ARIZONA ASSOCIATION FFA
Career Development Event Manual

In cooperation with Agricultural Business and Educational Agencies
# Table of Contents

Objectives of Career Development Events ........................................................................................................... A3
General Information .................................................................................................................................................. A4-5
Summary of Team Make-Up ................................................................................................................................ B1
Summary of CDE Revision Dates .......................................................................................................................... B2
Summary of CDE’s by Site and State ...................................................................................................................... B3
Agriculture Business Management ...................................................................................................................... C1-C5
Agricultural Communications ............................................................................................................................... D1-D18
Agriculture Issues Forum ...................................................................................................................................... E1-E5
Agricultural Mechanics ......................................................................................................................................... F1-F13
Agricultural Sales .................................................................................................................................................. G1-G13
Agriscience Fair ..................................................................................................................................................... H1-H4
Agronomy ............................................................................................................................................................... I1-I3
Aquaculture ........................................................................................................................................................... J1-J10
Chapter Display .................................................................................................................................................... K1-K2
Conduct of Meetings .............................................................................................................................................. L1-L6
Creed Speaking ..................................................................................................................................................... M1-M4
Dairy Management ................................................................................................................................................. N1-N16
Entomology ............................................................................................................................................................. O1-O7
Extemporaneous Speaking .................................................................................................................................... P1-P5
Field Crop Management ........................................................................................................................................ Q1-Q8
Floriculture ............................................................................................................................................................. R1-R18
Food Science & Technology ................................................................................................................................. S1-S9
Forestry ................................................................................................................................................................. T1-T8
Horse Evaluation and Selection ............................................................................................................................ U1-U4
Information ............................................................................................................................................................. V1-V2
Internet Site ............................................................................................................................................................ W1-W2
Job Interview .......................................................................................................................................................... X1-X8
Livestock Evaluation and Selection ....................................................................................................................... Y1-Y4
Marketing Plan ....................................................................................................................................................... Z1-Z4
Meats Evaluation ...................................................................................................................................................... AA1-AA9
Newsletter ............................................................................................................................................................... BB1-BB2
Novice Extemporaneous Speaking ....................................................................................................................... CC1-CC4
Novice Prepared Public Speaking ....................................................................................................................... DD1-DD8
Nursery/Landscape ............................................................................................................................................... EE1-EE14
Parliamentary Procedure ...................................................................................................................................... FF1-FF10
Prepared Public Speaking ................................................................................................................................... GG1-GG6
Range Management ............................................................................................................................................. HH1-HH4
Reporter ................................................................................................................................................................. II1-II2
Scrapbook .............................................................................................................................................................. JJ1
Soils........................................................................................................................................................................... KK1-KK3
OBJECTIVES OF THE CAREER DEVELOPMENT EVENTS

1. To develop agricultural competencies for students who are interested in exploring and pursuing a career in the agricultural industry.
2. To aid local teachers of agriculture in motivating students to become involved in the agricultural industry.
3. To encourage the development of broader analytical skills, critical thinking strategies and an understanding of appropriate agricultural terminology.
4. To complement classroom instruction by giving students an opportunity to apply classroom knowledge in competitive situations. Each event has been specifically developed to test skills and knowledge of students in a particular area of agriculture.
5. To assist students in developing academic skills related to the successful completion of the various career development events.
GENERAL INFORMATION

Eligibility of Participants

1. Any student is eligible who is under 21 years of age at the time of the Career Development Events (CDE) event, and who is a dues paying FFA member enrolled in an agricultural education program or has completed all of the agriculture courses offered in their school and is carrying at least three units of regular high school work.

2. Any student who has been a member of a team placing first in a state career development event (CDE) and/or who has represented the state in a national CDE shall be ineligible to participate in that particular event again.

3. Protest on the eligibility of any student must be made in writing to the State FFA advisor within 10 days of the CDE competition date.

4. Members participating in any Career Development Event must pay their dues before entry forms are submitted. A $10 late fee may be assessed to students paying dues after that date.

5. Participating chapters must be in good standing at the time of the CDE event.

CDE Format

1. The CDE program is an activity of the Arizona Association FFA in cooperation with The College of Agriculture and Life Sciences at the University of Arizona, the Morrison School of Agribusiness at the Arizona State University East Campus and Mesa Community College as well as several business and industry partners. The events are planned and conducted by faculty members and students from the respective departments of the colleges and/or business and industry representatives.

2. Each teacher will be held responsible for correctly registering his/her students and distributing the correct participant number and/or materials to the properly registered student.

3. Each teacher will be responsible for providing transportation for his/her students to and from the various events. In some cases, teachers will be asked to use their school van and/or bus to transport groups of students to and from contest sites.

4. Any chapter, whose students have inspected plants or livestock on the University farms or campus between January 1 and the CDE day, will not be eligible to enter teams in these events. No phone contact will be permitted to university staff regarding events for the same period.

5. Whenever possible each team will be divided so that no two members of any one team will be judging the same class at the same time.

6. Members must stay with their group or be eliminated from the event.

7. No placing card will be accepted after the close of the time allocated for each period.

8. Students will not be allowed to use books, notes or writing paper during the event except that furnished or designated by the officials. They may, however, use writing boards.

9. Individual and team achievement will be determined on a total point basis unless stated differently in event rules. High scoring individuals and teams in an event will be recognized in accordance with paragraph one of the awards section below. Where ties occur for team awards, they shall be broken by using the following practices:
   a. the team with the greatest number of perfect placing
   b. the team with the highest point individual

10. While each event is in progress, there shall be no communication among the students, or between a student and anyone else (i.e. cell phones, personal digital assistants and all other electronic communication devices), except in the presence of and with the permission of the official in charge of the event. Only participants, judges and officials will be allowed near the classes while the judging events are in progress. Violations by students or teachers will result in the disqualification of the entire team from the event.

11. Judging Forms without the participant’s number, the name of the class judged, and/or the final placing, will not be scored.

12. A student can compete in more than one CDE providing the times for the two do not conflict with each other. Students may compete in some events which have conflicting times at the State FFA Leadership Conference if the State FFA Executive Secretary and contest superintendents have been made aware and agree to adjust the contestant rotation prior to the start of the conference.
13. It is very desirable for instructors to duplicate the judging scantron forms used in the various events (see copies in each section of this publication) and use these forms when giving students practice in judging. In previous years many participants have been eliminated through errors committed because of unfamiliarity with the judging scantron forms. A sample of scantrons used in the majority of CDE’s is found below.

14. Since the educational value and the success of the CDE’s will depend upon the number of individuals participating in the different events, schools should enter as many events as feasible.

15. The deadline for submitting entries for the CDEs is announced by the State FFA Executive Secretary. Entries must be mailed to the Arizona Association FFA at the Arizona Department of Education, 1535 West Jefferson Street, Bin 42, Phoenix, Arizona 85007. If entries are postmarked after midnight of the announced deadline, teams will not be eligible to compete. All Arizona agricultural education teachers will receive the entry forms electronically and/or by mail.

16. Each chapter in good standing may draw upon members as submitted on FFA membership rosters. If a team or team member has not been identified for an event on the entry form, cards for that event will not be available the morning of the CDE event.

17. The State FFA Staff will confirm membership for the participants entered.

18. Unless otherwise stated, student teams with fewer team members than what is listed may be formed, compete in and win CDE’s.

**Recognition at the Mid Winter Leadership Conference**

Appropriate recognition will be given according to the configuration of the individual CDE’s as outlined by the rules and the discretion of the contest superintendent.

**Recognition at the Spring Conference (formerly known as CDE Day)**

Appropriate recognition will be given according to four levels of achievement. These will be gold, silver, bronze and honorable mention classifications. Point totals will be used for selecting the following:

- The ten highest individuals in each event
- The ten highest teams in each event

Teams representing Arizona in any national or regional event will be selected from those receiving the gold emblem classification.

**Recognition at the State FFA Leadership Conference**

Appropriate recognition will be given according to the configuration of the individual CDE’s as outlined by the rules and the discretion of the contest superintendent.
SUMMARY OF TEAM MAKE-UP

1. Agriculture Business Management ......................................... 3 + 1 alternate, top three scores count
2. Agricultural Communications ................................................................. 4, all scores count
3. Agriculture Issues Forum .......................................................................Minimum of 3, maximum of 7
4. Agricultural Mechanics ............................................................ 3 + 1 alternate, top three scores count
5. Agricultural Sales .................................................................................. Up to 4, all scores count
6. Agriscience Fair .................................................................................. 1 or 2
7. Agronomy ................................................................................. 4, all scores count
8. Aquaculture .................................................................................. 4, all scores count
9. Conduct of Meetings ........................................................................... 6 (limited to grades 7,8 and 9)
10. Creed Speaking ................................................................................. 1 (limited to grades 7,8 and 9)
11. Dairy Management .............................................................................. 3 + 1 alternate, top three scores count
12. Entomology ..................................................................................... 3 + 1 alternate, top three scores count
13. Extemporaneous Speaking ..........................................................................................1
14. Field Crop Management ................................................................. 3 + 1 alternate, top three scores count
15. Floriculture ......................................................................................... Up to 4, all scores count
16. Food Science & Technology ................................................................ 4, all scores count
17. Forestry .......................................................................................... 3 + 1 alternate, top three scores count
18. Horse Evaluation and Selection ......................................................... 3 + 1 alternate, top three scores count
19. Information ..........................................................................................1
20. Internet Site ....................................................................................... This is a chapter activity
21. Job Interview .......................................................................................1
22. Livestock Evaluation and Selection .................................................... 3 + 1 alternate, top three scores count
23. Marketing Plan .....................................................................................3
24. Meats Evaluation .................................................................................. 3 + 1 alternate, top three scores count
25. Newsletter ............................................................................................1
26. Novice Extemporaneous Speaking (Grades 7, 8 or 9) .........................................................1
27. Novice Prepared Public Speaking (Grades 7, 8 or 9) ............................................1
28. Nursery/Landscape ............................................................................... 3 + 1 alternate, top three scores count
29. Parliamentary Procedure ...................................................................... 6 + 1 alternate (alternate does not compete in the event)
30. Prepared Public Speaking .......................................................................1
31. Range Management .............................................................................3 + 1 alternate, top three scores count
32. Reporter ...............................................................................................1
33. Soils .......................................................................................... 3 + 1 alternate, top three scores count

Note: A school may enter a team with fewer than the prescribed number of students. That team may place and win the event. State winning teams must abide by National FFA rules/procedures when registering for national competition.
SUMMARY OF CDE REVISION DATES

1. General Information ............................................................................................................. July 2003
2. Agriculture Business Management ...................................................................................... July 2003
3. Agricultural Communications ............................................................................................. July 2003
4. Agriculture Issues Forum ..................................................................................................... July 2003
5. Agricultural Mechanics ....................................................................................................... July 2003
6. Agricultural Sales ................................................................................................................ July 2003
7. Agriscience Fair .................................................................................................................... July 2003
8. Agronomy ........................................................................................................................... July 2003
10. Conduct of Meetings ........................................................................................................... July 2003
11. Creed Speaking .................................................................................................................. July 2003
13. Entomology ........................................................................................................................ July 2003
15. Field Crop Management ..................................................................................................... July 2003
16. Floriculture ........................................................................................................................ July 2003
17. Food Science & Technology ............................................................................................... July 2003
18. Forestry ............................................................................................................................. July 2003
19. Horse Evaluation and Selection .......................................................................................... July 2003
20. Information ......................................................................................................................... July 2004
21. Internet Site ........................................................................................................................ July 2003
22. Job Interview ...................................................................................................................... July 2003
23. Livestock Evaluation and Selection .................................................................................... July 2003
24. Marketing Plan ..................................................................................................................... July 2003
25. Meats Evaluation ................................................................................................................ July 2003
27. Novice Extemporaneous Speaking ....................................................................................... July 2003
29. Nursery/Landscape .............................................................................................................. July 2003
30. Parliamentary Procedure ..................................................................................................... July 2003
31. Prepared Public Speaking .................................................................................................... July 2003
32. Range Management ............................................................................................................ July 2003
33. Reporter ............................................................................................................................... July 2003
34. Scrapbook ........................................................................................................................... July 2003
35. Soils .................................................................................................................................... July 2003
Summary of Career Development Events by Site and Date

Mid-Winter Conference, Arizona State University East Campus in December

1. Creed Speaking CDE
2. Information Contest CDE
3. Novice Public Speaking CDE
4. Novice Extemporaneous CDE
5. Food Science CDE
6. Agricultural Sales CDE
7. Floriculture CDE
8. Parliamentary Procedure Invitational

Spring Conference (formerly known as State CDE Day), University of Arizona in March

1. Ag Issues CDE
2. Ag Mechanics CDE
3. Agronomy CDE
4. Entomology CDE
5. Horse Evaluation CDE
6. Nursery/Landscape Evaluation CDE
7. Meats Evaluation CDE
8. Range Management CDE
9. Ag Business CDE
10. Aquaculture CDE
11. Dairy Management CDE
12. Field Crop Management CDE
13. Forestry CDE
14. Job Interview CDE
15. Livestock Judging CDE
16. Soils CDE

State Leadership Conference, University of Arizona in June

1. Marketing Plan CDE
2. Parliamentary Procedure CDE
3. Prepared Public Speaking CDE
4. Extemporaneous Public Speaking CDE
5. Agriscience Fair CDE
6. Agriculture Communications CDE
7. Internet CDE
8. Newsletter CDE
9. Reporter CDE
10. Conduct of Meetings CDE
PURPOSE

The purpose of the Agricultural Business Management CDE is for members to learn and use effective business management practices.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores on the written exam plus the team score on the team activity.

I. OBJECTIVES

A. To test a student's:

1. Ability to apply economic principles and concepts in analyzing the farm business management decisions.
   a. Production Functions
      1) Diminishing return
      2) Profit maximizing point: benefit cost: MC =MR
   b. Opportunity Cost
   c. Cost Analysis (fixed-variable)
   d. Input Combinations
   e. Enterprise Selection
      1) Equi-marginal principals
      2) Specialization and diversification
   f. Supply and Demand
      1) Price and quantity determination
      2) Elasticity
      3) Substitute, complementary products

2. Ability to use records and manage resources for optimum return to resources.
   a. Analysis of Records
      1) Profit and loss
      2) Financial statement
         a) Ratios
         b) Inventory assets, liabilities, net worth
   b. Budgeting
      1) Partial budgeting
      2) Total farm budgeting
      3) Enterprise
   c. Cash Flow Analysis
      1) Summary
      2) Projections
d. Basic Tax Management
   1) assets
   2) liabilities
   3) receipts
   4) expenses

3. Ability to apply principles of farm management to the decision making process.
   a. Investment Analysis
      1) Capital budgeting
         a) time value
         b) net present value
      2) Credit
         a) sources
         b) loan applications
         c) interest
      3) Leasing of real property
      4) Land acquisition and ownership
      5) Machinery management
      6) Insurance
         a) life insurance
         b) property insurance
         c) crop insurance
         d) health
         e) liability
   b. Marketing analysis
      1) Functions
      2) Structures
      3) Price determination
         a) supply
         b) demand
         c) comparative advantages
      4) Price methods
         a) supply
         b) futures and options
         c) forward contracting
      5) International trade
   c. Market and Purchasing Structure
      1. Cooperatives
      2. Independents
   d. Agricultural Law
      1) Estate planning
      2) Business organization
         a.) sole proprietorship
         b.) business organization
         c.) partnership
         d.) contract farming
         e.) Taxes
      3) Written agreements
   e. Miscellaneous
      a) Integrating government programs
b) ASCS

c) FMHA

II. COMPETENCIES

A. Develop and analyze a budget.
B. Develop and analyze a business agreement.
C. Keep production and work experience records.
D. Analyze business records.
E. Prepare and analyze a financial statement.
F. Develop a summary and analysis of crop or livestock enterprise.
G. Analyze supply and demand forces at the market level.
H. Understand key institutional arrangements in agriculture.

III. ORGANIZATION AND CONTENT

A. The Agricultural Business and Management Event will consist of a multiple choice test and a problem solving analysis. A microcomputer maybe used in either or both of the general parts of the event. If microcomputers are used in the event they will be provided by the University of Arizona and all participating teams will be provided information about the type and operation of the hardware and software. A team will consist of three members and one alternate. The three highest members' scores will be used to place the teams.

1. Multiple Choice - The multiple choice section is designed to test team members' understanding of the application of economic principles in farm management. In general, questions emphasize understanding of the application, rather than definition, although some definitions will be included.
   a. Team members work as individuals and answer all questions.
   b. There will be approximately 40 multiple choice questions with 50 minutes allowed for completion of this section of the event.
   c. Only one half (1/2) of the points are allowed for this section of the event.

2. Problem Solving - The problem solving portion of the event is designed to determine the team members' ability to apply principles of farm management to the decision making process by actual problem analysis and to justify the decisions made. Team members work as individuals and complete all problems assigned.
   a. If microcomputers are used, the problem solving section may be restructured to involve a team exercise.
   b. One hundred (100) minutes are allowed for completion of this section of the event.
   c. One-half (1/2) of the points are allowed for this section of the event.
   d. Forms such as enterprise, partial, whole farm, and cash flow budgets will follow the samples and procedures for completion as presented in the Farm and Ranch Business Management text published by John Deere.

Tie breaking procedure will use one or more of the problem solving questions.

3. Team Activity

REFERENCES


PURPOSE

The purpose of the State FFA Agricultural Communication CDE event is for FFA members to develop, practice, and demonstrate skills needed in communication practices.

COMPETENCIES

PS 1, 19

- Develop a portfolio
- Develop and present a presentation
- Utilize communication and speaking skills

TEAM MAKE-UP

A team will consist of a four-member team.

I. GENERAL RULES

A. Eligible participants in the State FFA Agricultural Communications Career Development Event will be students who are regularly enrolled in agricultural education during the calendar year, have a planned course of study, or who are still in high school, but have completed all the agricultural education offered. When selected, participants must be active members of a chartered FFA chapter and the National FFA Organization. Members representing a state association may participate in the National FFA Agricultural Communications Event only once.

B. Five copies of the communications project proposal will be due to the State office on or before May 15.

C. It is highly recommended that participants be in official FFA dress in each event.

D. All material will be student produced and verified by the local chapter.

E. The event will include both written as well as oral communications presentations.

II. EVENT FORMAT

A. EQUIPMENT

Materials students must provide - pens and pencils.
Provided: For team presentations - Overhead projector, slide projector, easel, VCR/TV monitor; For Practicums - PC computer, tape recorder, cassettes B & W or color photographs (5x7) prints, wax pencils, pica poles, paper. Note: Teams may bring additional equipment for project presentation as long as they are able to set up and tear down equipment in the time allowed for the presentation.

B. TEAM ACTIVITIES

Communications Project Proposal and Presentations - Each team will prepare a communications project proposal for their chapter. The proposal will explain the communications activities planned to publicize an event/issue.

Guidance on the event/issue is presented below. At the National FFA Career Development Event, the team will make an oral presentation of the proposal.

1. Guidelines for Proposal

The key to producing a good communications project proposal is to select a project that is specific enough that you will be able to do a good job with it.

a. The proposal should be a maximum of 12 double-spaced typed pages on 8.5" x 11" white bond paper using 1" margins and 12-point Time New Roman or Times as the font.

b. Staple the proposal in upper left-hand corner. DO NOT bind or place in folders, special binders, or covers.


d. A cover page should give the title of the communications proposal, state, chapter name, team member names, and date.

e. The communications project proposal should include the following sections:

1. Rationale for selecting the project, including background information that helps provide judges with an understanding of the project and the situation or local where it will be implemented.

2. Objectives of the project (what is the project to accomplish).
3. Audiences to be targeted with this project.

4. Key messages or themes to communicate to the audiences.

5. Media (brochures, newspapers, signage, radio, etc.) selected to accomplish the project.

6. Budget to produce and place communications materials.

7. Criteria upon which project will be evaluated (these criteria should result in some indication of how well the project accomplishes the stated objectives).

2. Topic for communications project proposal and presentation

The communications project proposal and presentation will be based on the same topic. The topic will be chosen by the team from a theme of possible topics provided by National FFA. The themes of topics will rotate from year to year (see table).
<table>
<thead>
<tr>
<th>YEARS</th>
<th>PROJECT THEME</th>
<th>POTENTIAL TOPICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>EXISTING CHAPTER ACTIVITY</td>
<td>PALS, SAE, FOOD FOR AMERICA, BANQUETS, ETC.</td>
</tr>
<tr>
<td>2000, 2004</td>
<td>INNOVATIVE AGRICULTURAL PRACTICES, MANAGEMENT OR MARKETING TOOLS</td>
<td>FINANCIAL RISK MANAGEMENT USING OPTIONS AND/OR FUTURES, EFFICIENT WATER USE WITH IRRIGATION SYSTEMS IN YOUR COUNTY, ROTATIONAL CROPPING SYSTEMS FOR PEST CONTROL, SUSTAINABLE AGRICULTURE, ETC.</td>
</tr>
<tr>
<td>2001, 2005</td>
<td>LOCALIZED OR NATIONAL EVENTS</td>
<td>NATIONAL AG WEEK, EARTH DAY, VOCATIONAL EDUCATION WEEK, FFA WEEK, ETC.</td>
</tr>
<tr>
<td>2002, 2006</td>
<td>AGRICULTURE OR CONSUMER ISSUES</td>
<td>WATER QUALITY IN YOUR COUNTY AND AGRICULTURAL STRESSORS, SAFE FOOD HANDLING IN THE HOME, SAFE AGRICULTURAL PRACTICES AT HARVEST, PROMOTING AGRICULTURE LITERACY, ETC.</td>
</tr>
</tbody>
</table>

3. Communications project presentation

The team will present their communications project to a panel of judges. When making the presentations to the judges, the team should present based on the following:

- The presentation should follow and cover all of the items listed in the Guidelines for Proposal.
- Include examples of materials prepared during the execution of the proposal (ex. brochures, newsletters, news releases, photos, graphics, videos, radio tapes, etc.)
- Team members should not rely solely on equipment. Each team member must participate in the presentation.

C) INDIVIDUAL ACTIVITIES

1. Tests
   a. Editing exercise
      Because editing is a critical skill for all communications, each team member will complete an editing exercise. They will be given a printed document that contains 25 mistakes. In correcting the mistakes, team members will be required to use correct proofreader's marks (see Associated Press Stylebook and Libel Manual). Style, grammar, punctuation and spelling mistakes will be included. Team members will NOT be able to use the style manual or a dictionary during this exercise.

   b. Communications quiz
      Each team member will complete a quiz that covers basic elements important to the skill areas of journalistic writing and broadcasting, public relations writing and graphic design. Five questions will be written for each segment, which includes broadcast, public relations, news, visuals, and ethics of communication. Team members will NOT be able to use the style manual or a dictionary during this exercise.
2. Practicums

The practicums will consist of four individual events. Each team should assign a member to one of the following activities PRIOR to arriving at the national event:
1. Organizing and writing news story;
2. Organizing and writing a press release;
3. Developing and carrying out a broadcast; or
4. Preparing a graphic and photo editing for a news story.

All teams will meet in a central location for an orientation and press conference. Teams will be divided so that all broadcasters sit together, all news writers sit together, all press release writers sit together and all graphic designers sit together. All team members will be given an orientation at the beginning of the practicums to last no more than 10 minutes.

Following the orientation, the press conference will be held. Each team member will receive a press packet with background information on the agricultural topic and expert to use during the event. An expert will speak on a timely agricultural topic for 20 minutes. Students will be provided with paper to take notes, if they wish. After the 20-minute presentation, the broadcasters and graphic designers will be dismissed to a different area to complete their assigned tasks. (See detailed descriptions of assignments below).

The news writers and press release writers will then be involved in a 10-minute question and answer period with the expert (speaker). Only the news writers will be allowed to ask questions. Each news writer will stand to be recognized before asking a question. News writers may ask more than one question, however, the expert will attempt to address questions from as many different contestants as possible. All news writers and press release writers may take notes during the questions and answer period, but only news writers will be allowed to ask questions of the expert. Tape recorders will not be allowed during this portion of the event.

Upon completion of the 10-minute question and answer session, the news writers and press release writers will be dismissed to a computer room to complete their assigned tasks.

**Description of each team member's assignment**

**News writers**
Students are to write a news story based on information gathered at the news conference. It should be written for an agriculture population (agriculture producer) audience. The story should have a minimum of 250 words and follow news or inverted pyramid style. It should have a strong focus and lead (opening paragraph). The story should provide answers to who, what, when, where and why. Students also should write a headline for their story. Each writer can use notes from the press conference, the Q&A session and from information in the press packet. After writers arrive in their designated room, they will have 60 minutes to complete their task. The story will be word processed by the student on a computer, printed out and turned in to be scored. Judging will be based on written communication skills, accuracy, organization style, creativity and grammar.
Press release writers
Each press release writer will use the press packet and the information gathered in the press conference to write a 200 to 300-word press release excluding the words in the header. The release should be written as if the experts company or organization was distributing it. The release will be word processed on a computer, printed out and turned in to be scored. Once the press release writers arrive in the computer room, they will have 60 minutes to complete the task.

Broadcasters
Each broadcaster will use the press packet and information that was gathered in the press conference to write and carry out a two-minute radio broadcast. The message should be suitable to be aired on a radio station or radio network. After the contestant has developed the story, he or she will use a standard cassette and tape recorder to broadcast the story. The cassette with the recorded broadcast will be turned in to be evaluated. Students will be able to listen to their recording prior to turning in the cassette if time allows. All tape recorders will be the same, therefore, recording quality will not be a factor in the evaluation process. Broadcasters will also develop and turn in five written questions that he or she would have asked the expert if they were given the opportunity to interview the expert after the press conference. These written questions will be turned in along with the cassette once the student has completed the tasks. After the broadcasters arrive in their designated room, they will have 60 minutes to complete their tasks.

Graphic Designers
Each graphic designer will complete a graphic art, photo editing and photo caption writing exercise. Effective communication or information sharing through visual tools is the objective. After graphic designers arrive in their designated room, they will have 60 minutes to complete their two tasks. Each of these tasks is described below.

Graphic art exercise Each student creates a chart or table on a computer that illustrates numeric data from the press conference. A press packet (including news release and data) is provided for each artist. Students are judged on their graphic art skill, understanding and use of statistics and creativity. Students will receive 11 x 17 blue-line graph paper to layout their final design. The design should be constructed as a front-page newspaper layout.

Photo editing exercise Students will receive a variety of black & white photos or color photos (5x7 prints) and will be asked to select the best photo to use in a story based on the news conference. Each student should make photo-cropping suggestions by marking the photo borders with a wax pencil. Each student is to give oral reasons on why they selected a particular photo. These reasons should include the photo’s best qualities, its visual appeal to readers, and how it helps communicate the story’s message.

Photo caption writing exercise Students are to write a two-line caption (approximately 25 words) for their selected photo. Students will be judged on accuracy of information, grammar, brevity, clarity and creativity of captions.

OVERALL CDE TIMELINE AND SCHEDULE
1. (Exact times will be provided prior to each convention)
2. Communication plan presentation B 15 minutes
3. Tests (editing exercise and quiz) B 30 minutes
4. Practicum 1 hour and 40 minutes
   Total = 2 hours 25 minutes

Coaches= Orientation

Orientation
Communications Quiz
Editing Exercise
Press Conference
Rotating groups B Practicums

Communications Project Presentations

III. SCORING

COMMUNICATION PROJECT PROPOSAL
Rationale 25
Objectives of project 25
Target audiences to address 20
Key messages 15
Media selection 20
Budget 10
Evaluation criteria 15
Grammar punctuation, spelling, style 20
TOTAL 150

COMMUNICATIONS PROJECT PRESENTATION
Professionalism 10
   appearance (official dress), poise and posture, attitude/confidence, demeanor, ethical concerns
Knowledge of subject 15
Power of expression 10
directness, sincerity, emphasis
Verbal skills 40
verbal communication with judges, grammar, voice (quality, pitch), articulation, pronunciation, force)
Questions and Answers 50
   ability to answer questions on the presentations which are asked by judges indicating originality, familiarity with subject and ability to think quickly
Supporting Evidence 10
   examples that document the materials used to develop the project
Creativity and innovation 15

PRESENTATION TOTAL 150
## TESTS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications Quiz</td>
<td>100</td>
</tr>
<tr>
<td>(25 points per team member)</td>
<td></td>
</tr>
<tr>
<td>Editing Exercise</td>
<td>100</td>
</tr>
<tr>
<td>(25 points per team member)</td>
<td></td>
</tr>
<tr>
<td><strong>TEST TOTAL</strong></td>
<td>200</td>
</tr>
</tbody>
</table>

## PRACTICUMS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>News writer story</td>
<td></td>
</tr>
<tr>
<td>Lead/focus</td>
<td>20</td>
</tr>
<tr>
<td>Organization, brevity, conciseness and clarity</td>
<td>15</td>
</tr>
<tr>
<td>Correct style</td>
<td>10</td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>20</td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
</tr>
<tr>
<td>Headline</td>
<td>10</td>
</tr>
<tr>
<td>Grammar, spelling, punctuation, word choice</td>
<td>15</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press release writer story</td>
<td></td>
</tr>
<tr>
<td>Lead/focus</td>
<td>20</td>
</tr>
<tr>
<td>Organization, brevity, concise and clarity</td>
<td>15</td>
</tr>
<tr>
<td>Correct style</td>
<td>10</td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>15</td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
</tr>
<tr>
<td>Header/headline</td>
<td>10</td>
</tr>
<tr>
<td>Grammar, spelling, punctuation, word choice</td>
<td>10</td>
</tr>
<tr>
<td>Company or product information</td>
<td>10</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcaster recording</td>
<td></td>
</tr>
<tr>
<td>Voice quality</td>
<td>10</td>
</tr>
<tr>
<td>Power of expression</td>
<td>10</td>
</tr>
<tr>
<td>Lead/focus</td>
<td>15</td>
</tr>
<tr>
<td>Clarity of communication</td>
<td>10</td>
</tr>
<tr>
<td>Organization, concise and brevity</td>
<td>10</td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>15</td>
</tr>
<tr>
<td>Quality of five written follow-up</td>
<td>20</td>
</tr>
<tr>
<td>questions</td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>100</td>
</tr>
</tbody>
</table>
Graphic Designer exercises
Graphic art skill 20
Understanding and use of statistics 15
Creativity 15
Photo editing 20
Reasons (critical thinking) 15
Photo caption-writing 15
SUBTOTAL 100

TOTAL PRACTICUM SCORE 400

TOTAL TEAM SCORE POSSIBLE
Practicum scores 400
Communications project proposal 150
Project presentation 150
Test scores 200
TOTAL POSSIBLE 900

IV. TIEBREAKERS
1. Team tiebreakers will be settled in the following order:
   a) Proposal score
   b) Practicum scores
   c) Presentation score

   Individual tiebreakers will be settled in the following order:
   a) Practicum score
   b) Quiz score
   c) Editing exercise score

V. AWARDS
Awards will be presented at an awards assembly. Awards are presented to teams as well as individuals based upon their rankings.
REFERENCES
This list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available.

The following list contains references that may prove helpful during event preparation.

Associated Press Stylebook and Libel Manual


Strunk and White (1979). The Elements of Style, Allyn & Bacon

Ability to use word processing and spreadsheet software
Agricultural Communications

NAME: _______________________________ Chapter: ________________
State: _______________________________ Team No.: _______________

Communication Project Proposal Scorecard

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationale</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Objectives of project</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Target audiences to address</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Key Messages</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Media Selection</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Budget</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Grammar, punctuation, spelling, style</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Total Possible:</strong></td>
<td><strong>150</strong></td>
<td><strong>D-12</strong></td>
</tr>
</tbody>
</table>

Total Score:
### Communication Project Presentation Scorecard

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professionalism</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance, poise and posture,</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>attitude/confidence, demeanor,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ethical concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge of Subject</strong></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Power of Expression</strong></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Directness, sincerity, emphasis</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Verbal Skills</strong></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Grammar, voice (quality, pitch,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>articulation, pronunciation,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>force)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Questions and Answers</strong></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Ability to answer questions on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the presentations, which are</td>
<td></td>
<td></td>
</tr>
<tr>
<td>asked by judges indicating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>originality, familiarity with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>subject and ability to think</td>
<td></td>
<td></td>
</tr>
<tr>
<td>quickly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supporting Evidence</strong></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Examples that document the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>materials used to develop the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>project</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Creativity and Innovation</strong></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

**Total Possible:** 150

**Total Score:** D-13
Agricultural Communications

NAME: ............................................. Chapter: ...............................
State: .................................................. Team No.: .................................

News Story Practicum

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead/Focus</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Organization, brevity, conciseness, clarity</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Correct Style</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Headline</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Grammar, spelling, punctuation, word choice</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Total Possible:</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Total Score:
Agricultural Communications

NAME: ____________________________ Chapter: _____________
State: ____________________________ Team No.: _____________

Press Release Practicum

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead/Focus</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Organization, brevity, conciseness, clarity</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Correct Style</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Header/Headline</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Grammar, spelling, punctuation, word choice</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Company or product information</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total Possible:</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Total Score: D-15
Agricultural Communications

NAME: _____________________________ Chapter: _____________
State: _____________________________ Team No.: _____________

Broadcaster’s Recording Practicum

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice Quality</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Power of expression</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Lead/focus</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Clarity of communication</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Organization, concise and brevity</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Accuracy of information and quotes</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Quality of five written follow-up questions</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total Possible:</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Total Score:

Total Score:
Agricultural Communications

NAME: _____________________________________  Chapter:  ________________
State: _____________________________________  Team No.:  ________________

Graphic Designer Practicum

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Art Skill</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Understanding and use of statistics</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Photo Editing</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Reasons (critical thinking)</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Photo Caption writing</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Total Possible:</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Total Score: D-17
## Team Scorecard

<table>
<thead>
<tr>
<th></th>
<th>Possible Score</th>
<th>Team Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practicum Scores</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Communications Project Proposal</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Communications Project Presentation</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Test Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Communications Quiz – 100 pts. (25 pts/member)</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>• Editing Exercise – 100 pts. (25 pts/member)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Possible:</td>
<td>900</td>
<td></td>
</tr>
</tbody>
</table>

Total Score: D-18
PURPOSE

The purpose of the agricultural issues forum event is to allow students to identify and study an issue in their local community. Through the presentation of the event, students the importance of research and their presentation skills.

TEAM MAKE-UP

A team will consist of a minimum of three students and a maximum of seven students.

I. OBJECTIVES

A. To provide an opportunity to expose a wide variety of students to the selection, research, planning and presentation of an agricultural issue.
B. To acquire knowledge and skills in community leadership for present and future use.
C. To become knowledgeable of, and familiar with a variety of local, state, national and international issues facing agriculture.
D. To understand the principles and fundamentals of agricultural issue analysis.
F. To further the awareness of agricultural issues in the local community.

1. To promote integration of agricultural issue analysis in local school academic subject matter areas.
2. To promote career choices by providing an opportunity for individuals to become acquainted with professionals in the industry.
3. To foster teamwork, leadership and communication skills.

II. COMPETENCIES

PS 1, 19

- Develop a Portfolio
- Develop and present a presentation.
- Utilize communication and speaking skills

III. GENERAL RULES

A. Each team will conduct a presentation on the issue developed and presented at the local level.

B. The event is open to two teams per district not to exceed 16 teams. In the even that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place teams from other districts.

C. The issue will come from one of the following seven agricultural issue topics as listed in the Focusing on Agricultural Issues instructional materials: It is recommended that the same topic is not used in consecutive years by the same chapter/advisor. Research on the topic must be current and students must be involved in the research of the topic and development of the Portfolio.
1. Environmental Issues
2. Agricultural Technology Issues
3. Animal Issues
4. Agricultural Career Issues
5. Economy and Trade Issues
6. Agricultural Policy Issues
7. Food Safety Issues

D. The portfolio should include items described in sections 3a, 3b, and 3c, and will be ten pages maximum not including cover page. The cover page will include the title of the issue, name, address and phone number of the chapter. The event chair must receive ten copies of the portfolio no later than 30 days prior to the State CDE, or by the specific due date as stated in the memo from the Career Development Event chair.

1. A maximum of two pages of the Portfolio will include a summary of the issue, answering the questions that are most relevant to your topic:
   - List course(s) in which instruction occurred including the number of students involved in the instruction of the issue. (See Objective 6.)
   - Why is this issue important now?
   - What is the nature of the issue?
   - Who is involved in the issue?
   - How can the issue be defined?
   - What is the historical background of the issue?
   - What caused the issue?
   - What are the risks?
   - What are the benefits?
   - Is there strong disagreement on how the issue should be solved?

2. A bibliography of all resources and references cited which may include personal interviews and any other supporting material.

3. Documentation that local forum(s) occurred such as:
   - Letters from organizations
   - News articles
   - Photos (3" x 5" or 4" x 6")
   - Scrapbook

4. Presentations may include official FFA attire, costumes, props, skits and other creative paraphernalia.

5. Time Limits: Five minutes will be allowed for set up. The presentation will be a maximum of 15 minutes in length. The presenters will receive a signal at 10 minutes and 14 minutes. At 15 minutes, the timekeeper will announce that time is up, and the presentation will end. A maximum of 5 minutes for questions and answers will be allotted. Questions and answers will terminate at the end of 5 minutes. Five minutes will be allowed for take down.

6. The presentations will be designed to be viewed by the judges. The audience at-large will not be of concern to the presenters.

IV. QUESTIONS FROM JUDGES
The judges may ask questions of all individuals of the presenting team. Each Individual is encouraged to respond to at least one question from the judges.

V. ELIGIBILITY

Teams will be certified by respective state staff from authentic state guide forms. Signatures of community representatives must be on registration forms.

Each district can send a maximum of two teams to compete on the state level. In the event that a district does not send two teams, all third place teams may be placed in a lottery to select the appropriate number of teams to reach a total of eight.

VI. SCORING CRITERIA

1. Introduction, Pro, Con and Conclusions (20 points each, 80 points total)

2. Overall presentation (participation of each member of the team, quality and power of the presentations, creativity, stage presence) (20 points)

3. Questions (25 points)

E. Portfolio: 10 pages maximum
   (Three parts, 25 points total)
   -Summary of the Issue, 2 pages -maximum (5 points).
   -Bibliography (5 points).
   -Documentation of local forums (15 points).

   The portfolios will be judged in advance by a separate set of judges. Scores for the portfolio will be factored in after the team presentation. Late portfolios will receive a score of zero.

F. Judges’ ranking will be used to place teams. Raw scores will be utilized to break ties. Judges’ questions will be used to break additional ties.

VII. CRITERIA FOR JUDGE SELECTION

Three competent and unbiased judges will be provided. They will be instructed not to take sides on the issue(s). Professors and industry representatives are recommended. The superintendent of this CDE will adequately prepare the judges before the event competition.

VIII. EQUIPMENT PROVIDED

Equipment provided by the event superintendent includes: overhead projector, TV/VCR, easel, slide projector and screen. Other equipment is allowed, but it must be provided by the presenting team.
# AGRICULTURAL ISSUES SCORECARD – TEAM PRESENTATION

<table>
<thead>
<tr>
<th>Area/Description</th>
<th>Points Possible</th>
<th>25-21</th>
<th>20-16</th>
<th>15-11</th>
<th>10-6</th>
<th>5-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Introduction</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement of the issue and its importance</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Pro Viewpoint</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Con Viewpoint</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4. Conclusion</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summarize the Pros</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summarize the Cons</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach a Conclusion</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5. Questions</strong></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>6. Overall Presentation</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7. Portfolio</strong></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Points Possible**

150

**TEAM SCORE**
AGRICULTURAL ISSUES SCORECARD - PORTFOLIO

The portfolio should include items described in Sections 3a, 3b and 3c. of the Guidelines, and the portfolio will be limited to ten pages maximum. Ten copies of the portfolio must be received by the event chair no later than 30 days prior to the State FFA Competition or by the specific due date as stated in the memo from the University of Arizona Career Development Event chair.

<table>
<thead>
<tr>
<th>AREA/DESCRIPTION</th>
<th>POINTS POSSIBLE</th>
<th>15-11</th>
<th>10-6</th>
<th>5-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summary of the Issue (Two pages maximum)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Bibliography</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Local Forums</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Points Possible</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

To effectively prepare the students for the expectations of the agricultural mechanics workplace. Tomorrows workers must not only develop a high degree of knowledge and skill, they must also develop the ability to solve difficult problems and work with others.

I. TEAM MAKE-UP

A team will consist of three or four members. Team ranking is determined by combining the scores of the top three students from each team.

II. OBJECTIVES

The objectives of the Agricultural Mechanics event is to test the students skills in the area of mechanics.

COMPETENCIES

PS 14, 15, 16, 17

The competencies of agricultural mechanics are machinery equipment, construction, environmental/natural resources, and energy systems.

III. GENERAL RULES

1. A team will consist of three members and one alternate.

2. The State FFA Agricultural Mechanics Career Development Event will be developed from the subject matter areas that are listed in Part B.

3. The Career Development Event will be conducted in eight 15 minute sessions and one 30 minute group activity (x 2 groups), for a total of 180 minutes involving the following:
   - Written Examination 30 minutes
   - Three Problem-Solving Areas @ 15 minutes each, 45 minutes
   - Structural and Environmental/Natural Resource Systems Skill 15 minutes
   - Machinery and Equipment Systems Skill 15 minutes
   - Energy Systems Skill 15 minutes
   - Group Problem Solving/Skill 30 minutes
   - Fifteen-minute layout periods may be added to accommodate additional participants.

4. Each participant will be evaluated upon his or her performance on each of the activities as follows:

   Highest team standing will be based upon the total points earned by the three high scoring participants representing each team.

   The following activities will be used to break a tie between teams or individuals:
   1. The written test score(s); if still tied.
   2. The problem solving scores.
5. Each member of the competing team must participate in the following events:
   
   A. **Written Examination**, which covers all subject matter areas as identified in the competencies description page. Each participant will complete 90 four-item, multiple-choice questions, 30 in each of the three event areas. Each participant will have 30 minutes to complete the 90 questions.
   
   B. **Problem Solving** in which each participant will complete 30 activities, 10 in each of the three event areas. A problem-solving activity is defined as a mental activity involving the gathering or searching of information and the use of a logical solution process based on commonly accepted standards and available information to solve a problem specific to a particular subject matter unit.
   
   C. **Skill activities** which are listed for the event for the year in question. Each participant will complete specific hands-on performance operations in a 15 minute time period.
   
   D. **Group Skill Activity** has a minimum of 3 team members required for a team score to be entered. At the chairman’s discretion, individuals from different schools may be combined on site to create teams so individuals may earn a team score.

**Career Development Event Theme**

The Career Development Event Theme will follow the National Agricultural Mechanics Event rotation schedule, as contained in The National FFA Career Development Event Bulletin. Specific competencies will be selected in a workshop of teachers held once each year. Specific information and materials for each year’s event will be mailed to each department 60 days prior to the event. If materials are not received, contact the Superintendent-Events at the University of Arizona.

**Career Development Event Bulletin Additions**

NOTE: Upon receipt of event registration, teams will be assigned to event areas in the internal event rotation schedule until all teams are assigned. Alternates will enter a pool and will be randomly assigned to the event (by luck of the draw) on the morning of the event. Advisors MUST inform their alternate that he or she may be excluded from participation if the event fills before their number is drawn. Past experience would indicate that sufficient cancellations will occur on the morning of the event to accommodate all alternates.

6. Each participant will be responsible for all personal safety equipment including:

   A. **Industrial Quality Eye Protection** - Participant will be required to wear "eye protection devices" (spectacles or goggles) that meet the standards of the American National Standard Practice for Occupational and Education Eye and Face Protection, Z87.1-1979 (or Z87.1-1968) and any subsequent revisions thereof, approved by ANSI. Dress eyewear DOES NOT qualify as Industrial Quality Eye Protection.

      The descriptions of style A, B, and C Industrial Quality Eye Protection are as follows:

      • **Style A** - Safety spectacles without side shields are for limited hazard use requiring only frontal protection. The addition of accessory side shields, which are not firmly secured, does not upgrade Style A to a Style B or C. This style is NOT recommended for use in the event.

      • **Style B** - Safety spectacles with wire mesh, perforated plastic or non-perforated side shields. The side shields shall be tapered with an anatomical periphery extending at least halfway around the circumference of the lens frames. INDUSTRIAL QUALITY EYE PROTECTION FOR THOSE NOT WEARING PRESCRIPTION GLASSES SHALL BE STYLE B.
• **Style C** - Safety spectacles with semi- or flat-fold shield which must be firmly secured to the frame. Style "C" glasses do not provide maximum protection from the top and bottom angels and are not recommended. Those wearing prescription eyewear which are not industrial quality must also wear goggles while performing in the event skill areas.

B. **Clothing** - Each participant must furnish and wear coveralls, a shop coat or appropriate clothing for this event. Clothing must be in good repair and fit properly. Long sleeved clothing must be worn when welding or cutting and must be fire retardant.

C. **Specialized Safety Equipment** - Necessary equipment such as helmets, welding goggles, shields, gloves, leathers and hearing protection devices will be provided by the University of Arizona.

7. All tools and equipment will be furnished for the event. Participants must use the tools and equipment furnished by the University of Arizona.

8. All written materials will be furnished for the event. **Participants should provide clipboards and two sharpened No. 2 pencils.** The use of an electronic calculator is encouraged. Personal computers may be provided for problem-solving activities.

**IV. EVENT-RELATED COMPETENCIES FROM CURRENT NATIONAL CDE BULLETIN**

The State FFA Agricultural Mechanics Career Development Event will be developed from the subject matter areas that are listed following each of the five systems associated with the agricultural mechanics industry:

A. **Machinery and Equipment** Systems - processing, materials handling, adjustments, metal fabrication, maintenance and repair.

B. **Industry and Marketing Systems** - customer relations, accounting, communication, economics, safety, service calls, reading and understanding labels, planning, regulations.

C. **Energy Systems** - mechanical power, electrical power, chemical power, wind power, solar power, water power.

D. **Structural Systems** - concrete, plumbing, structural material selection, heating, ventilation, air conditioning, metal and wood construction.

E. **Environmental/Natural Resource Systems** - water quality, material compatibility, soil and water conservation, handling of waste, recycling.

The following list of statements with specific problem-solving and skill performances were identified from the systems areas. Examination questions may be developed from either problem solving or skill competencies.

Team activities may be developed from the Problem-solving competencies, while individual performance activities may be developed from either the problem-solving and/or skill competencies.

**Industry and Marketing Systems Competencies**

- **Problem Solving**
  1. Complete and interpret pre-delivery and delivery instructions.
  2. Describe the importance of customer relations and communications.
  3. Comprehend cab and environment controls (air conditioning and heating).
  4. Compare costs of ownership, lease, rental and custom agreements.
  5. Interpret and follow recommended service and maintenance schedules.
6. Determine proper practices and procedures for storing an engine.
7. Use of operator’s manuals.
8. Identify safe machinery operating practices.
9. Select machinery parts using manufacturer’s catalogs, microforms, microfiche or computers.
11. Determine finance and insurance needs.
12. Identify and be able to describe safety practices.
13. Read and interpret drawings, plans, symbols and figuring of bill of materials.

Skills

1. Use safety precaution in operation.
2. Perform pre-delivery setup and adjustment.
3. Demonstrate interaction with customer/fellow employee.
4. Identify and use international operators symbols.
5. Adjust operator controls for best fit.
6. Select appropriate tools and equipment.

Energy Systems Competencies

Problem Solving

1. Describe how to repair a specific component or system.
2. Select fuels, lubricants, hydraulic fluids and coolants for proper operation.
3. Identify importance of oil analysis as a management tool.
4. Operation and interpretation of circuit diagrams and flow charts in electrical, hydraulic, fuel, oil, cooling and intake and exhaust systems.
5. Identify the function and operating principles of tractor clutches, transmissions, control device and brakes.
6. Explain and describe principles of power transmission.
7. Identify the parts and functions of electrical, hydraulic, lubrication, cooling, governor and fuel systems.
8. Interpret horsepower, torque and other power measurement criteria.
9. Identify and use OECD (Organization for Economic Cooperation and Development).
10. Interpret metric units in measurements.
11. Select proper ballast and tractor weighting.
12. Compare costs of alternative machine uses.
14. How to use load/inflation table for tires using a constant deflection table.
15. Describe operating principles of two-stroke and four-stroke spark or compression ignition engines.
16. Identify the use and function of engine repair tools.
17. Evaluate engine performance under-load and no-load operation.
18. Evaluate engine parts or short blocks for replacement or servicing.
20. Use appropriate standards for agricultural applications, including the National Electrical Code (NEC), Electrical Testing Laboratory (UL), Canadian Standard Association (CSA) and/or OSHA standards.
22. Select conductor type and size for specific applications.
23. Calculate voltage drop.
24. Determine electrical power requirements.
25. Identify the characteristics of single and three-phase circuits.
26. Plan and evaluate proper grounding systems and ground-fault protection.
27. Determine volt, amp and ohm relationships (Ohm's and other application laws).
28. Select adequate and appropriate lighting fixtures.
29. Make connections in a computer-simulated wiring task.
30. Select electric motors based upon type of application.
31. Interpret electric motor nameplate data.
32. Service electric motors.
33. Identify electric motors and motor parts.
34. Identify methods of providing electric motor protection.
35. Interpret power (horsepower, kilowatt), power factor, torque and other motor selection criteria.
36. Calculate heating and cooling loads.
37. Interpret wiring diagrams.
38. Identify and describe basic principles of controls including thermostats; humidistat; photoelectric;
   magnetic relays; programmable controllers; proximity switches and sensors; ultrasonics; timers
   and other time-delay equipment; and pressure, motion, limit, float and sail switches.
39. Select controls from supply catalogs, microforms, microfiche or computers.
40. Select controls for electrical applications.
41. Use low-voltage electrical control equipment.
42. Identify and select devices for automated systems.
43. Select aquaculture air delivery systems.
44. Select aquaculture water heating devices.
45. Determine water filtration needs.
46. Use safe wiring practices for specific applications.
47. Select standby power generators and isolation equipment for specific applications.
48. Match tractors to implements.

• Skill

2. Conduct a pre-operation inspection of a tractor.
3. Starting, stopping and operating the tractor engine.
4. Perform recommended periodic service jobs (as found in operator's manuals).
5. Use measuring tools and test instruments such as: micro metering and telescoping gauges, dial
   indicator, compression tester, torque wrench, VOA (volt-ohm-amp)-meter, DMM (digital
   multimeter), timing devices, tachometer and dynamometer for determining test procedures.
6. Test and troubleshoot electronic sensing devices.
7. Remove, service and replace electrical components.
8. Test and service batteries, charging, lighting, warning and cranking system.
9. Test and service cooling systems.
10. Make hitch and PTO adjustments to the implement.
11. Adjust wheel tread spacing.
12. Adjust steering linkage.
13. Match tractors to implements.
14. Conduct on-board tractor monitor checks as identified in operator's manual.
15. Test and service air conditioning systems.
16. Test engine for emissions.
17. Select and use engine overhaul equipment, including valve, cylinder, piston, seal and bearing
    tools.
18. Service and maintain fuel, air intake and exhaust, cooling and lubrication systems.
19. Operate engine and adjust or check ignition timing, engine speed and carburetor adjustments.
20. Read schematics and sketch wiring circuits.
21. Attach conductors to terminals.
22. Install attachment plugs and cord connector bodies.
23. Make proper splices and connections.
24. Troubleshoot electrical circuits using proper testing equipment and measuring devices.
25. Measure electrical circuits for voltage, amperage, resistance and wattage.
26. Install service entrance for single phase 120/240V service or three phase power.
27. Wire 120/240V service outlets.
28. Install electrical circuits, switching devices and appliances.
29. Install ground-fault circuit interrupters.
30. Make connections in a computer-simulated wiring task.
31. Troubleshoot electric motor circuits using proper testing equipment.
32. Connect a dual-voltage motor to power source.
33. Change the direction of electric or hydraulic motor rotation.
34. Disassemble and reassemble an electric motor.
35. Provide suitable motor over-current protection.
36. Service and lubricate an electric motor.
37. Check the running amperage and voltage of a motor.
38. Select and mount an electric motor on a machine.
39. Connect electric motor controls.
40. Install timer circuits and automation devices.
41. Install thermal and solid state delay/relay controls.
42. Install a low-voltage motor control system.
43. Install sensing devices including thermostats; humidistat; photoelectric; magnetic relays; programmable controllers; proximity switches and sensors; ultrasonics; timers and other time-delay equipment; and pressure, motion, limit, float and sail switches.
44. Wire devices that are capable of providing artificial heat.
45. Select and install aquaculture control and sensing systems.

Machinery/Equipment Systems

Competencies

- **Problem Solving**

1. Identify safe tractor operation practices for field and highway conditions.
2. Identify the recommended service and maintenance operations from the operator's manual.
3. Select lubricants for machinery and equipment.
4. Identify functions of machinery components.
5. Identify parts and functions of hydraulic systems.
6. Identify and compute harvest losses.
7. Prepare machinery for storage.
8. Identify and select reduced tillage and conservation tillage equipment.
9. Explain principles of machinery management.
10. Describe functions of chemical application, fertilizing, harvesting, materials handling, processing, planting, seeding and tillage equipment.
11. Select arc welding machines and accessories.
12. Read drawings and welding symbols.
13. Control distortion in arc welding.
14. Select appropriate electrodes and wires.
15. Select hard surfacing alloys.
16. Prepare materials and equipment for arc welding.
17. Test weld quality and strength.
18. Select shielding gases.
19. Describe the science of the welding processes.
20. Select gas welding, plasma arc and cutting equipment and supplies.
21. Assemble gas welding, plasma arc and cutting equipment.
22. Check equipment for leaks.
23. Select welding rods and fluxes.
25. Start up, shut down and secure the equipment.
26. Select shielding gases.
27. Describe the science of welding and cutting processes.
28. Describe cylinder sizes and gas flow extraction rates. Calculate the volume of acetylene that can be delivered per cylinder per hour.
29. Explain the functions of flash arresters and reverse flow check values.
30. Identify appropriate shapes of tool and equipment cutting edges.
31. Select abrasive for grinding and sharpening.
32. Describe the application of simple machines to cutting edges.
33. Identify safe adjustment [level] on power equipment.
34. Identify kinds of metal used in tool construction.
35. Identify various types and shapes of metals.
36. Select soldering equipment and tools.
37. Prepare metals for soldering.
38. Identify hand metal working tools by types and sizes.
39. Determine tap and drill sizes.
40. Select files and saw blades.
41. Read metal working plans and prints.
42. Identify metal alloys and their strength.
43. Identify and select power shears, benders, brakes and saws.
44. Calculate materials costs.
45. Identify pipe, valves and fittings by type.
46. Select pipe threading and cutting tools.
47. Select types of pipe and tubing.
48. Calculate lengths of pipe.
49. Application of dissimilar plumbing materials.
50. Select pipe sizes to meet pressure and flow requirements.
51. Select valves and controllers for turf and drip irrigation systems.
52. Identify and select pipe sealants.
53. Identify characteristics and applications of fiberglass and plastic.
54. Identify types of damage that can occur to fiberglass and plastic.
55. Identify repair procedures and techniques.
56. Select repair material needed for specific jobs.
57. Identify the appropriate tools to use when welding plastics.
58. Identify the types and properties of plastics.

**Skills**

1. Check and adjust driveline components.
2. Adjust equipment hitches and drives.
3. Install, adjust and service belt and chair drives.
4. Select and use test equipment including meters, tachometers and timing devices to determine proper machine operation.
5. Adjust and/or calibrate chemical application, seeding, fertilizing, harvesting, processing and materials handling machinery.
6. Operate, test, and maintain machine systems.
7. Install, adjust and evaluate machine systems.
8. Inflate tires to proper air pressure to carry the heaviest load.
9. Adjust equipment to field and crop condition.
10. Identify different types of metal.
11. Lay out and prepare metal for arc welding.
12. Start up, shut down and secure equipment.
13. Weld basic joints in all positions.
15. Prepare for and apply hard surfacing alloys.
16. Adjust machines for various metals, joints and thicknesses.
17. Start up, shut down and secure welding equipment.
18. Light and adjust the torch flame for specific welding or cutting operations.
19. Lay out and prepare metal for welding or cutting.
20. Fuse and braze welding basic joints on mild steel and cast iron.
21. Cut mild steel, including pipe, all shapes.
22. Join steel pipe, tubing or shapes by welding.
23. Estimate and calculate welding materials costs.
25. Identify the type of metals used in agricultural instruction.
27. Prepare grinding and sharpening equipment.
28. Recondition hand tools such as hammers, twist drills, chisels, punches and screwdrivers.
29. Recondition keen edge wood cutting tools.
30. Recondition keen edge metal cutting tools.
31. Recondition chain saw, horticultural and turf cutting tools.
32. Recondition rotary lawn mower blades.
33. Adjust bed knife on reel mowers.
34. Solder copper joints and sheet metal.
35. Solder electrical connections.
36. Join metals with appropriate fasteners.
37. Cut threads with taps and dies.
38. Lay out and drill holes with twist drill.
39. Operate power tools such as nibblers, drills and saws.
40. Operate hand tools such as saws and files.
41. Bend sheet and strap steel to angles or shapes.
42. Repair damaged threads.
43. Select appropriate metals for projects (strength).
44. Shape hot and cold metals using power shears, benders, brakes and saws.
45. Cut and assemble plastic pipe.
46. Cut, thread and assemble steel pipe.
47. Connect flare and compression fittings.
48. Solder copper fittings and tubing.
49. Assemble dissimilar plumbing materials.
50. Program timers - install valves and wire timers.
51. Select tools and materials for specific repair jobs.
52. Repair structural or cosmetic damage using proper materials.
53. Select and use appropriate safety equipment.
54. Fuse plastic parts using plastic welding processes.
55. Construct plastic projects.
56. Compile thermoplastic welds.
57. Weld plastic using hot air method.
58. Identify the types of plastics to be welded.
59. Describe the methods of welding plastics.
60. Select and use plastic welding equipment.
61. Identify weldable plastic by burn tests.
62. Weld plastics using the basic weld parts.

**Environment/Natural Resources Systems Competencies**

- **Problem Solving**

1. Identify environmental problems in livestock and crop handling and processing buildings.
2. Read and interpret maps including conservation, land use, soils, topographic, aerial and remote sensing, and geological surveys.
3. Describe principles involved in appropriate conservation and/or land use planning.
4. Read legal land descriptions.
5. Determine land areas.
6. Identify the types and parts of leveling instruments.
7. Determine the difference in elevation of two or more points.
8. Determine cuts, fills, cut/fill ratios and volumes.
9. Describe the characteristics of a profile leveling plot.
10. Identify water quality factors for aquaculture.
11. Read and interpret a topographic map.
12. Select terracing and diversions for water and soil conservation.
13. Describe strip-cropping principles.
14. Select water management techniques including grassed waterways, parallel terrace outlets, tile outlet systems and erosion control structures.
15. Determine types of vegetative cover and mulch for erosion stabilization.
16. Determine and select appropriate cultural tillage or mechanical practices of equipment for specific soil type and residue management.
17. Compare effects of traffic patterns on soil compaction.
18. Calculate soil loss using universal equations and determine effects of the components of the equations.
19. Determine practices to improve or maintain water quality and recharge.
20. Determine appropriate types, locations and uses of erosion and sedimentation control basins.
21. Determine appropriate types, locations and uses of water impoundment structures.
22. Describe surface and subsurface drainage and irrigation techniques.
23. Calculate subsurface drainage and irrigation requirements.
24. Determine if drainage or irrigation is economically and physically feasible.
25. Identify appropriate drainage systems including natural, open drainage, closed gravity and pumping systems.
26. Determine land shaping and grading requirements.
27. Determine economics of alternative systems.
28. Determine water needs.
29. Select irrigation systems for specific conditions.
30. Select irrigation equipment and techniques.
31. Determine soil moisture and temperature.
32. Select surface and subsurface irrigation systems for specific application.
33. Identify and select fittings for irrigation systems.
34. Identify size system components.
35. Determine power requirements and pump size for specific applications.
36. Make water management choices.
37. Make water management choices.
38. Understand water quality impacted by drainage and irrigation.
39. Understand pressure, flow and head.
40. Select pumps and power sources and compare efficiencies.
41. Interpret pump characteristics curves.
42. Determine appropriate waste disposal methods.

- **Skills**

1. Set up and level the surveying instrument.
2. Take rod readings.
3. Measure distance with tape and/or instruments.
4. Lay out corners using instruments.
5. Determine direction by use of a compass.
6. Record field notes for differential, profile and topographic leveling.
7. Lay out contour lines.
8. Lay out grade stakes for cut/fills.
9. Determine soil types and selecting appropriate structures or practices.
10. Use automatic leveling and laser equipment.
11. Use water testing equipment.
12. Lay out and mapping contour lines.
15. Measure cross-sectional areas of a grass waterway, drainage ditch and earthen embankment.
16. Determine field slope and length.
17. Identify soil limitations and determine the effects on land use.
18. Use maps to make selection and determine location of conservation practices or land use changes.
19. Assemble turf irrigation equipment.
20. Determine soil moisture.
22. Determine and compare evaporation losses.
23. Install drainage systems or components.
24. Determine cuts, fills and grade lines.
25. Lay out contour ditches, basins, borders, contour levees, furrow and corrugation systems for irrigation.
26. Determine proper waste disposal procedures.
27. Lay out and assemble solid-set, lateral move, center-pivot and traveling gun irrigation systems and components.
28. Lay out and assemble trickle and drip irrigation systems or components including mainlines, lateral lines, control devices, valves, pressure regulators, gauges and filters.
29. Select and install components of irrigation systems for specific applications.
30. Calculate well capacity and demand.
31. Determine delivery rates of pumps.
32. Select pumps and power units.
33. Calculate chemical injection rates.
34. Determine percent of slope or grade.

**Structures Systems Competencies**

- **Problem Solving**

1. Select and evaluate building sites.
2. Determine the size, specifications and layout of building.
3. Select appropriate framing, siding, roofing, insulation and vapor barrier materials.
4. Develop a bill of materials.
5. Interpret plans and working drawings.
6. Identify structural components of buildings.
7. Select preservatives for building materials.
8. Evaluate building construction techniques.
9. Select hand, electric and pneumatic tools.
10. Estimate handling materials, cost and construction time.
12. Identify and select materials for concrete form construction.
13. Determine quantity and cost of materials for concrete and masonry jobs.
15. Select materials for concrete and masonry construction.
17. Identify procedures for mixing and placing concrete in cold or hot weather.
18. Identify materials and techniques to reinforce concrete and masonry construction.
19. Identify techniques for placing, finishing and curing concrete and masonry units.
20. Identify concrete additives to increase strength and reduce cracking.
21. Identify concrete additives to control hydration rate.
22. Identify and select masonry materials.
23. Describe and select masonry mortar.
24. Identify and select tools and equipment for concrete and masonry construction.
25. Interpret lumber and manufactured wood product grade stamps.
26. Determine ventilation air inlet size based on exhaust fan capacity.
27. Identify alternative construction styles (stud frame, post frame, rigid arch and stressed skin).
28. Identify structural components for each alternative construction style.
29. Specify materials for the construction of wood foundation systems.
30. Develop plans for selected enterprises.
31. Calculate and compare the installation and maintenance costs of crushed rock and concrete materials in the construction of feedlot surfaces.
32. Determine size and quality of aggregates and materials.
33. Select portions and prepare a trial mix.
34. Calculate masonry units needed for a given application.
35. Use traditional, electronic and laser tools in concrete and masonry construction.
36. Evaluate building systems and construction practices based on standards provided in one of the following model building codes: UBC, BOCA or SBC.
37. Specify and plan windbreak structures for livestock protection and reduction of snow accumulation in feedlot and farmstead drive areas.

Skills

1. Lay out a building foundation.
2. Identify, select and apply construction fasteners.
3. Use and maintain hand, electric and pneumatic tools and measuring instruments for building construction.
4. Construct buildings or building components.
5. Lay out and cut structural components.
6. Construct trusses with different building materials.
7. Install composition shingles, metal and fiberglass roofing materials.
8. Apply paint and other finishing materials.
10. Construct forms.
11. Calculate a concrete or mortar mix.
12. Determine moisture content in and.
13. Mix concrete or mortar on the job site.
15. Place concrete or masonry reinforcement.
16. Lay out and make isolation, control and construction joints.
17. Group place, consolidate, finish and cure concrete.
18. Place and finish concrete masonry units.
19. Produce special finishes on concrete.
20. Use and maintain concrete and masonry tools and equipment.
21. Calculate types and amount of concrete or mortar mix for a job.
22. Adjust ventilation air inlet openings.
23. Fabricate and install reinforcing steel bar and welded wire mesh.
24. Specify and use admixtures that entrain air, retard set, reduce water requirements and/or improve concrete mix workability in concrete mixes.
25. Set up manufactured form systems for poured-in-place foundation walls.
26. Select and apply appropriate framing, siding, roofing, insulation and vapor barrier materials.

REFERENCES

The primary goal of the National FFA Agricultural Mechanics Career Development Event is to promote quality agricultural mechanics instructional programs in agricultural education. The following list contains books and manuals that are useful for event preparation. Test questions will be generic in nature and found in several specific sources. It is the goal of the national event committee to reflect mechanization and technological practices in the agricultural production and processing industry. Additional materials may be obtained from the listed publishers.

FOS & FMO. John Deere.

Mechanics in Agriculture. Interstate.


Practical Farm Buildings. Interstate.

Agricultural Structures, Volumes I and II. UMC-IML.


Briggs & Stratton Service and Repair Instructions. Briggs & Stratton Corp.

Introduction to Agricultural Engineering. Van Nostrand Reinhold.

Modern Residential Wiring. Goodheart-Wilcox.


Elementary Soil and Water Engineering. John Wiley and Sons.

Physical Science Applications in Agriculture. Interstate.

Mechanical Technology in Agriculture. Interstate.

Agricultural Electrification. South-Western.


Electric Motors. Hobar.

Welding and Fabrication Data Book. Penton Publishing.

Farm and Home Concrete Handbook. MWPS.

PUBLISHERS

AAVIM, 220 Smithonia Road, Winterville, GA 30683

Ag. Education Department, College of Agriculture, Forbes Bldg., Rm. 224, University of Arizona, Tucson, AZ 85721-0036

American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085

American Technical Publishers, Inc., 12235 S. Laramie Ave., Alsip, IL 60658

The AVI Publishing Co., Inc., P.O. Box 831, Westfork, CT 06881

Briggs-Stratton Corporation, P.O. Box 702, Milwaukee, WI 53201

CIMA (Curriculum & Instructional Materials Center of Oklahoma Department of Education), 1500 W. 7th Ave., Stillwater, OK 74074-4364

Delmar Publishers, Inc., 2 Computer Drive West, Box 15-015, Albany, NY 12212-9985
Engine Service Association (ESA), 701 N. Plankinton Ave., Suite 333, Milwaukee, WI 53203

Glencoe Publishing Company, 17337 Ventura Boulevard, Encino, CA 96316

Goodheart-Wilcox, 123 West Taft Drive, South Holland, IL 60473

Harper & Row Publishers, 10 East 53rd. St., New York, NY 10222

Hobar Publishers, 1234 Tiller Lane, St. Paul, MN 55112

IMS (Instructional Materials Service), FE Box 6601, Texas A&M University, College Station, TX 77843-2588

Interstate Printers and Publishers, P.O. Box 50, Danville, IL 61832-0050

Iowa State University Press, 2121 S. State Ave., Ames, IA 50010

John Deere Service Training, John Deere Road, Dept. 150, Moline, IL 61265-8098

John Wiley and Sons, P.O. Box 6793, Somerset, NJ 08873-9977

MAVCC (Multistate Academic & Vocational curriculum Consortium). 1500 W. 7th Ave., Stillwater, OK 74074-4364

McGraw-Hill Book Company, 1221 Avenue of the Americas, New York, NY 10020

McKnight Publishing Co., Box 2854, Bloomington, IL 61701

Midwest Plan Service (MWPS), 122 Davidson Hall, Iowa State University, Ames, IA 50011

National Fire Protection Association (NFPA), Batterymark Park, Quincy, MA 02269

National Food and Energy Council, 409 Vandiver West-Suite 202, Columbia, MO 65202

The Ohio State University, Ohio Ag. Ed. Curriculum Materials Service, 2120 Fyffe Road, Columbus, OH 43210

Penton Publishing, 1100 Superior Ave., Cleveland, OH 44197-8112

Reston Publishing Company, Aprentice-Hall Company, Reston, VA 22090

South-Western Publishing Company, 5101 Madison Road, Cincinnati, OH 45227

Stanley Tool Company, 600 Myrtle Service, New Britain, CT 06050

University of Missouri-Columbia-IML, 10 Industrial Ed. Bldg., Columbia, MO 65211

Van Nostrand Reinhold, 115 Fifth Ave., New York, NY 10003

Vocational Agriculture Service, College of Agriculture, University of Illinois, 1401 S. Maryland Drive, Urbana, IL 61801
PURPOSE

The marketing of agricultural products is a key to profitability in today's competitive economy. Agricultural sales play a major role in the marketing process. Through this event, students will have the opportunity to prepare for careers in sales by participating in a wide range of activities oriented around the total sales process.

TEAM MAKE-UP

The event is a team event consisting of four students. A team may compete with less than four students. All students’ scores (maximum of 4) count towards the team total.

I. OBJECTIVES

B. Understand and demonstrate the professional sales process in agribusiness.
   1. Preparing to sell
      a. Targeting customers
      b. Customer buying motives
      c. Product information

C. Developing sales skills
   1. Approaching the customer
   2. Determining customer needs wants
   3. Planning a feature-benefit sales presentation
   4. Making a feature-benefit sales presentation
   5. Handling customer objections
   6. Closing the sale
   7. Suggestion selling and reassurance

D. Develop the ability to build customer confidence in you and your product.
   1. Dealing with typical customer problems:
      a. Return of merchandise
      b. Defective merchandise
      c. Lack of understanding in use of merchandise
   2. Determine customer complaints
   3. Determine basis for complaint
   4. Determine proper course of action to resolve the issue

Develop abilities to utilize knowledge of advertising and promotion in agricultural sales.
   1. Value of promotion in agriculture
   2. Use of advertising in agribusiness
   3. Role of different types of advertising media
   4. Design agribusiness displays
   5. Construct agribusiness displays
   6. Maintain and increase the effectiveness of agribusiness displays
   7. Develop written and illustrated messages using broadcast media
E. Utilize market research data to establish goals for sales campaigns and to target prospective customers.
   1. Analyze market research data for a given product and area (i.e. prior sales, potential clientele, competition)
   2. Relate market research data to the development of annual measurable marketing goals
   3. Understand the "life cycle" of a product
   4. Write measurable marketing goals
   5. Identify appropriate activities for a market area sales force based on performance

 Develop the ability to research sales careers and strategies for employment.

F. Demonstrate the ability to successfully interview for an agricultural sales position.
   1. Grooming
   2. Dress
   3. Poise
   4. Attitude
   5. Knowledge related to product

G. Identify career options in agricultural sales and determine specific entry requirements

COMPETENCIES

PS 1, 4
-Demonstrate human relation skills, market analysis skills, and advertisement skills.
-Utilize interpersonal communication skills
-Demonstrate the professional sales process in agribusiness.

II. EVENT FORMAT

The model agricultural sales event will consist of four parts: an objective test, oral sales presentation, market analysis and practicums. The event will be a team event consisting of four students. All team members will participate in the test and sales presentation components of the event. Using the team approach, each team competes as a group in the market analysis. Four practicums (Customer Relations, Telephone Skills, Product Display, and Advertising and Promotion) will be conducted each year. The event will consist of 200 total possible points per team member (test-50 points, sales presentation-100 points and practicum -50 points) and a team practicum of market analysis 50 points, for a total team score of 850 points.

Should a tie occur in the individual or team scores, the tie will be broken by the highest sales presentation score. If the tie cannot be broken using the sales presentation score, the highest written test score will be used. If a tie stiff exists, the highest practicum score will be used to break the tie.

PART I- SALES PRESENTATION

A. All participants will conduct a sales presentation.
B. Official FFA dress is required.
C. The participant will select an agricultural product representing one of the seven instructional areas:
   1. Agricultural Mechanics
   2. Agricultural Production
   3. Agricultural Products and Processing
4. Agricultural Supplies and Services
5. Forestry
6. Natural Resources and Rural Recreation
7. Ornamental Horticulture

D. Each participant will provide a copy of all written/brochure information used in preparation.

E. Each participant will provide three copies of the project summary sheet (see F) to the event coordinator at the event site.

F. Guidelines for the project summary sheet (typed and double spaced):
   1. Participant's name
   2. Statement of situation, circumstances locations, etc.
   3. Representation (company/chapter)
   4. Product to be sold
   5. Features of the product
   6. Product structure
   7. Warranty
   8. Service availability
   9. Demonstration of function
   10. Competitors and pertinent information
   11. Price
   12. Closing statement or method

G. Each participant will be allowed 10 minutes for his or her presentation with a verbal time warning at 7 minutes. The presentation will conclude at 10 minutes. The 10-minute sales presentation will be interactive between the participant and the judge(s).

H. The event will operate with three sets of judges for every 15 teams. Each set of judges will consist of two qualified individuals. One judge will serve as the customer for all presentations. No two team members will be judged by the same set of judges.

I. Evaluation Criteria
   1. Pre-approach
      a. Project summary sheet
      b. Preparation for sale
      c. Product knowledge
   2. Approach
      a. First impressions
      b. Create customer attention
      c. Determine customer wants
      d. Establish rapport
   3. Demonstration
      a. Feature and related customer benefits
      b. Allow customer to participate
      c. Attempt trial closes
   4. Handling customer objections
      a. Identify customer objections
      b. Handle customer objections
5. Closing the sale
   a. Ask for the order
   b. Recognize closing opportunities

### Sales Presentation Scorecard

<table>
<thead>
<tr>
<th>Preapproach ........................................ 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Product Summary Sheet</td>
</tr>
<tr>
<td>➢ Preparation for Sale</td>
</tr>
<tr>
<td>➢ Product Knowledge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approach ............................................. 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ First Impression</td>
</tr>
<tr>
<td>➢ Create Customer Attention</td>
</tr>
<tr>
<td>➢ Determine Wants</td>
</tr>
<tr>
<td>➢ Establish Rapport</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demonstration ........................................ 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Feature and Customer Benefits</td>
</tr>
<tr>
<td>➢ Allow Customer to Participate</td>
</tr>
<tr>
<td>➢ Attempt Trial Closure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Objections .................................. 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Identify Customer Objections</td>
</tr>
<tr>
<td>➢ Handle Customer Objections</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Closure .............................................. 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Ask For The Order</td>
</tr>
<tr>
<td>➢ Recognize Closing Opportunities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Points ......................................... 100</th>
</tr>
</thead>
</table>

### PART II-OBJECTIVE TEST

The objective test of the agricultural sales career development event is designed to determine team members’ understanding of the professional sales process, the role that selling plays in the marketing of agricultural products and the knowledge possessed by students relative to the content areas of advertising and promotion, customer relations, product displays, telephone skills, market analysis, customer prospecting, job application and interviewing for a sales position.

A. Team members will work individually.

B. The test will consist of 50 multiple-choice questions, with 50 minutes allowed for completion of this section of the event.

C. Fifty points are allowed for this section of the event. One point per question.

D. The test will be based on the attached list of references found on "Agricultural Sales" page 7.

### PART III-MARKET ANALYSIS

The Market Analysis is a team activity. Using market data provided to the team and market data obtained through hypothetical market research methods, the team will create a realistic marketing plan. Team members work to demonstrate group dynamics, problem solving data analysis, decision making and oral and written communication skills.
Each team will receive a profile of an existing market situation for a product or company. It will include:

A. Product descriptions
B. Existing competition
C. Production capacity or product availability
D. Pricing
E. Description of present and/or potential retail outlets
F. Information about supply and demand
G. Transportation, distribution and storage information
H. Existing marketing problems

Time

Each team will have **one minute** to read over the market analysis problem they are given at the career development event. Each team will have **20 minutes to develop and present** its marketing plan to the panel of judges. Five minutes will be allowed to answer questions. Each participant (team member) must answer at least one question. Each team will turn in a hand-written marketing plan, limited to one page. Teams will be signaled at 15 minutes and again at 18 minutes. The presentation will be stopped at 20 minutes.

Evaluation Criteria

Each team will be evaluated on the five areas:

- Teamwork
- Analysis of the Information,
- Quality of Marketing Plan,
- Content, Presentation and Questions.

**Note:**
40% of the score is based on the teamwork evaluation and the team's ability to analyze the information; 20% is based on the quality of the marketing plan content 20% on the presentation; and 20% on the questions.

The most important part of the Market Analysis Team Activity is the team's ability to work together and develop a solution to the market problem. Make sure your team members speak up during the entire process so that the judges can hear what you are saying and how well your team is working together.

Evaluation Criteria

A. Teamwork Evaluation (10 points), 20%
   1. Leadership roles easily perceived
   2. Participation by each member of the team
3. Member responsibilities outlined and defined
4. Members demonstrated effective listening and communication skills
5. Demonstrated a wise use of time

B. Analysis of the Information (10 points), 20%
1. Clearly identified the problem
2. Market information and data is analyzed and utilized
3. Demonstrated the use of market research methods and data*
4. Possible solutions are discussed
5. Each solution is analyzed
6. Short-term and long-term goals are discussed:
   • Short-term goals: Within one year
   • Long-term goals: Beyond one year

C. Quality of the Marketing Plan Content (10 points) 20%
   **Suggested Format**
   1. Introduction
   2. Statement of the problem
   3. Analysis of market data
   4. Possible solutions identified
   5. Recommendations
      a. Short-term goals
      b. Long-term goals
   6. Are the goals measurable and pertinent to the market situation
   7. Summary

D. Presentation (10 points), 20%
1. Follows marketing plan
2. Over all delivery professional and well thought out
3. Presentation is clear and effective
4. A team members participated
5. Written plan neat and grammatically correct

E. Questions are Taken From: (10 points) 20%
1. Teamwork evaluation
2. Analysis of the information
3. Marketing plan content
4. Presentation

**Conducting a Market Analysis**

1. Carefully read the current market situation report or business profile given to you at the agricultural sales career development event.
2. Highlight or take notes of the key facts - the things you see that may be contributing to changes in the market situation.
3. Consider hypothetical market research data that your team could add to the current market information. It is assumed that this information would be obtained by conducting market research.

**Example Profile**
You are a member of a marketing team hired by Smith's Livestock Supply Company, a small livestock supply store doing business in a rural community. The team's job is to evaluate the current market situation and design a marketing plan to increase sales. For the past 20 years Smith's has been selling a wide range of livestock feeds for cattle, pigs, sheep, poultry and horses. Until 1993 the business was very profitable. But, since 1994 profits have been declining. The local community is becoming increasingly developed and fewer people raising livestock. However, the number of small hobby farms is increasing with this trend there has been a significant increase in the number of horse owners in the county. In addition a large feed retailer has opened a business in the area. This competitor specializes in selling major brand animal feeds at a discount. Research shows that the feeds being offered by the competitor are less expensive, but are of lower quality. The current market strategies also need to be reviewed. A marketing program with measurable impact is essential for the survival of Smith's Livestock Supply Co. Advise the owner of a plan of action. Include short-term and long-term goals. List alternatives and a final recommendation.

*Teams should include hypothetical research information in their marketing plan. This information will be created by the team and will be fictional. It should be part of the final marketing plan and presentation.

**Market Analysis Team Activity Scorecard**

<table>
<thead>
<tr>
<th>1. Teamwork Evaluation</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership roles perceived</td>
<td></td>
</tr>
<tr>
<td>Participation by all members</td>
<td></td>
</tr>
<tr>
<td>Members’ responsibilities outlined and defined</td>
<td></td>
</tr>
<tr>
<td>Demonstrated wise use of time</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Analysis of the Information</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly identified the problem</td>
<td></td>
</tr>
<tr>
<td>Market information and data analyzed and utilized</td>
<td></td>
</tr>
<tr>
<td>Demonstrated use of market research</td>
<td></td>
</tr>
<tr>
<td>Possible solutions analyzed</td>
<td></td>
</tr>
<tr>
<td>Each solution discussed</td>
<td></td>
</tr>
<tr>
<td>Short and Long term goals discussed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Quality of Marketing Plan Content</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>Statement of problem</td>
<td></td>
</tr>
<tr>
<td>Analysis of market data</td>
<td></td>
</tr>
<tr>
<td>Possible solutions identified</td>
<td></td>
</tr>
<tr>
<td>Recommendations</td>
<td></td>
</tr>
<tr>
<td>Short-term goals</td>
<td></td>
</tr>
<tr>
<td>Long-term goals</td>
<td></td>
</tr>
<tr>
<td>Are goals measurable</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Presentation</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Followed marketing plan</td>
<td></td>
</tr>
<tr>
<td>Delivery professional and well thought out</td>
<td></td>
</tr>
<tr>
<td>Presentation clear and effective</td>
<td></td>
</tr>
<tr>
<td>Written plan neat and grammatically correct</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Questions Are Taken from</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork evaluation</td>
<td></td>
</tr>
<tr>
<td>Analysis of the information</td>
<td></td>
</tr>
<tr>
<td>Marketing plan content</td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
</tr>
</tbody>
</table>

| Total Points                                         | 50 |
PART IV-PRACTICUMS

Each participant will complete one of four designated practicums in the event. Practicums to be conducted will follow the rotational schedule listed below. Each participant will be assigned the practicum by the team coach at the time of certification. All materials used in the practicums will be furnished at the event site. Each practicum will be worth a total of 50 points per team member.

- Customer Relations
- Telephone Skills
- Advertising and Promotion
- Product Display

Each of the practicums that participants will participate in will follow a theme rotational pattern.

- 1998 Animal Industry
- 1999 Crop Industry
- 2000 Natural Resources
- 2001 Horticulture Industry

Customer Relations Practicum

The event chairperson will select a scenario realistically portraying a customer relations problem that may occur in agricultural sales. The participant will be evaluated primarily on their sales and human relation skills, and secondly on their technical knowledge of the subject matter. The sales person (participant) will be provided with the company policy or philosophy concerning merchandise return and refunds prior to performing the practicum. It is possible the salesperson will have to develop a solution independently if the company policy does not specify one for the particular scenario. In this case the salesperson will be evaluated on their creativity, judgement and application of the philosophy of the company.

Types of problems that may be used are:
1. Return of defective merchandise sold
2. Lack of understanding in use of merchandise
3. Calming and regaining trust of a dissatisfied customer

The participant will enter a room where a customer is seated. Using the guidelines provided to the participant prior to entry into the room with sufficient time to read and prepare, the participant will attempt to work with the customer to determine the basis for the complaint and determine the proper course of action to resolve the issue.

Seven minutes will be allowed for the participant to determine their customer relations skills. There will be 5 1/2 minute warning. Two judges will be used, and their scores will be averaged. One judge will serve as the customer.
## Customer Relations Practicum Scorecard

**Possible points**

### Conversation

- Voice- tone, empathy, grammar
- Personality- pleasant, friendly

### Skills Information

- Was problem correctly identified
- Information provided to customer

### Diagnosis and Treatment

- Correct diagnosis of problem
- Correct treatment prescribed

### Closing

- Encourage sale of additional merchandise
- Ask for customer satisfaction and commitment

### Total points

- 50

---

**Telephone Skills Practicum**

Each participant will demonstrate his or her telephone skills in one of two exercises as selected by the event coordinator. The participant will have three to five minutes to complete the telephone call.

**A.** Receive a telephone call from a prospective or existing customer to be handled on an extemporaneous basis. Suggested calls might be:

1. From an interested prospect inquiring about the company's product
2. From a customer with a product complaint
3. From an existing customer interested in new or additional products

**B.** Place a telephone call to a customer or prospect. Preparation time of 10-12 minutes will be given to study the scenario before placing the call. Suggested scenarios would include:

1. Placing a cold call to qualify a prospect
2. Placing a call to an existing customer to check on product performance and build a Stronger customer relationship
3. Placing a call to an existing customer seeking referrals for new customers
### Telephone Practicum Scorecard

<table>
<thead>
<tr>
<th>Category</th>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Telephone Etiquette</strong></td>
<td>4</td>
</tr>
<tr>
<td>Polite</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td></td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>4</td>
</tr>
<tr>
<td>Identify yourself</td>
<td></td>
</tr>
<tr>
<td>Purpose of call</td>
<td></td>
</tr>
<tr>
<td><strong>Voice</strong></td>
<td>6</td>
</tr>
<tr>
<td>Tone</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
</tr>
<tr>
<td>Grammar</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude</strong></td>
<td>10</td>
</tr>
<tr>
<td>Pleasant</td>
<td></td>
</tr>
<tr>
<td>Friendly</td>
<td></td>
</tr>
<tr>
<td>Establish rapport</td>
<td></td>
</tr>
<tr>
<td><strong>Information Gathered</strong></td>
<td>10</td>
</tr>
<tr>
<td>Determine the problem</td>
<td></td>
</tr>
<tr>
<td>Clarify the problem</td>
<td></td>
</tr>
<tr>
<td><strong>Develop Solution</strong></td>
<td>10</td>
</tr>
<tr>
<td>Evidence of product knowledge</td>
<td></td>
</tr>
<tr>
<td>Overcome customer objectives</td>
<td></td>
</tr>
<tr>
<td><strong>Closing</strong></td>
<td>6</td>
</tr>
<tr>
<td>Get customer agreement</td>
<td></td>
</tr>
<tr>
<td>Review and closure</td>
<td></td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td>50</td>
</tr>
</tbody>
</table>

**Product Display Practicum**

The participant will set up a sales display of a product from one of the seven major instructional areas as chosen by the event coordinator. Simulated retail store display areas will be established for each participant along with the products to be displayed and all materials to establish the display. Students will have 20 minutes to set up a product display.
### Product Display Scorecard

**Possible Points**

**Sales Appeal**
- Color harmony ¾
- Sizes and shapes ¾
- Focal point ¾
- Design ¾
- Attractiveness ¾
- Creativity ¾
- Product faced ¾

**Central Theme**
- Organization (products with the same products) ¾

**Signs**
- Design ¾
- Pricing accuracy ¾
- Sign appeal ¾
- Product identification ¾

**Time Organization**

**Clean up**

**Total Points**

---

**Advertising and Promotion Practicum**

Participants will prepare an advertising campaign component (see below) or promotional material to support or set up a sales presentation. The participant will only use the materials provided, adhere to the guidelines and use the time allocated for preparation and presentation.

A. **Point-of-Purchase Advertising Sign** Use the furnished material to develop a sign to accompany an agricultural sales display. The participant will have 30 minutes to prepare this sign. **A warning will be given at 20 and 25 minutes.**

B. **Print Media: Newspaper or Magazine** Use the furnished material to prepare the "copy" and design the layout of an advertisement scheduled to appear in a designated newspaper or magazine. The participant will have 30 minutes to prepare this advertisement. **A warning will be given at 20 and 25 minutes.**

Participants should come prepared to participate in either sub-option, chosen by the event coordinator. All materials will be provided at the event site. The participant is responsible for assembly and presentation. In each sub-option, only the final product will be judged. At the designated time, final products will be collected or recorded on tape, judged and scored.
<table>
<thead>
<tr>
<th>Knowledge of Advertising</th>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Layout and Design</strong>....................................</td>
<td>10</td>
</tr>
<tr>
<td>Proper Advertising format</td>
<td></td>
</tr>
<tr>
<td>Headline</td>
<td></td>
</tr>
<tr>
<td>Sub headline</td>
<td></td>
</tr>
<tr>
<td>Body copy</td>
<td></td>
</tr>
<tr>
<td>Illustration</td>
<td></td>
</tr>
<tr>
<td><strong>Creativity</strong></td>
<td>12</td>
</tr>
<tr>
<td>Use of creative art</td>
<td></td>
</tr>
<tr>
<td>Use of creative terminology</td>
<td></td>
</tr>
<tr>
<td>Creative ad design</td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness of Ad/P.O.P. Sign</strong></td>
<td>12</td>
</tr>
<tr>
<td>Reaches the prospective customer</td>
<td></td>
</tr>
<tr>
<td>Clear message</td>
<td></td>
</tr>
<tr>
<td>Includes necessary product features</td>
<td></td>
</tr>
<tr>
<td>** Appropriateness**</td>
<td>8</td>
</tr>
<tr>
<td>Appropriate for target audience</td>
<td></td>
</tr>
<tr>
<td>Meets the needs of the product being promoted</td>
<td></td>
</tr>
<tr>
<td><strong>Neatness/Clarity</strong></td>
<td>8</td>
</tr>
<tr>
<td>Ad neatly laid out</td>
<td></td>
</tr>
<tr>
<td>Neat graphics</td>
<td></td>
</tr>
<tr>
<td>Neat copy</td>
<td></td>
</tr>
<tr>
<td>Clear and easy to understand message</td>
<td></td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td>50</td>
</tr>
</tbody>
</table>

**REFERENCES**

*Agricultural Sales*, Chris G. Yorke, ACRO Press, 1925 Main Street, Vancouver, WA 98660 (360) 693-9101

*Agribusiness Sales, Marketing and Management*, Ron Schneiderheinze, Christina Wood, Instructional Materials Laboratory, London Hall University of Missouri, Columbia, MO 65211 (1-800-669-2456 or 573-882-2883)


*Introduction to Agribusiness*, Seperich, Woolverton, Beierlein, Prentice Hall Career and Technology, 1994, Publisher's address. Englewood Ciffs, NJ 0 7632

CRISP Publications, 1200 Hamilton Court, Menlo Park CA 94 025-142 7 (1-800-4 42- 74 7) (FAX 650-323-5800)

Professional Selling, Rebecca L. Morgan ISBN 0-931961-42-4


Effective Sales Management, Tom Johnson ISBN 1-56052-031-0

Calming Upset Customers, Rebecca L. Morgan ISBN 1-56052-384-0


PURPOSE

The purpose of the State FFA Agriscience Fair CDE is to recognize high school students who are studying the application of scientific principles and emerging technologies in an agricultural enterprise.

As this event occurs as part of the Arizona FFA State Leadership Conference, all participants must be registered to attend the Conference.

TEAM MAKE-UP

Competition shall be open to all FFA members in grades 7-12. There shall be four divisions. Division I is open to individual members in grades 7-8-9. Division II is open to individuals in grades 10-11-12. Division III is open to teams of two individuals in grades 7-8-9 and Division IV is open to teams of two individuals in grades 10-11-12.

I. OBJECTIVE

- Provide students an opportunity to use the scientific process
- Provide students an opportunity to achieve local, state, and national recognition for their accomplishments in Agriscience
- Reinforce skills and principles learned in Agriscience programs
- Provide an opportunity for students to demonstrate and display Agriscience projects that are products of the Agriscience courses.

II. COMPETENCIES

PS 1 ABS 1, 10

- Demonstrate communication skills
- Demonstrate ability to use the scientific method
- Demonstrate appropriate use of tools in performing experiments and other scientific processes
- Demonstrate ability to interpret and use an evaluation instrument.

Arizona FFA Agriscience Fair Categories:

Biochemistry / Microbiology / Food Science
Biology of microorganisms – Bacteriology, virology, protozoology, fungi, bacterial genetics, yeast. This area also can include chemistry of life processes—molecular biology, molecular genetics, enzymes, photosynthesis, protein chemistry, food chemistry, hormones, etc.

EXAMPLES:
- Compare different yeast fermentation techniques for converting sugars to alcohol.
- Research resistance of organic fruits to common diseases.
- Examine techniques for controlling molds on bakery products.

Environmental Sciences
Study of pollution (air, water, and land) sources and their control; ecology.
EXAMPLES:

- Study effect of agricultural chemicals on water quality.
- Compare water movements through different soil types.
- Examine effects of cropping practices on wildlife populations.
- Compare different irrigation systems for energy efficiency.
- Research uniform water quality.

**Zoology (Animal Science)**

Study of animals -- animal genetics, ornithology, ichthyology, entomology, animal ecology, paleontology, cellular physiology, animal husbandry, cytology, histology, animal physiology, invertebrate neurophysiology, studies of invertebrates, etc.

EXAMPLES:

- Compare effects of different thawing temperatures on livestock semen.
- Compare effects of different nutrient levels on animal growth
- Study effects of growth hormones on meat and mild production.
- Research new disease control mechanisms.
- Examine effects of estrous synchronization on ovulation.

**Botany (Plant / Soil Science)**

Study of plant life – agronomy, horticulture, forestry, plant taxonomy, plant physiology, plant pathology, plant genetics, hydroponics, algae, etc.

EXAMPLES:

- Study effects of lunar climate and soil conditions on plant growth.
- Examine effect of substrate particle size on shiitake mushroom growth.
- Research effects of heavy metals such as cadmium on edible plants.
- Compare plant growth using hydroponics and conventional methods.
- Study effects of ultraviolet light on soil microbes.

**Engineering (Mechanical / Agricultural Engineering Science)**

Technology; projects that directly apply scientific principles to manufacturing and practical uses – mechanical, chemical, electrical, environmental engineering, etc.

EXAMPLES:

**JUDGING**

Judges evaluate

1. How well a student followed the scientific method.
2. The detail and accuracy of the research data book.
3. Whether tools / equipment were used in the best possible way.

Judges look for well thought-out research. The look at how significant the project is in the field, as well as how thorough the research is. Was something left out? Were four experiments started and only three finished?

Judges applaud those students who speak freely and confidently about their work. They are not interested in memorized speeches – they simply want to talk about the research to see if the competitor(s) have a good grasp of the project from start to finish. Besides asking the obvious questions judges often ask questions to test insight in the project such as “What wasn’t done?” and “What would be the next step?”. 
Awards
Twenty winners, one from each Agriscience area in each of the four divisions, maybe selected at the state level to compete at the national level.

State Level:
Twenty winners, one from each of the Agriscience areas in each division, may be selected annually from each state FFA association. Each of those winners may then participate in the appropriate area on the national level. States will receive certificates for winners.

GENERAL RULES

1. There shall be five categories as identified on the previous page.
2. There shall be awarded overall division winners. The division winners shall be selected from the five categories winners.
3. Each individual student or team may enter only one project.
4. Exhibit projects and research papers shall be the result of the student’s own efforts.
5. If an exhibit becomes unsafe or unsuitable for display during the fair, it will be removed and deemed ineligible for any awards.
6. Projects which involve vertebrate animal subjects must conform with the following statement: Experiments on live animals involving, the removal of parts, injection of harmful chemicals or exposure to harmful environments are not acceptable at the State FFA Agriscience Fair.
7. Live vertebrates are not permitted at the Agriscience Fair.
8. Lasers shall not be used in any exhibit.
9. No exhibit shall have open flames. Any part of an exhibit that can get hotter than 100 degrees Celsius (boiling water temperature) must be adequately protected from its surroundings.
10. If an exhibit includes electrical wiring or devices, they must be safe. Special precautions must be taken for wiring carrying more than 20 volts (see number 12 below). All connections must be secure and provide suitable protection against short circuits.
11. All wiring more than 20 volts must be insulated. Connections must be either soldered or secured by UL approved fasteners. The wire used must be insulated adequately for the maximum voltage that will be present and the wire must be of sufficient size to carry the maximum anticipated current. Open knife switches or doorbell-type push buttons may not be used in circuits using more than 20 volts.
12. If the exhibit will be connected to 120 volt AC power (plugged into a wall outlet), fuses or circuit breakers must be provided to protect not only the exhibit but also any other that may share the same sources of power. The power cord used must be UL approved for the voltage and current it will be carrying, and it must be at least 1.8 meters (6 feet) long.
13. Exhibits requiring voltage in excess of 20 volts AC are not allowed.
14. Dangerous and combustible materials are prohibited.
15. Toxic and hazardous chemicals are prohibited.
16. Each exhibit may consist of one or more panels of information and any objects the student wishes to display. The exhibit panels must be stable and free standing. The exhibit panels may be of poster board construction.
17. The official maximum size for a project is 48 inches wide by 30 inches deep (the distance from front to back) by 108 inches high (from floor to top), includes table if project is on table top).
18. All projects must have the following information attached to the upper right hand corner of the exhibit:
   - Name of person(s) responsible for developing project.
   - Chapter name.
   - Category name entered
   - Division entered (I, II, III, or IV)
19. Each category winner will be required to meet with the judges to explain the project. Explanation and questions may not exceed five minutes.
20. The State FFA Agriscience Fair will be held in conjunction with the State Leadership Conference.
21. All Agriscience Fair participants must be registered participants of the State Leadership Conference and must be members in good standing with the State FFA Association.
PURPOSE

To create interest and promote understanding in agronomy by providing opportunities for recognition through the demonstration of skills and proficiencies.

TEAM MAKE-UP

Team size shall be four members. The team score shall consist of four individual scores. The students composite score from Soils, Entomology and Field Crop will be used in determined the individual scores for Agronomy.

OBJECTIVES

1. To demonstrate basic knowledge of agronomic sciences.
2. To explore career opportunities, skills and proficiencies in the agronomy industry.
3. To determine the ability to identify agronomic:
   • Crops
   • Weeds
   • Seeds
   • Insects
   • Diseases
   • Plant Nutrient Deficiencies
   • Plant Disorders
   • Crop Grading and Pricing
4. To evaluate a scenario and develop a crop management plan including crop selection, production and marketing.
5. To demonstrate understanding of sustainable agriculture and environmental stewardship through the use of Integrated Pest Management and Best Management Practices.

COMPETENCIES

A. Classify common Arizona insects according to the mouth parts, types of metamorphosis, scientific classification, feeding behaviors and foods.
B. Select appropriate insect sampling method and determine when insect control is economically necessary.
C. Describe methods of applying cultural, biological and chemical controls to common Arizona insects.
D. Classify plant according to life cycle, structure and use.
E. Properly plant a crop on a prepared seedbed.
F. Recognized water requirements and identify methods of irrigation.
G. Describe approved weed control measures.
H. Recognize major plant diseases of Arizona, their causes and controls.
I. Explain the formation and function of a soil and identify its suitability or potential for different land uses.
J. Sample soils and interpret soil tests to determine the chemical and physical properties.
K. Recognize the different ways soils can be degraded, such as soil erosion, pollution, etc. and explain how these soils could be “remediated.”

GENERAL RULES

A. **It is highly recommended that participants be in official FFA dress in each event.**
B. Under no circumstances will any participant be allowed to handle any of the items in the identification portion of the practicums. Any infractions of this rule will be sufficient to eliminate a team from the event.
C. Written Material: All written material will be furnished for the event. No written materials such as tests, problems and worksheets shall be removed from the site.
D. All general rules will apply to this event.

E. The event will include participation in the State CDE’s of Entomology, Field Crop and Soil.

EVENT FORMAT

Please refer to the Arizona Association FFA CDE Manual for Entomology, Field Crop and Soil for the appropriate event rules.

IMPORTANT NOTE: *Please thoroughly read the Introduction Section at the beginning of this handbook for complete rules and procedures that are relevant to all State FFA Career Development Events.*
## WEED IDENTIFICATION:

<table>
<thead>
<tr>
<th>COMMON NAME</th>
<th>SCIENTIFIC NAME</th>
<th>Pg</th>
<th>LIFE CYCLE</th>
<th>LEAF TYPE</th>
<th>GROWTH HABIT</th>
<th>METHOD OF PROPAGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnyard Grass</td>
<td>Echinochloa crus-galli</td>
<td>446</td>
<td>Annual (S)</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Black Nightshade</td>
<td>Solanum nigrum</td>
<td>574</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Broadleaf Plainain</td>
<td>Plantago major</td>
<td>404</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Buckhorn Plainain</td>
<td>Plantago lanceolata</td>
<td>402</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Bull Thistle</td>
<td>Cirsium vulgare</td>
<td>118</td>
<td>Biennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Canada Thistle</td>
<td>Cirsium arvense</td>
<td>108</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Roots</td>
</tr>
<tr>
<td>Cheat Grass</td>
<td>Bromus tectorum</td>
<td>433</td>
<td>Annual (W)</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Chick Weed</td>
<td>Stellaria media</td>
<td>264</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Stems</td>
</tr>
<tr>
<td>Cocklebur</td>
<td>Xanthium strumarium</td>
<td>194</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Mallow</td>
<td>Malva neglecta</td>
<td>388</td>
<td>Perennial</td>
<td>Broad</td>
<td>Low Spreading</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Milkweed</td>
<td>Asclepias speciosa</td>
<td>38</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Mullein</td>
<td>Verbascum thapsus</td>
<td>552</td>
<td>Biennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Purslane</td>
<td>Portulaca oleracea</td>
<td>522</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Ragweed</td>
<td>Ambrosia artemisiifolia</td>
<td>46</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Sunflower</td>
<td>Helianthus annuus</td>
<td>134</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>Digitaria sanguinalis</td>
<td>440</td>
<td>Annual (S)</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Curly Dock</td>
<td>Rumex crispus</td>
<td>514</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Dandelion</td>
<td>Taraxacum officinale</td>
<td>186</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Root Crown</td>
</tr>
<tr>
<td>Dodder</td>
<td>Cuscuta Campestris</td>
<td>286</td>
<td>Annual (S)</td>
<td>Scales</td>
<td>Vine</td>
<td>Seed</td>
</tr>
<tr>
<td>Dog Fennel (Mayweed)</td>
<td>Anthemis cotula</td>
<td>54</td>
<td>Annual (S)</td>
<td>Narrow Divided</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Field Bindweed</td>
<td>Convolvulus arvensis</td>
<td>284</td>
<td>Perennial</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed, Roots</td>
</tr>
<tr>
<td>Field Pennycress</td>
<td>Thlaspi arvense</td>
<td>240</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Green Foxtail</td>
<td>Setaria spp</td>
<td>490</td>
<td>Annual (S)</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Giant Bermuda</td>
<td>Cynodon dactylon</td>
<td>436</td>
<td>Perennial</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed, Rhizomes, stolons</td>
</tr>
<tr>
<td>Ground Cherry</td>
<td>Physalis wrightii</td>
<td>568</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Jimson Weed</td>
<td>Datura stramonium</td>
<td>562</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Johnson Grass</td>
<td>Sorghum halepense</td>
<td>494</td>
<td>Perennial</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed, Rhizomes</td>
</tr>
<tr>
<td>Knotweed</td>
<td>Polygonum aviculare</td>
<td>502</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed,</td>
</tr>
<tr>
<td>Lambquarter</td>
<td>Chenopodium berlandieri</td>
<td>268</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Leafy Spurge</td>
<td>Euphorbia esula</td>
<td>316</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Roots</td>
</tr>
<tr>
<td>Morning Glory</td>
<td>Ipomoea spp</td>
<td>290</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Vine</td>
<td>Seed</td>
</tr>
<tr>
<td>Nettle (horse)</td>
<td>Solanum elaeagnifolium</td>
<td>572</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Rhizomes</td>
</tr>
<tr>
<td>Nutsedge (yellow)</td>
<td>Cyperus esculentus</td>
<td>298</td>
<td>Perennial</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed, Rootstock, rootlets</td>
</tr>
<tr>
<td>Prickly Lettuce</td>
<td>Lactuca serriola</td>
<td>152</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Puncturevine</td>
<td>Tribulus terrestris</td>
<td>600</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Redroot Pigweed</td>
<td>Amaranthus retroflexus</td>
<td>12</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erectg</td>
<td>Seed</td>
</tr>
<tr>
<td>Russian Thistle</td>
<td>Salsola kali</td>
<td>276</td>
<td>Annual (S)</td>
<td>Narrow</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Sandbur</td>
<td>Cenchrus longispinus</td>
<td>434</td>
<td>Annual (S)</td>
<td>Narrow Erect</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Shepherdspurse</td>
<td>Capsella bursa-pastoris</td>
<td>220</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Smartweed</td>
<td>Polygonum lapathifolium</td>
<td>510</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Sowthistle</td>
<td>Sonchus oleraceus</td>
<td>182</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>St. Johns Wart</td>
<td>Hypericum perforatum</td>
<td>280</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed, Runners</td>
</tr>
<tr>
<td>Tansy Mustard</td>
<td>Descurainia pinnata</td>
<td>226</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Wild Carrot</td>
<td>Daucus carota</td>
<td>24</td>
<td>Biennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Wild Mustard</td>
<td>Brassica kaber</td>
<td>212</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Wild Oats</td>
<td>Avena fatua</td>
<td>418</td>
<td>Annual (W)</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Wild Onion/Garlic</td>
<td>Allium vineale</td>
<td>374</td>
<td>Perennial</td>
<td>Narrow</td>
<td>Erect</td>
<td>Bulbs</td>
</tr>
</tbody>
</table>

Page numbers are from *Weeds of the West*. 

---

I-3
PURPOSE

The purpose of the aquaculture CDE is to promote the skills and knowledge of the aquaculture industry.

TEAM MAKE-UP

1. A team will consist of four members. All four scores will count in determining the team score

I. OBJECTIVES

To test the student's ability to:
A. use and understand aquaculture terms
B. identify important species in the aquaculture industry
C. recognize and use basic aquaculture equipment and instruments
D. correctly determine feeds and feeding rates
E. process fish according to industry standards

II. COMPETENCIES

AS 6, PS 14

A. Classify fish, shellfish, and crustacea in the aquaculture industry according to common and scientific names, warm/cold/salt water (habitat), feeding habits, and status (threatened, endangered or domesticated).
B. Cut, thread, and assemble common materials utilized in the aquaculture industry.
C. To test water for dissolved oxygen, pH, ammonia and tank inflow in liters per minute.
D. To weigh fish and determine the correct feeding amount for a given tank.
E. To clean, fillet and package a fish (tilapia, catfish or trout).
F. Describe and identify management practices, diseases, equipment, facilities and production methods in the aquaculture industry.

III. GENERAL RULES

A. A team will consist of four members. The team score will consist of the sum of all four participants’ individual scores. Ties will be broken from written exam score.

B. The event will consist of three parts: (a) written exam; (b) species identification exam; (c) practicums (one practicum for each team member).

C. Scoring will be as follows:
1. 50 question written exam **100 pts.** 30 minutes will be allowed for written exam. Questions for written exam will be taken from "Aquaculture" available from the Mid American Vocational Curriculum Consortium, Inc., 1500 West Seventh, Stillwater, Oklahoma 74074-4364.

2. Species identification **100 pts.** 30 minutes will be allowed for species identification. (20 species selected randomly from a list of 55, 1 pt. ea. for common name, scientific name, habitat, feeding habits, and status). Arizona Game and Fish Educational Resources, (contact Kelly Burgett, Environmental Education Administrative Assistant, 2221 W. Greenway Road, Phoenix, Arizona 85023, phone (602) 789-3220, also library references and internet are suggested.

3. Practicums (one per participant at 50 pts. each). Practicum should be selected in advance. Students will have 30 minutes to complete practicum. Practicums will consist of the following:
   a. Cutting, threading and assembling common materials used in the aquaculture industry. See detailed plans contained within.
   b. Preparing tilapia fillets and/or trout in the round. See attached score sheet.
   c. Testing of tank water for dissolved oxygen, pH, ammonia load, and liters per minute inflow. See attached score sheet.

4. Given three fish to weigh and a tank consisting of 400 fish, to determine the correct feeding amount based on a rate of 2% of biomass. See attached score sheet.
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brown Trout</td>
<td>Salmo trutta</td>
<td>Common</td>
</tr>
<tr>
<td>2. Brook Trout</td>
<td>Salvelinus fontinalis</td>
<td>Common</td>
</tr>
<tr>
<td>3. Smallmouth Bass</td>
<td>Micropterus dolomieni</td>
<td>Common</td>
</tr>
<tr>
<td>4. Northern Pike</td>
<td>Esox lucius</td>
<td>Common</td>
</tr>
<tr>
<td>5. Channel Catfish</td>
<td>Ictalurus punctatus</td>
<td>Domesticated</td>
</tr>
<tr>
<td>6. Apache Trout</td>
<td>Onchorhynchus apache</td>
<td>Threatened</td>
</tr>
<tr>
<td>7. Tilapia, mossambique</td>
<td>Oreochromis mossambicus</td>
<td></td>
</tr>
<tr>
<td>8. Black Crappie</td>
<td>Pomaxis nigromaculatus</td>
<td>Common</td>
</tr>
<tr>
<td>9. White Bass</td>
<td>Morone chrysops</td>
<td>Common</td>
</tr>
<tr>
<td>10. Yellow Bass</td>
<td>Morone mississippiensis</td>
<td>Common</td>
</tr>
<tr>
<td>11. Bluegill</td>
<td>Lepomis macrachirus</td>
<td>Common</td>
</tr>
<tr>
<td>12. Green Sunfish</td>
<td>Chaeonobryttus cyaneus</td>
<td>Common</td>
</tr>
<tr>
<td>13. Largemouth Bass</td>
<td>Micropterus salmoides</td>
<td>Common</td>
</tr>
<tr>
<td>14. Cutthroat Trout</td>
<td>Onchorhynchus clarki</td>
<td>Common</td>
</tr>
<tr>
<td>15. Rainbow Trout</td>
<td>Onchorhynchus mykiss</td>
<td>Common</td>
</tr>
<tr>
<td>16. Flathead Catfish</td>
<td>Pilodictus olivaris</td>
<td>Common</td>
</tr>
<tr>
<td>17. Striped Bass</td>
<td>Morone saxatilis</td>
<td>Domesticated</td>
</tr>
<tr>
<td>18. Wallyeye</td>
<td>Stizostedion vitreum</td>
<td>Common</td>
</tr>
<tr>
<td>19. Colorado Squawfish</td>
<td>Ptychocheilus lucius</td>
<td>Endangered</td>
</tr>
<tr>
<td>20. Virgin Chub</td>
<td>Gila seminuda</td>
<td>Endangered</td>
</tr>
<tr>
<td>21. Little Colorado Spinedace</td>
<td>Lepidomeda vittata</td>
<td>Threatened</td>
</tr>
<tr>
<td>22. Beautiful Shiner</td>
<td>Cyprinella formosa</td>
<td>Endangered</td>
</tr>
<tr>
<td>23. Sonora Chub</td>
<td>Gila ditaenia</td>
<td>Endangered</td>
</tr>
<tr>
<td>24. Loach Minnow</td>
<td>Rhinchychys cobitis</td>
<td>Threatened</td>
</tr>
<tr>
<td>25. Spikedace</td>
<td>Meda fulgida</td>
<td>Threatened</td>
</tr>
<tr>
<td>26. Desert Pupfish</td>
<td>Cyprinodon macularius</td>
<td>Endangered</td>
</tr>
<tr>
<td>27. Desert Sucker</td>
<td>Catostomus clarki</td>
<td>Common</td>
</tr>
<tr>
<td>28. Machete</td>
<td>Elops affinis</td>
<td>Common</td>
</tr>
<tr>
<td>29. Gila Trout</td>
<td>Onchorhynchus gilae</td>
<td>Endangered</td>
</tr>
<tr>
<td>30. Yaqui Catfish</td>
<td>Ictalurus pricei</td>
<td>Endangered</td>
</tr>
<tr>
<td>31. Striped Mullet</td>
<td>Mugil cephalus</td>
<td>Common</td>
</tr>
<tr>
<td>32. Gila Chub</td>
<td>Gila intermedia</td>
<td>Threatened</td>
</tr>
<tr>
<td>33. Roundtail Chub</td>
<td>Gila Robusta</td>
<td>Threatened</td>
</tr>
<tr>
<td>34. Bonytail</td>
<td>Gila elegans</td>
<td>Endangered</td>
</tr>
<tr>
<td>35. Little Colorado Sucker</td>
<td>Catostomus Sp.</td>
<td>Common</td>
</tr>
<tr>
<td>36. Flannelmouth Sucker</td>
<td>Catostomus latipinnis</td>
<td>Common</td>
</tr>
<tr>
<td>37. Yaqui Sucker</td>
<td>Catostomus bernardini</td>
<td>Endangered</td>
</tr>
<tr>
<td>38. Bluehead Sucker</td>
<td>Catostomus discobolus</td>
<td>Common</td>
</tr>
<tr>
<td>39. Humpback Chub</td>
<td>Gila cypha</td>
<td>Endangered</td>
</tr>
<tr>
<td>40. Razorback Sucker</td>
<td>Xyrauchen texanus</td>
<td>Endangered</td>
</tr>
<tr>
<td>41. Yaqui Chub</td>
<td>Gila purpurea</td>
<td>Endangered</td>
</tr>
<tr>
<td>42. Woundfin</td>
<td>Plagopterus argentissimus</td>
<td>Endangered</td>
</tr>
<tr>
<td>43. Gila Topminnow</td>
<td>Poeciliopsis o. occidentalis</td>
<td>Threatened</td>
</tr>
<tr>
<td>44. Yaqui Topminnow</td>
<td>Poeciliopsis o. sonoriensis</td>
<td>Endangered</td>
</tr>
<tr>
<td>45. Mexican Stoneroller</td>
<td>Campostoma ornatum</td>
<td>Endangered</td>
</tr>
<tr>
<td>46. Virgin Spinedace</td>
<td>Lepidomeda mollispinis</td>
<td>Endangered</td>
</tr>
<tr>
<td>47. Longfin Dace</td>
<td>Agosia chrysogaster</td>
<td>Common</td>
</tr>
<tr>
<td>48. Sonora Sucker</td>
<td>Catostomus insignis</td>
<td>Common</td>
</tr>
<tr>
<td>49. Crayfish, white</td>
<td>Cambarus diogenes</td>
<td>Common</td>
</tr>
<tr>
<td>50. Chinook Salmon</td>
<td>Onchorhynchus tshawytscha</td>
<td>Common</td>
</tr>
<tr>
<td>51. Zebra Danio</td>
<td>Brachydania relo</td>
<td>Common</td>
</tr>
<tr>
<td>52. Sailfin molly</td>
<td>Poecilia latipinna</td>
<td>Common</td>
</tr>
<tr>
<td>53. Nile Tilopia</td>
<td>Oreochromis niloticus</td>
<td>Domesticated</td>
</tr>
<tr>
<td></td>
<td>Common Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>54</td>
<td>Tiger Barb</td>
<td>Capoeta tetrazona</td>
</tr>
<tr>
<td>55</td>
<td>Guppy</td>
<td>Poecilia reticulata</td>
</tr>
<tr>
<td>56</td>
<td>Clown Loach</td>
<td>Botia macracantha</td>
</tr>
<tr>
<td>57</td>
<td>American Shad</td>
<td>Alosa sapidissima</td>
</tr>
<tr>
<td>58</td>
<td>Atlantic Salmon</td>
<td>Salmo Salar</td>
</tr>
<tr>
<td>59</td>
<td>Australian Blowfish</td>
<td>Torquigener pleuogramma</td>
</tr>
<tr>
<td>60</td>
<td>White Shrimp</td>
<td>Litopenaeus vannamei</td>
</tr>
<tr>
<td>61</td>
<td>Neon Tetra</td>
<td>Paracheirodon innesi</td>
</tr>
<tr>
<td>62</td>
<td>Paradise Fish</td>
<td>Macropodus operculus</td>
</tr>
<tr>
<td>63</td>
<td>Angelfish</td>
<td>Pterophyllum scalare</td>
</tr>
<tr>
<td>64</td>
<td>Goldfish</td>
<td>Carassius auratus</td>
</tr>
<tr>
<td>65</td>
<td>Red Swamp Crawfish</td>
<td>Procambarus clarki</td>
</tr>
</tbody>
</table>
**Practicum Test for Water Analysis**

Complete the following tests on the tank provided and record your answers on this sheet. You may use your own equipment or the equipment provided. Remember to adjust DO meters for Tucson altitude which is approximately 2500 feet. You have 30 minutes to complete the event.

<table>
<thead>
<tr>
<th>Test</th>
<th>Answer</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolved oxygen in ppm (10)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Ammonia Load in ppm (10)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td><strong>ph (10)</strong></td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>water inflow in liters per minute (10)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Proper knowledge of equipment (10)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>
PRACTICAL TEST -- DETERMINING FEED RATIO

DIRECTIONS:
In this activity, you will weigh fish and determine biomass in order to formulate a proper feed ration. Because feed is a high cost, it is important not to overfeed. Fish have a tendency to gorge themselves when overfed, causing a fatty fish and contributing to off flavors when eaten. Additionally, underfeeding will increase the length of production time. Care must be taken to produce a quality product with minimum costs.

STEPS:

STEP 1 -- Fill a one gallon bucket about half way with water and weigh it using the balance. Remember, if you use counter weights, you must add them to the total weight obtained.

STEP 2 -- Carefully remove 3 fish from a tank and place them in water. Add weight until the balance is centered. Record the new weight.

STEP 3 -- Return fish to water.

STEP 4 -- Plug numbers into formula and determine how much feed is needed per day.

FORMULA TO USE:

\[
0.025 \left( \frac{A+B+C}{3} \right) N = X
\]

.025 = the percentage of biomass we feed (2.5%). A+B+C = each individual weight of the fish. 3 the total number of fish weighed. N the total number of fish in the tank. X the amount of feed needed per day.

NOTE: This formula must be memorized prior to event. There is 50 points possible for this practicum (5 points for each step performed correctly and 25 points for the correct answer.) The breakdown is as follows:

Steps 1-4 performed correctly for up to 20 points. Formula used correctly for 5 points. Correct answer for 25 points.
Practical Test - Process and Package a Trout

Students Name_____________________________  Date____________________
Evaluator's Name___________________________  Attempt no._______________

PROCESS EVALUATION

(EVALUATOR NOTE: Place a check mark in the "Yes" or "No" blanks to designate whether or not the student has satisfactorily achieved each step in this procedure. All items listed under "Process Evaluation" must receive a "Yes" for the student to receive the 20 points for this practicum.)

The student:

Yes  No
1. Prepared ice bath.
2. Removes scales or skin as required.
3. Cleaned gut and gill cavities properly
4. Placed fish in ice bath.
5. Packaged weighed and labeled fish (date and weight).
6. Properly discarded waste and cleaned equipment.

Evaluator's comments:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

J-7
PRODUCT EVALUATION

(EVALUATOR NOTE: Rate the student on the following criteria by circling the appropriate numbers (See performance evaluation key below.) Add up the total numbers circled and enter the total score from this page in the space provided below.)

Criteria:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Complete</th>
<th>Acceptable</th>
<th>Poor</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrubbing and Gutting</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Product Preparation</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Packaging and Weighing</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

EVALUATOR’S COMMENTS:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

PERFORMANCE EVALUATION KEY

4 – Skilled
3 - Moderately skilled
2 – Limited skill
1 – Unskilled

Total Points from this page: __________

Add 20 only if all "Yes" boxes are checked on previous page: __________

Total score: __________
Practical Test - Fillet and Package a Tilapia

Students Name_____________________________  Date____________________
Evaluator's Name___________________________  Attempt no._______________

PROCESS EVALUATION

(EVALUATOR NOTE: Place a check mark in the "Yes" or "No" blanks to designate whether or not the student has satisfactorily achieved each step in this procedure. All items listed under "Process Evaluation" must receive a "Yes" for the student to receive the 20 points for this practicum.)

The student:                           Yes   No

1. Prepared ice bath.                 1.    ☐   ☐

2. Prepared fillets and trimmed.      2.    ☐   ☐


4. Placed fillets in air-free freezer bag  4.    ☐   ☐

5. Weighed and labeled fillets (Date and weight).  5.    ☐   ☐

6. Properly discarded waste and cleaned equipment.  6.    ☐   ☐

Evaluator's comments:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
PRODUCT EVALUATION

(EVALUATOR NOTE: Rate the student on the following criteria by, circling the appropriate numbers (See performance evaluation key below.) Add up the total numbers circled and enter the total score from this page in the space provided below.)

Criteria:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Complete</th>
<th>Acceptable</th>
<th>Poor</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Filet Preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Packaging and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

EVALUATOR'S COMMENTS:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

PERFORMANCE EVALUATION KEY

4 – Skilled
3 - Moderately skilled
2 – Limited skill
1 – Unskilled

Total Points from this page:__________

Add 20 only if all "Yes" boxes are checked on previous page: __________

Total score: __________
Purpose

The purpose for the chapter display CDE is for members to develop and apply the knowledge of their chapter to promote their chapter and local agricultural education program.

Team Make-up

This is a chapter event and does not have a set number for a team.

I. Objectives

A. Ability to produce a quality presentation about their chapter and its activities.

II. Competencies

A. Develop a chapter display of the year’s events.
B. Develop a working knowledge of the chapter and activities conducted.

III. Organization and Content

1. Displays must fit within the space allotted to a 3’ x 6’ table. There are no height limits—only the 3 x 6 floor space rule applies. Use of a table is optional.
2. Display must reflect activities of the chapter over the past 12 months.
3. There must be a chapter member, in official dress, present at the time of judging. Judging will take place Friday at 12:30 pm.
4. Chapter representatives should be ready to answer questions for the judges.
5. A panel of judges will determine the placings.
6. The top three exhibits will be recognized.
7. The first place chapter will receive one scholarship to the 2004 State FFA Alumni Leadership Camp. The Chapter Advisor(s) will determine how that scholarship will be used.
8. Second and third place displays will receive a certificate.
9. Displays must be removed by 8:30 AM, Saturday, June 19th.

The Department of Agricultural Education proudly announces the State Leadership Conference chapter display career development event. Participating chapters will set up their displays on Friday from 11:30 AM-12:30 PM. Displays will be set up in the lobby of the Forbes Building and will remain on exhibit until 7:30 AM on Saturday. All Arizona FFA Chapters are invited to bring one display to the event.
References

Registration must be postmarked by May 15. This is necessary to arrange for enough tables for the event. Send your registration to:
Dr. Billye Foster
Department of Agricultural Education
PO Box 210036
Tucson, Arizona 85721
FAX: 520-621-9889

CHAPTER DISPLAY SCORESHEET

__________________________ FFA

<table>
<thead>
<tr>
<th>Possible Score</th>
<th>Actual Score</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display reflects all chapter activities (over past 12 months)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Originality, creativity, overall appearance</strong></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Student(s) present during judging, in appropriate attire</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Students able to answer questions effectively</strong></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
PURPOSE

To develop the ability of beginning FFA members to conduct meetings effectively according to correct parliamentary procedure and to improve the leadership skills of members.

IV. COMPETENCIES (PS 1)

- Utilize communication and leadership skills
- Develop the ability to public speak
- Utilize written skills
- Utilize listening skills

V. ELIGIBILITY

A. This event is open only to Discovery and Greenhand students who are enrolled in a state approved agriculture education course during the current year and are of 7-9th grade standing. Discovery students may participate in the contest a maximum of three times: twice as a Discovery member, and once as Greenhand member.

B. Contestants must be active members of a chartered FFA chapter in good standing with the State Association and the National Organization.

VI. EVENT RULES

1. Each team will be composed of seven active members. Each team will be organized to have members acting as president, vice-president, secretary, treasurer, reporter, and sentinel. The seventh member will take the part of chapter advisor in the opening ceremonies and then will participate as a regular team member.

2. The secretary must take minutes and hand them in to the judges (5 minutes will be allowed after completion of the meeting to finish the minutes). Shorthand and styles as described on the guide to grading the secretary’s minutes may be used.

3. OFFICIAL TIME: The demonstration must be a minimum of 8 minutes in length and a maximum of 10 minutes. Official time does not include the time required for the team introduction or the time to read the topic and abilities. The team chairperson must instruct the timekeeper when the demonstration begins. A deduction of 2 points for each minute (or major fraction, thereof) over 10 minutes and 30 seconds and 4 points under 7 minutes and 30 seconds will be made.

4. Abilities to be demonstrated and items of business to be used in the state contests will be furnished to the general chairman of these contests. Teams are not to be penalized for not completing the list of things to consider.

VII. EVENT FORMAT

1. Teams will be held in a holding room until they are to appear in the prep room. The team will then be taken to the prep room. An adult will read the item of business to the group and then the team will be given 5 minutes to look over the item of business and abilities to perform and prepare for
the contest. Students may ask questions about the meaning of words in the item of business. A team may be disqualified if anyone other than the holding room or prep room monitor enters the holding room or the prep room at any time during the competition.

2. The entire team will be lead to the contest room where they will wait for the sentinel to set-up the room.

* Without assistance, the sentinel will be required to arrange the station markers for the meeting according to the FFA Student Handbook.

* The sentinel is also to set the items of business at each station.

* The door will be labeled by the contest chair, which shows the sentinel where the door is (this eliminates confusion in the case that the contest room has multiple doors).

3. Contest teams will only be allowed time to:
   * Introduce team members
   * The item of business
   * Abilities to perform
   * Name of the FFA chapter competing
   * Immediately proceed with Mr./Madam timekeeper, we are ready to begin.
   * Teams may not read the list of things to consider.

4. The team members will open the meeting with the official opening FFA ceremonies, will conduct a short demonstration of three parliamentary procedure abilities and close the meeting with the official closing ceremonies. (Teams have two options to use to transition into closing ceremonies:

   **Option 1:**
   Have a slight pause between the last item of business and the closing ceremonies and then start closing ceremonies.

   **Option 2:**
   Pass the adjourn motion (but do not say meeting adjourned). The president after saying motion carried (for the adjourn motion), then will enter into closing ceremonies.

5. Each team will be asked to demonstrate three of the following abilities (the actual abilities to perform will be written on the item of business sheet given to the team in the prep and contest room).

   **Abilities for demonstration at the district contest**

   a. To receive and dispose of a motion of business (main motion).
   b. To call for a division of the assembly.
   c. To rise to a point of order.
   d. To receive a motion of business with or without an amendment, and receive a motion to lay it on the table.
   e. To consider an item of business and receive a motion to refer it to a committee.
   f. To receive a motion to suspend the rules.
   g. To move the previous question.
h. To direct a question of parliamentary inquiry.

**Abilities for demonstration at the regional contest**

All the abilities listed in the district contest plus the following:

i. Motion with one amendment only

**Abilities for demonstration at the state contest**

All the abilities listed in the district and regional contests plus the following:

j. Object consideration of question

A. At the conclusion of the demonstration, the president should conclude their presentation with “Mr./Madam timekeeper, this concludes our demonstration.” Contest judges will then ask ten questions to each team. The first seven questions will be directed to specific offices/spots consistently to all teams.

(For example, each president gets the same question, each secretary gets the same question, etc.)

The next three questions will be open to all members to answer. Any team member may respond; however, maximum points can only be awarded for total team participation. If more than one team member wishes to respond to a specific question, the judges will designate which member shall answer.

7. Following the questioning round, the secretary will submit the minutes. The sentinel will return the station markers and items of business to the storage table following the questioning round. Two points will be deducted if this rule is not followed.

8. The authority for the abilities will be the same as that for the official Parliamentary Procedure Contest (Robert’s Rules of Order 10th Edition) while the official manual and the FFA Student Handbook will be the authorities for the remainder of the contest.

**VIII. TIMEKEEPER**

A TIMEKEEPER MUST BE DESIGNATED TO RECORD THE TIME USED BY EACH TEAM. THE EXACT MINUTES AND SECONDS MUST BE RECORDED.

The timekeeper will stand at 8 minutes and hold up an 8 1/2 x 11 inch card indicating that 8 minutes have elapsed. The timekeeper should remain standing until recognized. It is recommended that the chairperson say:

“Thank you Mr./Madam Timekeeper.”

The timekeeper will stand again when 9 minutes and 30 seconds have elapsed and hold up another 8 1/2 x 11 inch card to indicate that 9 minutes and 30 seconds have elapsed, again standing until recognized.

When the team says “This concludes our presentation” AND raps the gavel, the timekeeper is to record the time.
The timekeeper then resets the stopwatch and starts the five-minute round for the secretary. At the end of five minutes the timekeeper stands up and says time and the secretary must stop writing.

IX. SCORING

A. Judges are to score the contestants and rank them numerically without consultation. The judges will then make a joint report on the final placing. All judges must use the official Conduct of Meetings Contest scorecards.
Conduct of Meetings Score Card

<table>
<thead>
<tr>
<th>Team Name: __________________________</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstration of opening ceremonies</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>(based only on correct memorization)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pts. Received</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Debate (It should be difficult to receive all points possible)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>* convincing, realistic, logical, orderly &amp; efficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* voice, poise, &amp; grammar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* all members should participate nearly equally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 5 pts./member</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Demonstration of closing ceremonies</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>(based only on correct memorization)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Teams are to move into closing ceremonies following one of the two options listed in event procedure #4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pts. Received</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Demonstrated knowledge of parliamentary procedure (See rubric supplied in judges packet) (10 pts./ability)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>A. __________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. __________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. __________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Conduct of business/solving the problem (completeness (who, what, when &amp; where), realistic, responsibilities are delegated, finality)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>NO POINTS ARE TO BE DEDUCTED FOR NOT COMPLETING THE THINGS TO CONSIDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Correct arrangement of station markers by the sentinel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>(2 point deduction if sentinel does not return items to storage table)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Correct use of the gavel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>3 taps- standing during open and closing ceremonies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 taps- start meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 tap- sit during ceremonies, announcement of result of motion (pass/fail), meeting adjourned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Ability of president to preside</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>9. Questions concerning the conduct of meetings (2 pts/question)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>
10. Minutes
   A. completeness and accuracy (6 pts.)
      B. Format: date, time started, presiding officer, place, Secretary signature (2 pts.)
      C. legibility (clarity) (2 pts.)
* Examples of shorthand notations and styles can be found on the attached secretary minutes grading sheet.
* Minutes that exceed the minimum criteria should not be marked down (i.e. discussion could be included).

11. Deductions for time
   (4 pts./minute or fraction of) under 7 min. 30 seconds
   (2 pts./minute or fraction of) over 10 min. 30 seconds

12. Deductions for official dress (0, 2, 5, 7 or 10 pts.) FFA Official Dress consists of:
    Male members: Official FFA jacket, white shirt, dark tie (including FFA striped tie) dark pants, and dark footwear.
    Female members: Official FFA jacket, white blouse, dark skirt or dark slacks, scarf, and dark footwear.

Grand Total | 170
PURPOSE

The State FFA Creed Speaking Career Development Event is designed to develop speaking skills and enhance the knowledge level of first year members of the organization.

I. OBJECTIVES

- To encourage FFA members to develop speaking skills.
- To encourage new members to learn about the history of the FFA.

COMPETENCIES

PS 1

- Demonstrate communication skills, public speaking skills, and a comprehension of the FFA Creed.
- Demonstrate leadership skills

II. EVENT FORMAT

A. The State FFA Advisory Board will assign a chairperson of this event.

B. The event is open to two individuals per district not to exceed 16 individuals. In the event that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place individuals from other districts.

C. The event will include both an oral presentation as well as answering questions directly related to the Creed. Each participant will be asked three questions per round with a five minute time limit. The questions used will change as the participant progresses to semi and final rounds of competition. The questions will be formulated annually by the Creed Speaking chairperson. Two part questions will be avoided. Sample questions will not be available prior to the event.

D. Members will present the FFA Creed from the current year’s Official FFA manual.

E. The event will be a timed activity with four minutes for presentation. After four minutes, participant will be deducted 1 point for every second over the set time.

F. The state event will be conducted in one round. Each district may enter their first and second place participant. The event will be held at the State CDE Day.

G. Event officials will randomly determine the speaking order. The program chairman shall introduce each participant by participant number and in order of the drawing. No props are to be used. Applause shall be withheld until all participants have spoken.

H. Each participant must recite the FFA Creed from memory. Each participant shall begin the presentation by stating "The FFA Creed by E.M. Tiffany." Each participant shall end the presentation with the statement "... that inspiring task. Thank you."
I. Participants will be held in isolation until their presentation. Participant will not be allowed to have contact from any outside persons.

J. Three to six competent and impartial persons will be selected to judge the event. Judges will be selected by the State Executive Secretary and will be comprised of business and industry representatives.

K. At the time of the event, the judges will be seated in different sections of the room in which the event is held. They will score each participant on the delivery of the Creed, using the score sheet provided.

L. One timekeeper shall be designated who will record the time used by each participant in delivering his/her speech.

M. Two content accuracy judges will record the number of recitation errors during delivery. The accuracy judges will be seated with the timekeeper.

N. When all participants have finished speaking, each judge will total the score of each speaker. The timekeeper and accuracy judge's record will be used in computing the final score for each participant. The judges score sheets will then be submitted to event officials to determine final ratings of participants.

O. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges' ranking of each participant then shall be added (high and low rank may be eliminated), and the winner will be that participant whose total ranking is the lowest. Other placings will be determined in the same manner (low point score method of selection).

III. TIE BREAKER

Ties will first be broken by total net scores and then by the score for answer to the questions.

IV. ELIGIBILITY

A. The State FFA Creed Speaking Career Development Event will follow the general rules and polices for all State FFA Career Development Events.

B. The State FFA Creed Speaking Career Development Event will be limited to two participants per district and these students must qualify in grades 7, 8 or 9.
AWARDS

Plaques will be awarded to the district participants by the Arizona Association FFA. A plaque and a $250 cash reward will be presented to the State Winner.

REFERENCE

Current Official FFA Manual
# Possible Points

<table>
<thead>
<tr>
<th>Voice (200 Points)</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitch</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Force</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulation</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronunciation</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Presence</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(200 Points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official Dress</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Appearance</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poise And Posture</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality And Ease</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before Audience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Of Expression (200 Points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluency</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emphasis</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directness</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sincerity</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicative Ability</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conveyance Of Thought And Meaning</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Effect (100 Points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent To Which Speech Was Understandable, Convincing, Pleasing, And Held Attention</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response To Questions (300 Points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability To Answer Satisfactorily The Questions Asked By The Judges Indicating Familiarity With The Subject Ability To Answer</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Points (Gross)</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Time Deduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>**1 Pt. Per Second Over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Accuracy Deduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*** 20 Pts Per Word</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Points (Net)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Judges will select three questions per round. Questions will be selected from a data bank of questions that will be developed by the event chairperson.

**From the timekeepers

***From the accuracy judges
PURPOSE

To provide a competitive event for agricultural education students, emphasizing skills in dairy cattle selection and dairy herd management. The recognition portion is both to reward and encourage more students to enter the dairy industry and to select a team to represent Arizona at the National FFA level.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores plus the team activity score.

I. OBJECTIVES

A. To provide agricultural students with dairy interests a practical experience that will serve them well in industry positions or in management of a modern dairy herd.

B. To develop students’ skills in observation, analysis and communication and team collaboration.

C. To provide experience in the evaluation of dairy cattle type, production records and dairy herd management.

D. To encourage agriculture instructors to seek assistance from various resources in the dairy industry, (Examples: dairy breed associations, artificial breeding associations, state extension dairy specialists, state DHI associations, dairy equipment manufacturers, local dairy farmers and breeders, etc.)

COMPETENCIES

AS 6

Select dairy cattle possessing desirable traits utilizing selection tools including but not limited to pedigrees, sire selection, linear evaluation, herd record evaluation, and a dairy management exercise, and production records.

II. GENERAL RULES

A. Participants will report to the event superintendent for instructions at the time and place indicated.

B. The most current and updated information (DHI, linear, body scoring, etc.) will be used as industry standards change.

C. Computer score sheets will be used in the event to record all responses. These forms must be completed within the time allotted for each section of the event. No additional time will be permitted to transfer responses to computer score sheets. Responses that are not correctly
recorded on the computer score sheets cannot be considered due to the large number of participants' responses that must be processed.

D. Participants are urged to bring clipboards that are free of markings or notes. Blank sheets of paper will be permitted for note taking. Participants must bring two (no. 2) pencils.

E. Official FFA Dress is required during the event. Black jeans are permissible. Hats/caps are not accepted.

F. The Dairy management event will have two formats; one for even years and one for odd years unless a two-day event is implemented and then all events will be used following the national event format. Even year events will include three placing classes, one set of oral reasons, one sire selection class, dairy management exercise, and linear evaluation. Odd year events will include three placing classes, one set of oral reasons, one pedigree selection class, dairy management exercise and team herd record evaluation.

III. EVENT FORMAT

A. Herd Record Evaluation

1. Members of a team will collaborate to analyze individual cow production records (DHI) of a 5075 cow herd. Individual cows are to be selected according to their appropriate status for culling, breeding or other management decision categories. Answers will be recorded on the provided team answer form. (See sample herd production form and questions on "Dairy Cattle" pages 5-8.)

2. Each cow will have an assigned point value that will accumulate points toward team score only. Individual scores and rankings will not be affected.

3. The herd record management exercise is worth a maximum of 150 points. Members will have 30 minutes to complete it.

B. Dairy Management Exercise

1. The exercise will consist of a 25-question written test involving dairy management practices and DHI records.

2. Students will analyze individual cow production records and/or herd management summaries answering seven questions on even years, and eight questions on odd years concerning their use in making management decisions. The remaining 17 or 18 questions will be concerned with various dairy management and industry-related topics. (See sample quiz and herd summary on "Dairy Cattle" pages 47-49.)

3. Appropriate information necessary to answer the DHI questions will be provided.

4. The dairy management exercise is worth a maximum of 50 points. Participants will have a minimum of 20 minutes to complete the exercise.

C. Pedigree Class
1. One class of pedigrees (no animals present) will be ranked as to their indication of the animals' ability to transmit superior production and type traits to offspring. This exercise is worth 50 points for a perfect placing.

2. Other factors include completeness (number of daughters or records), accuracy (reliability), level of performance (type and production) and profitability.

3. See sample pedigrees and reasons on "Dairy Cattle" pages. These pedigrees were placed 2-1-3-4 with cuts of 4-3-7.

D. Sire Selection Exercise

The sire selection exercise requires members to use linear descriptive traits for one cow and sire summary information to make corrective matings. Participants will rank four potential mates for each cow. (See sample problems and reasons on “Dairy Cattle” pages)

1. Linear evaluation and production information on the cows will be provided along with the transmitting ability estimates of the sires.

2. A maximum of 50 points can be earned in this section.

3. A minimum of 15 minutes will be allowed for this exercise.

E. Linear Evaluation

1. Five Holstein cows will be evaluated using the 15 major traits recognized in the "Holstein Association Linear Descriptive Traits Worksheet."

2. Cows will be numbered 1 to 5.

3. Participants will be afforded a close-up view of each cow as she is paraded near them. Evaluations will be completed at a distance of approximately ten feet from each cow. Participants will not be permitted to handle them.

4. Correct evaluation of the 15 traits of each cow is worth 30 points (150 point's maximum). The four scores of each of the members will be added together and then divided by four to get a total of 150 points per team.
   a. Two points will be awarded for each trait scored within four points of the official judges' score.
   b. One point will be awarded for each trait scored within five to six points of the official judges’ score.
   c. A minimum of 30 minutes will be allowed for the linear evaluation.

F. Evaluation and Selection

1. Three classes of four dairy animals each will be placed on type. Classes will be selected from the recognized breeds of dairy cattle. The class selection committee, however, shall give priority to selecting quality cattle in the breeds available, and not be obligated to having all breeds represented in the judging classes. Classes will consist of heifers, young cows or mature cows.
2. Participants will be permitted to view the animals from all angles but will not be permitted to handle them.

3. Animals will be numbered 1-2-3-4 left-to-right as viewed from the rear.

4. Each class is allowed 50 points for a correct placing (150 points maximum).

5. Participants will have a minimum of 15 minutes to place each class. For classes on which oral reasons will be given, participants will be given a minimum of 15 minutes.

G. Oral Reasons

1. Oral reasons will be required on one class, which will be designated by the event superintendent prior to the actual judging of the class.

2. Participants may not use notes during delivery of reasons, with the exception of a card showing only their placing order.

3. The class is allowed 50 points for a perfect set of reasons (50 points maximum).

4. Participants will have at least 15 minutes to prepare each set of oral reasons. No more than two minutes may be used to deliver the reasons before the judges.

H. Scoring

**Even Years**

- Three Placing Classes: 150 pts
- Oral Reasons: 50 pts
- Sire Selection: 50 pts
- Management Exercise: 50 pts Average Score/Linear
- Evaluation: 150 pts
- **Total:** 450 pts

**Odd Years**

- Three Placing Classes: 150 pts
- Oral Reasons: 50 pts
- Pedigree Selection: 50 pts
- Management Exercise: 50 pts
- Team Event/Herd Record Evaluation: 150 pts
- **Total:** 450 pts

**REFERENCES**

Annual Cow judging Event official entry form and booklet with color pictures of the five classes of dairy cows to be judged before March 15 of the event year. Available after January 1 of the event year. *Hoard's Dairyman.* Free.

"*Hoard's Dairyman* judging Guide," a 34-page booklet describing the scorecard breakdown and how to evaluate each class plus 20 practice judging classes. *Hoard's Dairyman.* Approx. cost $3.00.
"Introduction to Dairy Judging and Oral Reasons," 43-minute video that discusses the fundamentals of dairy cattle judging, preparing and presenting oral reasons plus sample reasons from the University of Wisconsin-Madison students (CEV00503Q). Creative Educational Video, Inc. Approx. cost $89.95.

"Judging Dairy Cows," 28-minute video that provides a basic introduction to judging, review of scorecard categories, judging tips and practice class with reasons (CEV00501Q). Creative Educational Video, Inc. Approx. cost $79.95.

"Judging Dairy Heifers," 18-minute video that provides a basic introduction to judging dairy heifers, scorecard categories, judging tips and practice class with reasons (CEV00502Q). Creative Educational Video, Inc. Approx. cost $79.95.

"Practice Dairy Heifer judging," 27-minute video that provides five practice classes with views from rear and top and with animals walking and posing-four breeds (CEV00507Q). Creative Educational Video, Inc. Approx. cost $69.95.

"Practice Dairy Cow Judging," 31-minute video that provides five practice classes with views from rear and top and with animals walking and posing plus close-ups of udders-three breeds (CEV00506Q). Creative Educational Video, Inc. Approx. cost $69.95.

"Practice Dairy Cattle judging I, II, III, IV," 38-minute video that provides classes of heifers and cows of various breeds (three to four classes per video plus linear evaluation on 11) with views from rear and top and with animals walking and posing plus close-ups of udders-three breeds (CEV00511Q, CEV00513Q, CEV00514Q, CEV00515Q). Creative Educational Video, Inc. Approx. cost $69.95 per video.

"Linear Evaluation of Dairy Cattle," 38-minute video that identifies parts of a cow, 15 primary linear traits and classification of two cows (CEV00510Q). Creative Educational Video, Inc. Approx. cost $89.95.

"Practice Linear Evaluation," video with sample evaluation of six Holstein cows for 15 traits with official scores (CEV00516Q). Creative Educational Video, Inc. Approx. cost $69.95.

"Dairy Cattle Judging and Evaluation," 120-minute video that provides a dairy cow introduction to judging and three practice classes (IMS Cat. # 9557). Instructional Materials Service. Approx. cost $60.00.

*Note: videos also available from Sat Texas A&M University under the same title and for the same price.*


"Linear Classification Program," revised 16-page booklet with complete introduction to the current descriptive type traits in the Holstein classification program. Holstein Association. Approx. cost $1.00.

Judging Slides, two sets-1) Holstein only (12 classes) and 2) Colored breeds (15 classes, three per breed) heifer and cow classes with side view of each animal plus composite of all four. Includes audio
tape with official reasons by outstanding young dairy animals. (1990) Agri-Graphics. Approx. cost $80.00 per set; $150.00 for both sets.
"BEST ANSWERS" for
Dairy Cattle Evaluation - Herd Record Evaluation
(Collaborative Team Exercise)

After evaluating the individual cow records which are provided, select the best answers for the following questions. Cows maybe listed in any order within an answer.

A. Select those cows which will be the next five to calve, assuming that breeding dates are accurate.
   1. -377-
   2. -434-
   3. -443
   4. -445-
   5. -450

B. Indicate the cows which are most likely to become candidates for culling due to their reproductive status.
   6. -433-
   7. -452-
   8. -453-
   9. -688-
   10. -710

C. Indicate the cows most likely to be considered as donors in an embryo transfer program when their reproductive status is appropriate.
   11. -708-
   12. -404-1
   13. -405- also: 455, 460

D. Indicate those cows which are significantly overweight.
   14. -374-
   15. -430-
   16. -434- also: 660

E. Indicate which cows are most significantly underweight.
   17. -405-
   18. -467-
   19. -481-
   20. -713

F. Indicate which cows may become candidates for culling because their current production level is significantly low.
   21. -349-
   22. -374-
   23. -527

G. Indicate those cows which are contributing the most to a high somatic cell count in the bulk tank.
   24. -405-
   25. -739
A. This question asked specifically for the next 5 cows expected to calve. This is rather straightforward to solve since the "days bred" indicates the time since the last service, i.e. the gestation length to date. (If no breeding date has been reported or if the cow was declared "open", this figure is "zero".) Since the expected gestation length is 279 days for Holsteins, #337 and #443 are "overdue" as of the reported date (5-11-94) and those cows expected to calve within the next 45 days beyond that date are #434, #445 and #450. None other is due within over 90 days so no other cow (answer) will generate points. This question could also be answered directly from the reported breeding dates, but with greater difficulty as the Pregnant or Open status would also have to be checked.

B. The answers to this question can also be found most easily in the "days bred" column IF there are "Open" cows with high "days in milk". Cows with a high discrepancy between "days in milk" and "days bred" but currently "Pregnant" would be less likely to be culled as the days bred gets higher. They were "problem breeders" but are currently pregnant. Answers which would generate fewer points than those given above include #432, #505, #528, #536, #714 and #717. Cow #721 would not generate any points because she was reported "sold for beer" on 4-11, possibly because she was not pregnant.

C. To answer this question, one should look to the genetic statistics (Predicted Transmitting Ability for Milk/Dollars) and possibly adjust for current Relative Value. Since this is additional information (more current) to the cow's records included in the index, they may modify the PTA's to some extent, especially for those cows with only one (or a partial) record available when the PTA's were calculated nearly 6 months previous. Cow #708 ranks high in both PTA$ and in current Relative Value. The highest PTA$ cow, #402, is producing at 15% below herd average in her current lactation with a significant portion of the lactation completed. Other cows which may be candidates are #404, #405, #455 and #460. Fewer points would be earned with answers of #420, #437 or #481. #542 died so she could not be considered. Minor points could be earned for answers including #431, #443, #452, #526 and #717 whose indexes are relatively high but current production is mediocre or poor. #710 and #711 are doing well currently but each has a modest PTA$.

D. Overweight cows can be identified by the "Body Condition Scores" which are too high. Any lactating cow greater than 3.5 is considered overweight. Dry cows in this range are also considered overweight by most nutritionists, although some managers are not concerned unless the score exceeds 4. Cows (#374, #430, #434 and #660) earn maximum points with #377 at slightly fewer points because she is dry and overdue.

E. Lactating cows which are scored below 1.5 are generally considered too thin. Cows scoring at 1.5 are also considered too thin, especially if they are past their early lactation period and should be in positive energy balance and gaining weight. Cows should score about 3.5 at calving time. Cows (#405, #467, #481 and #713) earned maximum points while cows (#404, #479, #529, #543, #698, #708 and #711) earned slightly lower values as answers (they were too thin but not as extreme as others.)
F. Culling on current production should begin with those cows significantly below the current herd average, i.e. low Relative Value. It is generally agreed that cows about 75% Relative Value and lower should be scrutinized severely when making up a culling list. Cows (#349, #374, #527) earned maximum points, but meriting consideration were #450, #463, #526 and #536. A lesser case could be made for other cows ranked in the 80's in Relative Value.

G. Contributions to the Somatic Cell Count in the bulk tank result from a combination of production level and somatic cell count of the individual cow's milk. Cow #405 is contributing the greatest level of somatic cells and is a high producing cow. Similarly high levels of SCC are found in #539 and #739. However, #739 is out producing #539 by about 50% (73.2 vs. 54.4 lbs.) so she is contributing a greater number of cells to the bulk tank.

SAMPLE
National FFA Dairy Cattle Evaluation
Management Quiz

For questions 1 through 5, use the herd summaries which are attached.

1. Which herd currently has the highest average genetic level for milk?

Which herd shows the greatest change in protein level from current sire to service sire?

2. In which herd will calves born over the next year have the lowest estimated genetic merit for protein yield?

4. Which herd has the highest protein test over the past year?

5. Which herd currently has the lowest percentage of cows with low somatic cells?

6. Which of the following methods of dehorning is suitable for calves under two weeks of age:
   a. hot iron (electric)
   b. caustic potash
   c. gouge/ scoop
   d. saw
   e. all but d

Which disease causes the greatest annual economic loss in the dairy industry?
   a. Tuberculosis
   b. Brucellosis,
   c. Trichomoniasis
   d. Mastitis
   e. Vibriosis

7. Which vitamin is essential for normal calcium /phosphorus metabolism?
   a. A
   b. B
   c. C
   d. D
   e. E
8. The breed with the highest average total solids content in milk is:
   a. Holstein
   b. Ayrshire
   c. Guernsey
   d. Jersey
   e. Brown Swiss

9. The hormone which causes milk let-down is called
   a. Adrenalin
   b. Prostaglandin
   c. Estrogen
   d. Progesterone
   e. Oxytocin

PLEASE SEE FOLLOWING PAGES FOR HERD INFORMATION, PEDIGREES, AND ORAL REASONS.
### LACTATION AVERAGE ALL COWS

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt;</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL COW MONTHS</td>
<td>52</td>
<td>43</td>
<td>30</td>
<td>125</td>
</tr>
<tr>
<td>% DAYS IN MILK</td>
<td>83</td>
<td>81</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>POUNDS MILK</td>
<td>52.2</td>
<td>59.2</td>
<td>68.1</td>
<td>58.4</td>
</tr>
<tr>
<td>% FAT</td>
<td>3.21</td>
<td>3.22</td>
<td>3.11</td>
<td>3.19</td>
</tr>
<tr>
<td>POUNDS FAT</td>
<td>1.68</td>
<td>1.91</td>
<td>2.12</td>
<td>1.86</td>
</tr>
<tr>
<td>% PROTEIN</td>
<td>3.13</td>
<td>3.00</td>
<td>2.86</td>
<td>3.01</td>
</tr>
<tr>
<td>POUNDS PROTEIN</td>
<td>1.63</td>
<td>1.77</td>
<td>1.95</td>
<td>1.76</td>
</tr>
<tr>
<td>POUNDS 3.5% FCM</td>
<td>49.7</td>
<td>56.5</td>
<td>63.8</td>
<td>55.4</td>
</tr>
</tbody>
</table>

### 365-DAY HERD AVERAGE

<table>
<thead>
<tr>
<th></th>
<th>128</th>
</tr>
</thead>
</table>

### LACTATION AVERAGE MILKING COWS

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt;</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COW MONTHS</td>
<td>45</td>
<td>35</td>
<td>29</td>
<td>109</td>
</tr>
<tr>
<td>POUNDS MILK</td>
<td>62.9</td>
<td>73.4</td>
<td>72</td>
<td>68.7</td>
</tr>
<tr>
<td>POUNDS FAT</td>
<td>2.02</td>
<td>2.37</td>
<td>2.24</td>
<td>2.19</td>
</tr>
<tr>
<td>POUNDS PROTEIN</td>
<td>1.97</td>
<td>2.20</td>
<td>2.06</td>
<td>2.07</td>
</tr>
<tr>
<td>POUNDS 3.5% FCM</td>
<td>69.1</td>
<td>81.2</td>
<td>87.3</td>
<td>77.2</td>
</tr>
</tbody>
</table>

### GENETIC INFORMATION (PTA)

<table>
<thead>
<tr>
<th></th>
<th>COW</th>
<th>1&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt;</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILK</td>
<td>994</td>
<td>1173</td>
<td>684</td>
<td>972</td>
<td></td>
</tr>
<tr>
<td>FAT</td>
<td>36</td>
<td>44</td>
<td>20</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>PROT.</td>
<td>34</td>
<td>34</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

### SIRE

<table>
<thead>
<tr>
<th></th>
<th>MILK</th>
<th>1178</th>
<th>1746</th>
<th>1146</th>
<th>1632</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT</td>
<td>67</td>
<td>71</td>
<td>46</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>PROT.</td>
<td>61</td>
<td>52</td>
<td>34</td>
<td>52</td>
<td></td>
</tr>
</tbody>
</table>

### SERVICE SIRES

<table>
<thead>
<tr>
<th></th>
<th>MILK</th>
<th>2085</th>
<th>2129</th>
<th>2122</th>
<th>2107</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT</td>
<td>65</td>
<td>60</td>
<td>58</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>PROT.</td>
<td>62</td>
<td>63</td>
<td>64</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

### SCC SUMMARY

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt;</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>% COWS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW 0-4</td>
<td>81</td>
<td>85</td>
<td>78</td>
<td>82</td>
</tr>
<tr>
<td>MED 5-6</td>
<td>19</td>
<td>9</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>HIGH 7-9</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### REPRO. STATUS

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt;</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAYS @ 1&lt;sup&gt;ST&lt;/sup&gt; BRDG</td>
<td>102</td>
<td>112</td>
<td>125</td>
<td>110</td>
</tr>
<tr>
<td>SVCS./CONCEPTION</td>
<td>1.82</td>
<td>1.85</td>
<td>1.67</td>
<td>1.80</td>
</tr>
<tr>
<td>DAYS OPEN</td>
<td>148</td>
<td>163</td>
<td>152</td>
<td>154</td>
</tr>
<tr>
<td>LAST CALV. INT.</td>
<td>----</td>
<td>13.3</td>
<td>13.5</td>
<td>13.4</td>
</tr>
<tr>
<td>NEXT CALV. INT.</td>
<td>14.0</td>
<td>14.1</td>
<td>14.4</td>
<td>14.1</td>
</tr>
<tr>
<td>AGE @ LAST CALV</td>
<td>27.9</td>
<td>40.6</td>
<td>68.3</td>
<td>42.0</td>
</tr>
</tbody>
</table>

SAMPLE FORM

(5 HERD SUMMARIES PROVIDED TO ANSWER TEST QUESTIONS)
Pedigree # 1

PATERNAL GRANDSIRE
VG-88 6y GM
PTA +2065M+35F +29P 99R
PTA$ +113CY +222+166 1/94
PTA% -.19 -.17 100%US
PTAT +.93T +1.14UDC 99R 1/94
TPI +1101

PATERNAL GRANDDAM
EX-91 7y-02 EEEV GMD-DOM
PTA +2309M +71F +90P 79R
PTA$ +285CY +270 +2951/94
PTA% -.06 +.09
PTAT +1.72T -.10UDC 8OR 1/94
CTPI +1219
PPA +8256M +291F +296P

DHIR % FAT % PRT
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.7 1572 3.31389

MATERNAL GRANDSIRE
EX-90 I 10Y GM
PTA +1400M +93F +59P 99R
PTA$ +278CY +198 +220 1/94
PTA% +.21 +.08 100%US
PTAT -.13T +.72UDC 99R 1/94
TPI +942

MATERNAL GRANDDAM
VG-87 3y-07 WVV GMD-DOM
PTA +2608M +99F +75P81R
PTA$ +314CY +318+3051/94
PTA% +.03 -03
PTAT +1.17T +.38UDC 85R 1/94

SIRE
EX-94 8y GM
PTA +2746M +65F +84P 98R
PTA$ +262CY +308 +302 1/94
PTA% - 16 +.00 100%US
PTAT +. 93T -.12UDC 95R 1/94
D/AV 22372M 3.5 78OF 3.1 695P 80.2T
TPI +1101

DAM
GP-83 2y-11 GE++
PTA +2493M +121F +85P 53R
PTA$ +374CY +322 +330 1/94
PTA% +.14 +.04
PTAT +.92T +.53UDC 61R
CTPI +1273
PPA +6721M +354F +228P 1/94

DHI % FAT % PRT
2-01 2 305 28874 4.4 1274 3.6 1043
336 30928 4.5 1378 3.6 1127

3rd Dam: VG-87 DOM
3-07 2X 365D 40022M 4.6 1823F 3.7
1484P
Pedigree # 2

**SIRE**

VG-87  GM

PTA +2285M  +110F  +64P  99R
PTA$  +317CY +295 +2811/94
PTA%  +.13  -03  100%US
PTAT +1.72T+.64UDC 99R 1/94
D/AV 22485M 3.8 844F 3.1 692P 80.2T
TPI +1147

**PATERNAL GRANDSIRE**

EX-92  GM

PTA +1923M  +83F  +52P  99R
PTA$  +245CY +241 +227 1/94
PTA%  -.03  +.07  100%US
PTAT +.15T-.84UDC 99R 1/94
TPI +787

**PATERNAL GRANDDAM**

VG-86 DOM

PTA +27F  77R
PTAT +.25T  80R 1/94

DHIR % FAT
3.05 2 253 23140 3.6 836
2-06 2 305 20570 4.0 816

**DAM**

EX-91 5y EEEEE

PTA+2874M 101F  +79P  54R
PTA$  +324CY +345  +3251/94
PTA%  -.01  -.05
PTAT +2.12T +1.48UDC 61R 1/94
CTPI +1326

PPA +6973M  +24OF +174P
DHIR % FAT % PRT

2-04 2 365 26770 3.7 999 2.9 783
44 2 296 30260 3.6 1085 2.9 862

**MATERNAL GRANDSIRE**

EX-92  GM

PTA +2200M  +86F  +65P  99R
PTA$  +272CY +270 +2621/94
PTA%  -.01  +.03  100%US
PTAT +.74T +.72UDC 99R 1/94
TPI +1036

**MATERNAL GRANDDAM**

VG-86  DOM

PTA +2957M  +86F  +83P  77R
PTA$  +303CY +347 +3271/94
PTA%  -.09  -.04
PTAT +2.07T +.95UDC 77R 1/94
CTPI +1290
PPA +7075M  +22IF  +193P

DHI % FAT % RT
2-072 365 32910 3.5 1146 3.1 1019
2nd IN Milk
Pedigree # 3

PATERNAL GRANDSIRE
EX-90  GM
PTA +1298M +54F +54P 99R
PTA$ +2345M +66F +95P 84R
PTA$ +285CY +271 +301 1/94
PTA% +.07 +.03 100%US
PTAT +.34T -.20UDC 99R 1/94
TPI +744

PATERNAL GRANDDAM
EX-91 7y-02 EEEV GMD-DOM
PTA +2390M +71F +90P 79R
PTA$ +285CY +270 +295 1/94
PTA% -.06 +.09
PTAT +1.72T -.10UDC 80R 1/94
CTPI +1219
PPA +8265M +291F +296P

DHIR % FAT % PRT 3-07 2365 33480 4.61547
2-02 2385 29180 4.21234
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.71572 3.3 1389

2ND PA PROT
LIFE 2761 166M 3.9 6487 3.6 5996

DAM
VG-88 By GM
PTA +1804M +88F +SIP 43R
PTA$ +253CY +233 +222 1/94
PTA% +.04 +.08
PTAT +.1.73 +1.90UDC 43R 1/94
PTPI +1070

MATERNAL GRANDSIRE
VG-88  GM
PTA +2708M +89F +52P 99R
PTA$ +253CY +233 +222 1/94
PTA% +.04 +.08
PTAT +.1.73 +1.90UDC 43R 1/94
TPI +1111

MATERNAL GRANDDAM
EX-91 5y-02 EEEV GMD-DOM
PTA +2390M +71F +90P 79R
PTA$ +285CY +270 +295 1/94
PTA% -.06 +.09
PTAT +1.72T -.10UDC 80R 1/94
CTPI +1219
PPA +8265M +291F +296P

DHIR % FAT % PRT 3-07 2365 33480 4.61547
2-02 2385 29180 4.21234
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.71572 3.3 1389

3rd Dam: EX-91 DOM
5-04 2X 365D 31970M 4.2 1355F 3.2 1023P

Pedigree # 4

PATERNAL GRANDSIRE
EX-90  GM
PTA +1298M +54F +54P 99R
PTA$ +2345M +66F +95P 84R
PTA% +.07 +.03 100%US
PTAT +.34T -.20UDC 99R 1/94
TPI +744

PATERNAL GRANDDAM
EX-91 7y-02 EEEV GMD-DOM
PTA +2390M +71F +90P 79R
PTA$ +285CY +270 +295 1/94
PTA% -.06 +.09
PTAT +1.72T -.10UDC 80R 1/94
CTPI +1219
PPA +8265M +291F +296P

DHIR % FAT % PRT 3-07 2365 33480 4.61547
2-02 2385 29180 4.21234
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.71572 3.3 1389

2ND PA PROT
LIFE 2761 166M 3.9 6487 3.6 5996

DAM
VG-88 By GM
PTA +1804M +88F +SIP 43R
PTA$ +253CY +233 +222 1/94
PTA% +.04 +.08
PTAT +.1.73 +1.90UDC 43R 1/94
PTPI +1070

MATERNAL GRANDSIRE
VG-88  GM
PTA +2708M +89F +52P 99R
PTA$ +253CY +233 +222 1/94
PTA% +.04 +.08
PTAT +.1.73 +1.90UDC 43R 1/94
TPI +1111

MATERNAL GRANDDAM
EX-91 5y-02 EEEV GMD-DOM
PTA +2390M +71F +90P 79R
PTA$ +285CY +270 +295 1/94
PTA% -.06 +.09
PTAT +1.72T -.10UDC 80R 1/94
CTPI +1219
PPA +8265M +291F +296P

DHIR % FAT % PRT 3-07 2365 33480 4.61547
2-02 2385 29180 4.21234
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.71572 3.3 1389

3rd Dam: EX-91 DOM
5-04 2X 365D 31970M 4.2 1355F 3.2 1023P

DHIR % FAT % PRT 3-07 2365 33480 4.61547
2-02 2385 29180 4.21234
6-02 2 305 37260 3.7 1389 3.2 1210
365 41990 4.71572 3.3 1389

3rd Dam: EX-91 4E DOM DHI
6-06 2X 305D 25070M 4.0 994F 3.2 809P
OFFICIAL REASONS FOR PLACING PEDIGREE CLASS:

This class of pedigrees for Holstein heifers is placed 2-1-3-4 with cuts of 4-3-7.

In placing # 2 over # 1, the pedigree shows an edge in most categories. The overall index, TPI, is stronger in # 2 for both the sire and the dam. This results in a higher parent average for the predicted TPI of the calf.

In considering the sire, most of the advantage comes in the higher type component, both in overall PTA for type and udder composite. Advantage in production goes to the sire in pedigree # 1, with the exception of PTA for fat yield and $-cheese yield. Both bulls have highly reliable proofs (99% for # 2 and 99%/95% for # 1) for production and type traits.

In comparing the dams, # 2 shows a similar pattern of superiority, especially for overall type and udder composite. In the production traits, the PTA's are generally in favor of #1, with the exception of milk and $-milk, fat. These genetic estimates are a reflection of the PTA's in the maternal grandparents and the production of the dams.

In placing # 1 over # 3, the difference in the TPI values for heifers is somewhat smaller, at first glance. Sire # 3 has a greater TPI value than the sire in # 1 and the dams have the reverse situation. The advantage goes to # 3 in the PTA for protein and $-cheese yield while 1 has the edge in PTA for milk and $-milk, fat. Other values are very similar for these two sires who are maternal half sibs (note the same info for 'paternal granddam'.)

The main advantage in the placing comes in the dam's side of the pedigree. Admitted that the 3 maternal grandsire has equal or greater PTA values in most categories, the females in the pedigree are not as strong. Note that the # 3 dam has incomplete information and the TPI is a pedigree index (parental average) rather than one that includes performance of the dam herself. The actual production record of the # 3 dam to date is decidedly lower than dam # I and there is no type evaluation (classification scores.) The # 1 maternal granddam has higher genetic values in all production traits and only slightly lower in the type traits, giving her a higher TPI. The higher PTA values are partially influenced by the greater production of the "3rd dam", who is the maternal great granddam. Given the greater amount of information for dam # 1 as well as the higher values of the estimates, the placing of # 1 over # 3 is rather definite.

In placing # 3 over # 4, there are easily noticed superiorities in both sides of the pedigree. The # 3 sire has a decided advantage throughout the PTA's for the production traits and only slight disadvantages in the type traits. This yields a significant difference in the TPI values between the sires.

Although the information on the # 3 dam yields genetic information with a lower reliability, the estimates still reflect a significant superiority. This is easily seen in the greater values throughout the maternal grandsire and maternal granddam. In every category, these two individuals have higher genetic credentials in pedigree # 3, making it a fairly obvious placing with the highest cut in the official placing.
1994 NATIONAL FFA DAIRY CATTLE EVENT
SIRE SELECTION - PROBLEM # 1

SITUATION:
Semen is available from each of these four bulls at similar prices. All bulls rank in the top 15 of the breed for Production-Type Index. Rank the four bulls as they best meet the following objectives in the mating of this cow.

This New England herd has two hundred purebred Jersey cows. The milk is processed through their own bottling plant and sold through various retail routes. Whole milk is standardized at 3.8% and excess milk fat is sold as heavy cream to an ice cream plant. Fat test is not of high concern due to its low value. Cows are housed in a free stall barn and very functionally correct cattle are most desirable. Emphasis is placed on correct feet and legs and well-attached udders with strong support. The lactation average is 18,500-lbs. milk, 780-lbs. fat and 690-lbs. protein.

COW TO BE MATED
BULLS TO CONSIDER
CURRENT RECORD

<table>
<thead>
<tr>
<th>current record</th>
<th>traits</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 yr 10mo-me)</td>
<td>rel</td>
<td>99</td>
<td>70</td>
<td>89</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>pta-milk</td>
<td>2277</td>
<td>1756</td>
<td>183</td>
<td>2210</td>
</tr>
<tr>
<td></td>
<td>pta-fat%</td>
<td>-.35</td>
<td>.03</td>
<td>.05</td>
<td>-.21</td>
</tr>
<tr>
<td></td>
<td>pta-fat</td>
<td>54</td>
<td>88</td>
<td>95</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>pta-pro</td>
<td>-.15</td>
<td>-.02</td>
<td>-.07</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>pta-p</td>
<td>62</td>
<td>62</td>
<td>59</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>pta-mfp$</td>
<td>239</td>
<td>238</td>
<td>244</td>
<td>288</td>
</tr>
<tr>
<td></td>
<td>pta-cy$</td>
<td>232</td>
<td>256</td>
<td>251</td>
<td>329</td>
</tr>
<tr>
<td></td>
<td>pti</td>
<td>372</td>
<td>365</td>
<td>356</td>
<td>495</td>
</tr>
</tbody>
</table>

LINEAR SCORES

<table>
<thead>
<tr>
<th>linear scores</th>
<th>traits</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>stature</td>
<td>2.1</td>
<td>2.0</td>
<td>2.4</td>
<td>1.1</td>
</tr>
<tr>
<td>30</td>
<td>dairy form</td>
<td>5.8</td>
<td>.3</td>
<td>4.4</td>
<td>5.5</td>
</tr>
<tr>
<td>24</td>
<td>strenght</td>
<td>-1.0</td>
<td>1.2</td>
<td>1.8</td>
<td>-4.0</td>
</tr>
<tr>
<td>22</td>
<td>thurl width</td>
<td>.4</td>
<td>1.2</td>
<td>1.9</td>
<td>-3.0</td>
</tr>
<tr>
<td>15</td>
<td>pelvic angle</td>
<td>L1.1</td>
<td>L0.5</td>
<td>L2.3</td>
<td>L0.3</td>
</tr>
<tr>
<td>35</td>
<td>rear legs</td>
<td>P1.1</td>
<td>P0.6</td>
<td>P1.2</td>
<td>P0.8</td>
</tr>
<tr>
<td>18</td>
<td>foot angle</td>
<td>S0.8</td>
<td>0.0</td>
<td>S0.8</td>
<td>S2.0</td>
</tr>
<tr>
<td>25</td>
<td>fore udder</td>
<td>-.4</td>
<td>1.0</td>
<td>-.4</td>
<td>-4</td>
</tr>
<tr>
<td>22</td>
<td>r udder height</td>
<td>3.9</td>
<td>.2</td>
<td>1.6</td>
<td>3.9</td>
</tr>
<tr>
<td>23</td>
<td>r udder width</td>
<td>3.8</td>
<td>.1</td>
<td>2.6</td>
<td>3.3</td>
</tr>
<tr>
<td>22</td>
<td>susp ligament</td>
<td>1.1</td>
<td>-.1</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>18</td>
<td>udder depth</td>
<td>S0.2</td>
<td>S1.5</td>
<td>D1.2</td>
<td>S0.2</td>
</tr>
<tr>
<td>15</td>
<td>front teat placement</td>
<td>C0.2</td>
<td>W0.2</td>
<td>C1.3</td>
<td>C2.0</td>
</tr>
<tr>
<td>18</td>
<td>teat length</td>
<td>L0.6</td>
<td>L0.5</td>
<td>L2.2</td>
<td>L1.5</td>
</tr>
</tbody>
</table>

PELVIC ANGLE (H-HIGH, L-LOW) REAR LEGS (S-SICKLE, P-POSTY)
FOOT ANGLE (S-STEEP, L-LOW) UDDER DEPTH (D-DEEP, S-SHALLOW)
FRONT TEAT PLACEMENT (W-WIDE, C-CLOSE) TEAT LENGTH (L-LONG, S-SHORT)
PURPOSE

The purpose of the State FFA Entomology event is to develop the students knowledge and interest in the area of entomology.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores.

I. OBJECTIVES

A. To test the student’s ability to:
   1. identify common Arizona insects and indicate their order, economic importance and other requested information.
   2. react to a written exam pertaining to insect anatomy, development, habits, economic importance, possible control, etc.

B. To motivate learning in the classroom and create a spirit of competition among the students.

C. To provide recognition for those individuals excelling in this area.

D. To promote career awareness in entomology-related occupations.

II. COMPETENCIES

PS 9

A. Classify common Arizona insects according to the mouth parts, types of metamorphosis, scientific classification, feeding behaviors and foods.

B. Select appropriate insect sampling method and determine when insect control is economically necessary.

C. Describe methods of applying cultural, biological and chemical controls to common Arizona insects.

III. GENERAL RULES

A. The total possible score will be 200 points; including identifications, (100 points) and a written examination, (100 points).

B. The event will be conducted as follows:

1. Identifications:
   Twenty identifications will be made. Subjects will be chosen from the list given below. Each identification has a possible credit of five points, including; correct common name (two points); order, (one point); mouthparts, (one point); and, type of metamorphosis, (one point).
point). Identifications may be based on actual specimens (adults or immature stages), samples of insect damage or other activity or slides or pictures of any of the above.

2. Written Examination:
   This will be of the objective type and may include multiple choices, completions, recognition of true or false statements and labeling of diagrams.

   Questions may cover:
   - rudiments of insect anatomy (including mouthparts)
   - insect development (metamorphosis)
   - names and elementary recognition characters for the most common insect orders
   - habits and economic importance of common pests and possible control measures.

   Questions will be limited to subject matter in references cited below (or in duly publicized supplementary references).

C. List of Study Insects or Arthropods
   The 20 insects (or near relatives) selected for the identification portion of this event will be chosen from the following list:

1. American cockroach
2. aphid
3. Arizona brown spider (relative of the brown recluse)
4. armored scale
5. assassin bug
6. bagworm
7. bark scorpion
8. big eyed bug
9. blister beetle
10. boll weevil
11. bollworm
12. brown banded cockroach
13. cabbage looper
14. cattle grub
15. chewing louse
16. cicada
17. collops beetle
18. cotton leaf perforator
19. cottony cushion scale
20. cucumber beetle
21. cut worm
22. daddy longlegs
23. darkling beetle
24. dermestid beetle
25. dragonfly
26. damsel bug
27. earwig
28. field cricket
29. fig beetle (Green June beetle)
30. flea
31. flea beetle  
32. German cockroach  
33. grape leaf skeletonizer  
34. grasshopper  
35. honey bee  
36. house fly  
37. ichneumon wasp  
38. katydid (long horned grasshopper)  
39. lacewing  
40. lady beetle  
41. leaf footed plant bug  
42. leaf hopper  
43. leaf cutter bee  
44. long horned wood boring beetle  
45. lygus bug  
46. minute pirate bug  
47. mosquito  
48. paper wasp  
49. pink bollworm  
50. praying mantis  
51. red harvester ant  
52. salt marsh caterpillar  
53. silverfish  
54. spider mite  
55. stink bug  
56. sucking louse  
57. syrphid fly  
58. tachinid fly  
59. termite  
60. three cornered alfalfa hopper  
61. thrips  
62. tick  
63. tomato horn worm/sphinx moth  
64. walking stick  
65. web spinners  
66. whitefly  
67. white grub  
68. wolf spider
REFERENCES


6. Due to continuous changes in materials dealing with insects and their control, it is suggested that the individual teacher secure the latest up-to-date publications dealing with insects and their control from the local County Extension Office.

1. Availability of slide series for identification of insects and arthropods from Agricultural Education Department, The University of Arizona.

2. Insects in the System. May Berenbaum

3. Introduction to the Study of Insects, Borrom Treplehorm and Johnson.

4. Insect Biology, Noward E. Evans.

5. Life on a Little Known Planet, Noward E. Evans.


7. The Science of Entomology, Romoser and Stoffolane.

8. Insects of the Southwest, Werner and Olson.
<table>
<thead>
<tr>
<th>Identification No.</th>
<th>Common Name Insect</th>
<th>Order</th>
<th>Mouthparts</th>
<th>Metamorphosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ENTOMOLOGY EVENT

1. Acarina
   tick (brown dog, ear, etc.)
   spider mite

2. Araneida.
   Arizona brown spider
   Wolf spider

3. Anoplura
   Sucking louse (body, crab)

4. Coleoptera
   blister beetle
   collops beetle
   cucumber beetle
   boll weevil
   darkling beetle
   dermestid beetle
   fig beetle (green June beetle)
   flea beetle
   lady beetle
   long horned wood boring beetle
   white grub (scarab beetle larva)

5. Dermaptera
   earwig

6. Diptera
   cattle grub (warble fly, bot fly)
   house fly
   mosquito
   syrphid fly
   tachinid fly

7. Embioptera
   web spinners

8. Hemiptera
   assassin bug
   big eyed bug (Geocoris)
   damsel bug (nabid)
   leaf footed plant bug
   lygus bug
   minute pirate bug (Orius)
   stink bug (say, brown)

9. Homoptera
   aphid
   cicada
   cottony cushion scale
   armored scale
   leafhopper
   3 cornered alfalfa hopper
   whitefly
10. Hymenoptera  honey bee
   ichneumon wasp
   leaf cutter bee
   paper wasp
   red harvester ant

11. Isoptera  termite

12. Lepidoptera  bagworm
   bollworm
   cabbage looper
   cut worm
   cotton leaf perforator
   grape leaf skeletonizer
   pink bollworm
   salt marsh caterpillar
   tomato horn worm/sphinx moth

13. Mallophaga  chewing louse

14. Neuroptera  lacewing

15. Odonata  dragonfly

16. Orthoptera  American cockroach
   brown banded cockroach
   field cricket
   German cockroach
   Grasshopper
   katydid (long horned grasshopper)
   praying mantis
   walking stick

17. Phalangida  daddy longlegs (harvestman)

18. Scorpionida  bark scorpion

19. Siphonaptera  flea

20. Thysanoptera  thrips

21. Thysanura  silverfish
PURPOSE

The State FFA Extemporaneous Public Speaking Career Development Event is designed to develop the ability of all FFA members to express themselves on a given subject without having prepared or rehearsed its content in advance, therefore causing FFA members to formulate their remarks for presentation in a very limited amount of time. The event will be held in connection with the State FFA Leadership Conference.

Copies of the rules and score sheet will be supplied to participants in advance of the state event.

COMPETENCIES

PS 1, 2

-Demonstrate communication skills
-Demonstrate leadership skills
-Utilize time management skills
-Utilize listening skills

I. ELIGIBILITY

A. The State FFA Extemporaneous Public Speaking Career Development Event will be open only to students who are regularly enrolled in agricultural education during the current calendar year, or who are still in high school but have completed all the agricultural education offered. When selected, participants must be active members of a chartered FFA chapter and the National FFA Organization.

B. The event is open to two individuals per district not to exceed 16 teams. In the even that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place individuals from other districts.

C. A participant shall wear complete official FFA dress for this each event.

II. SUBJECTS

A. The selection of topics shall be held 30 minutes before the event. The participants will draw four specific topics, selected at random from one pool of 12, relating to the industry of agriculture. After selecting the topic they desire to speak on, all three topics will be returned for the next drawing.

B. Twelve topics shall be prepared by the event chairperson and will include three each from the following categories:
   1. agriscience and technology;
   2. agrimarketing and international agricultural relations;
   3. food and fiber systems;
   4. urban agriculture.
C. Participants will be admitted to the preparation room at 11-minute intervals and given exactly 30 minutes for topic selection and preparation.

D. Reference material will be screened by the officials in charge of the event on the following basis:
1. Shall be limited to five items.
2. Must be printed material such as books or magazines and/or a compilation of collected materials. To be counted as one item, a notebook or folder of collected materials may contain no more than 100 pages, single side (cannot be notes or speeches prepared by the participant or notes prepared by another person for the purpose of use for this event). (Copies must reference the origination point).

E. Each speech shall be the result of the participant's own effort using approved reference material, which the participant may bring to the preparation room. No other assistance may be provided. Participants must use the uniform note cards provided. Any notes for speaking must be made during the 30-minute preparation period.

F. A list of all possible topics will be given to and reviewed by the judges prior to the beginning of the event. Judges will be notified of the speakers topic prior to each speech.

III. TIME LIMIT

Each speech shall be not less than four nor more than six minutes in length with five minutes additional time allowed for related questions, which shall be asked by the judges. The program chairman of the event shall introduce the participant by name and chapter, and the participant may introduce his or her speech by title only. Participants will be penalized one point per second on each judge's score sheet for being over six minutes or under four minutes. Time commences when the speaker begins talking. Speakers may use a watch to keep a record of their time. No time warnings will be given by event officials or observers.

IV. EVENT PROCEDURES

A. The State advisory board will assign a chair to this event.

B. Speaking order will be randomly drawn by event officials. The program chairman shall introduce each participant by name and in order of the drawing. A participant will be permitted to use notes while speaking, but deductions in scoring may be made for this practice if it detracts from the effectiveness of the presentation. Applause shall be withheld until all participants have spoken.

C. The state event will be conducted in two rounds: semifinals and finals. No ranking will be given except for the final four. Preliminary rounds will be conducted at the district level. Each district may submit their first and second place speaker for the semifinal event.

D. One timekeeper shall be designated who will record the time by each participant in delivering his or her speech, noting undertime or overtime, if any, for which deductions will be made. Each section and round will be assigned a timekeeper.

E. A minimum of three competent and impartial persons will be selected to judge the event. At least one judge should have an agricultural background.
F. At the time of the event, the judges will be seated in different sections of the room in which the event is held. They will score each participant on the delivery of the production, using the score sheet provided.

G. Each judge shall formulate and ask questions. Questions shall pertain directly to the speaker's subject. Judges will score each participant on the ability to answer all questions asked by all judges. Three to five minutes should be used.

H. When all participants have finished speaking, each judge will total the score on each speaker. The timekeeper's record will be used in computing the final score for each participant. The judges score sheets will then be submitted to event officials to determine final ratings of participants.

I. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges' ranking of each participant then shall be added, and the winner will be that participant whose total of rankings is the lowest. Other placings shall be determined in the same manner (low point score method of selection). In case of a tie, that individual who has the highest grand total score shall have higher rating. The high and low score will be dropped to ensure accuracy.

V. AWARDS

Plaques will be awarded to the state finalists by the Arizona Association FFA. A cash award of $175 will be awarded to the State winner.

VI. SCORING

EXPLANATION OF SCORE SHEET POINTS

1. *Content Related to Topic* includes:
   - Appropriateness of the total speech content to the topic selected
   - Extent to which the speaker addressed the topic selected
   - Suitability of the material used
   - Accuracy of the statements included
   - Relationship of the content to agriculture

2. *Organization of Material* includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose/conclusions
   - Material related to subtopic

3. *Power of Expression* includes:
   - Fluency
4. **Voice includes:**
- Quality
- Pitch
- Articulation
- Pronunciation
- Force

5. **Stage Presence includes:**
- Personal appearance
- Poise and body posture
- Attitude
- Confidence
- Personality
- Ease before audience

6. **General Effect includes:**
- Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.
- Evidence of purpose

7. **Response to Questions includes:**
- Ability to answer the questions on the speech which are asked by the judges indicating originality, familiarity with subject and ability to think quickly
- Conveyance of thought and meaning

**NOTE:** Judges will meet prior to the event to prepare and clarify the types of questions to be asked.
STATE FFA EXTEMPORANEOUS PUBLIC SPEAKING CAREER DEVELOPMENT EVENT
JUDGES SCORE SHEET

<table>
<thead>
<tr>
<th>Items To Be Scored</th>
<th>Max. Points</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Related to Topic</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization of Material</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power of Expression</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Presence</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Effect</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response to Questions*</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Gross)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Time Deductions**</td>
<td>1 pt. per second</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Net)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rank of Participant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: Judges should meet prior to the event to prepare and clarify the types of questions to be asked. **From the timekeeper's record.

EXPLANATION OF SCORE SHEET POINTS

1. **Content Related to Topic** includes:
   - Appropriateness of the total speech content to the topic selected
   - Extent to which the speaker addressed the topic selected
   - Suitability of the material used
   - Accuracy of the statements included
   - Relationship of the content to agriculture

2. **Organization of Material** includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose/conclusions
   - Material related to subtopic

3. **Power of Expression** includes:
   - Fluency
   - Emphasis
   - Directness
   - Sincerity
   - Communicative ability
   - Conveyance of thought and meaning

4. **Stage presence** includes:
   - Personal Appearance
   - Poise and body posture
   - Attitude
   - Confidence
   - Personality
   - Ease before audience

5. **General Effect** includes:
   - Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.
   - Evidence of purpose

6. **Response to Questions** includes:
   - Ability to answer the questions on the speech which are asked by the judges indicating originality, familiarity with subject and ability to think quickly
PURPOSE

The purpose of the State Field Crop Management event is to develop the skills needed to manage a successful crop.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals' scores.

I. OBJECTIVES

A. To evaluate the student's competency in Field Crop Management.

1. select quality crop seed and/or specimens
2. identify commonly used crop seeds
3. recognize important weed specimens and know the proper control measures (cultural and chemical)
4. determine most economical seed to buy from information on seed tags (based on pure live seed basis)
5. determine the cost per pound of fertilizer nutrients or costs of nutrients per acre
6. calculate time, rate, amount, area and depth using various methods of irrigation
7. describe the protective equipment used when working with agricultural chemicals
8. relate molecular processes to the plant

B. To motivate learning in the classroom and create a spirit of competition among the students.

C. To provide recognition for individuals excelling in this area.

D. To promote career choice in Field Crop Management.

II. COMPETENCIES

PS 6, 8, 10, 11

A. Classify plant according to life cycle, structure, and use.

B. Properly plant a crop on a prepared seedbed.

C. Recognize water requirements and identify methods of irrigation.
D. Describe approved weed control measures.

E. Recognize major plant diseases of Arizona, their causes and controls.

III. GENERAL RULES

A. A team will consist of three members. One alternate may judge, if desired. The team score will be the total of the three highest individuals.

B. Crop Seed Identification

Participants will identify crop seeds from the following:
Weed Plants and/or seeds:

<table>
<thead>
<tr>
<th>Plant</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>barnyardgrass</td>
<td>barnyardgrass</td>
</tr>
<tr>
<td>black nightshade</td>
<td></td>
</tr>
<tr>
<td>broadleaf plaintain</td>
<td>broadleaf plaintain</td>
</tr>
<tr>
<td>buckhorn plaintain</td>
<td>buckhorn plaintain</td>
</tr>
<tr>
<td>bull thistle</td>
<td>bull thistle</td>
</tr>
<tr>
<td>Canada thistle</td>
<td>Canada thistle</td>
</tr>
<tr>
<td>cheat grass</td>
<td>cheat grass</td>
</tr>
<tr>
<td>chickweed</td>
<td>chickweed</td>
</tr>
<tr>
<td>cocklebur</td>
<td>cocklebur</td>
</tr>
<tr>
<td>common mallow</td>
<td>common mallow</td>
</tr>
<tr>
<td>common milkweed</td>
<td></td>
</tr>
<tr>
<td>common mullein</td>
<td></td>
</tr>
<tr>
<td>common purslane</td>
<td>common purslane</td>
</tr>
<tr>
<td>common ragweed</td>
<td>common ragweed</td>
</tr>
<tr>
<td>common sunflower</td>
<td>common sunflower</td>
</tr>
<tr>
<td>crabgrass</td>
<td>crabgrass</td>
</tr>
<tr>
<td>crown vetch</td>
<td>crown vetch</td>
</tr>
<tr>
<td>curly dock</td>
<td>curly dock</td>
</tr>
<tr>
<td>dandelion</td>
<td>dandelion</td>
</tr>
<tr>
<td>dodder</td>
<td></td>
</tr>
<tr>
<td>dog fennel</td>
<td></td>
</tr>
<tr>
<td>field bindweed</td>
<td>field bindweed</td>
</tr>
<tr>
<td>field pennycress</td>
<td></td>
</tr>
<tr>
<td>foxtail</td>
<td>foxtail</td>
</tr>
<tr>
<td>giant bermuda</td>
<td></td>
</tr>
<tr>
<td>groundcherry</td>
<td>ground cherry</td>
</tr>
<tr>
<td>jimson weed</td>
<td></td>
</tr>
<tr>
<td>johnsongrass</td>
<td>johnsongrass</td>
</tr>
<tr>
<td>knotweed</td>
<td></td>
</tr>
<tr>
<td>lambsquarters</td>
<td>lambsquarters</td>
</tr>
<tr>
<td>leafy spurge</td>
<td>leafy spurge</td>
</tr>
<tr>
<td>morningglory</td>
<td>morningglory</td>
</tr>
<tr>
<td>nettle (horse)</td>
<td></td>
</tr>
<tr>
<td>nightshade</td>
<td></td>
</tr>
<tr>
<td>nutsedge-yellow</td>
<td>nutsedge-yellow</td>
</tr>
<tr>
<td>prickly lettuce</td>
<td>prickly lettuce</td>
</tr>
<tr>
<td>prostrate knotweed</td>
<td>prostrate knotweed</td>
</tr>
<tr>
<td>puncture vine</td>
<td>puncture vine</td>
</tr>
<tr>
<td>redroot pigweed</td>
<td>redroot pigweed</td>
</tr>
<tr>
<td>Russian thistle</td>
<td>Russian thistle</td>
</tr>
<tr>
<td>shepardspurge</td>
<td>shepardspurge</td>
</tr>
</tbody>
</table>
smartweed
sowthistle
St. johns wart
tansy mustard
wild carrot
wild mustard
wild oats
wild onion/garlic

Crop Plants and/or Seeds:

<table>
<thead>
<tr>
<th>Plant</th>
<th>Seeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>alfalfa</td>
<td>alfalfa</td>
</tr>
<tr>
<td>barley</td>
<td>barley</td>
</tr>
<tr>
<td>bean</td>
<td></td>
</tr>
<tr>
<td>bermuda grass</td>
<td>bermuda grass</td>
</tr>
<tr>
<td>canola</td>
<td>canola</td>
</tr>
<tr>
<td>cantaloupe</td>
<td>cantaloupe</td>
</tr>
<tr>
<td>cauliflower</td>
<td>cauliflower</td>
</tr>
<tr>
<td>chili pepper</td>
<td>chili pepper</td>
</tr>
<tr>
<td>corn</td>
<td>corn, dent</td>
</tr>
<tr>
<td>cotton</td>
<td>corn, pop</td>
</tr>
<tr>
<td>cucumber</td>
<td>cucumber</td>
</tr>
<tr>
<td>durum wheat</td>
<td>durum wheat</td>
</tr>
<tr>
<td>flax</td>
<td></td>
</tr>
<tr>
<td>hops</td>
<td></td>
</tr>
<tr>
<td>Kentucky bluegrass</td>
<td>Kentucky bluegrass</td>
</tr>
<tr>
<td>lettuce</td>
<td>lettuce</td>
</tr>
<tr>
<td>oats</td>
<td>lima beans</td>
</tr>
<tr>
<td>onion</td>
<td>oats</td>
</tr>
<tr>
<td>orchardgrass</td>
<td>onion</td>
</tr>
<tr>
<td>peanuts</td>
<td>orchardgrass</td>
</tr>
<tr>
<td>peas</td>
<td>peanuts</td>
</tr>
<tr>
<td>potato</td>
<td>pinto beans</td>
</tr>
<tr>
<td>red clover</td>
<td>red bean</td>
</tr>
<tr>
<td>red wheat</td>
<td>red clover</td>
</tr>
<tr>
<td>rice</td>
<td>rice</td>
</tr>
<tr>
<td>rye</td>
<td>rye</td>
</tr>
<tr>
<td>safflower</td>
<td>safflower</td>
</tr>
<tr>
<td>sorghum</td>
<td>sorghum</td>
</tr>
<tr>
<td>soybeans</td>
<td>soybeans</td>
</tr>
<tr>
<td>squash</td>
<td>squash</td>
</tr>
<tr>
<td>strawberry</td>
<td>strawberry</td>
</tr>
<tr>
<td>sudangrass</td>
<td>sudangrass</td>
</tr>
<tr>
<td>sugar beets</td>
<td>sugar beets</td>
</tr>
<tr>
<td>sugar cane</td>
<td></td>
</tr>
<tr>
<td>sunflower</td>
<td>sunflower</td>
</tr>
<tr>
<td>sweetclover</td>
<td>sweetclover</td>
</tr>
<tr>
<td>tall fescue</td>
<td>tall fescue</td>
</tr>
<tr>
<td>timothy</td>
<td>timothy</td>
</tr>
</tbody>
</table>

Q-3
C. Weed Identification:

Participants will identify weed specimens from the following plant mounts:

<table>
<thead>
<tr>
<th>WEED</th>
<th>LIFE CYCLE</th>
<th>LEAF TYPE</th>
<th>GROWTH HABIT</th>
<th>METHOD OF PROPAGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnyard Grass</td>
<td>Annual (S)*</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Black Nightshade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broadleaf Plaintain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buckhorn Plaintain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bull Thistle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada Thistle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheat Grass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chick Weed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocklebur</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Common Mallow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Milkweed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Mullein</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Puslane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Ragweed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Sunflower</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Bushy</td>
<td>Seed, stems rooting at joints</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Crown Vetch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curly Dock</td>
<td>Perennial</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Dandelion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dodder</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Seed</td>
<td></td>
</tr>
<tr>
<td>Dog Fennel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Bindweed</td>
<td>Perennial</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Field Pennycress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Foxtail</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Narrow Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Giant Bermuda</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundcherry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jimson Weed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnson Grass</td>
<td>Perennial</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed, Rhizome</td>
</tr>
<tr>
<td>Knotweed</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Lambsquarters</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Leafy Spurge</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Morning Glory</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Seed</td>
<td></td>
</tr>
<tr>
<td>Nettle (horse)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutsedge (yellow)</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Prickly Lettuce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prostrate Knotweed</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Puncturevine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redroot Pigweed</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Prostrate</td>
<td>Seed</td>
</tr>
<tr>
<td>Russian Thistle</td>
<td>Annual (S)</td>
<td>Broad</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Sandbur</td>
<td>Annual (S)</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Shepherdspurge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smartweed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sowthistle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Johns Wart</td>
<td>Annual (W)</td>
<td>Broad</td>
<td>Bushy</td>
<td>Seed</td>
</tr>
<tr>
<td>Tansy Mustard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Carrot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Mustard</td>
<td>Annual (S)</td>
<td>Narrow</td>
<td>Erect</td>
<td>Seed</td>
</tr>
<tr>
<td>Wild Oat</td>
<td>Annual (S)</td>
<td>Narrow</td>
<td>Eect</td>
<td>Seed</td>
</tr>
</tbody>
</table>

Q-4
Wild Onion/Garlic
*(S) - Summer
(W) - Winter
IV. CROP JUDGING

Participants will judge two to four (2-4) classes of seed with four entries in each class and give written reasons for one class. The written reasons will be weighted to count more than the correct placing. Judging samples will be selected from the following classes:

- Class I: Grass Seed
- Class II: Sorghum Seed
- Class III: Oil Seed
- Class IV: Small Grain Seed
- Class V: Cotton

V. WRITTEN EXAMINATION

Participants will take a written examination based upon information in the following references:


E. Monsanto. *Of the Earth: Agriculture and the New Biology*
## FEILD CROP MANAGEMENT EVENT
### WEEDS

Place the number of the weed after the letter of the sample.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Common Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Barnyard Grass</td>
<td>1</td>
</tr>
<tr>
<td>B.</td>
<td>Black Nightshade</td>
<td>2</td>
</tr>
<tr>
<td>C.</td>
<td>Broadleaf Plaintain</td>
<td>3</td>
</tr>
<tr>
<td>D.</td>
<td>Buckhorn Plaintain</td>
<td>4</td>
</tr>
<tr>
<td>E.</td>
<td>Bull Thistle</td>
<td>5</td>
</tr>
<tr>
<td>F.</td>
<td>Canada Thistle</td>
<td>6</td>
</tr>
<tr>
<td>G.</td>
<td>Cheat grass</td>
<td>7</td>
</tr>
<tr>
<td>H.</td>
<td>Chickweed</td>
<td>8</td>
</tr>
<tr>
<td>I.</td>
<td>Cocklebur</td>
<td>9</td>
</tr>
<tr>
<td>J.</td>
<td>Common Mallow</td>
<td>10</td>
</tr>
<tr>
<td>K.</td>
<td>Common Milkweed</td>
<td>11</td>
</tr>
<tr>
<td>L.</td>
<td>Common Mullein</td>
<td>12</td>
</tr>
<tr>
<td>M.</td>
<td>Common Purslane</td>
<td>13</td>
</tr>
<tr>
<td>N.</td>
<td>Common Ragweed</td>
<td>14</td>
</tr>
<tr>
<td>O.</td>
<td>Common Sunflower</td>
<td>15</td>
</tr>
<tr>
<td>P.</td>
<td>Crabgrass</td>
<td>16</td>
</tr>
<tr>
<td>Q.</td>
<td>Crown Vetch</td>
<td>17</td>
</tr>
<tr>
<td>R.</td>
<td>Curly Dock</td>
<td>18</td>
</tr>
<tr>
<td>S.</td>
<td>Dandelion</td>
<td>19</td>
</tr>
<tr>
<td>T.</td>
<td>Dodder</td>
<td>20</td>
</tr>
<tr>
<td>U.</td>
<td>Dog Fennel</td>
<td>21</td>
</tr>
<tr>
<td>V.</td>
<td>Field Bindweed</td>
<td>22</td>
</tr>
<tr>
<td>W.</td>
<td>Field Pennycress</td>
<td>23</td>
</tr>
<tr>
<td>X.</td>
<td>Foxtail</td>
<td>24</td>
</tr>
<tr>
<td>Y.</td>
<td>Giant Bermuda</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Groundcherry</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Jimson Weed</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Johnson Grass</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Knotweed</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Lambsquarter</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Leafy Spurge</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Morning Glory</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Nettle (horse)</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Nightshade</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Nutsedge (yellow)</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Prickly Lettuce</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Puncture vine</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Redroot Pigweed</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Russian Thistle</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Shephardspurge</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Smartweed</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Sowthistle</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>St. Johns wart</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Tansy Mustard</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Wild Carrot</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Wild Garlic</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Wild Mustard</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Wild Oats</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Wild Onion</td>
<td>50</td>
</tr>
</tbody>
</table>
FIELD CROP MANAGEMENT EVENT
Crop Identification
(Seeds)

Place the number of the crop after the letter of the sample.

<table>
<thead>
<tr>
<th>CROP (SEEDS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. _____</td>
</tr>
<tr>
<td>E. _____</td>
</tr>
<tr>
<td>G. _____</td>
</tr>
<tr>
<td>H. _____</td>
</tr>
<tr>
<td>J. _____</td>
</tr>
<tr>
<td>K. _____</td>
</tr>
<tr>
<td>L. _____</td>
</tr>
<tr>
<td>M. _____</td>
</tr>
<tr>
<td>O. _____</td>
</tr>
<tr>
<td>P. _____</td>
</tr>
<tr>
<td>Q. _____</td>
</tr>
<tr>
<td>R. _____</td>
</tr>
<tr>
<td>S. _____</td>
</tr>
<tr>
<td>T. _____</td>
</tr>
<tr>
<td>U. _____</td>
</tr>
<tr>
<td>V. _____</td>
</tr>
</tbody>
</table>
PURPOSE

The purpose of the Floriculture career development event is to stimulate the study of and interest in production and retailing of flowers, plants and foliage through the agricultural education curriculum.

Team Make-up

A team representing a chapter will consist of four members. All four members will compete however only the top three individual scores will be counted towards the overall team score.

I. OBJECTIVES

A. Identify floriculture and bedding plant materials.

B. Identify and treat unhealthy plants due to pest, nutritional, mechanical or chemical injury.

C. Understand the biological and scientific principles and develop the skills underlying propagation, growth requirements, growing techniques, harvesting, marketing and maintenance of established floriculture plants.

D. Understand principles and develop skills of floral design.

E. Identify and select appropriate supplies and equipment for the flower shop and greenhouse.

F. Understand and demonstrate the use of safety procedures and practices in floriculture operations.

G. Operate and maintain appropriate equipment for floriculture operations.

H. Understand and demonstrate interpersonal skills prerequisite to successful employment in the floriculture industry.

I. Understand and demonstrate proper sales and service skills.

J. Maintain records and proper reports that are accurate and legible.

K. Develop those interpersonal skills prerequisite to effective participation in the floriculture industry.

II. COMPETENCIES

PS 4, 5, 6, 7, 14, 15

A. Select and prepare growing media and understand characteristics of different medium components.
B. Determine need for fertilizers, growth regulators and pesticides.
C. Propagate, grow and maintain nursery stock.
D. Establish and maintain a hydroponic vegetable crop.
E. Recommend maintenance measures for interior and exterior landscapes.
F. Recommend correct plant(s) for a given situation.
G. Identify characteristics of a quality plant.
H. Propagate, grow and maintain greenhouse crops.
I. Identify nursery, greenhouse and floral crops.
J. Apply skills in selling and merchandising horticulture products.
K. Demonstrate an understanding of economic principles needed for an effective operation of a horticultural business.
L. Construct, operate and maintain plant growth structures (greenhouses, lath houses, cold frames, hydroponics, etc.).
M. Demonstrate an understanding of basic principles of floral design.
N. Identify tools, equipment and supplies used in the nursery and floral industries.

III. EVENT RULES

1. The event will have five phases: identification of plant materials, general knowledge examination, problem solving, practicums and a team activity.
2. Under no circumstances will any participant be allowed to touch or handle plant material during the event except during the practicums and team activity.
3. Observers will not be permitted in the event area while that event is in progress.
4. Any communication between participants from the same team during the event will be sufficient cause to eliminate the team from the event. The exception to this is the team activity.
5. No team, participant or coach shall visit the event facilities from October 1 to the end of the event. Any team, participant or coach reported and proven to do so will cause the elimination of that team from competing in the national event.
6. Any participant caught cheating during the event will be, along with his or her team members, expelled from the event.
7. All participants are expected to be prompt at their stations throughout the event. No provision will be made for tardiness, which will in most cases cause the late participant to lose event points.

8. Participants will be assigned to group leaders who will escort them to various event staging sites. Each participant is to stay with his or her group leader throughout the event or until told to change leaders by the event superintendent.

9. Any assistance given a participant from any source during the event (other than the event officials, group leaders and assistants) will be sufficient cause to eliminate the team from the event.

10. All participants will be given an identification number by which they will be designated throughout the event.

11. Teams will be divided into groups so that when possible, no two participants from a chapter will be in the same competing group, except for the team activity.

12. All participants must be in full official FFA dress at all events. Participants must appear at the awards function in official FFA dress.

IV. REFERENCES

This list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.

*All About Perennials.* 1981 Ortho Books. Chevron Chemical Company, 6001 Bolinger Canyon Road, San Ramon, CA 94583


*Floral Design and Marketing.* 1988. Ohio Agricultural Education Curriculum Materials Service, The Ohio State University, Room 254, 2120 Fyffe Road, Columbus, Ohio 43210
Materials student must provide - Each participant must have a clean, free of notes clipboard, two sharpened No. 2 pencils, a prepared résumé, florist shears, knife and an electronic calculator. Calculators used in this event should be battery operated, non-programmable, silent with large keys and large displays. Calculators should have only these functions-addition, subtraction, multiplication, division, equals, percent, square root, +/- key, and one memory register. No other calculators are allowed to be used during the event.

B. TEAM ACTIVITY

Phase 1 - Team Activity (200 points)
Each team will perform a task normally performed in some phase of the floriculture industry that requires teamwork. Prior to the event, the State FFA Floriculture Career Development Event Committee Chair will select a theme and series of floriculture industry tasks. These tasks will be described in situational terms for presentation to each team. Forty-five minutes will be allowed for this activity. All supplies and materials needed to complete the task will be provided.

Typical of the type of tasks that will be used in this phase of the event are:

• Making floral decorations for an event or party
• Demonstrating the use of a horticultural product
• Packing plants for shipping and updating inventory
• Filling orders for customers
• Preparing floral decorations for a convention
• Designing on location.

Team Activity Scorecard
Established team leadership role ..................................... 15
Member participation in planning of activity ..................... 35
Developed a workable plan.............................................40
Member responsibilities were outlined and assigned ...... 15
Materials were organized prior to commencing activity .... 15
Member participation in carrying out activity functions ..... 30
Followed proper procedures in carrying out activity ....... 30
Quality of activity product.............................................20
Total Points ..................................................................200

C. INDIVIDUAL ACTIVITIES

Phase 2 - Identification Of Plant Materials (200 points)
Forty specimens from the Floriculture Plant Identification List will be displayed for participants to
distinguish by technical and common names. A number will designate each specimen. Five points will be
awarded for each specimen that is correctly identified. Each participant will be allowed 20 minutes to
complete this phase of the event.

Phase 3 - General Knowledge Examination (250 points)
Fifty objective-type multiple choice questions will be written that covers the areas of the floriculture
industry reflected in the event objectives. This phase of the event will test participants’ knowledge and
understanding of basic biological and scientific principles of producing and marketing flowers, plants
and foliage. Each participant will be allowed 50 minutes to complete this phase of the event. Each
answer has a value of five points.

Phase 4 - Problem-Solving/Decision-Making (200 points)
Each participant will solve ten (10) problems related to the various aspects of the floriculture industry
identified in the event objectives. A problem-solving activity is defined as:

“A mental or physical activity involving the gathering or searching of information and the use of a
logical solution process using commonly accepted standards and available information to solve a
problem specific to a particular area of floriculture production or retailing.”

Each problem will describe the situation associated with, or creating the problem, and list four
possible solutions to the problem. The participant must decide on the BEST possible solution to the
problem. All materials and information necessary to solve the problem will be available to the
participant as he/she solves the problem. An example problem follows:

Situation:
You are the owner of the “Flower City” florist shop. You received an order for a floral arrangement to
be delivered to one of your regular customers. You give the order to one of your employees and ask
that it be ready by delivery time. When the employee brings the finished arrangement to you for
packing and delivery, you notice a problem with the arrangement. The arrangement before you is
the arrangement made by the employee. You realize that the problem must be corrected before the
arrangement can be delivered. What would you tell your employee to do to the arrangement to
correct the problem?
Possible Solutions:
a. Move smaller flowers to the top of the arrangement and larger flowers to the bottom of the arrangement.

*b. Add a focal point to the arrangement.

c. Use some different plant materials to add texture to the arrangement.

d. Change the color of the flowers to make the colors compatible with each other.

Each participant will be allowed 50 minutes to complete this phase of the event. Each correct solution has a value of 20 points.

Phase 5 - Practicum (525 points)
Each participant will complete the flower arrangement, job interview, one of the selling practicums (over the telephone or one-on-one) and three of the other eleven practicums.

Selection of the three other practicums will be made from the practicums listed below for each noted year:

2001
Handling a Hazardous Situation
Make a Dish Garden
Make a Product Display
Pinching Plants
Potting Plant Cuttings
Using a Computer

2002
Asexual Propagation of Plants
Handling a Customer Complaint
Identifying and Controlling Plant Disorders
Make and Package a Corsage
Media Selling
Potting Plant Cuttings

2003
Handling a Hazardous Situation
Make a Dish Garden
Make a Product Display
Media Selling
Pinching Plants
Using a Computer

2004
Asexual Propagation of Plants
Handling a Customer Complaint
Identifying and Controlling Plant Disorders
a. Floral Arrangement (100 points)

Make a $35 floral arrangement. The event superintendent will announce the type of arrangement during the coaches' meeting. Using the materials provided, participants will be allowed 20 minutes to complete their arrangements and itemized bills. The event assistant at the beginning of the practicum will provide participants the RETAIL price of the flowers and foliage that they will use in their arrangements. The MARKUP will be built into the retail price. When the participant has determined the total arrangement cost, he or she has included the markup. Retail cost of flowers and foliage given to the participant will be determined after polling florists to determine their current retail prices on the flowers and foliage used in the event.

Floral Arrangement Scorecard

Arrangement (65 points) ......................Possible Points
  Design ................................................. 35
  Balance.............................................. 15
  Functionality .................................... 5
  Judges' Choice ................................. 10

Itemized Bill (35 points)
  Price Range ......................................... 11
  Accuracy .......................................... 10
  Completeness ..................................... 7
  Neatness .......................................... 7

Total Points .................................... 100

Explanation of Floral Arrangement Terms:
Design: Design is the overall shape or form of composition; a planned relationship of the parts. The elements of design include: line (linear patterns attracting the eye to the focal point); form (three-dimensional shape); texture (surface appearance of materials); color (use of tints, tones, shades of hues, as well as black, grey, and white); the pleasing way in which lines, textures, sizes and colors are blended or contrasted; and the tying together of the parts by the combination of good design, balance, and harmony.

Balance: Visual stability, regardless of whether design is symmetrical or asymmetrical; determined by the relative sizes of material and relative darkness of lightness, and the placement of them.

Functionality: Appropriateness of arrangement for use intended, soundness of construction.
**Judges’ Choice:** The use of plant materials and design principles in a particularly creative, original and unique manner.

### b. Interview for a Job (100 points)

Each participant will appear before an employer (judge) for the purpose of interviewing for a position available in the employer’s business. The event superintendent will announce specific information about the job for which the participant is applying at the coaches’ meeting. Participants will be given two job descriptions at the coaches’ meeting along with application forms to complete. Participants will be allowed to choose the job they wish to interview for and prepare their applications prior to participating in the practicum. Participants will be expected to prepare, prior to the event, a résumé of their experiences and background to present to the judge at the time of the interview. Ten minutes will be allowed for this practicum. Participants will be allowed five minutes to complete the interview and three minutes for judges to score the interview.

#### Job Interview Scorecard

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction .............................................. <strong>11</strong></td>
</tr>
<tr>
<td>Knowledge of job ............................................ <strong>25</strong></td>
</tr>
<tr>
<td>Knowledge of the floriculture industry ..... <strong>20</strong></td>
</tr>
<tr>
<td>Response to questions ............................ <strong>14</strong></td>
</tr>
<tr>
<td>Personality ............................................... <strong>15</strong></td>
</tr>
<tr>
<td>Poise ........................................................ <strong>15</strong></td>
</tr>
<tr>
<td><strong>Total Points .......................................... 100</strong></td>
</tr>
</tbody>
</table>

### c. Selling over the Telephone (100 points)

Each participant will be provided an order form and telephone. An event judge will serve as a customer and will score telephone usage as well as the written order. Ten minutes will be allowed for completion of this practicum including the judging of the telephone dialogue and sales slip. Participants will be allowed five minutes for dialogue with the customer and completion of the sales slip. Judges will be allowed three minutes to score the participant.

#### Telephone Scorecard

**Telephone Usage (70 points)....Possible Points**

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction ...................................... <strong>5</strong></td>
</tr>
<tr>
<td>Voice ..................................................... <strong>7</strong></td>
</tr>
<tr>
<td>Personality ............................................ <strong>18</strong></td>
</tr>
<tr>
<td>Information Gathered .................................. <strong>12</strong></td>
</tr>
<tr>
<td>Evidence of Product Knowledge ............ <strong>14</strong></td>
</tr>
<tr>
<td>Closing of Order .................................... <strong>14</strong></td>
</tr>
</tbody>
</table>

**Written Order (30 points)**

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery Instructions ........................... <strong>5</strong></td>
</tr>
<tr>
<td>Description of Floral Items ............. <strong>5</strong></td>
</tr>
<tr>
<td>Billing Information ............................... <strong>5</strong></td>
</tr>
<tr>
<td>Card Message ........................................... <strong>5</strong></td>
</tr>
<tr>
<td>Neatness and Completeness ................****<strong>5</strong></td>
</tr>
<tr>
<td>Correct Computation ............................ <strong>5</strong></td>
</tr>
</tbody>
</table>
d. Selling One-On-One (100 points)
Each participant will assume the role of a sales person in a floriculture business (grower, florist shop, garden center, etc.). A customer (judge) with a specific need will approach the participant. The participant will, through selling, help the customer meet his/her need. All supplies, information, and the business setting in which the participant works will be provided. Fifteen minutes will be allowed for this practicum.

Selling One-On-One Scorecard

Possible Points
Took initiative .................................................. 16
Communicated effectively .................................. 16
Exhibited ambition and efficiency ..................... 20
Diplomatic and courteous .................................. 20
Knew merchandise, prices and policies ............... 14
Closed sale properly ......................................... 14

Total Points .................................................. 100

e. Potting of Plant Cuttings (75 points)
Plant five rooted cuttings in the pot provided. (Each participant will be given a group of cuttings from which to select five; a 5 1/2-to-6-inch pot; a 1-1 soil mixture at the correct moisture level and a marking pencil.) Ten minutes will be allowed for completion on this practicum including the judging of the potted plant cuttings.

Plant Potting Scorecard

Potting Process (52 points) ..................Possible Points
Selection of Cuttings ....................................... 10
Filling Pot with Soil .................................... 4
Placing of Cuttings ..................................... 6
Covering Cutting Rooted Ends .................... 18
Labeling of Pot .......................................... 9
Watering of Potted Cutting ....................... 5

Potting Product (23 points)
Depth of Planting ......................................... 5
Correct Soil Level in Pot ............................... 5
Cutting Arrangement and Angle .................. 5
Firmness of Soil .......................................... 4
General Appearance
(freedom from handling damage) ................ 4

Total Points .................................................. 75

f. Make a Dish Garden (75 points)
Each participant will make a $25 dish garden. All plant materials, growing media, and containers will be provided. Twenty minutes will be allowed for each participant to make his/her dish garden and
complete the itemized bill. The event assistant at the beginning of the practicum will provide participant the RETAIL price of plants and other materials that they will use in their dish gardens. The MARKUP will be built into the retail. When the participant has determined the TOTAL DISH GARDEN COST, he or she has included the markup.

**Dish Garden Scorecard**

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of Plant Material .......... 8</td>
</tr>
<tr>
<td>Preparation of Plant Material ........ 17</td>
</tr>
<tr>
<td>Use of Growing Media                .......... 10</td>
</tr>
<tr>
<td>Use of Other Materials              .......... 12</td>
</tr>
<tr>
<td>Design                               .......... 15</td>
</tr>
<tr>
<td>Attractiveness                      .......... 13</td>
</tr>
<tr>
<td>Pricing                             .......... 10</td>
</tr>
<tr>
<td><strong>Total Points</strong>                    .......... 75</td>
</tr>
</tbody>
</table>

**g. Make a Product Display (75 points)**

Each participant will set up a sales display of an item(s) commonly sold in florist shops. Display areas will be established for each participant along with the product(s) to be displayed and all materials to establish the display. Twenty minutes will be allowed for completion of this practicum.

**Make A Product Display Scorecard**

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creates Interest                    .......... 9</td>
</tr>
<tr>
<td>Attractiveness                      .......... 10</td>
</tr>
<tr>
<td>Central Theme                       .......... 8</td>
</tr>
<tr>
<td>Sales Appeal                        .......... 15</td>
</tr>
<tr>
<td>Design                              .......... 16</td>
</tr>
<tr>
<td>Color Harmony                       .......... 9</td>
</tr>
<tr>
<td>Focal Point                         .......... 8</td>
</tr>
<tr>
<td><strong>Total Points</strong>                    .......... 75</td>
</tr>
</tbody>
</table>

**h. Make and Package a Corsage (75 points)**

Make and package a $15 corsage. The type of corsage and information about the corsage will be announced by the event assistant in charge at the beginning of the practicum. All plant and non-plant materials needed to construct and package the corsage will be provided. Participants should be knowledgeable and possess skills in the use of glue in making a corsage. Each participant will be allowed 20 minutes to complete the construction of the corsage and complete an itemized bill for the corsage constructed.

**Corsage Scorecard**

<table>
<thead>
<tr>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiring and Taping                   .......... 12</td>
</tr>
<tr>
<td>Use of Ribbon                       .......... 15</td>
</tr>
<tr>
<td>Design                              .......... 15</td>
</tr>
</tbody>
</table>
Wearability................................................... 14
Packaging...................................................... 7
Pricing.......................................................... 12
Total Points ................................................ 75

i. Asexual Propagation of Plants (75 points)
Each participant will be provided the parent plant materials and all other materials needed to propagate plants asexually. Using the available materials, participants will take five cuttings from the plant before them and stick them in rooting media. Ten minutes will be allowed for completion of this practicum including the judging of the participant’s performance in completing the practicum.

Asexual Plant Propagation Scorecard

Possible Points
- Selection of.................................................. 12
- Making cuttings............................................ 15
- Preparation of cuttings
  (for sticking in growing media)....................... 10
- Use of rooting hormone............................... 6
- Selection of growing media.......................... 12
- Sticking of cuttings in growing media.............. 8
- Response of questions............................... 12
- Total Points ................................................ 75

j. Identifying and Controlling Plant Disorders (75 points)
Each participant will be given a plant with a nutritional, environmental, disease or insect disorder. If the disorder is nutritional or environmental, the participant will identify the disorder and prescribe treatment to the customer. If a disease or insect causes the disorder, the participant will prepare and apply a treatment for the disorder. Containers marked with specific chemicals or chemical products (will contain water colored to resemble the products) will be available for participant to prepare their recommended treatments and apply them. In addition to the above points, participants will be judged on the safety practices they follow while completing this practicum. Safety materials and equipment will be provided each participant. Ten to twenty minutes will be allowed for this practicum.

Control Of Plant Disorders Scorecard
(For plants with insect or disease disorders)

Possible Points
- Diagnosis of Problem ...................................... 14
- Prescription of Treatment ............................... 14
- Preparation of Treatment.............................. 16
- Application of Treatment............................. 16
- Followed Recommended Safety Practices ....... 15
- Total Points .................................................... 75

Identifying & Prescribing Treatment For Plant
Disorders Scorecard

(For plants with nutritional or environmental disorders)

Possible Points

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis of Problem</td>
<td>12</td>
</tr>
<tr>
<td>Description of Problem</td>
<td>15</td>
</tr>
<tr>
<td>Discussion of Problem</td>
<td>18</td>
</tr>
<tr>
<td>Prescription of Treatment</td>
<td>18</td>
</tr>
<tr>
<td>Personality</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total Points** ........................................... 75

The plant disorder to be used in the event will be selected from the following list of disorders.

**Nutritional & Environmental Disorders**

- Poor soil drainage
- Overwatering damage
- Insufficient water damage
- Inadequate lighting
- Improper temperature
- Too much light
- Nitrogen deficiency
- Iron deficiency
- Salt damage
- Phosphorus deficiency

**Diseases**

- Powdery mildew
- Leaf spot
- Root rot
- Stem rot
- Verticillium wilt
- Fusarium wilt
- Rust
- Damping-off
- Mosaic
- Rhizoctonia
- Anthracnose
- Bacterial wilt

**Insects and Pests**

- Snails
- Slugs
- Whiteflies
- Aphids
- Leaf miner
- Spider mites
- Mealybugs
- Leafhopper
- Spittlebug
- Scale

**k. Pinching Plants (75 points)**

A plant will be placed before each participant. The participant will be given instructions as to what they are to do to the plant by the event assistant in charge of the practicum. Participants will be judged on the procedures they follow in pinching the plant. Ten minutes will be allowed for completion and judging of this practicum.

**Pinching Scorecard**

Possible Points

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of plant parts to pinch</td>
<td>16</td>
</tr>
<tr>
<td>Use of proper procedures in making pinches</td>
<td>20</td>
</tr>
<tr>
<td>Made proper hard pinches</td>
<td>12</td>
</tr>
<tr>
<td>Made proper soft pinches</td>
<td>12</td>
</tr>
<tr>
<td>Overall effect of making pinches</td>
<td>15</td>
</tr>
</tbody>
</table>
I. Handling a Hazardous Situation (75 points)

Each participant will be presented with a hazardous situation that could develop in a floriculture business. The participant will be asked to resolve the problem. The participant will be evaluated on his/her understanding of the problem and procedures and practices followed in resolving the problem. Twenty minutes will be allowed for this practicum.

Hazardous Situation Scorecard

Possible Points

- Utilize proper personal safety precautions......20
- Utilize proper safety procedures in clearing up the situation .........................25
- Proper disposal of problem materials ..............20
- Utilize proper follow-up procedures ..............10

Total Points ................................................... 75

m. Handling a Customer Complaint (75 points)

Each participant will assume the role of an employee in a floriculture business (grower, flower shop, garden center, etc.). A customer or potential customer who has a complaint will approach the participant. The participant will work with the customer in working out his/her complaint. Ten minutes will be allowed for this practicum.

Customer Complaint Scorecard

Possible Points

- Obtained clear understanding of complaint ..... 10
- Rephrase complaint in less negative terms ...... 8
- Changed complaint into question .................. 8
- Explored alternative solutions..................... 20
- Solved problem........................................ 15
- Exhibited a pleasing personality................ 14

Total Points .................................................... 75

n. Using the Computer (75 points)

Each participant will be given a situation typical of that experienced regularly by floriculture businesses that require the use of a computer. The participant will be expected to handle the situation using the computer. The computer model and specific programs to be used in this practicum will be announced in September when contest teams are provided with the “Program for National FFA Career Development Events” sent to participating teams and State Agricultural Education Officials. All teams will be expected to be familiar with the type of computer and programs to be used in the event prior to participating in this event. Twenty minutes will be allowed for this practicum.
Computer Use Scorecard

Possible Points

Familiarity with computer commands ........ 10
Understanding of computer programs ........ 15
Generated solution to situation .............. 25
Followed directions ................................ 15
Accuracy ............................................. 10
Total Points ........................................ 75

b. Media Selling (75 points)
Each participant will develop a one-page sales brochure, a newspaper advertisement, or the layout for a TV advertisement. Information and all materials needed to develop the brochure, newspaper ad or TV advertisement will be provided. When participants are asked to make a TV advertisement, they should be prepared to present their ad on camera. Twenty minutes will be allowed for this practicum.

Media Selling Practicum Scorecard (Newspaper Ad)

Possible Points

Identified target group......................... 8
Informed the reader ................................ 10
Appeared in good taste ......................... 10
Easy to read ....................................... 10
Presented one idea ............................... 15
Included only the essentials.................. 12
Proper use of space ............................. 10
Total Points ..................................... 75

Media Selling Practicum Scorecard
( Television Commercial)

Ad Information (36 points) ............ Possible Points

Identified target group ....................... 8
Informed the listener .......................... 8
Presented one idea ............................. 7
Contained essential information ........... 7
Appealed to the listener ..................... 6

Camera Performance (39)

Voice ............................................... 10
Personality ........................................ 2
Diplomatic & courteous ...................... 9
Enthusiastic about product ................ 8

Total Points ..................................... 75

VI. TIEBREAKERS

If ties occur the following events will be used in order to determine award recipients:

1. Arrangement Practicum
2. Sales practicum
VII. AWARDS

Awards will be presented at an awards ceremony. Awards are presented to teams as well as individuals based upon their rankings. Awards are sponsored by a cooperating industry sponsor(s) as a Special Project, and/or by the general fund of the Arizona FFA Foundation.

**Number Botanical Name/Common Name**

101 Aechmea chantinii cv. / Bromeliad
102 Ageratum mexicanum cv.* / Ageratum
103 Aglaonema commutatum cv. / Aglaonema
104 Alstroemeria aurantiaca / Peruvian Lily
105 Anthirrhinum majus cv. / Snapdragon
106 Anthurium x Andraeanum cv. / Anthurium, Flamingo Lily
107 Aphelandra Squarrosa cv. / Aphelandra, Zebra Plant
108 Araucaria heterophylla / Norfolk Island Pine
109 Asparagus densiflorous ‘sprengeri’ / Sprengri “Fern”
110 Asparagus setaceus / Asparagus “Fern”
111 Astilbe hybrid cv. / Astilbe
112 Begonia x tuberhybrida cv. / Tuberous Begonia
113 Begonia x semperflorens-cultorum / Wax Begonia
114 Caladium x hortulanum cv. / Fancy-Leaved Caladium
115 Calceolaria crenatiflora cv. / Pocketbook Plant
116 Callistephus chinensis cv. / China Aster
117 Camellia japonica cv. / Common amellia
118 Canna x generalis cv. / Common Garden Canna
119 Catharanthus roseus / Madagascar Periwinkle
120 Cattleya cv. / Cattleya Orchid Hybrid
121 Celosia cristata cv. / Cockscomb
122 Chamaedorea elegans / Parlor Palm
123 Chamelaucium uncinatum / Waxflower
124 Chlorophytum comosum cv. / Spider Plant
125 Chrysanthemum frutescens / Marguerite Daisy
126 Chrysanthemum x morifolium cv. / Florist’s Chrysanthemum
127 Chrysanthemum x superbum cv. / Shasta Daisy
128 Cissus rhombifolia “mandaiana” / Grape Ivy
129 Clematis Jackmanii Group cv. / Clematis
130 Codiaeum variegatum pictum cv. / Croton
131 Coleus x hybridus / Coleus
132 Crassula argentea / Jade Plant
133 Cyclamen x persicum cv. / Florist’s Cyclamen
134 Cymbidium cv. / Cymbidium Orchid
135 Dianthus caryophylus cv. / Carnation
136 Dieffenbachia maculata cv. / Spotted Dumbcane
137 Dracaena fragrans ‘Massangeana’ / Corn Plant Draceana
138 Dracaena cincta / Red Edge Draceana
139 Echeveria cv / Hen and Chickens
140 Echinocactus cv. / Barrel Cactus
141 Epipremnum aureum cv. / Golden Pothos, Devil’s Ivy
142 Erica carnea cv. / Spring Heather
143 Eucalyptus polyanthemos / Silver Dollar Gum
144 Euphorbia milii splendens / Crown-of-Thorns
145 Euphorbia pulcherrima cv. / Poinsettia
146 Exacum affine / German (Persian) Violet
147 Ficus benjamina ‘Exotica’ / Benjamin Fig
148 Ficus elastica ‘Decora’ / ‘Decora’ Rubber Plant
149 Ficus pumila / Creeping Rubber Plant
150 Freesia x hybrida / Freesia
151 Frittonia verschaffeltii / Nerve Plant
152 Gardenia jasminoides ‘Fortuniana’ / Gardenia
153 Gladiolus x hortulanus cv. / Garden Gladiolus
154 Gerbera jamesonii / Transvaal Daisy
155 Gynura aurantiaca ‘Sarmentosa’ / “Purple Passion”, Velvet Plant
156 Gypsophila elegans’ cv. / Baby’s Breath
157 Hedera helix cv. / English Ivy
158 Heptapleurum arbicola** / Dwarf Schefflera, Dwarf Octopus Tree
159 Hemerocallis cv. / Daylily
160 Hippeastrum hybrid cv. / Amaryllis
161 Hosta undulata / Plantain Lily
162 Hoya carnosa / Wax Plant
163 Hyacinthus orientalis cv. / Hyacinth
164 Hydrangea macrophylla macrophylla cv./French (Florist’s) Hydrangea
165 Impatiens hybrid cv. / Impatiens
166 Iris x germanica florentina cv. / Flag Bearded) Iris
167 Iris x xiphium cv. / Dutch Iris
168 Justicia brandegeana / Shrimp Plant
169 Kalanchoe x blossfeldiana cv. / Kalanchoe
170 Liatris spicata / Liatris
171 Lilium longiflorum cv. / Trumpet (Easter) Lily
172 Lilium x hybridum cv. / Hybrid (Garden) Lily
173 Limonium sinuatum / Statice
174 Lobularia maritima / Sweet Alyssum
175 Maranta leuconeura kerchoviana / Prayer Plant
176 Matthiola incana cv. / (Flowering Stock
177 Monstera deliciosa / Cutleaf “Philodendron”
178 Narcissus pseudo-narcissus cv. / Daffodil
179 Neoregelia carolinae ‘Tricolor’ / Bromeliad
180 Nephrolepis exaltata cv. / Boston Fern
181 Opuntia tribe cv. / Cactus
182 Paeonia cv. / Peony
183 Paphiopedelum x hybrid cv. / Ladyslipper Orchid
184 Pelargonium x domesticum cv. / Regal (Lady Washington) Geranium
185 Pelargonium x hortorum cv. / (Zonal) Geranium
186 Pelargonium peltatum cv. / Ivy Geranium
187 Peperomia argyreia / Watermelon Peperomia
188 Peperomia caperata / Emerald Ripple Peperomia
189 Peperomia obtusifolia ‘Variegata’ / Variegated Peperomia
190 Petunia x hybrida cv. / Common Garden Petunia
191 Phalenopsis cv. / Phalaenopsis (Buttefly) Orchid
192 Philodendron scandens oxycardium / Heartleaf Philodendron
193 Pilea cadierei / Aluminum Plant
194 Pilea involucrata / Friendship Plant
195 Pilea microphylla / Artillery Plant
196 Pilea nummulariifolia / Creeping Charley
197 Plectranthus mummularis / Swedish Ivy
198 Polianthes tuberosa / Tuberose
199 Primula x polyanthus cv. / Polyanthus (Primrose)
200 Primula malacoides cv. / Fairy Primrose
201 Rhododendron cv. / Azalea
202 Rosa hybrid, Class Hybrid Tea cv. / Hybrid Tea Rose
203 Rumohra adiantiformis / Leatherleaf Fern
204 Saintpaulia ionantha cv. / African Violet
205 Salvia splendens cv. / Salvia
206 Sansevieria trifasciata cv. / Snake Plant
207 Saxifraga stolenifera / Strawberry Plant
208 Schlumbergia bridgesii / Christmas Cactus
209 Schlumbergia truncata cv. / Thanksgiving Cactus, Crab Cactus
210 Senecio cineraria ‘Diamond’ / Diamond Dusty Miller
211 Senecio x hybridus cv. / Florist’s Cineraria
212 Sinningia speciosa Fyfiana Group cv. / Gloxinia
213 Solanum pseudocapsicum cv. / Jerusalem Cherry
214 Spathiphyllum clevelandii / White Anthurium, Peace Lily
215 Stephanotis floribunda / Stephanotis
216 Sterlitzia reginae / Bird-of Paradise
217 Syngonium podophyllum / Nephthyts
218 Tagetes species cv. / Marigold
219 Tolmeia menziesii / Picaback Plant
220 Tulipa cv. / Tulip
221 Vaccinium ovatum / Florist’s “Huckleberry”
222 Viola x wittrockiana cv. / (Garden ) Pansy
223 Zebrina pendula cv. / Wandering Jew
224 Zinnia elegans / Zinnia
PURPOSE

To stimulate learning activities in food science and technology related to the food industry and to assist students in developing a good working knowledge of sound principles used in a team decision making process.

TEAM MAKE-UP

This contest will consist of a four member team. All four team members’ scores will count towards the team total.

I. OBJECTIVES

A. To encourage FFA members to gain an awareness of vocational and professional opportunities in the field of food science and technology, marketing and management occupations.

B. To give FFA members the opportunity to experience group participation and leadership responsibilities in a competitive food science and technology program.

C. To help FFA members develop technical competence and personal initiative in a food science and technology occupation.

D. To provide opportunities for FFA members to participate in activities where they gain in appreciation for cooperative effort in the food industry.

II. COMPETENCIES

PS 1, 2

-Demonstrate personal and human relations skills
-Utilize time management skills
-Demonstrate the operation of business computers.

III. FORMAT

The food science and technology career development event will consist of four activities:

- an objective test,
- a team product development project,
- a practicum in food safety and quality, and
- a practicum in sensory evaluation.

This career development event will be a four-person team activity. All team members will participate in all of the activities. This career development event has a maximum of 1,000 total points per team. The team product development project will be worth 400 points, the objective test will be worth 300 points and each practicum, will be worth 150 points.
Each year this career development event will focus on one food product category as a theme, e.g. ready-to-eat cereal, convenience food, etc. Each activity in this event will use the theme food product category to achieve the project objectives.

IV. TIE BREAKERS

Should a tie occur in the overall team placing, the tie will be broken by the highest team product development project score. If this score does not break the tie, then the highest number of total points earned from the objective test (adding all four team member scores) will break the tie. A third tie breaker will use the judges' response to the Team Question period from the Team Product Development project, if it is necessary. To identify the high individual for this event in case of a tie, the highest examination score will be used as the first tie breaker, followed by the highest Food Safety and Quality practicum score, as the second tie breaker.

V. TEAM PRODUCT DEVELOPMENT PROJECT

This project is a team activity. Each team will receive a marketing scenario describing a need for a new or redesigned product that would appeal to a potential market segment. This scenario will contain a description of the existing marketing situation, competition and potential target market segment to be served by the new product. It is the task of the team to design a new food product or reformulate an existing product.

The team will be responsible for understanding and using the following concepts:

- Formulation of a product to meet specified market requirements.
- New package design to reflect the developed product.
- Nutritional label development and adjustments.
- Equipment used to formulate the product.
- Address any potential quality control and assurance issues.

Each team will be provided with package materials, ingredients and materials necessary for each ingredient group to be included on the label.

The team will have sixty (60) minutes to respond to the marketing scenario and reformulate or develop a new product, correctly calculate a nutritional label, develop the ingredient statement and educational panel and develop the front or principal display panel to reflect the new product and its market. After this time period, each team member will be expected to participate in a ten (10) minute oral product development proposal. In addition, there will be a five (5) minute question period in which each team member will be expected to answer a question and one general question will be addressed to the team.

Total time involved for each team will be 75 minutes. Total number of points possible for this activity will be 400 points.
Possible Products - A rotational list is being developed. This list currently includes:
- Ready-to-Eat Cereal (1997)
- Breakfast Bars
- Candy
- Beverages (Sports Drinks)
- Cheese
- Ice Cream
- Processed Fruit Snacks
- Stir-Fried Vegetables
- Processed Meat
- Imitation Seafood

VI. EVALUATION CRITERIA

PRODUCT DEVELOPMENT PRESENTATION

Package Design ............................. 100 points

- Use, development and adaptation of nutritional label
- Use and development of the ingredient statement on educational panel
- Use of principle display panel to convey information

Oral Proposal ................................. 200 points

- How does the product meet market needs?
- How does the product address target audience?
- The presentation should address the following product concerns:
  - Economics
  - Nutrition
  - Quality Control
  - Health
  - Equipment
  - Ethnicity
  - Formulation

Response to judges questions ........ 100 points

- Time management in question response
- Organizational ability

Total points ................................. 400 points

OBJECTIVE TEST

The objective questions administered during the Food Science and Technology examination will be designed to determine each team member’s understanding of the basic principles of food science and
technology. It will encompass the knowledge required of the team event and the two practicum i.e. food safety and quality and sensory evaluation, as well as test a participant’s knowledge of the equipment used to manufacture the theme product and product nutritional analysis.

Team members will work individually to answer each of the fifty questions. Each team member should provide a pencil. Each person will have fifty (50) minutes to complete the examination. Each question will be worth six (6) points for a correct answer. The test will be based on the list of references.

No programmable calculators will be allowed to be used during this career development event.

PRACTICUMS

Each team member will compete in both practicums. The practicums will each be worth 150 points. Each participant must bring a pencil and a clipboard for this portion of the event.

FOOD SAFETY AND QUALITY PRACTICUM

Customer Complaint Letter
Each participant will be given a representative consumer complaint letter received by a food processing company. In fifteen (15) minutes the participant must determine if the complaint involves a food quality problem, then ascertain the cause of the quality defect and a possible solution. If the participant identifies that the letter describes a food safety problem, he or she must determine whether the problem is biological, chemical or physical in nature and its possible mitigation. Each participant will write out his or her answer using paper provided.

Food Safety/Sanitation
Each participant will be given ten (10) photos of potential food safety and/or sanitation problems. A numbered list of problems will also be provided at the beginning of this practicum segment. The list will contain more potential problems than the number of photographs. Each participant will identify the type of problem in the photo sheet by recording the number from the list on a scantron sheet provided to each participant. Each participant will start at a station to view a photograph and record an answer. After one minute, the participants will be told to move to the next station. This will continue until each participant returns to his or her original station.

Food Safety and Quality Practicum Scorecard

| Identification of Problem | 25 points |
| Solution to Problem | 25 points |
| Food Safety and Sanitation Problem Identification | 100 points |
| **Total Points** | **150 points** |

Sensory Evaluation
Each participant will be asked to identify four different aromas from vials provided at each station and record the answer on the sheet provided. A list of potential aromas will be provided to each person. Each station is worth 15 points.
Three different triangle tests will be conducted. Participants are expected to identify the different sample through aroma, visual cues or textural differences. Answers will be given on the sheet provided. No list will be provided for this segment of the practicum. Each test is worth 15 points.

Three samples will be tasted. Participants will be expected to discern the different taste of each sample when compared to a control or normal sample. Each station is worth 15 points. Each participant will be given one minute at each station before being told to move to a new station. When each person returns to his or her original station this practicum is completed.

<table>
<thead>
<tr>
<th>Sensory Evaluation Scorecard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroma Identification .......... 60 points</td>
</tr>
<tr>
<td>Difference Testing ............ 45 points</td>
</tr>
<tr>
<td>Taste Testing .................... 45 points</td>
</tr>
<tr>
<td>Total Points ..................... 150 points</td>
</tr>
</tbody>
</table>

**REFERENCE MATERIAL**

*Food Science, Safety and Nutrition* - a special project from the National Council of Agricultural Education.

**FOOD PROCESSING EQUIPMENT LIST**

**Adhesive Applicator** - applies bonding materials to labels, containers and cartons.

**Aerator** - incorporates air chemically or mechanically in various food products.

**Air Compressor** - supplies air under pressure for temperature control, agitation and lift equipment.

**Air Curtain** - provides air flow across doorways to reduce refrigerated air losses and control pests.

**Aseptic Processing System** - a continuous thermal sterilization process and aseptic packaging for preserving foods.

**Bar Code Printer/Applicator** - a system of coding products for computer readout to improve inventory control, pricing, and manufacturing schedules.

**Batter & Breading Machines** - to apply coatings of dough and bread crumbs to foods.

**Blancher** - immerses food in hot water or exposes them to five steam, hot gases, or microwave enzymes, set or fix color, and remove air and undesirable odors.

**Bowl Chopper** - rotating bowl with sharp knives for cutting raw meat into smaller pieces or into ground emulsions.

**Box Making Machinery** - forms food cartons from various types of paper.
**Can Closing and Sealing Machines** - removes residual air from surface of foods filled into metal containers, applies lid and seals the lid to the container.

**Capping Machine** - removes residual air from surface of foods filled into bottles or jars, applies cap, and seals the cap to the container.

**Carton Handling Machine** - (Forming, Filling and Closing)

**Clean-in-Place Systems (CIP)** - fluid cleaning materials are held in tanks and re-circulated under pressure through pipelines around the plant or within a specific equipment system.

**Coder, Dater and Imprinter** - applies identifying numbers, letters, or marks to foods or containers to indicate to the producer or consumer, the product date of manufacture and/or usage or freshness dates.

**Conveyor** - mechanical devices used to assist in the movement of ingredients, food products or packaging supplies.

**Cutting Machine, Dicer, Flaker, Slicer** - reduces or changes size, volume, or shape of raw food materials.

**Dough-Proofer** - enclosed room or cabinet with controlled environment (temperature, humidity) used for final fermentation step prior to baking to allow dough to warm up and accelerate production of carbon dioxide by yeast (rising).

**Dryer** - use of forced hot air, dehydro-freezing or freeze-drying for removal of moisture from foods for purposes of preservation, texture improvement, weight reduction, or cost savings.

**Enrober** - coats food products, generally by dipping or flowing liquid coating over the product (such as chocolate or candy).

**Evaporator** - removes water from raw food materials as a first step to drying.

**Extractor/Presse** - for separation of solids and liquids.

**Stuffer** - device for holding quantities of meat emulsions (or other extrudable products) and pressurized extrusion through a die into a finished food package.

**Thermometer** - instruments for measuring temperatures.

**FOOD LABORATORY EQUIPMENT LIST**

**Abbe refractometer** - used to measure the refractive index of compounds; for example, used to measure the soluble solids of juices.

**Accelerated Shelf Life Chamber** - chambers set at various temperatures to conduct accelerated shelf life testing.
Adhesive Bond Test Equipment - measures adhering strength of sealants or glues.

Autoclave - heated chamber for sterilization of equipment & microbiological media.

Automatic Colony Counter - fore laser counting of mold colonies grown on petri dishes.
Balance - analytical, top - loading device for measuring weight.

Brabender Amylograph - records changes in viscosity of starch under controlled temperatures and stirring used in baking and food processing industries to measure starch characteristics.

Centrifuge - instrument that rotates at very high speeds allowing the separation of compounds.

Colony Counter - used to count mold colonies on a petri dish.

Color Measuring Instrument (Laboratory or Portable) - color, an important attribute of foods, may be measured with a variety of instruments.

Colored blocks or chips - used to compare with products.

Hunter color difference meter - provide standardized objective measurement of food color.

Spectrophotometers - (see separate listing)

High Pressure Liquid Chromatograph (HPLC) - measures level of the separation of mixtures into individual components by passing a liquid or gas along a stationary material such as paper or gels. One example of its use in the food industry is to determine flavor compounds in coffee.

Hot Plate - a flat portable electric heating unit.

Impulse Sealer - seals seasoning pouches or plastic bags for send out or sample storage.

Incubators - heated chamber used for storage of petri dishes & culture to grow microorganisms.

Impedance Monitoring System - rapid method for determining the number of microorganisms in a sample.

Kjeldahl Method - laboratory equipment and technique for determining nitrogen content of food samples (mostly grains) to calculate the protein percentage.

Laboratory Glassware - a variety of sizes of beakers, tubes, pipettes, dishes and covers used for running tests and other products.

Luminometer - instrument for instantaneously determining sanitation of food handling equipment.

Microscope - an optical instrument consisting of lenses for making enlarged images of minute objects.

Petri Dish - glass or disposable plastic plates or dishes for growing microbiological cultures.
**pH Meter** - measure the hydrogen ion concentration of foods and determines if a food is acidic or basic. pH is an important basic attribute of foods.

**Pipette** - glass or disposable plastic tubes for siphoning or adding small-measured amounts of liquids.

**Refrigerator - Freezer** - to store microbiological cultures and keep samples.

**Rotap** - sieve analysis of ingredients.

**Safety Hood** - to handle hazardous cultures and/or food samples usually containing an exhaust fan.

**Salmonella Testing Kit** - measures a pathogenic bacteria which causes food poisoning.

**Scale** - measures weights of ingredients for testing.

**Shear Press** - instrument that pushes a metal probe through a food sample, gives an indication of how tough a food is.

**Spectrophotometer** - measures the light energy absorption by food samples. This instrument is used in determining such attributes as lactose in milk. Near - infrared Spectroscopy provides quantitative determination of moisture, fat, protein, and sugar contents of a wide variety of foods.

**Spiral Plater** - laboratory equipment for a rapid method of preparing petri dishes to enumerate microorganisms in foods.

**Stomacher Blender** - blender that utilizes sterile plastic bags & paddles to macerate a sample.

**Testing Kit** - self - contained units that include all the materials to test foods for either microorganisms (for example, salmonella, E. coli), pesticides, or toxicants (alfatoxins).

**Thermometer** - basic instrument in the food laboratory used to measure the heat of a food sample. Various types include liquid thermometers and thermocouples.

**Titrator** - used to measure the concentration of components of a solution. For example, titration may be used to measure the amount of malic acid in apple juice or the salt in seasonings.

**Vacuum Oven** - vacuumized chamber for drying samples for moisture analysis.

**Water Activity Meter** - measures water activity for shelf life testing.

**Water Bath** - for incubation or storage of melted media.

**SENSORY EVALUATION – Aromas**

<table>
<thead>
<tr>
<th>Cinnamon</th>
<th>Lime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanut Butter</td>
<td>Orange</td>
</tr>
<tr>
<td>Chocolate</td>
<td>Vanilla</td>
</tr>
<tr>
<td>Maple</td>
<td>Almond</td>
</tr>
<tr>
<td>Ingredient</td>
<td>Flavor</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Oregano</td>
<td>Smoke (liquid)</td>
</tr>
<tr>
<td>Basil</td>
<td>Cherry</td>
</tr>
<tr>
<td>Lemon</td>
<td>Pine</td>
</tr>
<tr>
<td>Onion</td>
<td>Nutmeg</td>
</tr>
<tr>
<td>Butter</td>
<td>Ginger</td>
</tr>
<tr>
<td>Menthol</td>
<td>Molasses</td>
</tr>
<tr>
<td>Grape</td>
<td>Wintergreen</td>
</tr>
<tr>
<td>Garlic</td>
<td>Banana</td>
</tr>
<tr>
<td>Peppermint</td>
<td>Coconut</td>
</tr>
<tr>
<td>Clove</td>
<td>Lilac</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Strawberry</td>
</tr>
<tr>
<td>Licorice (anise)</td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

To stimulate student interest and to promote forestry instruction in the agricultural education curriculum and to provide recognition for those who have demonstrated skills and competencies as a result of forestry instruction.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores and the team activity.

I. OBJECTIVES

To test the student’s ability to:
- Ability to understand and use forestry terms
- Recognize agencies for managing western forest resources
- Recognize environmental factors
- Use multiple concepts to identify important forest species
- Recognize and use basic forest hand tools and measurement devices

COMPETENCIES

PS 7

- Describe the environmental zones, vegetation types and management practices required.
- Identify forest plants
- Describe the effects of forest management on forest production.

II. GENERAL RULES

A. The event will consist of four parts: (a) written exam; (b) species identification exam; (c) practical exam on forest measurements; and (d) team activity, and will require approximately three hours

B. Scoring of the plant identification portion of the event will be as follows: five points for each correct common name.

C. Participants will identify a maximum of 30 tree species selected from “Shrubs and Trees of the Southwest Uplands” by F.H. Elmore (1976). Published by and available from: Southwest Parks and Monuments Association, 221 N. Court Street, Tucson, Arizona 85701. There no restrictions on the number of duplicate mounts included in the event.

D. Participants will have one minute to bubble in the common name of each plant. Five seconds will be allowed to move to the next plant.
E. The written examination will consist of 50 multiple choice questions worth two points each. Thirty minutes will be allowed for the written examination. Questions will be based on the “Student Reference on Forestry” available from the Department of Agricultural Education, University of Arizona, Tucson, Arizona.

F. The practical examination will consist of exercises in land and forest measurements. Students will be assigned four problems worth 25 points each. Problems may include questions about land measurement (including map and compass), cubic volume, cord log scaling, and measurement of standing trees. A reference for this part of the event is “Forest Measurements” by Avery and Burkhart (1983), published by McGraw-Hill (part of the McGraw Hill series in forest resources). Up to one hour will be allowed for this portion of the event.

G. Sample Question:
Which of these is not one of the three main parts of a tree?
   a) the roots
   b) the crown
   c) the culm
   d) the bole

III. EQUIPMENT NEEDED

Each chapter is responsible for bringing the following equipment to the event for students’ use:
   (a) D-tape or tree caliper
   (b) Abney level or Clinometer
   (c) Hand compass
   (d) Biltmore stick
   (e) Log Scaling Stick

IV. EVENT FORMAT

Team members will participate in each of the following phases as individuals or as a team cooperative activity.

Phase I. Basic Knowledge and Concepts General Knowledge Exam (100 Points)

Fifty objective-type multiple-choice questions will be selected from areas of forestry industry related in the event objectives. This phase of the event will test participant’s knowledge and understanding of basic principles of forestry.

Time:
Each participant will be allowed 45 minutes to complete this phase of the event.

Scoring:
Each answer as a value of 2 points, for a total maximum score of 100 points.

Phase II Tree Identification (150) points
Thirty specimens from the following list may be displayed for participants to identify by common names. Each specimen will be designated by a number.

**Time:**
Each participant will be allowed 45 minutes to complete this phase, or approximately 1-½ minutes for each specimen station.

**Scoring:**
Five points will be given for each specimen that is correctly identified, for a maximum of 150 points.
### Forestry Plant List:

<table>
<thead>
<tr>
<th>COMMON NAME</th>
<th>PG</th>
<th>FAMILY</th>
<th>GENUS</th>
<th>SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PINYON PINE</td>
<td>14</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>edulis</td>
</tr>
<tr>
<td>ALLIGATOR JUNIPER</td>
<td>16</td>
<td>Cupressaceae</td>
<td>Juniperus</td>
<td>depeana</td>
</tr>
<tr>
<td>ONE-SEEDED JUNIPER</td>
<td>17</td>
<td>Cupressaceae</td>
<td>Juniperus</td>
<td>monosperma</td>
</tr>
<tr>
<td>SINGLE LEAF PINYON PINE*</td>
<td>18</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>monopylla</td>
</tr>
<tr>
<td>MEXICAN PINYON PINE</td>
<td>19</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>cembroides</td>
</tr>
<tr>
<td>CHIHUAHUA PINE</td>
<td>20</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>leiophylla</td>
</tr>
<tr>
<td>TAMARISK*</td>
<td>21</td>
<td>Tamarisk</td>
<td>Tamarix</td>
<td>pentandra</td>
</tr>
<tr>
<td>SHRUB LIVE OAK</td>
<td>23</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>turbinella</td>
</tr>
<tr>
<td>EMERY OAK</td>
<td>23</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>emoryi</td>
</tr>
<tr>
<td>GRAY OAK*</td>
<td>23</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>grisea</td>
</tr>
<tr>
<td>SILVERLEAF OAK</td>
<td>23</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>hypoleucoides</td>
</tr>
<tr>
<td>ARIZONA WHITE OAK</td>
<td>23</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>arizonica</td>
</tr>
<tr>
<td>CANYON GRAPE</td>
<td>25</td>
<td>Vitaceae</td>
<td>Vitis</td>
<td>arizonica</td>
</tr>
<tr>
<td>SILKTASSEL*</td>
<td>31</td>
<td>Cornaceae</td>
<td>Garrya</td>
<td>wrightii</td>
</tr>
<tr>
<td>BOXELDER</td>
<td>46</td>
<td>Aceraceae</td>
<td>Acer</td>
<td>negundo</td>
</tr>
<tr>
<td>ARIZONA SYCAMORE</td>
<td>47</td>
<td>Platanaceae</td>
<td>Plantanus</td>
<td>wrightii</td>
</tr>
<tr>
<td>VELVET ASH</td>
<td>53</td>
<td>Oleaceae</td>
<td>Fraxinus</td>
<td>velutina</td>
</tr>
<tr>
<td>MOUNTAIN MAHOGANY*</td>
<td>62</td>
<td>Rosaceae</td>
<td>Cercocarpus</td>
<td>montanus</td>
</tr>
<tr>
<td>ARIZONA WALNUT</td>
<td>87</td>
<td>Juglandaceae</td>
<td>Juglans</td>
<td>major</td>
</tr>
<tr>
<td>FREMONT COTTONWOOD</td>
<td>90</td>
<td>Salicaceae</td>
<td>Populus</td>
<td>fremontii</td>
</tr>
<tr>
<td>PONDEROSA PINE</td>
<td>110</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>pondersosa</td>
</tr>
<tr>
<td>GAMBEL OAK</td>
<td>111</td>
<td>Fagaceae</td>
<td>Quercus</td>
<td>gambelli</td>
</tr>
<tr>
<td>ARIZONA CYPRESS</td>
<td>115</td>
<td>Cupressaceae</td>
<td>Cupressus</td>
<td>arizonica</td>
</tr>
<tr>
<td>THINLEAF ALDER*</td>
<td>117</td>
<td>Betulaceae</td>
<td>Alnus</td>
<td>tenuifolia</td>
</tr>
<tr>
<td>GREENLEAF MANZANITA</td>
<td>124</td>
<td>Ericaceae</td>
<td>Arctostaphylos</td>
<td>patula</td>
</tr>
<tr>
<td>BLUEBERRY ELDER</td>
<td>127</td>
<td>Caprifoliaceae</td>
<td>Sambucus</td>
<td>coerulea</td>
</tr>
<tr>
<td>ROCKY MOUNTAIN MAPLE</td>
<td>132</td>
<td>Aceraceae</td>
<td>Acer</td>
<td>glabrum</td>
</tr>
<tr>
<td>BIGTOOTH MAPLE</td>
<td>133</td>
<td>Aceraceae</td>
<td>Acer</td>
<td>grandidentatum</td>
</tr>
<tr>
<td>NEW MEXICO LOCUST</td>
<td>134</td>
<td>Leguminosae</td>
<td>Robinia</td>
<td>neomexicana</td>
</tr>
<tr>
<td>BITTER CHERRY</td>
<td>143</td>
<td>Rosaceae</td>
<td>Prunus</td>
<td>emarginata</td>
</tr>
<tr>
<td>GOOSEBERRY</td>
<td>149</td>
<td>Saxifragaceae</td>
<td>Ribes</td>
<td>montigenum</td>
</tr>
<tr>
<td>NARROWLEAF COTTONWOOD</td>
<td>153</td>
<td>Saxifragaceae</td>
<td>Populus</td>
<td>angustifolia</td>
</tr>
<tr>
<td>RED-OISER DOGWOOD</td>
<td>155</td>
<td>Cornaceae</td>
<td>Cornus</td>
<td>stonifera</td>
</tr>
<tr>
<td>ARIZONA MADRONE*</td>
<td>156</td>
<td>Ericaceae</td>
<td>Arbutus</td>
<td>arizonica</td>
</tr>
<tr>
<td>DOUGLAS FIR</td>
<td>158</td>
<td>Pinaceae</td>
<td>Pseudotsuga</td>
<td>menziesii</td>
</tr>
<tr>
<td>QUAKING ASPEN</td>
<td>159</td>
<td>Salicaceae</td>
<td>Populus</td>
<td>tremuloides</td>
</tr>
<tr>
<td>WHITE FIR</td>
<td>160</td>
<td>Pinaceae</td>
<td>Abies</td>
<td>concolor</td>
</tr>
<tr>
<td>WILD RED RASPBERRY</td>
<td>167</td>
<td>Rosaceae</td>
<td>Rubus</td>
<td>idaeus</td>
</tr>
<tr>
<td>CORKBARK FIR</td>
<td>176</td>
<td>Pinaceae</td>
<td>Abies</td>
<td>lasiocarpa</td>
</tr>
<tr>
<td>LIMBER PINE</td>
<td>178</td>
<td>Pinaceae</td>
<td>Pinus</td>
<td>flexilis</td>
</tr>
</tbody>
</table>

* New Plants added to List

All plants can be found in *Shrubs and Trees of the Southwest Uplands*, printed by Southwest Parks And Monuments Association, 221 North Court, Tucson, Arizona 85701
## Phase III  EQUIPMENT IDENTIFICATION (100 points)

Twenty pieces of equipment from the following list will be displayed for participants to identify by technical names. Each piece of equipment will be designated by a number.

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tree Stick</td>
</tr>
<tr>
<td>2.</td>
<td>Diameter Tape</td>
</tr>
<tr>
<td>3.</td>
<td>Increment Borer</td>
</tr>
<tr>
<td>4.</td>
<td>Bark Gauge</td>
</tr>
<tr>
<td>5.</td>
<td>Tree Caliper</td>
</tr>
<tr>
<td>6.</td>
<td>Pulaski Forester Axe</td>
</tr>
<tr>
<td>7.</td>
<td>Stereoscope</td>
</tr>
<tr>
<td>8.</td>
<td>Gps Receiver</td>
</tr>
<tr>
<td>9.</td>
<td>Soil Sampler</td>
</tr>
<tr>
<td>10.</td>
<td>Wheeler Caliper</td>
</tr>
<tr>
<td>11.</td>
<td>Wedge Prism</td>
</tr>
<tr>
<td>12.</td>
<td>Relaskop</td>
</tr>
<tr>
<td>13.</td>
<td>Staff Compass</td>
</tr>
<tr>
<td>14.</td>
<td>Hand Compass</td>
</tr>
<tr>
<td>15.</td>
<td>Tree Planting Hoe/Bar</td>
</tr>
<tr>
<td>16.</td>
<td>Log Rule</td>
</tr>
<tr>
<td>17.</td>
<td>Planimeter</td>
</tr>
<tr>
<td>18.</td>
<td>Canthook</td>
</tr>
<tr>
<td>19.</td>
<td>Survey Instrument</td>
</tr>
<tr>
<td>20.</td>
<td>Hip Chain</td>
</tr>
<tr>
<td>21.</td>
<td>Plastic Flaggin</td>
</tr>
<tr>
<td>22.</td>
<td>Clinometer</td>
</tr>
<tr>
<td>23.</td>
<td>Hypo-Hatcher</td>
</tr>
<tr>
<td>24.</td>
<td>Chain Saw</td>
</tr>
<tr>
<td>25.</td>
<td>Safety Hard Hat</td>
</tr>
<tr>
<td>26.</td>
<td>Chainsaw Chaps</td>
</tr>
<tr>
<td>27.</td>
<td>Safety Glasses</td>
</tr>
<tr>
<td>28.</td>
<td>Altimeter</td>
</tr>
<tr>
<td>29.</td>
<td>Tally Meter</td>
</tr>
<tr>
<td>30.</td>
<td>Fiberglass Tape</td>
</tr>
<tr>
<td>31.</td>
<td>Fire Rake</td>
</tr>
<tr>
<td>32.</td>
<td>Drip Torch</td>
</tr>
<tr>
<td>33.</td>
<td>Data Recorder</td>
</tr>
<tr>
<td>34.</td>
<td>Fire Weather Kit</td>
</tr>
<tr>
<td>35.</td>
<td>Tally Book</td>
</tr>
<tr>
<td>36.</td>
<td>Fire-Swatter</td>
</tr>
<tr>
<td>37.</td>
<td>Back Pack Fire Pump</td>
</tr>
<tr>
<td>38.</td>
<td>Plant Press</td>
</tr>
<tr>
<td>39.</td>
<td>Soil Test Kit</td>
</tr>
<tr>
<td>40.</td>
<td>Water Sampler</td>
</tr>
<tr>
<td>41.</td>
<td>Densionmeter</td>
</tr>
<tr>
<td>42.</td>
<td>Ph Meter</td>
</tr>
<tr>
<td>43.</td>
<td>Hand Lense/Field</td>
</tr>
</tbody>
</table>
Time:
Each participant will be allowed 30 minutes to complete this phase.

Scoring:
Five points will be given for each piece of equipment correctly identified correctly, for a total of 100 points. All answers must be correct. No partial credit will be given.

Phase IV
Forestry Applications (300 Points)

Participants will compete individually in all three practicums from the following list. Each practicum has a score of 100 points and a time period of 30 minutes.

Practicum I Tree Measurement - Timber Cruising for Board Volume

Using forest measuring tools (such as scale stick, diameter tape or clinometer), each participant will measure pre-numbered trees on a fractional acre plot for board foot volume as specified by the event superintendent. The participant must record the DBH (Diameter Breast Height) computed to the nearest inch, and the merchantable height of each tree, height rounded down to the nearest 8-foot log. Participant must convert the volume to a one-acre basis. Volume tables will be provided at the event.

The minimum diameters and log length will be:

<table>
<thead>
<tr>
<th>Diameter</th>
<th>DBH</th>
<th>12 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Diameter</td>
<td>8 inches</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>16 feet</td>
<td></td>
</tr>
</tbody>
</table>

Scoring:
Three points will be allowed for the correct DBH and three points for the correct height. Forty points will be allowed for the correct volume per acre. Five points will be deducted for each five percent plus or minus from the correct measured volume.

Practicum II Map Interpretation

1. Participants will be furnished a United States Geological Survey topographical map with specific points marked to be identified. The participant shall know legal description, recognize topographic map symbols, understand the meaning of map symbols and size and location of 40 acres or more in a section.

2. Ten points on the map will be clearly marked with a number or arrow pointing to the section, symbol, or area on the map to be identified.

3. Legal descriptions will be written or described according to the following:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>Northwest</td>
</tr>
<tr>
<td>T</td>
<td>Township</td>
</tr>
</tbody>
</table>
SE Southeast
R Range
S Section (640 acres)
¼ Quarter of a section
(160 acres)

Scoring:
Ten questions or problems will be completed. Ten points will be awarded for each correct answer.

Practicum III Compass Practicum

The participant will use a hand compass and pacing to the nearest full foot to simulate the determination of the property lines on a tract of timber. The compass course will have ten marked points. The student will start at any point and record the compass reading and distance to the next point. Azimuth readings shall be recorded.

Scoring:
A total of 100 points are possible: Ten points for each correct numbered site, five points for correct azimuth and five points for correct distance. Partial credit will be given with a deduction of one point for each two degrees or two feet the participant is off the correct answer.

Phase V: Team Activity (150 Points)

Each team will perform a task normally performed in some phase of the forestry industry requiring teamwork to complete. These tasks will be described in situational terms for presentation for each team. Thirty minutes will be allowed to plan and complete the activity. All supplies and materials needed to complete the task will be provided. Tasks will be selected from the list of forestry application.

Tasks may be drawn from this list of event activities and practicums

- Tree measurement
- Map interpretation
- Compass interpretation

Scoring Procedure

<table>
<thead>
<tr>
<th>Phase</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>100</td>
</tr>
<tr>
<td>Phase II</td>
<td>100</td>
</tr>
<tr>
<td>Phase III</td>
<td>100</td>
</tr>
<tr>
<td>Phase IV</td>
<td>300</td>
</tr>
<tr>
<td>Phase V</td>
<td>150</td>
</tr>
</tbody>
</table>

Total Point Value 750 Points

REFERENCES

Student Reference on Forestry. Available from the Department of Agricultural Education, University of Arizona Tucson Arizona 85721-00236
Shrubs and Trees of the Southwest Uplands by F. W. Elmore available from Southwest P Monuments Association, 221 N Court Street, Tucson Arizona 85701

Forestry Supplies Catalog available from Forestry suppliers, Inc. 205 West Rankin Street, Jackson, MS 39204-0397
PURPOSE

The purpose of the state FFA Horse Evaluation and Selection Career Development Event is to:

➢ Stimulate the study of, and interest in, equine science selection, management and production through the agricultural education curriculum.
➢ Provide recognition for those who have demonstrated skills and competencies as a result of instruction in equine science.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals' scores plus the problem solving section.

I. OBJECTIVES

A. To instill leadership and motivate learning in the classroom while developing student skills in cooperative learning, observation, analysis and communication.

B. To test the student's ability to:
   1. Select light horses for breeding, production and performance purposes.
   2. Relate orally the reasons for selecting the most desirable animals and justify the decisions on conformation traits and performance of horses.

C. To motivate learning in the classroom and create a spirit of competition among students.

D. To provide recognition for individuals who excel in this area of interest.

E. To promote career choices directly related to the horse industry.

F. To prepare a state FFA horse judging team that might represent Arizona at a nationally recognized Horse Judging Event (i.e. American Junior Quarter Horse World Championship Show or other recognized breed horse judging event).

G. To promote the Arizona's horse industry and stimulate interest among youth that may become eligible and represent Arizona in judging at the National FFA Horse Judging Event.

H. To advance knowledge in selection and management of horses.

I. To develop the proficiency to communicate effectively in the terminology of the industry.

J. To provide the opportunity to evaluate, make a decision and justify those decisions on conformation traits and performance of horses.

II. COMPETENCIES
A. Select horses possessing desirable traits for light breeds of horses.
   1. Distinguish between types and breeds of light horses.
   2. Identification of parts of the light horse.
   3. Identification of quality animals at Halter and Performance activities.

B. Understand and use production records.
   1. Use selection tools such as pedigree records, performance records as supplied by a specific breed registry, determine proper feed rations, genetic probability and other useful production records.

C. Use appropriate horse terminology to accurately describe light horses and horse performance.

III. GENERAL RULES

A. Teams will consist of four (4) members. The member with the lowest score will become the alternate and that score is not to be counted toward team standings, including overall team standings. However, the alternate is eligible for individual awards. Three (3) member teams are eligible with no alternate option, available. No youth will be allowed to judge as an individual. They must be on a team.

B. Participants are urged to bring clipboards that are free of markings or notes. Blank sheets of paper will be permitted for note taking. Participants must bring two #2 pencils.

C. Official FFA dress is required in the event. Black jeans are permissible. Hats/caps are not accepted.

IV. EVENT FORMAT

A. There will be a total of four (4) classes judged. Two (2) of the classes will be at halter and two (2) will be in performance events. The following breeds and types may represent halter classes: Quarter Horse, Paint Horse, Arabian, Appaloosa, Conformation Hunter, Thoroughbred and Morgan. All halter classes will be judged as sound. Performance classes may include Western Pleasure, Western Riding, Reining, Hunter Under Saddle, Hunter Hack, Trail, Western or English Equitation. Performance classes will be judged as presented (unsoundness to be penalized accordingly unless otherwise instructed). All tack and attire will be considered legal.

B. Halter Classes will be 12-15 minutes in length. All classes will be worth 50 points. Participants will be shown a side view, front view, rear view, close inspection and the opposite side view. Horses may or may not be traveled (this will be announced at the time of the judging).

C. Performance classes will be allowed a standard amount of time to complete a regular class (i.e.: pleasure classes to walk trot, lope or canter both directions of the arena as well as line up and back) or complete an individual pattern.

D. All classes and reasons will be worth 50 points and score cards will be available to all teams at check in.
E. Oral reasons will be required in one of the four classes. The event chairperson at the beginning of the event will designate the reason classes. Participants MAY NOT use their placing card or notes while delivering oral reasons. Two minutes will be allowed to deliver oral reasons. An excellent reason performance will receive a score of 50 points. Oral reasons will be graded on organization, relevancy, accuracy, terminology and presentation. Note: A sample score card is located at the end of this document. Please make sure all participants are familiar with the card and how to fill it out correctly BEFORE they come to the event.

F. The morning of the event after check in, each team will be given a written examination; there will be no fewer than 20 and no more than 25 multiple choice questions. The exam will be a team exam and each participant will receive the same score. Each question will be worth 4 or 5 points each for a total of 100 points. Questions for the written examination will be written from information in Reference #2 - Horses and Horsemanship; Reference #3 - The Horse Reference unit #4 - Horse Industry Handbook, Reference Unit #5 - Equine Science Student Reference Guide (available in 1999). Several questions will be problem solving (i.e. From the Nutritional information given, calculate the crude protein content of the diet). Time allotment for the examination will be 30 minutes.

G. Official placing will be available immediately after completion of the event.

V. SCORING PROCEDURE

The event is organized into the following parts, classes and point values:

<table>
<thead>
<tr>
<th>Selection Classes</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place two halter classes</td>
<td>100</td>
</tr>
<tr>
<td>Place two performance classes</td>
<td>100</td>
</tr>
<tr>
<td>Oral reasons for one class</td>
<td>50</td>
</tr>
<tr>
<td>Total Selection Classes</td>
<td>250</td>
</tr>
<tr>
<td>Written Examination</td>
<td>100</td>
</tr>
<tr>
<td>Total Event per person</td>
<td>600</td>
</tr>
<tr>
<td>Total Event per team</td>
<td>1050</td>
</tr>
</tbody>
</table>

Tie Breakers: Scoring ties will be broken by comparing the individual's or teams total score on classes in the following order: oral reasons; halter classes one and two; and performance classes one and two.

REFERENCES

Official AQHA Handbook


*Horse Industry Handbook*. American Junior Horse Council. You can contact your county extension agent in order to-purchase this handbook.


*Kansas Youth Horse Judging* Manual:www.oznetksu.edu/p~_horse/jmanual.htm

*Texas Horse Judging Manual*. Call Martha Curtis @ 1(409)845-6534 or write Texas 4H Publications, 809 University Drive East, Suites D&E, College Station, TX 77843


*Video tapes on Horse Judging*: CEVMedia. 1-800-922-9965. Or fax 1-800-243-6398

C.D Rom. *Interactive Horse Judging*. A dynamic new approach to Horse Evaluation. Kansas State Research and Extension. Call Mark Arns @ 1-785-532-1246. Or e-mail marns@oz.oznet.ksu.edu.

Conformation: *The relationship of form to function*. Marvin Beeman. DVM. Contact the American Quarter Horse Association.

*Arabian Youth Judging Guide*. Contact the Arabian Horse Registry, P.O. Box 173886, Denver, CO 80217-3886. Phone 1-(303)450-4748.

Official judging guide, audiovisuals and video tapes from each of the various breed associate
PURPOSE

To provide a stimulus to FFA members to know more about their organization and recognize them for this accomplishment.

I. OBJECTIVES

The objective of the State FFA Information Career Development Event is to help the members know the history of the FFA and agriculture.

II. COMPETENCIES

PS 1

-Demonstrate memorization and comprehension skills
-Utilize leadership skills
-Demonstrate communication skills

III. GENERAL RULES

A. The event is run similar to a spelling bee. District winners will be selected on the basis of their knowledge of the FFA determined by questions selected from the FFA units in freshman and sophomore agriculture classes. The list of questions is the resource, “The New FFA Questions and Answers.” This reference is not revised annually, only as needed. Questions used in the event will not be limited to this list. This reference is available at the State FFA Office.

B. The event is open to two individuals per district not to exceed 16 individuals. In the even that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place individuals from other districts.

C. It will be up to each district to determine methods for conducting the event.

D. In the event of a tie (i.e. more than one student finishes the entire book correctly), students will be given a set of index cards, with each card containing one event, without the date, from the “Chronological History of FFA” (FFA Manual). The students will be timed on how quickly and accurately they can put the chronological events in order. A 5-second penalty will be assessed for every incorrect placing.

IV. ELIGIBILITY

Any 7-9 grade student, or tenth grade (sophomore) student in his/her first year, who is enrolled in agricultural education and who holds FFA membership is eligible to participate.
AWARDS

The district winner will receive a plaque from the Arizona Association FFA. The top four individuals will receive plaques at the state competition.

REFERENCE

The New FFA Questions and Answers
PURPOSE

The purpose of the State FFA Internet CDE is for the chapter to learn to create a web page and use the Internet effectively.

TEAM MAKE-UP

This is a chapter contest

COMPETENCIES

PS 1, 4, 19

A. Develop a Portfolio
B. Develop and present a presentation
C. Utilize communication and speaking skills
D. Demonstrate human relation skills, market analysis skills and advertisement skills

I. OBJECTIVES

To test a student's:

Ability to create a working web site
   1. internal links
   2. external links
   3. graphics/photos
   4. e-mail

II. GENERAL RULES

A. Each chapter is eligible to submit one entry.
B. For official score sheet refer to the attached FFA Internet Contest Score Sheet.
C. You must turn in your URL to Dr. Jack Elliot by May 15.
<table>
<thead>
<tr>
<th>Item</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>graphics/icons ...............10</td>
<td>3 or more – downloads in a reasonable amount of time (10 sec. or less)</td>
<td>10</td>
<td>2 – downloads in a reasonable amount of time (10 sec. or less)</td>
<td>8</td>
</tr>
<tr>
<td>photos.........................10</td>
<td>3 or more – downloads in a reasonable amount of time (10 sec. or less)</td>
<td>10</td>
<td>2 – downloads in a reasonable amount of time (10 sec. or less)</td>
<td>8</td>
</tr>
<tr>
<td>internal links ..............10</td>
<td>3 or more that work</td>
<td>10</td>
<td>2 that work</td>
<td>8</td>
</tr>
<tr>
<td>external links...........10</td>
<td>3 or more that work</td>
<td>10</td>
<td>2 that work</td>
<td>8</td>
</tr>
<tr>
<td>e-mail ......................10</td>
<td>hot/works</td>
<td>10</td>
<td>address only</td>
<td>8</td>
</tr>
<tr>
<td>maintenance process &amp; contact information...10</td>
<td>a formal process to update and maintain the web site is included as a one page document and mentioned in the web site</td>
<td>10</td>
<td>a formal process to update and maintain the web site is included as a one page document or is mentioned in the web site</td>
<td>8</td>
</tr>
<tr>
<td>user friendly ..............20</td>
<td>organized/easy to use/appropriate sections/good flow/ useful information</td>
<td>20</td>
<td>some non-essential information is included and organization could be improved</td>
<td>15</td>
</tr>
<tr>
<td>grammar/spelling format/content........20</td>
<td>free of grammatical/spelling errors, complete information, easy to navigate</td>
<td>20</td>
<td>4 or less grammatical/ spelling errors, mostly complete information, some navigation aids</td>
<td>15</td>
</tr>
<tr>
<td>Content</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>creativity .....................50</td>
<td>use of unique features and artistic influence within the site (e.g., logos, on-site auction, etc.)</td>
<td>50</td>
<td>some unique features are employed</td>
<td>36</td>
</tr>
<tr>
<td>additional features........50</td>
<td>use of 3 or more web options other than those listed above (e.g., chat rooms, bulletin boards, faq, etc.)</td>
<td>50</td>
<td>use of 2 web options other than those listed above</td>
<td>36</td>
</tr>
<tr>
<td>FFA content .............50</td>
<td>incorporation of FFA chapter activities within the entire site</td>
<td>50</td>
<td>FFA chapter activities need better incorporation</td>
<td>36</td>
</tr>
<tr>
<td>TOTAL .....................200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

The State FFA Job Interview Career Development Event is designed for FFA members to develop, practice, and demonstrate skills needed in seeking employment in the agricultural industry.

TEAM MAKE-UP

A Chapter may enter two individuals to be scored separately.

I. OBJECTIVES

To provide students with experience in applying for positions which will assist them in attaining their occupational goals.

To provide students with practice in following employment procedures currently used in business, including:

1. development and utilization of a resume.
2. preparation of a written letter of application.
3. completion of an employment application.
4. participation in a personal interview.

C. To stimulate instruction regarding preparation for employment.

D. To provide recognition for those individuals who excel in this program area.

II. COMPETENCIES

PS 19

*A. Complete a resume and job application.
*B. Communicate effectively.
*C. Interview for a job.

*Industry Validated

III. GENERAL RULES

A. Each participant will be scored individually for individual awards.

B. Only the high point individual in this event will be eligible to compete at the National Career Development Event.

C. A participant will be in official FFA dress in each event.
D. Each participant’s cover letter, resume, and application will be the result of his or her own efforts.


   a. Each participant will write a letter of application specific to the position for which they are applying, based upon the job titles "announced".

   b. The letter must be computer generated.

   c. The letter should be written to the company seeking to hire the employee for the job title as announced. A sample letter of application is shown on page 57.

   d. The letter of application will be judged by a qualified person other than the interviewer, and separately from the employer application.

2. Rules Governing the completion of the Employer Application.

   a. A sample employer application will be provided in the mailed packet to the participant. It may be duplicated for use and should be completed on typewriter or computer.

   b. The information listed on the application must be accurate, not fictitious. The participant should use correct statistical information such as social security number, list previous work experience, education record, etc., which may be required on the application form. Such information may also be on the resume.

   c. The names, addresses, positions, etc., of the persons given as references should be accurate, not fictitious.

   d. The employer application will be judged by a person other than the interviewer on the basis of the point system listed on the scorecard.

3. Rules governing the Personal Job Interview.

   a. Interviewers will be provided one of the three copies of the participant’s resume, cover letter of application and employer application.

   b. The order in which the participants will appear before the interviewer will be determined randomly and the participant will be called by number, not by name.

   c. The interview (maximum of 10 minutes) will be conducted by a person who has had experience in conducting employment interviews.

   d. The interviewer also will evaluate the participant's ability to solve problems. Sample interview questions are shown on page 60.

   e. The participant will be judged by the interviewer using the scorecard.

4. Rules governing the Resume.

   a. The resume must be completed prior to attending and brought to the event.
b. Any students not submitting a resume will not be allowed to compete.

c. The resume will be scored separately when the personal interview is complete. The resume must be printed from a word processor.

d. The information listed in the resume must be accurate and up-to-date.

e. The resume should include identifying information, e.g., name, address, telephone number, education, experience, honors and awards, and special skills. Other information, such as career objective(s) and personal background is optional. No personal information (age, gender, marital status, etc.) is to be included. Information for developing a resume is shown late in this portion of the rulebook.

f. The resume may be used in preparing the letter of application and the employer application.

5. Rules governing the Telephone Interview.

a. Students will interview with one of the three following personalities:
   1. Human, Fiscal and Resource personnel director
   2. Employer’s Secretary
   3. Employer

b. Students are to position themselves so that they obtain a personal interview with the company they are applying to. Student should interview with the thought that the company has already received their letter of intent, resume and application.

c. The telephone interview (maximum of 10 minutes) will be conducted by a person with experience in conducting employment interviews.


a. Participants will write a follow-up letter following the interview process. Students will be provided pen and paper or computers with word processing applications if available to compose their letters. They will be allowed 20 minutes to complete this part of the event.

b. The letter is to be addressed to the Superintendent of the Job Interview CDE and should address their personal interview.

IV. EVENT FORMAT

A. The Resume must be prepared prior to the event. The Resume must be printed from a word processor. Handwritten resumes will be rejected and the participant will not be allowed to compete. Three copies of the Resume, Cover Letter and the application must be mailed to:

Dr. Billye Foster
Department of Agricultural Education
PO Box 210036
Tucson, Arizona 85721
Must be postmarked by date set annually and received in mailed packet prior to the event.

A. The Personal Interview, Telephone Interview and the Follow-up Letter will be developed/written/participated in on the day of the event. No previously written Follow-up Letters or scripted Telephone/Personal Interviews will be permitted. Any participant who brings or uses a previously written letter or script will receive a “zero score” for that portion of the event.

B. The event will consist of the following:

1. writing a letter of application
2. completing an employer application
3. participating in a personal job interview
4. participating in a telephone job interview
5. writing a follow-up letter

C. General Instructions:

1. All participants must be in official FFA dress.

2. A list of possible job titles and information regarding the "companies" which will be conducting interviews during the event will be mailed to each FFA chapter prior to the event. Generally two companies will "announce" a list of ten to fifteen available job titles, covering a wide range of possibilities. This information will be included in the registration materials announcing the State FFA CDE Day. Sample company information and job titles are shown on page 56.

On the day of the event and when all participants have assembled, each "company" will "announce" a list of five job titles for which participants may apply. Every attempt will be made to provide a variety of job titles within the ten used on the day of the event.

3. Participants will assemble in a designated room at the start of the event. Two members from the same chapter will be separated during the written portion of the event.

4. Participants will be randomly assigned to a group and interviewer for the personal interview. The order of interviews within each group also will be randomly assigned.

5. Participants will be randomly assigned to a group and interviewer for the telephone interview. The order of interviews within each group also will be randomly assigned.

7. Each participant will participate in a personal interview by the designated judge for a period not to exceed ten minutes.

   a. Participants will provide the interviewer with the resume, letter of application and employer application.
   b. The interviewer will review the contents of the letter of application and the resume, and conduct the interview.

8. Each participant will participate in a telephone interview by a designated judge for a period of time not to exceed three minutes.
a. Participants will interview with one of the three following personalities:
   1. Human, Fiscal and Resource personnel director
   2. Employer’s Secretary
   3. Employer

b. Students are to position themselves so that they obtain a personal interview with the company they are applying to. Student should interview with the thought that the company has already received their letter of intent, resume and application.

9. All parts of the event will be scored independently.

V. SCORING PROCEDURE

A. PARTICIPANT SCORING:
   1. Cover Letter 100 points
   2. Resume 150 points
   3. Application/Reference 50 points
   4. Personal Interview 200 points
   5. Telephone Interview 150 points
   6. Follow-up Letter 100 points

   **TOTAL POSSIBLE** 750 POINTS

B. Ties will first be broken by total net scores and then by the score for the interview portion of the event. If a tie still exists, the telephone interview will then be used.
### C. SAMPLE SCORE CARDS

#### TELEPHONE SCORE CARD (150 points)

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>22</td>
</tr>
<tr>
<td>Initiative</td>
<td>22</td>
</tr>
<tr>
<td>Communicated Effectively</td>
<td>26</td>
</tr>
<tr>
<td>Exhibited Ambition and Efficiency</td>
<td>30</td>
</tr>
<tr>
<td>Diplomatic and Courteous</td>
<td>26</td>
</tr>
<tr>
<td>Gathered appropriate information</td>
<td></td>
</tr>
<tr>
<td>(Contact name, address, date, time, etc)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>150</strong></td>
</tr>
</tbody>
</table>

#### EMPLOYMENT APPLICATION (50 points)

Is the application:

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legible</td>
<td>10</td>
</tr>
<tr>
<td>Neat (Grammar, punctuation etc)</td>
<td>10</td>
</tr>
<tr>
<td>Completed according to instructions</td>
<td>10</td>
</tr>
<tr>
<td>Signed by each listed reference</td>
<td>10</td>
</tr>
<tr>
<td>Consistent with resume</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

#### COVER LETTER OF INTENT (100 points)

Composition:

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct format and stationary</td>
<td>10</td>
</tr>
<tr>
<td>Punctuation</td>
<td>10</td>
</tr>
<tr>
<td>Grammar</td>
<td>10</td>
</tr>
<tr>
<td>Spelling</td>
<td>10</td>
</tr>
<tr>
<td>General Appearance</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>
FOLLOW UP LETTER (100 points)

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>General appearance</td>
<td>5</td>
</tr>
<tr>
<td>Composition</td>
<td>10</td>
</tr>
<tr>
<td>Express appreciation</td>
<td>10</td>
</tr>
<tr>
<td>Comments on interview activities</td>
<td>15</td>
</tr>
<tr>
<td>Express interest in position</td>
<td>15</td>
</tr>
<tr>
<td>Is requested information</td>
<td></td>
</tr>
<tr>
<td>Addressed</td>
<td>15</td>
</tr>
<tr>
<td>Review of relevant qualification</td>
<td>15</td>
</tr>
<tr>
<td>Provisions for follow-up stated</td>
<td>15</td>
</tr>
</tbody>
</table>

100 points

RESUME (150 points)

General Appearance:
- Presented in proper format: 25 points
- Pleasing to the eye: 25 points
  (Captures interest, layout, easily read)
- Spelling/Grammar:
  (Punctuation, typing, spelling, grammar): 25 points

75 points

Composition:
- Personal data: 10
- Career objective: 5
- Educational background: 10
- Work experience/skills: 20
- Special experiences:
  activities, honors: 15
- References: 15

75 points
REFERENCES

1. Menecke, R. and Hummel, R. *Career Planning for the 80’s.*

2. Placement Service, University of Arizona. *Resume Writing and Cover Letters*


PURPOSE

The purpose of the State FFA Livestock Career Development Event is to:
1. Stimulate the study of, and interest in, livestock selection management and production through the agricultural education curriculum and to
2. Provide recognition for those who have demonstrated skills and competencies as a result of instruction in animal science.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores.

I. OBJECTIVES

A. To understand and to interpret the value of performance data based on industry standards.

B. To measure students' knowledge in the following categories:
   1. to make accurate observations of livestock.
   2. to determine the desirable traits in animals.
   3. to make logical decisions based on these observations.
   4. to discuss and to defend their decisions for their placing.
   5. to instill an appreciation for desirable selection, management and marketing techniques.
   6. to motivate learning in the classroom and create a spirit of competition among the students.
   7. to select and prepare a judging team the represent Arizona in the National FFA Livestock Judging Event.

C. To develop the ability to select and market livestock that will satisfy consumer demands and provide increased economic returns to producers. Provide positive economic returns to producers as well as meet the needs of the industry.

D. To become proficient in communicating in the terminology of the industry and the consumer.

E. To identify the criteria used in grading livestock. Scenarios will be used in the selection process.

F. To provide an opportunity for participants to become acquainted with professionals in the industry.

II. COMPETENCIES

-Select livestock possessing traits, which included performance, and grading criteria.
-Interpret and use production records.
-Present in oral form three sets of reasons to justify the class placing.

III. GENERAL RULES
A. Participants will report to the event superintendent for instructions at the time and place shown in the current year's "Program for National Career Development Events."

B. Participants are urged to bring clipboards that are free of markings or notes. Blank sheets of paper will be permitted for notes. Participants must bring two (No. 2) pencils.

C. Data may be added or deleted as technology changes. When new criteria are adopted, the information will be forwarded to all states by January 1 of the event year by the Teacher Services Specialist responsible for Career Development Events.

IV. EVENT FORMAT

A. Six classes of livestock of four animals each will be placed using a computerized scorecard. There will be one class each of breeding and market beef, sheep and swine.

B. Three sets of oral reasons will be designated by the event superintendent at the beginning of the event. Reasons will be given after all classes have been placed. Notes will not be permitted; however, participants may use a card with only their placing of the class written on it.

C. There will be three Female Selection classes, one each in beef, sheep and hogs, made up of eight animals each. Participants will be required to select the four best animals from the eight, using visual appraisal and performance data. Performance data will be provided. One of the Female Selection Classes will be a cooperative team activity. The class will be designated at the event site.

D. Performance records (including EPDs) may be used in the breeding and the Female Selection classes of beef, sheep and swine. Performance criteria, when used, shall be based on standards developed and used by the Beef Improvement Federation, the Sheep Industry Development Program, Inc., and the National Swine Improvement Federation.

E. Participants will be allowed 15 minutes for each placing and Female Selection class, except for the team activity.

F. One class of market swine consisting of five head will be graded individually according to the latest USDA market grades using Form 1. All grades will not necessarily be represented.

G. One class of five slaughter cattle will be graded individually, according to the latest USDA market grades using Form 2. The slaughter class will also be graded according to cutability. One class of five feeder cattle will be graded according to the latest USDA market grades using Form 3.

H. A multiple choice exam will be given. The objective exam is designed to determine team members understanding of the livestock industry. The exam will consist of 50 multiple choice questions. 60 minutes will be given for the exam.

V. SCORING PROCEDURE

The event is organized into the following parts, classes, and point values:

<table>
<thead>
<tr>
<th>Selection Classes</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Place five livestock classes  250
Place two grading classes  150
Place two keep/ cull classes  100
Oral Reasons for three classes  150
Total Selection classes  500
Written exam  100
Total event per person  750
Total event per Team  2250

Tie breakers: Scoring ties will be broken by comparing the individual’s or teams total score on classes in the following order:
1. Oral reasons
2. Team activity
3. Most perfect scores

RESOURCES

For the most current copies of USDA market standards and posters (large and small) illustrating these grades, write:

Agricultural Marketing Service, USDA
Livestock Seed Event
Standard and Review Branch
Room 2641 South Building
Washington, DC 20250

For the most current copies of performance criteria standards write:

Beef Improvement Federation
Department of Animal Sciences and Food
Kansas State University
Northwest Research Extension Center
105 Experiment Farm Rd.
Colby, KS 67701

National Swine Improvement Federation
204 Polk Hall
North Carolina State University
Raleigh, NC 27695-7621

Sheep Industry Development Program, Inc
200 Clayton St. Denver, CO 80202

EXAM REFERENCES


PURPOSE
To help students gain an understanding of the marketing process through the development and presentation of a marketing plan.

TEAM MAKE-UP
A team will consist of three members and no alternates.

I. OBJECTIVES
A. To develop an understanding of the marketing plan process.
B. To provide an activity to focus student and community attention on the agrimarketing curriculum.
C. To allow students to explore and prepare for possible careers in agrimarketing.
D. To help develop partnerships and improve relations with agricultural industries, local FFA chapters and the general public.

II. COMPETENCIES
PS 2, 3
-Develop a business plan
-Conduct business employment needs
-Develop a budget, balance sheet, and a market analysis.

III. PROJECT OUTLINE/RESEARCH RESULTS (25 POINTS)
A. Select a local community agricultural business that serves the community and decide on the product, supply or service for the marketing plan. Work with either existing or start-up situations. Plan to work with and off campus organization. Do not use your chapter as a client.
B. Emphasis should be placed on the "value added" concept using marketing techniques to increase the value of existing products, supplies or services.
C. A marketing plan deals with the future. Historical information is very valuable, but the actual plan must be a projection. A plan presented in 1999 should be for the year 2000. A two-year timeframe might be needed, which would mean the inclusion of the year 2001. Marketing plans may vary from one to ten years depending on your client and the type of product or service.
D. The project outline should include the following aspects of the marketing process.
   1. Analysis of market- "Where are we now?", "Why were we hired?"
      a. Buyer profile and behavior
      b. Competition's strengths and weaknesses
      c. Your product's/firm's strengths and weaknesses
Original research results
   d. Industry trends

2. Business proposition-"Where do we want to be?"
   a. Key planning assumptions
   b. (cite sources of information)
   c. Measurable and Attainable Goals—must be measurable, have completion date, be specific and be attainable.
   d. Target Market—identify specific market segments, which achieve your goals.

3. Strategies and Action plan-"How and when do we get there?" (10 points)
   a. Product attributes: size, quality, service, etc.
   b. How will you distribute and Sell?
      1) marketing channels
      2) physical distribution modes
   c. What will be the price structure?
   d. How will you promote the products? Which promotional activity or combinations of activities are appropriate for your product or service? How much promotion can you afford?
      1) personal selling
      2) direct sales promotion
      3) public relations
      4) advertising—mass media
   e. Develop a mission statement and predict competitor reactions, if any.

4. Projected Budget-"How much will it cost to get there?"
   a. What will be the strategies cost?
   b. Pro forma income statement which highlights costs of the strategies on an incremental or start-up basis
   c. Calculate the financial return of the marketing plan

5. Evaluation-"Did we get there?" (5 points)
   a. Specific measurement tools to measure the accomplishments of the goals at the end of the time period.
   b. Recommendations for future action and contingencies

Written Plan Procedures

1. Five copies of the project outline must be submitted to the event superintendent by date established by the CDE UofA coordinator.

2. The project outline will not exceed eight pages in length (excluding the survey(s) and title page).

3. The project outline must be double-spaced typed or word processor copies on 8 ½ " x 11" white paper with cover page that gives the project title, team name, state and date. The format should use one inch margins, ten characters per inch and follow APA or Chicago style manuals. Do not bind. Place a staple in upper left corner. Manuscripts not meeting these guidelines will be penalized.

4. Written expression is important. Attention should be given to language, general appearance, structure and format.

Scoring the Written Plan
The maximum score on the written plan is 35 points. Five areas are considered in scoring the written plan, as follows:

<table>
<thead>
<tr>
<th>WRITTEN SCORECARD</th>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markent Analysis</td>
<td>10</td>
</tr>
<tr>
<td>Business Proposal</td>
<td>5</td>
</tr>
<tr>
<td>Action Plan</td>
<td>10</td>
</tr>
<tr>
<td>Evaluation</td>
<td>5</td>
</tr>
<tr>
<td>Budget</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

**PRESENTATION (60 POINTS)**

A. A live presentation not exceeding 15 minutes duration should be planned and given. A warning will be given after 12 minutes. The presentation will be followed by up to five minutes of "clarifying" questions, with at least one question for each member of the team. Five points will be deducted from the final score for each minute, or fraction thereof, over 15 minutes for the presentation.

B. The focus of the presentation should be to the top management of an agribusiness or farm. The team should assume the role of marketing consultants, as found in industry. The team will inform the judges of their role in the team's presentation.

C. Visual aids shall be limited to the following:
   1. Flip charts/posters
   2. Overhead transparencies
   3. Samples (product prototypes)
   4. Printed materials
   5. Computer generated material (Power Point)

D. Scoring will be based on how effectively visual aids are used, not how elaborate they are.

E. The following equipment will be provided at the event site:
   1. Two tripod easels (24" x 36")
   2. One overhead projector and screen
   3. One podium
   4. Table and three chairs

F. The evaluation criteria will consist of the five parts of the marketing plan (market analysis, business proposition, action plan, evaluation and budget), use of primary research and the effectiveness of the presentation.

G. The question-and-answer session will be used to ask questions clarifying points in the presentation and to determine student involvement in the preparation of event materials. At least one question will be directed to each member of the team.

**Scoring the Presentation**
The maximum score on the written plan is 65 points.
### PRESENTATION SCORECARD

<table>
<thead>
<tr>
<th>Category</th>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marketing Process</strong></td>
<td>25</td>
</tr>
<tr>
<td>(Understanding and clear presentation of the five parts of the marketing plan.)</td>
<td></td>
</tr>
<tr>
<td><strong>Original Research</strong></td>
<td>15</td>
</tr>
<tr>
<td>(Evidence of meaningful original market research.)</td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness of Presentation</strong></td>
<td>10</td>
</tr>
<tr>
<td>(Organization, professionalism, effectiveness of visuals and adherence to guidelines.)</td>
<td></td>
</tr>
<tr>
<td><strong>Questions and Answers</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL POINTS</strong></td>
<td>65</td>
</tr>
</tbody>
</table>

### TIME ALLOWANCE

The maximum time allowed for the presentation is 15 minutes. The timekeeper shall be responsible for keeping an accurate record of time. Five points are to be deducted from the final score for each minute, or fraction thereof, that a presentation runs over 15 minutes.

### EVENT RULES AND FORMAT

A. Judges
1. At least three qualified judges will be used. If more than six teams are in a career development event, two sets of judges will be used.
2. Judges will be selected to represent a mix of industry, education and communication, if possible. They should have some understanding of the marketing planning process.
3. A timekeeper should be designated among the three judges.

B. Room Arrangement
1. Each team will be allowed 5 minutes to set up before their 15-minute allowance begins and 3 minutes to reset the equipment as they found it after the presentation. If there is an equipment failure during the presentation, the team will be allowed five minutes to set up again.
2. Official FFA dress is required.

### REFERENCES

PURPOSE

The purpose of the State FFA Meats Evaluation and Management CDE is to encourage members to gain knowledge in the management and evaluation of the meat process.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ scores plus the team activity score.

I. OBJECTIVES

A. To test the student’s ability to:
   1. identify cuts and make comparative judgments regarding quality of meat.
   2. determine grades of meat utilizing the established marketing standards.
   3. recognize from a producer’s standpoint, the quality of meat preferred by the consumer.

B. To motivate learning in the classroom and create a spirit of competition among the students.

C. To provide recognition for the individuals who excel in this area.

D. To promote career choice in meat industry occupations.

E. To select and prepare a judging team to represent Arizona in the National FFA Meats Judging Event.

COMPETENCIES

A. Identify the wholesale cuts of beef, pork and lamb.
B. Identify the retail cuts of beef, pork and lamb.
C. Classify beef carcasses as to quality grade.
D. Classify beef carcasses as to yield grade.
E. Judge classes of beef, pork and lamb carcasses.
F. Judge wholesale cuts of beef, pork and lamb.
G. Judge retail cuts of beef and pork.

GENERAL RULES

A. A team will consist of three members. One alternate may judge, if desired. The team score will be the total of the three highest individuals.

B. The event will consist of three parts: identification of retail cuts, judging wholesale cuts and/or carcasses of beef, lamb and pork and grading beef (both quality and yield).

C. The identification part will consist of at least thirty retail cuts from the list for the National FFA Meats Event, except that no cuts of veal will be included. One point will be given for correct
identification of the species, two points for the correct identification of the primal cut and three points for the correct identification of the retail name. A perfect score is 180 points.

D. The judging part of the event will consist of:
   1. one class of four lamb carcasses
   2. one class of four pork carcasses
   3. two classes of four retail cuts of beef and/or pork
   4. one class of four beef carcasses
The standard placing card for FFA judging will be used. A perfect score in each class is 50 points.

E. The grading classes will be made up of up to 10 carcasses to be quality graded and up to 10 carcasses to be yield graded using Form 5. A perfect score is the number of carcasses times 10. Maximum of 100 points for 10 carcasses. See score cards for scoring procedure.

F. Participants will be allowed ten minutes for placing each class and twenty minutes each for identifying the retail cuts and grading the carcasses.

G. Participants and official judges are to make their placings and identifications without handling the meat.

H. Official placings and reasons will be given following the event.

REFERENCES


U.S. standards for grades of meat, the ribeye grid is available from: Livestock and Seed Division, MS, USDA, Washington, DC 20250.

Preliminary Yield Grade Ruler, NASCO, Ft. Atkinson, Wisconsin 53538

Yellow Pages, for Section E of the event: American Meat Institute, PO Box 3556, Washington, DC 20007.

Ribeye Grid/ I Q AS-34, Iowa State University, Cooperative Extension Service, Ames, Iowa 60010.

Marbling Photographs, Art Services, Boisearl, NE

Event Review Manual, National FFA Supply Service, 5632 Mt. Vernon Memorial Highway, PO Box 15160, Alexandria, VA 22309

Meat Buyers Guide, National Association of Meat Purveyors, 252 West Ina Road, Tucson, AZ 85704.


Institutional Meat Purchase Specifications Fresh-Series 100, Washington, D.C. 20250, USDA Ag Marketing Service, Livestock and Seed Division.
<table>
<thead>
<tr>
<th>PRIMAL CUTS</th>
<th>RETAIL CUTS</th>
<th>SPECIES</th>
<th>PRIMAL</th>
<th>RETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEEF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROUND</td>
<td>Bottom Round Roast 1</td>
<td>10</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom Round Steak 1</td>
<td>10</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Round Roast 1</td>
<td>10</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Round Steak 1</td>
<td>10</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heel of Round Roast 1</td>
<td>10</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Round Steak 1</td>
<td>10</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rump Roast 1</td>
<td>10</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rump Roast (Bnls) 1</td>
<td>10</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tip Roast 1</td>
<td>10</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tip Roast, Cap Off 1</td>
<td>10</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tip Steak, Cap Off 1</td>
<td>10</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top Loin Double (Bnls) 1</td>
<td>10</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top Round Steak 1</td>
<td>10</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>LOIN</td>
<td>Porterhouse Steak 1</td>
<td>7</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak (Bnls) 1</td>
<td>7</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak, Flat Bone 1</td>
<td>7</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak, Pln Bone 1</td>
<td>7</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak, Round Bone 1</td>
<td>7</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak, Shell 1</td>
<td>7</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirloin Steak, Wedge Bone 1</td>
<td>7</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T - Bone Steak 1</td>
<td>7</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tenderloin Roast 1</td>
<td>7</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tenderloin Steak 1</td>
<td>7</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top Loin Steak 1</td>
<td>7</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top Loin Steak (Bnls) 1</td>
<td>7</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top Sirloin Steak (Bnls) 1</td>
<td>7</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>FLANK</td>
<td>Flank Steak 1</td>
<td>3</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>RIB</td>
<td>Eye Roast 1</td>
<td>9</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Steak 1</td>
<td>9</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roast, Large End 1</td>
<td>9</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roast, Small End 1</td>
<td>9</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small End Steak 1</td>
<td>9</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small End (Bnls) 1</td>
<td>9</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>CHUCK</td>
<td>Arm Pot Roast 1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arm Steak 1</td>
<td>2</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blade Roast 1</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blade Steak 1</td>
<td>2</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross Rib Roast 1</td>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flanken Style Ribs 1</td>
<td>2</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mock Tender 1</td>
<td>2</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seven (7) Bone Steak 1</td>
<td>2</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seven (7) Bone Roast 1</td>
<td>2</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>PLATE</td>
<td>Short Ribs 1</td>
<td>8</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>PRIMAL CUTS</td>
<td>RETAIL CUTS</td>
<td>SPECIES</td>
<td>PRIMAL</td>
<td>RETAIL</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>SHANK</td>
<td>Cross Cuts</td>
<td>1</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>VARIETY MEATS</td>
<td>Brains</td>
<td>1</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Heart</td>
<td>1</td>
<td>15</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>Kidney</td>
<td>1</td>
<td>15</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Liver</td>
<td>1</td>
<td>15</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>Sweetbread</td>
<td>1</td>
<td>15</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Tongue</td>
<td>1</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>VARIOUS</td>
<td>Beef for Stew</td>
<td>1</td>
<td>16</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>Cube Steak</td>
<td>1</td>
<td>16</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>Ground Beef</td>
<td>1</td>
<td>16</td>
<td>90</td>
</tr>
<tr>
<td>MIPS BOXED BEEF</td>
<td>Rib 107</td>
<td>1</td>
<td>9</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>Ribeye Roll 112</td>
<td>1</td>
<td>9</td>
<td>109</td>
</tr>
<tr>
<td>BRISKET</td>
<td>Brisket (BnIs) 120</td>
<td>1</td>
<td>1</td>
<td>110</td>
</tr>
<tr>
<td>ROUND</td>
<td>Bottom Rnd 170</td>
<td>1</td>
<td>10</td>
<td>111</td>
</tr>
<tr>
<td>PORK, FRESH</td>
<td>Fresh Ham (Whole)</td>
<td>2</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Shank Portion</td>
<td>2</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>LOIN</td>
<td>Blade Roast</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Back Ribs</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Blade Chop</td>
<td>2</td>
<td>7</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Butterfly Chop</td>
<td>2</td>
<td>7</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Center Loin Roast</td>
<td>2</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Center Rib Roast</td>
<td>2</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Country Style Ribs</td>
<td>2</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Loin Chop</td>
<td>2</td>
<td>7</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>Rib Chop</td>
<td>2</td>
<td>7</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Sirloin Chop</td>
<td>2</td>
<td>7</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Sirloin Cutlets</td>
<td>2</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Sirloin Roast</td>
<td>2</td>
<td>7</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Tenderloin</td>
<td>2</td>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Top Loin Roast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Double (BnIs)</td>
<td>2</td>
<td>7</td>
<td>43</td>
</tr>
<tr>
<td>SIDE</td>
<td>Fresh Side</td>
<td>2</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Spare Ribs</td>
<td>2</td>
<td>13</td>
<td>38</td>
</tr>
<tr>
<td>SHOULDER</td>
<td>Arm Picnic</td>
<td>2</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Arm Roast</td>
<td>2</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Ann Steak</td>
<td>2</td>
<td>12</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Blade, Boston</td>
<td>2</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Blade Steak</td>
<td>2</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>PRIMAL CUTS</td>
<td>RETAIL CUTS</td>
<td>SPECIES</td>
<td>PRIMAL</td>
<td>RETAIL</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>VARIETY MEATS</td>
<td>Heart</td>
<td>2</td>
<td>15</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>Kidney</td>
<td>2</td>
<td>15</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Liver</td>
<td>2</td>
<td>15</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>Tongue</td>
<td>2</td>
<td>15</td>
<td>85</td>
</tr>
</tbody>
</table>

### PRIMAL/RETAIL CUTS CODING

<table>
<thead>
<tr>
<th>PRIMAL CUTS</th>
<th>RETAIL CUTS</th>
<th>SPECIES</th>
<th>PRIMAL</th>
<th>RETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARIOUS</td>
<td>Cubes for Kabobs</td>
<td>2</td>
<td>16</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>Cube Steak</td>
<td>2</td>
<td>16</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>Ground Pork</td>
<td>2</td>
<td>16</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Hocks</td>
<td>2</td>
<td>16</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Sausage Links</td>
<td>2</td>
<td>16</td>
<td>94</td>
</tr>
</tbody>
</table>

### PORK, SMOKED/CURED

<table>
<thead>
<tr>
<th>CURED HAM</th>
<th>Center Slice</th>
<th>2</th>
<th>5</th>
<th>96</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ham (Whole)</td>
<td>2</td>
<td>5</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Ham Hocks</td>
<td>2</td>
<td>5</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Rump Portion</td>
<td>2</td>
<td>5</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Shank Portion</td>
<td>2</td>
<td>5</td>
<td>104</td>
</tr>
<tr>
<td>LOIN</td>
<td>Canadian Bacon</td>
<td>2</td>
<td>7</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Rib Chop</td>
<td>2</td>
<td>7</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Loin Chop</td>
<td>2</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>SHOULDER</td>
<td>Picnic (Whole)</td>
<td>2</td>
<td>12</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Shoulder Roll</td>
<td>2</td>
<td>12</td>
<td>105</td>
</tr>
<tr>
<td>SIDE (BELLY)</td>
<td>Slab Bacon</td>
<td>2</td>
<td>13</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Sliced Bacon</td>
<td>2</td>
<td>13</td>
<td>107</td>
</tr>
<tr>
<td>JOWL</td>
<td>Jowl</td>
<td>2</td>
<td>14</td>
<td>99</td>
</tr>
</tbody>
</table>

### LAMB

<table>
<thead>
<tr>
<th>LEG</th>
<th>American Style Roast</th>
<th>3</th>
<th>6</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frenched Style Roast</td>
<td>3</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Leg (Whole)</td>
<td>3</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Sirloin Chop</td>
<td>3</td>
<td>6</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Sirloin Half</td>
<td>3</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Shank Half</td>
<td>3</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>LOIN</td>
<td>Double Chop</td>
<td>3</td>
<td>7</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Double Chop (Bnls)</td>
<td>3</td>
<td>7</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Loin Chop</td>
<td>3</td>
<td>7</td>
<td>77</td>
</tr>
<tr>
<td>RIB</td>
<td>Crown Roast</td>
<td>3</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Rib Chop</td>
<td>3</td>
<td>9</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Rib Roast</td>
<td>3</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>SHOULDER</td>
<td>Am Chop</td>
<td>3</td>
<td>12</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>Blade Chop</td>
<td>3</td>
<td>12</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Neck Slice</td>
<td>3</td>
<td>12</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Square Cut (Whole)</td>
<td>3</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>FORESHANK</td>
<td>Breast</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>AND BREAST</td>
<td>Riblets</td>
<td>3</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Heart</td>
<td>3</td>
<td>15</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>Kidney</td>
<td>3</td>
<td>15</td>
<td>82</td>
</tr>
<tr>
<td>VARIETY MEATS</td>
<td>Liver</td>
<td>3</td>
<td>15</td>
<td>83</td>
</tr>
</tbody>
</table>
### BEEF CARCASS QUALITY AND YIELD GRADING

**CONTESTANT NUMBER _______**

<table>
<thead>
<tr>
<th>CARCASS NO.</th>
<th>QUALITY GRADE</th>
<th>YIELD GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>2</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>3</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>4</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>5</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>6</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>7</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>8</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
<tr>
<td>9</td>
<td>ABCDEFGHIJKLMNOPQR</td>
<td>ABCDEFGHIJKLMNOPQR</td>
</tr>
</tbody>
</table>

**QUALITY GRADES AND LETTERS**
- PRIME HIGH—A
- PRIME AVG.—B
- PRIME LOW—C
- CHOICE HIGH—D
- CHOICE AVG.—E
- CHOICE LOW—F
- SELECT HIGH—G
- SELECT AVG.—H
- SELECT LOW—I

**YIELD GRADES AND LETTERS**
- A- 1.00-1.33
- B- 1.34-1.66
- C- 1.67-1.99
- D- 2.00-2.33
- E- 2.34-2.66
- F- 2.67-2.99
- G- 3.00-3.33
- H- 3.34-3.66

Contestant is to circle the corresponding letter for the quality grade in the column marked quality grade. A total of 90 points is possible for quality grading.

Ten points are allowed for the correct grading of each carcass.

A deduction of 2 points will be made for one-third grade above or below the official grade; 5 points will be deducted for two-thirds of a grade above or below the official grade; 8 points will be deducted for one full grade above or below the official grade; 10 points will be deducted for more than one full grade above or below the official grade.
SELECT SPECIES, PRIMAL CUT AND RETAIL NAME FROM LIST BELOW AND WRITE THE NUMBER IN THE COLUMN. TOTAL 180 POINTS. EXAMPLE: BEEF, ROUND, RUMP ROAST

<table>
<thead>
<tr>
<th>SPECIES 1 POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-BEEF</td>
</tr>
<tr>
<td>2-PORK</td>
</tr>
<tr>
<td>3-LAMB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRIMAL CUTS 2 POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 BRISKET</td>
</tr>
<tr>
<td>2 CHUCK</td>
</tr>
<tr>
<td>3 FLANK</td>
</tr>
<tr>
<td>4 FORSHANK AND BREAST</td>
</tr>
<tr>
<td>5 CURED HAM</td>
</tr>
<tr>
<td>6 LEG</td>
</tr>
<tr>
<td>7 LOIN</td>
</tr>
<tr>
<td>8 PLATE</td>
</tr>
<tr>
<td>9 RIB</td>
</tr>
<tr>
<td>10 ROUND</td>
</tr>
<tr>
<td>11 SHANK</td>
</tr>
<tr>
<td>12 SHOULDER</td>
</tr>
<tr>
<td>13 SIDE (BELLY)</td>
</tr>
<tr>
<td>14 JOWL</td>
</tr>
<tr>
<td>15 VARIETY MEATS</td>
</tr>
<tr>
<td>16 VARIOUS MEATS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RETAIL TRADE NAMES 3 POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 HEEL OF ROUND</td>
</tr>
<tr>
<td>24 LEG (WHOLE)</td>
</tr>
<tr>
<td>25 MOCK TENDER</td>
</tr>
<tr>
<td>26 POINT HALF (BNLS)</td>
</tr>
<tr>
<td>27 RIB</td>
</tr>
<tr>
<td>28 RIBLETS</td>
</tr>
<tr>
<td>29 ROAST, LARGE END</td>
</tr>
<tr>
<td>30 ROAST, SMALL END</td>
</tr>
<tr>
<td>31 RUMP</td>
</tr>
<tr>
<td>32 RUMP (BNLS)</td>
</tr>
<tr>
<td>33 SEVEN BONE</td>
</tr>
<tr>
<td>34 SHANK PORTION/HALF</td>
</tr>
<tr>
<td>35 SHORT RIBS</td>
</tr>
<tr>
<td>36 SIRLOIN</td>
</tr>
<tr>
<td>37 SILOIN HALF</td>
</tr>
<tr>
<td>38 SPARE RIBS</td>
</tr>
<tr>
<td>39 SQUARE CUT (WHOLE)</td>
</tr>
<tr>
<td>40 TENDERLOIN</td>
</tr>
<tr>
<td>41 TIP</td>
</tr>
<tr>
<td>42 TIP, CAP OFF</td>
</tr>
<tr>
<td>43 TOP ROUND (BNLS)</td>
</tr>
<tr>
<td>44 TOP ROUND ROAST</td>
</tr>
</tbody>
</table>
STEAKS
45 ARM
46 BLADE
47 BOTTOM ROUND
48 RIBEYE
49 EYE ROUND
50 FLANK
51 NECK SLICE
52 PORTERHOUSE
53 ROUND
54 SEVEN BONE
55 SIRLOIN (BNLS)
56 SIRLOIN, CUTLETS
57 SIRLOIN, FLATBONE
58 SIRLOIN, PIN BONE
59 SIRLOIN, ROUND BONE
60 SIRLOIN, SHELL
61 SIRLOIN, WEDGE BONE
62 SKIRT
63 SMALL END
64 SMALL END (BNLS)
65 T BONE
66 TENDERLOIN
67 TIP, CAP OFF
68 TOP LOIN
69 TOP LOIN (BNLS)
70 TOP ROUND
71 TOP SIRLOIN (BNLS)

CHOPS
72 ARM CHOP
73 BLADE CHOP
74 BUTTERFLY CHOP
75 DOUBLE CHOP
76 DOUBLE CHOP (BNLS)
77 LOIN CHOP
78 RIB CHOP
79 SIRLOIN CHOP

VARIETY MEATS
80 BRAINS
81 HEART
82 KIDNEY
83 LIVER
84 SWEETBREAD
85 TONGUE

PROCESSED CUTS
86 BEEF FOR STEW
87 BRISKET, CORNED
88 CUBE STEAK
89 CUBES FOR KABOBS
90 GROUND BEEF
91 GROUND LAMB PATTIE
92 GROUND PORK
93 HOCKS
94 SAUSAGE LINKS

SMOKED, CURED PORK
95 CANADIAN BACON
96 CENTER SLICE
97 HAM (WHOLE)
98 HAM HOCKS
99 JOWL
100 LOIN CHOP
101 PICNIC (WHOLE)
102 RIB CHOP
103 RUMP PORTION

BOXED CUTS
104 SHANK PORTION
105 SHOULD ALL ROLL
106 SLAB BACON
107 SLICED BACON
108 RIB 107
109 RIBEYE ROLL
110 BRISKET (BNLS)
111 BOTTOM END

PARTICIPANT NUMBER________________________
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>PRIMAL CUT</th>
<th>RETAIL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

The purpose of the State FFA Newsletter CDE is for the chapter to learn how to create a newsletter.

TEAM MAKE-UP

This is a chapter contest.

COMPETENCIES

PS 1, 4

A. Develop a newsletter.
B. Demonstrate human relations skills, market analysis skills and advertisement skills.

OBJECTIVES

A. To test student’s:
   1. Ability to create a newsletter.
      a. graphics/photo
      b. mission statement of chapter
      c. template of newsletter
      d. feature article
      e. pull-quotes
      f. table of contents
      g. masthead
      h. number of issues per year

GENERAL RULES

1. Each chapter is eligible to submit one entry. An entry may include all publications throughout the year.
2. For official score sheet refer to the attached FFA Newsletter Contest Score Sheet.
3. Newsletters must be mailed by May 15 to:

   Dr. Jack Elliot, Associate Professor
   Department of Agricultural Education
   PO Box 210036
   Tucson, Arizona 85721-0036
## FFA NEWSLETTER CONTEST SCORE SHEET

Chapter Name: ____________________________________________

<table>
<thead>
<tr>
<th>Criteria</th>
<th>A</th>
<th>B or C</th>
<th>D</th>
<th>E</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphics or photo are included</td>
<td>All graphics and/or photos have captions on all pages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color/ Layout</td>
<td>4 graphics and/or photos included</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Mission Statement/Organization</td>
<td>Mission statement is included in the newsletter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is clearly marked</td>
<td></td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Easily understood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Theme of the newsletter is clear.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Template of the newsletter</td>
<td>At least 4 pages</td>
<td>20</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>3 pages with Titles of other articles, descriptions, and graphics/photos with captions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variety of topics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All sections labeled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional appearance (neat/organized)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer generated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“In the next issue..” included</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circle newsletter format: Thematic or Uniform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify the publishing cycle (i.e. how often the newsletter will be published)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feature article</td>
<td>Only one complete article located on the front page with no continuations on another page.</td>
<td>20</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Relates to the issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct punctuation, spelling and grammar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content of the article flows well (good transitions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content of the article is clear and interesting</td>
<td></td>
<td>20</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Pull-quotes</td>
<td>Article includes 3 pull-quotes</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Pull-quotes relate to the 3 key points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pull-quotes are highlighted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pull-quotes are used on the same page as the article</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Pull-Quotes are identified throughout the newsletter</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table of Contents</td>
<td>Table of content present</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Each article location correctly listed within the newsletter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed in a logical place within the newsletter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masthead</td>
<td>Must include the following (and it must be in a specific location.):</td>
<td>20</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Editor name, address, phone number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email, URL, volume #, issue #</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List of appropriate officials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscription information (including cost)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who publishes it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where it is published</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other pertinent information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of newsletter issues per year</td>
<td>At least 3 issues per year</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Issues relate to each other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total points maximum.</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

The State FFA Discovery Extemporaneous Public Speaking Career Development Event is designed to develop the ability of 7th, 8th and 9th grade FFA members to express themselves on a given subject without having prepared or rehearsed its content in advance, therefore causing young FFA members to formulate their remarks for presentation in a very limited amount of time. The event will be held in connection with the State FFA Mid-Winter Leadership Conference.

COMPETENCIES

PS 1, 2

- Demonstrate communication skills
- Demonstrate leadership skills
- Utilize time management skills
- Utilize listening skills

VII. ELIGIBILITY

D. The State FFA Discovery Extemporaneous Public Speaking Career Development Event will be open only to 7th, 8th and 9th grade students who are regularly enrolled in agricultural education during the current calendar year, or who are still in high school but have completed all the agricultural education offered. When selected, participants must be active members of a chartered FFA chapter and the National FFA Organization.

E. A participant shall wear complete official FFA dress for this each event.

VIII. SUBJECTS

G. The selection of topics shall be held 30 minutes before the event. The novice participants will draw four specific topics, selected at random from one pool of 12, relating to the industry of agriculture. After selecting the topic they desire to speak on, all three topics will be returned for the next drawing.

H. Twelve topics shall be prepared by the event chairperson and will include three each from the following categories:
   - agriscience and technology;
   - agrimarketing and international agricultural relations;
   - food and fiber systems;
   - urban agriculture.

I. Participants will be admitted to the preparation room at 11-minute intervals and given exactly 30 minutes for topic selection and preparation.

J. Reference material will be screened by the officials in charge of the event on the following basis:
   - Shall be limited to five items.
   - Must be printed material such as books or magazines and/or a compilation of collected materials. To be counted as one item, a notebook or folder of collected materials may contain no more than 100 pages, single side (cannot be notes or speeches prepared by the participant or notes prepared by another person for the purpose of use for this event). (Copies must reference the origination point).

K. Each speech shall be the result of the participant's own effort using approved reference material, which the participant may bring to the preparation room. No other assistance may be provided. Participants may only use the uniform note cards provided. Any notes for speaking must be made during the 30-minute preparation period.
IX. TIME LIMIT

Each speech shall be not less than four (4) nor more than six (6) minutes in length with five (5) minutes additional time allowed for related questions, which shall be asked by the judges. The program chairman of the event shall introduce the participant by name and chapter, and the participant may introduce his or her speech by title only. Participants will be penalized one point per second on each judge’s score sheet for being over six (6) minutes or under four (4) minutes. Time commences when the speaker begins talking. Speakers may use a watch to keep a record of their time. No time warnings will be given by event officials or observers.

X. EVENT PROCEDURES

J. The State advisory board will assign a chair to this event.
K. Speaking order will be randomly drawn by event officials. The program chairman shall introduce each participant by name and in order of the drawing. A participant will be permitted to use notes while speaking, but deductions in scoring may be made for this practice if it detracts from the effectiveness of the presentation. Applause shall be withheld until all participants have spoken.
L. The state event will be conducted in two rounds: semifinals and finals. No ranking will be given except for the final four.
M. One timekeeper shall be designated who will record the time by each participant in delivering his or her speech, noting undertime or overtime, if any, for which deductions will be made. Each section and round will be assigned a timekeeper.
N. A minimum of three competent and impartial persons will be selected to judge the event. At least one judge should have an agricultural background.
O. At the time of the event, the judges will be seated in different sections of the room in which the event is held. They will score each participant on the delivery of the production, using the score sheet provided.
P. Each judge shall formulate and ask questions. Questions shall pertain directly to the speaker's subject. Judges will score each participant on the ability to answer all questions asked by all judges. Three to five minutes should be used.
Q. When all participants have finished speaking, each judge will total the score on each speaker. The timekeeper's record will be used in computing the final score for each participant. The judges score sheets will then be submitted to event officials to determine final ratings of participants.
R. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges’ ranking of each participant then shall be added, and the winner will be that participant whose total of rankings is the lowest. Other placings shall be determined in the same manner (low point score method of selection). In case of a tie, that individual who has the highest grand total score shall have higher rating. The high and low score will be dropped to ensure accuracy.

XI. AWARDS

Plaques will be awarded to the state finalists by the Arizona Association FFA.
### STATE FFA DISCOVERY EXTEMPORENEOUS PUBLIC SPEAKING CAREER DEVELOPMENT EVENT
### JUDGES SCORE SHEET

<table>
<thead>
<tr>
<th>Items To Be Scored</th>
<th>Max. Points</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Related to Topic</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization of Material</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power of Expression</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Presence</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Effect</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response to Questions*</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Gross)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Time Deductions**</td>
<td>1 pt. per second</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Net)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rank of Participant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: Judges should meet prior to the event to prepare and clarify the types of questions to be asked.

**NOTE: From the timekeeper's record.

### EXPLANATION OF SCORE SHEET POINTS
1. **Content Related to Topic includes:**
- Appropriateness of the total speech content to the topic selected
- Extent to which the speaker addressed the topic selected
- Suitability of the material used
- Accuracy of the statements included
- Relationship of the content to agriculture

2. **Organization of Material includes:**
- Organization of the content
- Unity of thought
- Logical development
- Language used
- Sentence structure
- Accomplishment of purpose/conclusions
- Material related to subtopic

3. **Power of Expression includes:**
- Fluency
- Emphasis
- Directness
- Sincerity
- Communicative ability
- Conveyance of thought and meaning

4. **Voice includes:**
- Quality
- Pitch
- Force
- Articulation
- Pronunciation

9. **Stage presence includes:**
- Personal Appearance
- Poise and body posture
- Attitude
- Confidence
- Personality
- Ease before audience

10. **General Effect includes:**
- Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.
- Evidence of purpose

11. **Response to Questions includes:**
Ability to answer the questions on the speech which are asked by the judges indicating originality, familiarity with subject and the ability to think quickly.
PURPOSE
The Novice State FFA Prepared Public Speaking Career Development Event is designed to develop agricultural leadership by providing for 7th, 8th and 9th grade members participation in agricultural public speaking activities and stimulating interest in leadership and citizenship. The event will be held in conjunction with the State FFA Mid-Winter Leadership Conference.

I. COMPETENCIES (PS 1)
   - Utilize communication and leadership skills
   - Develop the ability to public speak
   - Utilize written skills
   - Utilize listening skills

II. ELIGIBILITY
A. Participant’s must be a 7th, 8th or 9th grade FFA member.
B. The State FFA Novice Prepared Public Speaking Career Development Event will follow the general rules and policies for all State FFA Career Development Events.
C. Each participant’s manuscript will be the result of his or her own efforts. It is expected that the participant will take advantage of all available training facilities at his or her local school in developing his or her speaking ability. Facts and working data may be secured from any source but must be appropriately documented.
D. Participants will submit the following materials one month prior the event:
   1. Five (5) double-spaced typewritten copies of the speech on 8 1/2" x 11 " white bond paper with cover page that gives the speech title, participant's name, chapter and date. The format should use 1" margins, 10-12 characters per inch and follow the APA (American Psychological Association) manual. Do not bind or place in folders, special binders or covers. Place a staple in upper left corner. Manuscripts not meeting these guidelines will be penalized.
   2. A signed statement of originality on the certification form provided.
   3. A complete and accurate bibliography used in writing the speech. All participants in the State FFA Novice Prepared Public Speaking Career Development Event should give credit to others where any direct quotes, phrases or special dates are used in the manuscript, in order not to be guilty of plagiarism.
      • A bibliography MUST be included as part of the public speaker's manuscript, and direct quotes from any source of information must be marked in "quotes" on the manuscript and be identified in the bibliography. Failure to do so will automatically disqualify a participant. This applies to all events above the local level.
• Factual information pertaining to agriculture is available from the United States Department of Agriculture, Washington, DC 20250; state colleges, research centers and/or experiment stations; or the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

E. A participant shall wear complete official FFA dress as defined in the current *Official FFA Manual*.

### III. SUBJECTS

Participants may choose any current subject for their speeches that is of an agricultural character (nature), which may include:

- agriscience
- technology
- agribusiness
- agrimarketing
- international agricultural relations
- agricultural communications

Official judges of any State FFA Novice Prepared Public Speaking Career Development Event shall disqualify a participant if he or she speaks on a nonagricultural subject.

### IV. TIME LIMIT

Each speech shall be a minimum of four (4) minutes in length and a maximum of six (6) minutes. Participants will be penalized one point per second on each judge's score sheet for being under four (4) minutes or over six (6) minutes. No time warnings will be given by event officials or observers. Each participant will be allowed three (3) to five (5) minutes additional time in which he or she will be asked questions relating to his or her speech.

### V. EVENT PROCEDURES

1. The State FFA Advisor will assign a chair to this event. Prior to the event the content and composition of all manuscripts will be scored by one qualified individual who will record the scores on a score sheet that will be provided. The scored manuscripts will be provided to the event chairman after each participant has presented.

2. The speaking order will be randomly determined by event officials. The event chairman shall introduce each participant by name and in order of the drawing. A participant will be permitted to use notes while speaking, but deductions in scoring may be made for this practice if it detracts from the effectiveness of the presentation. No props are to be used. Applause shall be withheld until all participants have spoken.

3. One timekeeper shall be designated who will record the time used by each participant in delivering his or her speech, noting undertime or overtime, if any, for which deductions will be made. Each district may submit their first and second place speaker for the semifinal event.

4. The state event will be conducted in two rounds: semifinals and finals. No ranking will be given except for the final four.
5. A minimum of three competent and impartial persons will be selected to judge the event. At least one judge should have an agricultural background.

6. At the time of the event, the judges will be seated in different sections of the room in which the event is held. They will score each participant on the delivery of production, using the score sheet provided.

7. Each judge shall formulate and ask questions. Questions shall pertain directly to the speaker's subject. Judges will score each participant on the ability to answer all questions asked by all judges. Three to five minutes for questions should be used.

8. When all participants have finished speaking, each judge will total the score on delivery and response to questions for each participant. The composition score and the timekeepers' record will be used in computing the final score for each participant. The judges' score sheets will then be submitted to event officials to determine final ratings of participants.

9. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges' ranking of each participant then shall be added, and the winner will be that participant whose total of rankings is the lowest. Other placings shall be determined in the same manner (low point score method of selection). In case of a tie, that individual who has the highest grand total score shall have higher rating.

VI. AWARDS

Plaques will be awarded to the state finalists by the Arizona Association FFA.

EXPLANATION OF SCORE SHEET POINTS

SCORING CONTENT AND COMPOSITION

1. **Content of Manuscript** includes:
   - Importance and appropriateness of the subject
   - Suitability of the material used
   - Accuracy of the statements included
   - Evidence of purpose
   - Completeness and accuracy of bibliography
   - Relationship to agriculture

2. **Composition of Manuscript** includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose conclusions
   - Spelling and grammar

SCORING DELIVERY OF PRODUCTION
1. **Voice** includes:
   - Quality
   - Pitch
   - Articulation
   - Pronunciation
   - Force

2. **Stage Presence** includes:
   - Personal appearance
   - Poise and body posture
   - Attitude
   - Confidence
   - Personality
   - Ease before audience

3. **Power of Expression** includes:
   - Fluency
   - Emphasis
   - Directness
   - Sincerity
   - Communicative ability
   - Conveyance of thought and meaning

4. **Response to Questions** includes:
   - Ability to answer satisfactorily the questions on the speech that are asked by the judges indicating originality, familiarity with subject and ability to think quickly.

5. **General Effect** includes:
   - Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.

**NOTE** judges should meet prior to the event to prepare and clarify the questions to be asked
The Biotechnology of Agriculture

By

James A. Smith
Chandler

State FFA Prepared Public Speaking Career Development Event
1999

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

Bibliography


Romans, J.R., Costello, W.J., Carlzen (1994) The Meat We Eat. (15th ed.) Danville, IL:
STATE FFA NOVICE PREPARED PUBLIC SPEAKING CAREER DEVELOPMENT EVENT
JUDGES’ SCORE SHEET

<table>
<thead>
<tr>
<th>Items to be Scored</th>
<th>Max. Points</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content of Manuscript</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composition of Manuscript</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Presence</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power of Expression</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response to Questions*</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Effect</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Gross)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Time Deductions**</td>
<td>1 pt. per sec</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL POINTS (Net)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rank of Participant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: Judges should meet prior to the event to prepare and clarify the types of questions to be asked. *
*From the timekeeper’s record.

EXPLANATION OF SCORE SHEET POINTS

Part I-For Scoring Content and Composition

1. **Content of Manuscript** includes:
   - Importance and appropriateness of the subject
   - Suitability of the material used
   - Accuracy of the statements included
   - Evidence of purpose
   - Completeness and accuracy of bibliography
   - Relationship to agriculture

2. **Composition of Manuscript** includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose conclusions
   - Spelling and grammar

Part II-For Scoring Delivery of Production

**Voice** includes:
- Quality
- Pitch
- Articulation
- Pronunciation
- Force

1. **Stage Presence** includes:
   - Personal appearance
   - Poise and body posture
• Attitude
• Confidence
• Personality
• Ease before audience

3. **Power of Expression** includes:
• Fluency
• Emphasis
• Directness
• Sincerity
• Communicative ability
• Conveyance of thought and meaning

4. **Response to Questions** includes:
• Ability to answer satisfactorily the questions on the speech that are asked by the judges indicating originality, familiarity with subject and ability to think quickly.

5. **General Effect** includes:
• Extent to which the speech was interesting, understandable, convincing, pleasing and held attention
NOVICE PREPARED PUBLIC SPEAKING CONTEST
STATEMENT OF ORIGINALITY

District Name__________________________ District Placing_____________________

Student Last Name____________________ First Name___________________________

Student Address__________________________________________________________

Phone Number (____) ______________________________________________________

FFA Chapter_______________________________________________________________

My speech entitled _________________________________________________________

is the result of my own effort and ability. It is understood that I am encouraged to utilize all available
training facilities of my local school in developing my speaking abilities, and that I may obtain facts
and working data from any source. However, in securing information as direct quotes or phrases,
specific dates, figures or other materials, such must be marked in "quotes" in manuscript and are
identified in the bibliography at the end of the manuscript. Failure to do so represents plagiarism and
will automatically disqualify a contestant. (Action of State FFA Advisory Board, August 1984.)

I hereby grant the Arizona FFA the right to publish and have published this manuscript after the
contest and/or after competition at the national level (if speech becomes a state winner).

Date________________________

Contestant Signature:________________________________________________________

Chapter Advisor Signature:___________________________________________________

_____

(Form completely filled out must be submitted with 5 copies of manuscript one month prior to
contest date)

Submit to: Arizona Association FFA
1535 West Jefferson-2nd Floor
Phoenix, Arizona 85007-3209
PURPOSE

To stimulate career interest, encourage proficiency development, and recognize excellence in students of nursery practices and landscaping through the agricultural education curriculum.

TEAM MAKE-UP

A team will consist of three members and one alternate.

I. OBJECTIVES

A. To demonstrate the ability to identify nursery and landscape plant materials and turf grasses commonly used in the United States.

B. To demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional or physiological disorders, and mechanical or chemical injury.

C. To demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, harvesting, marketing and maintenance of nursery plants and landscape turf.

D. To demonstrate knowledge of the principles and techniques of landscape design and construction.

E. To demonstrate the ability to identify, select, use and maintain appropriate supplies and equipment for nursery and landscape operations, including equipment and procedures in mechanization and automation.

F. To demonstrate knowledge of safety practices in nursery and landscape operations.

G. To demonstrate skills in oral and written business communications.

H. To demonstrate understanding of marketing principles and proper sales and service skills.

I. To demonstrate the ability to prepare accurate and legible records and reports and to interpret business documents.

II. COMPETENCIES

   PS 4, 5, 6, 7, 14, 15

A. Select and prepare growing media and understand characteristics of different medium components.

B. Determine need for fertilizers, growth regulators and pesticides.
C. Propagate, grow and maintain nursery stock.

D. Establish and maintain a hydroponic vegetable crop.

E. Recommend maintenance measures for interior and exterior landscapes.

F. Recommend correct plant(s) for a given situation.

G. Identify characteristics of a quality plant.

H. Propagate, grow and maintain greenhouse crops.

I. Identify nursery, greenhouse and floral crops.

J. Apply skills in selling and merchandising horticulture products.

K. Demonstrate an understanding of economic principles needed for an effective operation of a horticultural business.

L. Construct, operate and maintain plant growth structures (greenhouses, lath houses, cold frames, hydroponics, etc.).

M. Demonstrate an understanding of basic principles of floral design.

N. Identify tools, equipment and supplies used in the nursery and floral industries.

III. EVENT FORMAT

The divisions of the event are:
1. Written Exam - General Knowledge Test (200 points)
2. Plant Identification (100 points)
3. Plant Selection (100 points)
4. Two Practicums (2@50=100 points)
   TOTAL POINTS – 500

IV. SCORING PROCEDURE

The scorecards which are to be used for this event are attached. These include:
- NFPC1- This is the form that will be used for the plant identification portion of the event.
- NFPC2- National FFA Nursery Event Verbal customer Assistance Practicum Scorecard, which may be used for the customer assistance practicum.
- NFPC3- National FFA Nursery Event Propagating Nursery stock Practicum Scorecard.
- Other forms may be used/developed as needed for the practicums.

REFERENCES

NOTE: All General Knowledge Test questions will be based on information found in the references listed above.
Arizona Core Curriculum, Plant Growth and Development, SRU #5.

New Western Garden Book –Sunset will be the authority for the portion of the plant identification test where plant characteristics are tested.

Plants for Dry Climates, Duffield and Jones.


Nursery and Floriculture Event Plant List for the Arizona FFA State CDE Day Nursery and Floriculture Event.

Interior Plant Selection and Care, Cooperative Extension Service publication AZ 1025.

Hydroponic Instructional Package-Teachers Guide. Cornell Instructional Materials service, Kennedy Hall, Department of Education, Cornell University, Ithaca, NY 14853.

Hydroponic Tomato website: http://ag.arizona.edu/hydroponictomatoes/. U of A contact: Dr. Patricia A. Rorabough PH# (520) 621-5724.

GENERAL KNOWLEDGE TEST
(200 points, 50 questions, 50 minutes)

Each year the event officials will create a written test consisting of fifty objective questions (multiple choice and/or true/false). These questions may relate to any of the event competencies previously listed. The answers to all of the General Knowledge Test questions can be found in the references listed above. Each question will be worth four (4) points. Answers will be written on an answer score sheet. Participant will be allowed 50 minutes to complete this portion of the event.

PLANT IDENTIFICATION
(100 points)

Twenty-five (25) nursery or floral plant specimens selected from the approved list will be set up in an open area. Each plant will be numbered and the plants will be arranged randomly but sequentially from 1-25 with a minimum spacing of six feet between plants. Each participant will be given a score sheet (NFC1) that lists the botanical name, common name and variety (if appropriate) of each of the 25 specimen plants. Next to each plant's common and scientific name on the score sheet, participants will write the number of the corresponding specimen plant.

Four points will be awarded for each correct identification. Officials will designate a definite order of rotation and will space team members apart in order to avoid interaction between team members during this phase of the event. A time limit of 30 seconds per plant will be observed. No specimen plant may be touched or handled in any way.

PLANT SELECTION
(100 points)
Participants will identify specific characteristics of 20 plants from the plant list. This portion of the event will be a multiple-choice test, using a computer bubble answer sheet. The 20 questions will be worth 5 points each. Latin names will be used in all questions.

The following are sample questions:

Which of the following would be the best choice for a vine to cover the north side of a house in the desert southwest?
   a. Euonymus japonica
   b. Ficus plumila
   c. Leucophyllum frutecena
   d. Gazania rigens

Greenhouse production of Lycopersicon esculentum has been make easier and more popular by which of the following technologies?
   a. Thermostats that indicate greenhouse temperature.
   b. Mist systems that keep air moist.
   c. Irrigation systems that can send liquid fertilizer down the lines.
   d. Soil mixers that do the work of several laborors.

Floral designs for the festive Holiday Season must incorporate lots of red. Which of the following species would work?
   a. Hyacanthis orientalis cv
   b. Limonium sinuata
   c. Dianthus caryophylus cv
   d. Saintpaulia ionantha

PRACTICUMS (2 @ 50 pts =100 points)

NOTICE: PRACTICAL/ STATIONS MAY BE CONDUCTED AS TEAM ACTIVITIES WITH A TEAM SCORE GIVEN TO EACH MEMBER OF THE TEAM IF THE EVENT SUPERINTENDENT SO CHOOSES.

Each year two of the practical stations from the list below will be selected by the event superintendent, but will not be announced in advance to teams or coaches. The stations will be set up in such a way as to provide a "hands-on" opportunity for the students. All materials necessary to complete the skills test will be provided except pencils.

1. Customer Assistance Practicum
   (50 pts, 20 minutes)
   The participant will assume the role of a salesperson in a nursery or floriculture business (grower, garden center, florist). The participant will be approached by a customer (judge) with a specific need that the customer wants to satisfy. The participant will, through selling, help the customer meet his or her needs. All supplies, information and the business setting in which the participant works will be provided. Each judge will test two participants, one after another, at 10 minutes each. The station will be isolated from those who are waiting their turn. We will use the "Verbal Customer Assistance Practicum Scorecard" for scoring.
2. *Identification of Nursery and Floriculture Materials Practicum* (50 pts, 20 minutes)
The participant will identify 10 items (tools, equipment and supplies for nursery/floriculture business).
EXAMPLES OF ID MATERIALS:
1, 5, 15 gallon container
24" box
bamboo stakes
perlite
vermiculite
peat moss
pruners
4" & 6" pots
hanging baskets
grafting knife
tree netting
florist supplies
peat post
liners
soil sulphur
moisture meter
pH meter
drip irrigation component
rockwool blocks
tomato cages
oasis cubes
fertilizer injector
rooting hormone
trowel
propagation mat
shade cloth
plant tie tape
tree caliper
backpack sprayer

OR

3. Propagating Nursery Stock Practicum
Each participant will be furnished with a stock plant, rooting flat with media, rooting powder, hand pruner or knife, label, and pencil (personal knives or pruners are allowed, if desired). Participants are to prepare the designated softwood or hardwood cuttings and place them in the media with a label. One minute will be provided for participants to organize their work space as desired, and then five minutes will be allowed for making and sticking as many cuttings as possible. Three rounds will be scored within 20 minutes. An event official will observe and score each participant during the practicum. Scoring criteria are presented on the "Propagating Nursery Stock" scorecard.

OR

4. Identifying and Controlling Plant Disorders
Practicum (50 pts, 20 minutes)
Each participant will view five plant samples, each of which has a nutritional, environmental, disease or insect disorder. The participant will need to identify the disorder (given in the form of a
multiple choice question) and then prescribe a treatment (also given in the form of a multiple choice question). The five plants are worth 20 points each, 10 points for the identification of the disorder and 10 points for the selection of an appropriate treatment.

EXAMPLE: (PARTICIPANT IS LOOKING AT A PLANT SAMPLE LABELED "DISORDER #1")

Disorder #1 is:
- a. too much light
- b. root rot
- c. whiteflies
- d. salt damage

1. Prescribed Treatment for #1 is:
   - a. water deeply
   - b. apply Sevin according to directions
   - c. add sand to the soil around this plant
   - d. use a high phosphorus fertilizer

The plant disorders to be used in the event will be selected from the following list:

**Nutritional and Environmental Disorders**

- Poor soil drainage
- Overwatering damage
- Insufficient water
- Inadequate lighting
- Too much light
- Improper temperature
- Iron Deficiency
- Nitrogen deficiency
- Phosphorus Deficiency
- Salt damage

**Diseases**

- Powdery mildew
- Root rot
- Verticillium wilt
- Rust
- Mosaic
- Leaf spot
- Stem rot
- Fusarium wilt
- Damping-off
- Rhizoctonia

**Insects and Pests**

- Snails
- Whiteflies
Leaf cutter bees
Mealybugs
Slugs
Aphids
Spider mites
Scale
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACACIA redolens</td>
<td>“Freeway” Acacia</td>
<td></td>
</tr>
<tr>
<td>AGAVE huachucensis</td>
<td>Huachuca Agave</td>
<td></td>
</tr>
<tr>
<td>AGAVE vilmoriniana</td>
<td>Octopus Agave</td>
<td></td>
</tr>
<tr>
<td>APTENIA cordifolia</td>
<td>Hearts and Flowers</td>
<td></td>
</tr>
<tr>
<td>ASPARAGUS densiflorus</td>
<td>Asparagus Fern</td>
<td></td>
</tr>
<tr>
<td>BACCHARIS hybrid “Centennial”</td>
<td>Centennial Desert Broom</td>
<td></td>
</tr>
<tr>
<td>BOUGAINVILLEA “Barbara Karst”</td>
<td>Bougainvillea</td>
<td></td>
</tr>
<tr>
<td>BUXUS microphylla japonica</td>
<td>Japanese Boxwood</td>
<td></td>
</tr>
<tr>
<td>CAESALPINIA pulcherrima</td>
<td>Red Bird of Paradise</td>
<td></td>
</tr>
<tr>
<td>CALLIANDRA californica</td>
<td>Baja Fairy Duster</td>
<td></td>
</tr>
<tr>
<td>CARISSA grandiflora</td>
<td>Natal Plum</td>
<td></td>
</tr>
<tr>
<td>CASSIA artemisioides</td>
<td>Feathery Cassia</td>
<td></td>
</tr>
<tr>
<td>CASSIA nemophila</td>
<td>Desert Cassia</td>
<td></td>
</tr>
<tr>
<td>CASSIA phyllodenia</td>
<td>Silvery Cassia</td>
<td></td>
</tr>
<tr>
<td>CONVOLVULUS cneorum</td>
<td>Bush Morning Glory</td>
<td></td>
</tr>
<tr>
<td>CORDIA boissieri</td>
<td>Texas Olive</td>
<td></td>
</tr>
<tr>
<td>CYCAS revoluta</td>
<td>Sago Palm</td>
<td></td>
</tr>
<tr>
<td>DALEA greggii</td>
<td>Trailing Indigo Bush</td>
<td></td>
</tr>
<tr>
<td>DASYLIRION wheeleri</td>
<td>Desert Spoon</td>
<td></td>
</tr>
<tr>
<td>DODONAEA viscosa</td>
<td>Hopseed Bush</td>
<td></td>
</tr>
<tr>
<td>ENCELIA farinosa</td>
<td>Brittle Bush</td>
<td></td>
</tr>
<tr>
<td>EUPHORBIA rigidida</td>
<td>Gopher plant</td>
<td></td>
</tr>
<tr>
<td>EUCALYPTUS microtheca</td>
<td>Coolibah</td>
<td></td>
</tr>
<tr>
<td>EUONYMUS japonica</td>
<td>Evergreen Euonymus</td>
<td></td>
</tr>
<tr>
<td>FEROCACTUS spp.</td>
<td>Barrel Cactus</td>
<td></td>
</tr>
<tr>
<td>FOUQUIERIA splendens</td>
<td>Ocotillo</td>
<td></td>
</tr>
<tr>
<td>GARDENIA jasminoides</td>
<td>Gardenia</td>
<td></td>
</tr>
<tr>
<td>GAZANIA rigens</td>
<td>Gazania</td>
<td></td>
</tr>
<tr>
<td>HEDERA canariensis</td>
<td>Algerian Ivy</td>
<td></td>
</tr>
<tr>
<td>HESPERALOE parviflora</td>
<td>Red Yucca</td>
<td></td>
</tr>
<tr>
<td>HIBISCUS rosa-sinensis</td>
<td>Chinese Hibiscus</td>
<td></td>
</tr>
<tr>
<td>JUNIPERUS tamariscifolia</td>
<td>Tam Juniper</td>
<td></td>
</tr>
<tr>
<td>JUSTICIA specigera</td>
<td>Mexican Honeysuckle</td>
<td></td>
</tr>
<tr>
<td>LAGERSTROMIA indica</td>
<td>Crape Myrtle</td>
<td></td>
</tr>
<tr>
<td>LANTANA camara</td>
<td>Pinwheel Lantana</td>
<td></td>
</tr>
<tr>
<td>LANTANA montevidensis</td>
<td>Trailing Purple Lantana</td>
<td></td>
</tr>
<tr>
<td>LEUCOPHYLLUM candidum</td>
<td>Cenizo</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>Common Name</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>LEUCOPHYLLUM frutescens</td>
<td>Texas Ranger/Texas Sage</td>
<td></td>
</tr>
<tr>
<td>LEUCOPHYLLUM f. compacta</td>
<td>Compact Texas Sage</td>
<td></td>
</tr>
<tr>
<td>LEUCOPHYLLUM laevigatum</td>
<td>Chihuahuan Sage</td>
<td></td>
</tr>
<tr>
<td>LONICERA japonica &quot;Halliana&quot;</td>
<td>Halls Honeysuckle</td>
<td></td>
</tr>
<tr>
<td>MACFADYENA unguis-cati</td>
<td>Cat's Claw Vine</td>
<td></td>
</tr>
<tr>
<td>MYOPORUM parvifolium</td>
<td>Green Myoporum</td>
<td></td>
</tr>
<tr>
<td>NANDINA domestica</td>
<td>Heavenly Bamboo</td>
<td></td>
</tr>
<tr>
<td>NERIUM oleander &quot;petite pink&quot;</td>
<td>Petite Pink Oleander</td>
<td></td>
</tr>
<tr>
<td>NERIUM oleander</td>
<td>Standard Oleander</td>
<td></td>
</tr>
<tr>
<td>OENOTHERA caespitosa</td>
<td>White Primrose</td>
<td></td>
</tr>
<tr>
<td>OENOTHERA berlandieri</td>
<td>Mexican Evening Primrose</td>
<td></td>
</tr>
<tr>
<td>OPUNTIA spp.</td>
<td>Prickly Pear</td>
<td></td>
</tr>
<tr>
<td>PENNISETUM setaceum &quot;Cupreum&quot;</td>
<td>Purple Fountain Grass</td>
<td></td>
</tr>
<tr>
<td>PITTOSPORUM tobira &quot;wheeleri&quot;</td>
<td>Wheelers Dwarf Pittosporum</td>
<td></td>
</tr>
<tr>
<td>PODOCARPUS macrophyllus</td>
<td>Yew Pine</td>
<td></td>
</tr>
<tr>
<td>PYRACANTHA fortuneana</td>
<td>Pyracantha</td>
<td></td>
</tr>
<tr>
<td>RAPHIOLEPIS indica</td>
<td>Indian Hawthorn</td>
<td></td>
</tr>
<tr>
<td>ROSMARINUS officinalis</td>
<td>Prostrate Rosemary</td>
<td></td>
</tr>
<tr>
<td>RUELLIA brittoniana</td>
<td>Ruellia</td>
<td></td>
</tr>
<tr>
<td>RUELLIA peninsularis</td>
<td>Ruellia</td>
<td></td>
</tr>
<tr>
<td>SALVIA chamaedroides</td>
<td>Blue Salvia</td>
<td></td>
</tr>
<tr>
<td>SALVIA greggii</td>
<td>Autumn Sage</td>
<td></td>
</tr>
<tr>
<td>SALVIA leucantha</td>
<td>Mexican Sage</td>
<td></td>
</tr>
<tr>
<td>SANTOLINA chamaecyparissus</td>
<td>Lavender Cotton</td>
<td></td>
</tr>
<tr>
<td>SIMMONDSIA chinensis</td>
<td>Jojoba</td>
<td></td>
</tr>
<tr>
<td>SOPHORA secundiflora</td>
<td>Texas Mountain Laurel</td>
<td></td>
</tr>
<tr>
<td>STRELITZIA reginae</td>
<td>Tropical Bird of Paradise</td>
<td></td>
</tr>
<tr>
<td>TECOMA stans</td>
<td>Arizona Yellow Bells</td>
<td></td>
</tr>
<tr>
<td>TECOMARIA capensis</td>
<td>Cape Honeysuckle</td>
<td></td>
</tr>
<tr>
<td>THEVETIA peruviana</td>
<td>Yellow Oleander</td>
<td></td>
</tr>
<tr>
<td>TRACHELOSPERMUM jasminoides</td>
<td>Star Jasmine</td>
<td></td>
</tr>
<tr>
<td>VAUQUELINIA californica</td>
<td>Arizona Rosewood</td>
<td></td>
</tr>
<tr>
<td>VERBENA peruviana</td>
<td>Verbena (asst. colors)</td>
<td></td>
</tr>
<tr>
<td>VERBENA rigida</td>
<td>Sandpaper Verbena</td>
<td></td>
</tr>
<tr>
<td>YUCCA aloifolia</td>
<td>Spanish Bayonet</td>
<td></td>
</tr>
<tr>
<td>YUCCA baccata</td>
<td>Banana Yucca</td>
<td></td>
</tr>
<tr>
<td>YUCCA brevifolia</td>
<td>Joshua Tree</td>
<td></td>
</tr>
<tr>
<td>YUCCA elata</td>
<td>Soap Tree Yucca</td>
<td></td>
</tr>
</tbody>
</table>
**BEDDING PLANTS:**

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEGONIA semperflorens-cultorum hybrid</td>
<td>Wax Begonia</td>
</tr>
<tr>
<td>DIMORPHOTHECA sinuata</td>
<td>African Daisy</td>
</tr>
<tr>
<td>CALENDULA officinalis</td>
<td>Calendula</td>
</tr>
<tr>
<td>CATHARANTHUS roseus</td>
<td>Periwinkle</td>
</tr>
<tr>
<td>IMPATIENS balsamina</td>
<td>Impatiens</td>
</tr>
<tr>
<td>LISIANTHUS russelianus</td>
<td>Lisanthus</td>
</tr>
<tr>
<td>LOBULARIA maritima</td>
<td>Sweet Alyssum</td>
</tr>
<tr>
<td>MATTHIOLA</td>
<td>Stocks</td>
</tr>
<tr>
<td>PETUNIA</td>
<td>Petunia</td>
</tr>
<tr>
<td>TAGETES erecta</td>
<td>Marigolds</td>
</tr>
<tr>
<td>VIOLA x wittrockiana</td>
<td>Pansy</td>
</tr>
<tr>
<td>ZINNIA elegans</td>
<td>Zinnia</td>
</tr>
</tbody>
</table>

**INDOOR PLANTS:**

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGLAONEMA &quot;silver queen&quot;</td>
<td>Silver Queen Algaonema</td>
</tr>
<tr>
<td>BEGONIA rex-cultorum hybrids</td>
<td>Rex Begonia</td>
</tr>
<tr>
<td>CHRYSALIDOCARPUS lutescens</td>
<td>Areca Palm</td>
</tr>
<tr>
<td>CRASSULA argentea</td>
<td>Jade Plant</td>
</tr>
<tr>
<td>DRACAENA deremensis warneckii</td>
<td>Warneckii</td>
</tr>
<tr>
<td>DRACAENA marginata</td>
<td>Red-margin Dracaena</td>
</tr>
<tr>
<td>EUPHORBIA trigona</td>
<td>African Milk Tree</td>
</tr>
<tr>
<td>FICUS benjamina</td>
<td>Weeping Fig</td>
</tr>
<tr>
<td>FICUS elastica &quot;decora&quot;</td>
<td>Rubber Tree</td>
</tr>
<tr>
<td>KALANCHOE blossfeldiana</td>
<td>Kalanchoe</td>
</tr>
<tr>
<td>PHILODENDRON scandens</td>
<td>Heart Shaped Philodendron</td>
</tr>
<tr>
<td>PHILODENDRON selloum</td>
<td>Big Leafed Philodendron</td>
</tr>
<tr>
<td>PEPEROMIA obtusifolia</td>
<td>Peperomia</td>
</tr>
<tr>
<td>SANSEVIERIA trifasciata</td>
<td>Snake Plant</td>
</tr>
<tr>
<td>SCHEFFLERA arboricola</td>
<td>Hawaiian Dwarf Schefflera</td>
</tr>
<tr>
<td>SCINDAPSUS aureus</td>
<td>Golden Pothos</td>
</tr>
<tr>
<td>SPATHIPHYLLUM &quot;Mauna Loa&quot;</td>
<td>Peace Lilly</td>
</tr>
<tr>
<td>SYNGONIUM podophyllum</td>
<td>Noack White Nephthytis</td>
</tr>
</tbody>
</table>
FLORIST/FRESH CUT FLOWERS:

ALSTROEMERIA hybrids
DENDRANTHEMA x grandiflorum
DIANTHUS caryophylus cv.
EUPHORBIA pulcherrima
GLADIOLUS x hortulanus
GYPSOPHILA elegans' cv.
HYACINTHUS orientalis cv.
IRIS x Aphium cv.
LIMONIUM sinuata
NARCISSUS pseudo-narcissus cv.
PELARGONIUM spp.
PHALAENOPSIS hybrid
ROSE hybrid
SAINTPAULIA jonantha
TULIPA cv.

VEGETABLES- IDENTIFY IN 6-PACK SIZES

ALLIUM sp.
BRASSICA oleracea var. italica
CAPSICUM sp.
DAUCUS carota
LACTUCA sativa
LYCopersicon esculentum
PHASEOLUS sp.
SOLANUM tuberosum
ZEA mays

ALstroemeria
Florist's Chrysanthemum
Carnation
Poinsettia
Galdiolus
Baby's Breath
Hyacinth
Dutch Iris
Static
Daffodil
Geranium
Moth Orchid
Hybrid Tea Rose
African Violet
Tulip

Onion
Broccoli
Chile Pepper
Carrot
Lettuce
Tomato
Bean
Potato
Corn
# Verbal Customer Assistance Practicum

## Score Card

### Conversation (35 points)

<table>
<thead>
<tr>
<th>Points</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

- **Approach**
  - Effective greeting and offer to help
  - Positive, enthusiastic; not hesitant

- **Personality**
  - Pleasant, friendly manner
  - Not pushy in selling

- **Voice**
  - Easy to hear and understand
  - Proper grammar used; good speaking form

- **Information Requested from Customer**
  - Determines assistance need
  - Effectively asks details/preferences

- **Salesmanship**
  - Effective; tries to expand sale
  - Develops customer confidence in product/service

- **Closing**
  - Repeats order, handles payment (as applicable)
  - Asks if instructions understood
  - Thank you close

### Product/Problem/Procedure Presentation ¹ (15 Points)

<table>
<thead>
<tr>
<th>Points</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

- **Correct Product/Procedure Selections**
- **Correct Product/Problem Information Provided**
- **Clarity of Information Provided to Customer**

### Total Points (50)

<table>
<thead>
<tr>
<th>Total Points</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes, as applicable, evaluation of order form for completeness, accuracy of spelling and arithmetic, and clarity.
**State FFA Nursery/Landscape Event**  
**Propagating Nursery Stock Practicum**  
**Score Card**

Participant Number __________________________

Name __________________________

Chapter __________________________

<table>
<thead>
<tr>
<th>Points</th>
<th>Score</th>
</tr>
</thead>
</table>

### Propagation Process (55 points)

#### Propagation Process (55 points)

**Removal of Cuttings**
- Quickly selects cutting points
- Selects best sections from stock
- Cuts at appropriate lengths
- Makes clean cuts
- Maximizes use of stock

**Preparation of Cuttings**
- Leaves stripped/trimmed as needed
- Proximity of cuts to nodes
- Angled or wounded basal cut
- Cutting/buds not damaged
- Removes flower buds

**Application of Proper Hormone**
- Sufficient applied and excess removed
- Efficient handling
- Hormone kept clean

**Placement of Cuttings in Media**
- Furrow cut in media
- Proper sticking depth
- Efficient row and cutting spacing

**Labelling of Completed Units**
- Plant (variety) name, date, treatment
- Legible

### Propagating Productivity (20 points)

**Number of Units Completed**
- At 1 point per 2 cuttings completed  
  (Up to 20 cuttings)

**Quality of Units Completed**
- Uniform size and placement

Total Points (50) ____________
PURPOSE

To encourage students to learn to effectively participate in a business meeting and to assist in the development of their leadership skills.

TEAM MAKE-UP

A team will consist of six members and one alternate. The alternate is not permitted to observe competing teams, but may observe his/her own team. The alternates may replace a regular team member prior to the start of the event.

I. OBJECTIVES

Students will be able to:
1. Use parliamentary procedure to conduct an orderly and efficient meeting.
2. Demonstrate knowledge of parliamentary law.
3. Present a logical, realistic and convincing discussion.
4. Record complete and accurate minutes.

II. COMPETENCIES

PS 1

- Utilize oral communications
- Demonstrate leadership skills
- Utilize time management skills
- Demonstrate a meeting

III. EVENT RULES

A. The event is open to two teams per district not to exceed 16 teams. In the even that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place teams from other districts.

B. The event will have four phases: written examination, a ten-minute team presentation of parliamentary procedure, oral questions following the presentation, and minutes prepared by the team secretary in consultation with the team chairperson.

C. Participants must appear in official FFA dress during all rounds of the event and at the awards presentation.

D. The advisor shall not consult with the team after the event begins.

E. All participants must bring their own pencils (a minimum of two No. 2 pencils).

IV. EVENT FORMAT
WRITTEN TEST (100 POINTS)
A written test will consist of 25 objective type, multiple choice questions covering basic parliamentary law as related to the permissible motions of the event and pertaining to minutes. Thirty minutes will be allowed to complete the test. Each participant may score a maximum of 100 points. The average score of the six team members will be used to compute the total team score in each round.

ORAL QUESTIONS (100 POINTS)
Each of the six team members will be asked a planned question relating to their assigned motion. No one may step forward to help correct answers on the first six questions. Following these six questions, the judges will have two additional minutes to ask questions for clarification of the presentation, after which time will be called.

PRESENTATION (750 POINTS)
1. Teams will draw for order of appearance.

2. The event official will assign the main motion on a 3" x 5" card. This is to be the first item of business on the agenda. All teams in each round will use the same main motion. It is suggested that this main motion should be the first motion presented.

3. The event officials will select two subsidiary, two incidental and one privileged or unclassified motion from the list of permissible motions. These motions will be on a 3" x 5" card and will be randomly assigned to each team member. All teams in each round will be assigned the same motions. Team members will have one minute to review the main motion and the motions to be demonstrated and to identify his/her motion (which may be noted by bolding, underlining or highlighting).

4. There shall be no limitation to the number of subsidiary, incidental, privileged and unclassified motions demonstrated except that the team must demonstrate at least two subsidiary, two incidental and one privileged or unclassified motions designated by the officials in charge. The team may use more than one main motion as long as it pertains to the assigned main motion.

5. If the event officials designate the privileged motion "call for the orders of the day," as a motion to be demonstrated, an alternate motion not pertaining to the main motion may be used to facilitate the correct demonstration of the motion.

6. If the officials in charge designate "rescind, reconsider or take from the table" as a motion to be demonstrated, you could assume that you would rescind, reconsider or take from the table a motion that you did at your last meeting. Example: "I move to rescind the motion that passed at our last meeting about having an FFA hayride." These motions should not be used unless designated by the official in charge. Teams are discouraged from having a canned debate on rescind or reconsider.

7. The demonstrating team shall assume that a regular chapter meeting is in progress, and the chairperson shall start the presentation by saying, "Is there any further business that should be presented to the chapter at this time?" A team member will then move the main motion assigned to the team.
8. The state event will have three rounds: a preliminary round, a semifinal round and a final round. The preliminary round will have four to six sections. A section shall be made up of six to nine teams. Two teams from each of the sections for a total of 12 teams will advance to the semifinal round. The semifinal round is composed of two sections with six teams in each section. Two teams in each semifinal section will advance to the final round of four teams. Teams will draw for section and order of appearance in each round.

9. Each team will address a local chapter item of business selected from nationally recognized FFA activities (i.e. National Chapter, Food For America, PALS, Program of Work activities, Proficiency Awards and National FFA Convention-consult the Official *FFA Manual* and handbook). The motion will be specific and must be stated and moved as it is written.

10. A team shall be allowed a maximum of ten minutes in which to demonstrate its knowledge of parliamentary law without penalty. Warnings will be given at eight and ten minutes. A deduction of 50 points will be made for every 30 seconds over the first 30 seconds or major fraction thereof. A timekeeper will furnish the time used by each team at the close of the event.

### Team Progression Chart

6 sections of 6-9 teams of 6 participants

- Preliminary 2 sections of 6 teams of 6 participants
  - Semifinals 1 section of 4 teams of 6 participants
  - Finals

### Time Penalties

<table>
<thead>
<tr>
<th>Minutes</th>
<th>Points</th>
<th>Deducted</th>
<th>Minutes</th>
<th>Points</th>
<th>Deducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:30</td>
<td>0</td>
<td>0</td>
<td>11:31-12:00</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>10:31-11:00</td>
<td>50</td>
<td></td>
<td>12:01-12:30</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>11:01-11:30</td>
<td>100</td>
<td></td>
<td>12:31-13:00</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

### Sample Motion Card

Main motion: I move to start the Food for America program on December 1.

Required Motions: Lay on the table  Amend  Suspend the Rules  Appeal  Reconsider

**PRESENTATION MINUTES (50 POINTS)**

Each team will have a secretary take minutes of the presentation. A possible score of 50 points will be allowed for the minutes. Adequate paper will be supplied to take notes during the presentation. Following the presentation the secretary, in consultation with the chairperson, will have 30 minutes to prepare the official minutes. Time in and time out of the area set aside to prepare minutes will be noted by a timekeeper. The final copy of the minutes will be written on Form 1. (The lowest possible
score for this section is zero.) Event officials shall use Form 3 to score the official minutes of the presentation.

**Instructions on Minutes**

1. Use the example of proper minutes as illustrated in the *Official FFA Secretary's Book* and/or outlined in *Robert's Rules of Order*.

2. A dictionary will be permitted for writing the official minutes of the presentation.

3. The minutes will begin by recording the first item of business presented. Opening ceremonies and other preliminary information will not be used.

   **Example:** John Smith moved to start the Food for America program on December 1.

4. The chairperson and the secretary may consult in preparing the official minutes of the presentation. A total of 30 minutes will be allowed to prepare the minutes.

5. The time at which the official minutes were begun and the time when they were finished will be noted on the official minutes by the timekeeper.

6. A judge will read, review and grade the official minutes of the presentation after completion of each round of the event. The scores will be provided to the presentation judges for use in computing final scores.

The judges will use Form 2 to score the event. Once all scores are totaled on the scorecards, the teams will be given points as outlined on the tabulations sheet, Form 4, by the judges. These points will be added to determine teams advancing and semifinal and final placings. The two teams with the highest number of points will advance to the next round. The judges will use Form 4 to determine teams advancing and final placing.

**V. TIEBREAKERS**

Tiebreakers for teams will be:
1. the total presentation score,
2. the team's average score on the written test
3. the total score for questions.

**VI. REFERENCES**


Additional references may include *FFA New Horizons* magazine, the *Official FFA Manual*, the *FFA Student Handbook* and the *Official Chapter Secretary's Book*.

**VII. AWARDS**
Each state will be provided a plaque for its state winning team. The first place national team will be presented a trophy plaque. Each member of the first place team will be presented an individual team member plaque. A national gold plaque and individual medals will be presented to the top 12 teams competing in the event; silver plaques and individual medals to the middle 18; and remaining teams and individuals competing will receive bronze plaques and medals. The top four teams will each receive a designated gold plaque.

Scholarships may be awarded as funded by special project sponsors. Collegiate scholarships awarded to FFA members competing at or above the local level in parliamentary procedure events: four at $1,000 each.

VIII. JUDGES' SCORING GUIDELINES

GUIDELINES FOR SCORING DISCUSSION
Judges for the parliamentary procedure event should observe the following guidelines:
1. It is essential that each judge observe and maintain consistent criteria in scoring discussion for the duration of the event.

2. Judges must overlook personal opinions and beliefs and score discussion in an unbiased manner. All discussion should be scored at the time it is delivered.

3. Characteristics of effective discussion include:
   a) completeness of thought,
   b) logical reasoning,
   c) clear statement of speaker's position,
   d) conviction of delivery,
   e) concise and effective statement of discussion.

4. A suggested grading scale is as follows:
   Excellent  16-20 points
   Good       11-15 points
   Average    6-10 points
   Poor       0-5 points

An excellent discussion would be extremely unusual and would be characterized by a truly stirring delivery and brilliance in terms of information provided and/or suggestions for action offered. Poor discussion would be characterized by a lack of effective delivery, poor grammar, reasoning and substance. An example might be: "I think this is a good idea."

Most discussion would fall in the range of an average score (8-15 points). An example of an average discussion might be: "I think this is a very significant motion that should be passed for the following reasons (new, informative and logically related). For these reasons, I urge everyone to vote for this motion." Good discussion would be characterized by effective delivery, substance, creative and visionary thought delivered in a convincing and compelling manner.

5. Each time a participant in the presentation discusses any motion, he or she may earn a score. However, an individual may never earn more than 60 points in a given presentation. Furthermore, no more than 20 points may be earned during one recognition by the chair. An individual earning
an average number of points on each motion discussed would need to have been recognized by
the chair three to four separate times to earn the maximum 60 points.

**GUIDELINES FOR SCORING THE CHAIR**

1. Ability to preside - handling of motions, keeping members informed, use of the gavel, distribution
   of discussion. (80 points)

2. Leadership-stage presence, poise, self-confidence, politeness and voice. (20 points)

<table>
<thead>
<tr>
<th>Event Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Written Test</strong></td>
</tr>
<tr>
<td>[Average score of six members (6x100/6)]</td>
</tr>
<tr>
<td>➢ Minutes of Presentation</td>
</tr>
<tr>
<td>➢ Completeness and accuracy</td>
</tr>
<tr>
<td>➢ Format</td>
</tr>
<tr>
<td>➢ Grammar/style/legibility</td>
</tr>
<tr>
<td><strong>Oral Questions.</strong></td>
</tr>
<tr>
<td>➢ 12 points possible for each member's question</td>
</tr>
<tr>
<td>➢ Questions in the additional two minutes</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td>Total for five members on floor</td>
</tr>
<tr>
<td>➢ Required motion presentation</td>
</tr>
<tr>
<td>➢ Discussion (max. of 30 pts./discussion)</td>
</tr>
<tr>
<td>➢ Additional motions made (including main and alternate main)</td>
</tr>
<tr>
<td><strong>Chair</strong></td>
</tr>
<tr>
<td>Ability to preside</td>
</tr>
<tr>
<td>➢ Leadership</td>
</tr>
<tr>
<td><strong>General Effect of Team</strong></td>
</tr>
<tr>
<td>➢ Conclusion of the team</td>
</tr>
<tr>
<td>➢ Discussion</td>
</tr>
<tr>
<td>➢ Team's voice, poise and expression</td>
</tr>
</tbody>
</table>
| **Deduction for parliamentary mistakes:** 5-20 pts. per mistake, minor; omitting the assigned
  motion-50 pts. |
| **Deduction for overtime:** 50 pts. for every 30 seconds, or major fraction thereof, over the first 30
  seconds. |
| **TOTAL POINTS** | | | 1000 |
# Chart of Permissible Motions for the State FFA Parliamentary Procedure Career Development Event

<table>
<thead>
<tr>
<th>Motion</th>
<th>Debate</th>
<th>Amend</th>
<th>Vote Required</th>
<th>Second</th>
<th>Reconsider</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Privileged</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed time to adjourn</td>
<td>No</td>
<td>Yes</td>
<td>Majority</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjourn</td>
<td>No</td>
<td>No</td>
<td>Majority</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Recess</td>
<td>No</td>
<td>Yes</td>
<td>Majority</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Question of privilege</td>
<td>No</td>
<td>No</td>
<td>None</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Call for orders of the day</td>
<td>No</td>
<td>No</td>
<td>2/3 not to follow</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td><strong>Incidental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appeal</td>
<td>Yes/No</td>
<td>No</td>
<td>Majority</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Point of order</td>
<td>No</td>
<td>No</td>
<td>None</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parliamentary inquiry</td>
<td>No</td>
<td>No</td>
<td>None</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Suspend the rules</td>
<td>No</td>
<td>No</td>
<td>2/3</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Withdraw a motion</td>
<td>No</td>
<td>No</td>
<td>Usually none</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Object consideration of question</td>
<td>No</td>
<td>No</td>
<td>2/3</td>
<td>No</td>
<td>Yes, negative Vote only</td>
</tr>
<tr>
<td>Division of the question</td>
<td>No</td>
<td>Yes</td>
<td>Majority</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Division of the assembly</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Subsidiary</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lay on table</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Previous question</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, before vote</td>
</tr>
<tr>
<td>Extend or limit debate</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Postpone definitely</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Refer to a committee</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Amend</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Postpone indefinitely</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, vote only</td>
</tr>
<tr>
<td>Main motion</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Unclassified</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take from table</td>
<td>No</td>
<td>No</td>
<td>Majority</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Reconsider</td>
<td>No/Yes</td>
<td>No</td>
<td>Majority</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rescind</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority, 2/3 If not in writing</td>
<td>Yes</td>
<td>Negative vote only</td>
</tr>
</tbody>
</table>
## OFFICIAL MINUTES

<table>
<thead>
<tr>
<th>Date</th>
<th>FFA Chapter Name</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Entering Minutes Room</th>
<th>State Name</th>
<th>Time Leaving Minutes Room</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Chairperson**

**Secretary**
## STATE FFA PARLIAMENTARY PROCEDURE TEAM SCORE SHEET

**Participants**

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Required motion**

- 20 pts. max./member

**Discussion**

- 60 pts. max./member, 20 pts.max./item

**Add’l motions**

- 20 pts. max/member

**Indiv. Questions**

- 12 pts. max./member

**Total**

- 112 pts. max./member

### Chair

- Ability to Preside: 80 points maximum
- Leadership: 20 points maximum

### Team’s General Effect

- Conclusion: 50 points maximum
- Degree to which discussion was convincing, logical, realistic, orderly and efficient: 50 pts. maximum
- Team’s voice, poise, and expression: 50 points maximum

### Questions at large

- Questions for clarification of the presentation (2 minutes allowed): 28 points maximum

### Written test

- Average of the six individual scores: 100 points maximum

### Deductions

- Deductions for parliamentary mistakes: 5 to 20 points per mistake-omitting the assigned motion – 50 pts.
- Deductions for over time: 50 points for every 30 seconds over the first 30 seconds or a major fraction thereof

### TEAM TOTAL SCORE

#### Scoresheet

- Perfect Score
- Presentation: 600
- General Effect: 150
- Oral Questions: 100
- Written Test: 100
- Minutes: 50
- TOTAL: 1000

#### Tiebreakers

- a. Total Presentation Score
- b. Average Score on Written Test
- c. Total Questions Score

#### Motions for the event are:

- I. Privileged Motions
  - a. Fix the time to which to adjourn.
  - b. Adjourn
- II. Incidental Motions
  - a. Appeal
  - b. Previous question
  - c. Limit or extend debate
  - d. Postpone definitely
  - e. Refer to committee
  - f. Amend
  - g. Postpone indefinitely

#### III. Subsidiary Motions

- a. Lay on table
- b. Recconsider
- c. Rescind
- d. Suspend the rules
- e. Withdraw a motion
- f. Object to consideration
- g. Division of question
- h. Division of assembly

#### IV. Unclassified Motions

- a. Lay on table
- b. Recconsider
- c. Rescind
- d. Suspend the rules
- e. Withdraw a motion
- f. Object to consideration
- g. Division of question
- h. Division of assembly
TABULATION SHEET FOR SCORING MINUTES
FORM 3

Ability | Possible Points | Actual Points
---|---|---
Completeness and Accuracy…………………………………25
- Minutes accurately reflect all business transacted during presentation.

Format of Minutes include: (2 pts. each)…………………..10
- Date……………………………………………..
- Time in secretaries holding room …………………
- Place ……………………………
- Presiding officer signature …………………
- Secretary signature …………………

Grammar/Style/Legibility…………………………………15
- Complete sentences (0-5 points) ….………………
- Correct spelling (deduct 1 point/mistake) ………
- Correct punctuation (deduct 1 point/mistake) ………
- Legibility (clarity) (0-10 points)………………

TOTAL POINTS EARNED……………………………………50

TABULATION SHEET FOR RANKING TEAMS
FORM 4

<table>
<thead>
<tr>
<th>TEAM</th>
<th>Judge 1</th>
<th>Judge 2</th>
<th>Judge 3</th>
<th>FINAL RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ranking Points</th>
<th>Ranking Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st………………9</td>
<td>6th………………4</td>
</tr>
<tr>
<td>2nd………………8</td>
<td>7th………………3</td>
</tr>
<tr>
<td>3rd………………7</td>
<td>8th………………2</td>
</tr>
<tr>
<td>4th………………6</td>
<td>9th………………1</td>
</tr>
<tr>
<td>5th………………5</td>
<td></td>
</tr>
</tbody>
</table>
PURPOSE

The State FFA Prepared Public Speaking Career Development Event is designed to develop agricultural leadership by providing for member participation in agricultural public speaking activities and stimulating interest in leadership and citizenship. The event will be held in conjunction with the State Leadership Conference.

I. COMPETENCIES

PS 1

- Utilize communication and leadership skills
- Develop the ability to public speak
- Utilize written skills
- Utilize listening skills

II. ELIGIBILITY

A. The State FFA Prepared Public Speaking Career Development Event will follow the general rules and policies for all State FFA Career Development Events.

B. The event is open to two individuals per district not to exceed 16 individuals. In the even that a district does not fill its quota, the remaining slots may be filled using either a succession or lottery of the 3rd and/or 4th place individuals from other districts.

C. Each participant's manuscript will be the result of his or her own efforts. It is expected that the participant will take advantage of all available training facilities at his or her local school in developing his or her speaking ability. Facts and working data may be secured from any source but must be appropriately documented.

D. Participants will submit the following materials blank weeks before the event:

1. Twenty double-spaced typewritten copies of the speech on 8 1/2" x 11 " white bond paper with cover page that gives the speech title, participant's name, chapter and date. The format should use 1" margins, 10 characters per inch and follow the APA (American Psychological Association) style manual. Do not bind or place in folders, special binders or covers. Place a staple in upper left corner. Manuscripts not meeting these guidelines will be penalized.

2. A signed statement of originality on the certification form provided.

3. A complete and accurate bibliography used in writing the speech. All participants in State FFA Prepared Public Speaking Career Development Event should give credit to others where any direct quotes, phrases or special dates are used in the manuscript, in order not to be guilty of plagiarism.

- A bibliography MUST be included as part of the public speaker's manuscript, and direct quotes from any source of information must be marked in "quotes" on the manuscript.
and be identified in the bibliography. Failure to do so will automatically disqualify a participant. This applies to all events above the local level.

- Factual information pertaining to agriculture is available from the United States Department of Agriculture, Washington, DC 20250; state colleges, research centers and/or experiment stations; or the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

F. A participant shall wear complete official FFA dress as defined in the current *Official FFA Manual*.

### III. SUBJECTS

Participants may choose any current subject for their speeches that is of an agricultural character (nature), which may include:

- agriscience
- technology
- agribusiness
- agrimarketing
- international agricultural relations
- agricultural communications

Official judges of any State FFA Prepared Public Speaking Career Development Event shall disqualify a participant if he or she speaks on a nonagricultural subject.

### IV. TIME LIMIT

Each speech shall be a minimum of six minutes in length and a maximum of eight minutes. Each participant will be allowed five minutes additional time in which he or she will be asked questions relating to his or her speech. Participants will be penalized one point per second on each judge’s score sheet for being under six minutes or over eight minutes. No time warnings will be given by event officials or observers.

### V. EVENT PROCEDURES

1. The State FFA advisory board will assign a chair to this event. Prior to the event the content and composition of all manuscripts will be scored by one qualified individual who will record the scores on a score sheet that will be provided. The scored manuscripts will be provided to the chairman after each participant has presented.

2. The speaking order will be randomly determined by event officials. The program chairman shall introduce each participant by name and in order of the drawing. A participant will be permitted to use notes while speaking, but deductions in scoring may be made for this practice if it detracts from the effectiveness of the presentation. No props are to be used. Applause shall be withheld until all participants have spoken.

3. One timekeeper shall be designated who will record the time used by each participant in delivering his or her speech, noting under time or overtime, if any, for which deductions will be made. Each district may submit their first and second place speaker for the semifinal event.
4. The state event will be conducted in two rounds: semifinals and finals. No ranking will be given except for the final four. Preliminary rounds will be conducted at the district level.

5. A minimum of three competent and impartial persons will be selected to judge the event. At least one judge should have an agricultural background.

6. At the time of the event, the judges will be seated in different sections of the room in which the event is held. They will score each participant on the delivery of production, using the score sheet provided.

7. Each judge shall formulate and ask questions. Questions shall pertain directly to the speaker's subject. Judges will score each participant on the ability to answer all questions asked by all judges. Three to five minutes for questions should be used.

8. When all participants have finished speaking, each judge will total the score on delivery and response to questions for each participant. The composition score and the timekeepers' record will be used in computing the final score for each participant. The judges' score sheets will then be submitted to event officials to determine final ratings of participants.

9. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges' ranking of each participant then shall be added, and the winner will be that participant whose total of rankings is the lowest. Other placings shall be determined in the same manner (low point score method of selection). In case of a tie, that individual who has the highest grand total score shall have higher rating.

VI. AWARDS

Plaques will be awarded to the state finalists by the Arizona Association FFA. A cash award of $175 will be awarded to the state winner.

EXPLANATION OF SCORE SHEET POINTS

SCORING CONTENT AND COMPOSITION

1. Content of Manuscript includes:
   - Importance and appropriateness of the subject
   - Suitability of the material used
   - Accuracy of the statements included
   - Evidence of purpose
   - Completeness and accuracy of bibliography
   - Relationship to agriculture

2. Composition of Manuscript includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose conclusions
   - Spelling and grammar
SCORING DELIVERY OF PRODUCTION

1. **Voice** includes:
   - Quality
   - Pitch
   - Articulation
   - Pronunciation
   - Force

2. **Stage Presence** includes:
   - Personal appearance
   - Poise and body posture
   - Attitude
   - Confidence
   - Personality
   - Ease before audience

3. **Power of Expression** includes:
   - Fluency
   - Emphasis
   - Directness
   - Sincerity
   - Communicative ability
   - Conveyance of thought and meaning

4. **Response to Questions** includes:
   - Ability to answer satisfactorily the questions on the speech that are asked by the judges indicating originality, familiarity with subject and ability to think quickly.

5. **General Effect** includes:
   - Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.

*NOTE* judges should meet prior to the event to prepare and clarify the questions to be asked
FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. }

Bibliography


Romans, J.R., Costello, W.J., Carlson (1994) The Meat We Eat. (13th ed.) Danville, IL;
## STATE FFA PREPARED PUBLIC SPEAKING CAREER DEVELOPMENT EVENT
### JUDGES’ SCORE SHEET

<table>
<thead>
<tr>
<th>Items to be Scored</th>
<th>Max. Points</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content of Manuscript</strong></td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composition of Manuscript</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Presence</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power of Expression</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response to Questions*</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Effect</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL POINTS (Gross)</strong></td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Time Deductions**</td>
<td>1 pt. per sec</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL POINTS (Net)</strong></td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EXPLANATION OF SCORE SHEET POINTS

**Part I-For Scoring Content and Composition**

3. **Content of Manuscript** includes:
   - Importance and appropriateness of the subject
   - Suitability of the material used
   - Accuracy of the statements included
   - Evidence of purpose
   - Completeness and accuracy of bibliography
   - Relationship to agriculture

4. **Composition of Manuscript** includes:
   - Organization of the content
   - Unity of thought
   - Logical development
   - Language used
   - Sentence structure
   - Accomplishment of purpose conclusions Spelling and grammar

**Part II-For Scoring Delivery of Production**

**Voice includes:**
- Quality
- Pitch
- Articulation
- Pronunciation
- Force

2. **Stage Presence** includes:
   - Personal appearance
   - Poise and body posture
   - Attitude
   - Confidence
   - Personality
   - Ease before audience

3. **Power of Expression** includes:
   - Fluency
   - Emphasis
   - Directness
   - Sincerity
   - Communicative ability
   - Conveyance of thought and meaning

4. **Response to Questions** includes:
   - Ability to answer satisfactorily the questions on the speech that are asked by the judges indicating originality, familiarity with subject and ability to think quickly.

6. **General Effect** includes:
   - Extent to which the speech was interesting, understandable, convincing, pleasing and held attention.

*NOTE: Judges should meet prior to the event to prepare and clarify the types of questions to be asked. * *From the timekeeper’s record.*
PURPOSE

The purpose of the State FFA Range Management CDE is to develop the student’s skills and knowledge in range plants, management, and evaluation.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ score.

I. OBJECTIVES

A. To test the student’s ability to:
   1. Identify Arizona range plants and indicate their longevity and forage value.
   2. Make realistic decisions regarding range management practices and estimation of plant utilization.
   3. React to a written exam pertaining to management planning and implementation of evaluating range condition, trend, forage utilization and grazing capacity practices, based upon hypothetical situations.

B. To motivate learning in the classroom and create a spirit of competition among the students.

C. To provide recognition for those individuals excelling in this area.

D. To promote career choice in range management occupations.

II. COMPETENCIES

PS 7

A. Describe environmental zones, vegetation types and range sites and identify appropriate management practices.

B. Identify range plants.

C. Describe the effects of grazing on rangeland production.

D. Evaluate range condition and trend.

E. Develop range management plans to insure consideration of multiple uses and obtain maximum productivity and good range care.

III. GENERAL RULES

A team will consist of three or four members. The team score will consist of the three highest individuals.
B. The event will consist of three parts—plant identification, plant utilization and general questions and will require approximately 2 hours.

C. Scoring of the plant identification portion of the event will be as follows: 3 points for common name, 1 point for longevity and 1 point for forage value. Point for value will not be given unless properly identified. Spelling will be used to break tie scores. A maximum of 250 points will be given for the identification part of the event.

D. Participants will identify a maximum of fifty (50) plants selected from the enclosed master list of plants, using Form 1. There will be no restriction on the number of duplicate mounts included in the event.

E. Participants will have 55 seconds to write in the common name and check the appropriate characteristics of each plant. Five seconds will be allowed to move to the next plant.

F. Participants will have 3 minutes at the end of the identification event to check their papers. No participant will be allowed to look at the plants a second time.

G. Participants will use photo guides to estimate the average percentage utilization on 50, 8 X 10 photos of a single plant species clipped to represent varying degrees of utilization.

H. Participants will have 30 seconds to classify each photo plant. Participants will move to the next photo on signal only.

I. Participants will place each photo plant in the nearest grazed class. Estimates will be recorded for each plant on part 1 of form 2 using dot dash tallies will be recorded on part 2 for grazed classes on Form 2. Participants should note the starting photo to avoid duplication of estimates.

J. Utilization estimates should be based primarily on the growth form of the plant. Variations on height growth will be automatically adjusted for by the eye.

K. For plants clipped irregularly to simulate grazing, the normal plant growth on the photo guides should be used as a guide to estimate the proper grazed class.

L. After utilization estimates have been completed by the participants on the 50 plants, the percentage of plants in each grazed class will be calculated by doubling the number of tallies in each grazed class.

Each participant will calculate his estimate of the average percentage utilization for the plants by multiplying the percentage of photo plants in each grazed class by the appropriate percentage for each class (0, 10, 30, 50, 70, or 90%) and totaling the products. Participants will write their estimate of total current species used in both Form 2 and at the top of the written exam to be used in calculating an estimate of grazing capacity.

M. The participant score for the utilization event will be calculated by determining the deviation of the participant's estimate of utilization from the actual utilization score and subtracting from 100. The actual utilization score will be calculated by using oven-dry weight utilization percentage for each photo plant to determine its grazed class.
N. Participants may refer to Arizona Cooperative Extension Service Agricultural Experiment Station Bulletin A-73, *Estimation of Range Use with Grazed-Class Photo Guides*, for photo guides to be used, for the method of recording data and for procedures to calculate percentages.

O. The written exam will be graded for a maximum of 100 points per participant. Points will be added to the points on the identification and utilization part for total event points.

P. The written questions will be in two parts, (1) questions dealing with range issues and (2) questions dealing with management planning, range condition, plant growth, determining range carrying capacity, range utilization, range livestock grazing management, livestock poisoning and range improvements. Questions will pose hypothetical situations and will give the students an opportunity to select the best solutions of explanations.

R. Sample Question:
1. Suppose a rancher owns a ranch near Phoenix. He is grazing steers on the ranch which has vegetation that is dominated by the following species: (a) three awns, (b) six week's needle gram, (c) burroweed, (d) mesquite and (e) cholla. One day in May, he checked his animals to find several dead and some others alive but trembling. Which of the above species is the most likely cause of the poisoning? 

REFERENCE

General
SRUR-4, *Range Management*, University of Arizona, Agricultural Education Department.

Plant Identification
*Arizona Range Plants* (80, 35mm Color Slides), U of A Student Chapter, Society for Range Management, University of Arizona.


Plant Utilization
*Utilization Study Kit*, (25 photo guides and 25 quiz photos), University of Arizona Student Chapter Society for Range Management, University of Arizona.

Schmutz, Ervin M., *Estimation of Range

Written Exam
Current periodical stories and newspaper articles related to range management issues.

PURPOSE

Public awareness of agricultural education and the FFA needs to be increased if programs are to approach their potential effectiveness. This activity should provide FFA publicity in Arizona. This event recognizes outstanding publicity accomplishments by FFA chapter reporters in Arizona.

I. COMPETENCIES

PS 1

-Demonstrate writing skills
-Demonstrate public relations
-Utilize all forms of the media

II. EVENT FORMAT

A. Chapter reporters may apply for state awards as outlined in criteria section below.
B. Time period covered by the application should begin no earlier than July 1, and end no later May 21 of the following calendar year.
C. Completed entries to be sent to the State FFA Office by the established deadline.
D. Awards will be presented during the State FFA Leadership Conference.
E. Evaluation of the applications will be made by a committee composed of FFA advisors.
F. State awards will be patterned after the State FFA Proficiency award program; i.e., bronze, silver, and gold categories with a first place state winner.
G. State winner will receive a plaque and a check for $100.

III. CRITERIA

A. Entries must be submitted in an appropriate sized folder or notebook.
B. All entries must use the attached cover page.
C. Entries must be submitted using the following format:
   1. Cover folder
   2. Cover page
   3. Articles prepared by the reporter for the State FFA publications.
   4. Clippings of news stories prepared be the chapter reporter with name of publication and date of issue on each.
   5. Copies of news releases to radio stations from the chapter reporter.
   6. Copies of news releases to television stations from the chapter reporter.
   7. Copies of photographs that may have appeared in print or on television.
   8. Photographs of other community publicity such as exhibits, billboards, marquees, service presentations, etc.
   9. Evidence such as letters from radio and television stations
Chapter Reporter Award Program Cover Page

Chapter_________________  Student’s Name________________  Date Submitted______

1. Number of column inches of news articles written by the reporter and included in this application: __________

2. Number of photographs appearing in publications and included in this application: __________

3. Number of radio programs not including spot announcements: __________
   a. Number of minutes of radio time: __________
   b. Are substantiating letters from stations included? __________

4. Number of television programs not including spot announcements: __________
   a. Number of minutes of television time: __________
   b. Are substantiating letters from stations included? __________

5. Number of other different types of chapter publicity as evidenced by submitted photographs: __________

We have examined this application and find the contents to be true, accurate, and complete. We hereby permit the use of all information included in this application for publicity purposes.

Chapter Reporter_________________________ Date______________

Chapter President_________________________ Date______________

Chapter Advisor__________________________ Date______________

School Administrator_______________________ Date______________

Submit completed application to: Arizona Association FFA
1535 West Jefferson-2nd Floor
Phoenix, AZ. 85007-3209
PURPOSE

The purpose of the State FFA Scrapbook is for the chapter to learn how to create a scrapbook containing historical documents and published articles.

TEAM MAKE-UP

This is a chapter event

COMPETENCIES

PS 1, 4

A. Maintain historical documents
B. Demonstrate the ability to properly highlight the significant activities of the chapter.

OBJECTIVES

A. To test student's:
   1. Ability to create a scrapbook.
      a. graphics/photo
      b. mission statement of chapter
      c. high lights of the year
      d. captions to photos
B. To foster greater participation in chapter public relations.
C. To encourage a sharing of ideas by those chapters doing an out standing job in public relations.

CRITERIA

1. Number of newspaper photographs
2. Number of individual photos
3. Number of inches published
4. Amount of chapter literature (programs and promotions)
5. Quality (arrangement and layout)
6. Amount of publicity initiated by chapter
7. Only Official FFA Scrapbook from the FFA Supply Service are eligible
PURPOSE

The purpose of the State FFA Soils CDE is to stimulate the students knowledge of soil properties, soil importance, and how to manage soil.

TEAM MAKE-UP

A team will consist of three or four members. A team score consists of the total of the top three individuals’ score.

I. OBJECTIVES

A. To test the student’s ability to:
   1. Evaluate the soil properties important for proper soil management and determine its suitability or potential for different land uses.
   2. React to a written exam pertaining to general soil subject matter.

B. To motivate learning in the classroom and create a spirit of competition among the students.

C. To provide recognition for those individuals excelling in this area.

D. To promote career choice in soils related occupations.

II. COMPETENCIES

A. Explain the formation and function of a soil and identify its suitability or potential for different land uses.

B. Sample soils and interpret soil tests to determine the chemical and physical properties.

C. Recognize the different ways soils can be degraded, such as soil erosion, pollution, etc. and explain how these soils could be “remediated.”

III. GENERAL RULES

A. A team will consist of three members. One alternate may judge, if desired. The team score will consist of the three highest individuals, or the students may judge a soil as a team, and this score will be used to compute a team score.

B. One part of the event will consist of judging soil profiles to determine suitability or potential of that soil for different land uses.
C. Written exam questions may either be given as a supplementary sheet at one of the soil judging sites, or separately in a classroom. They will be practical questions relating to the soil profile being judged, material extracted from the resource unit on soils or the Soil Evaluation Supplement to Resource Unit No. 10 of the core curriculum.

D. An instructional and detailed explanation of the soil profile judging score card is presented in the Soil Evaluation Supplement to the Core Curriculum.

E. The judging of soil profiles has been set up so that it can be either an indoor or field event. If conducted in the field, a large pit will be dug and the participants will be asked to judge the exposed soil profile. If the event is held in the laboratory, trays of soils will be brought in from the field and displayed. The participants will be asked to examine these profiles and complete the soil judging scorecard. Approximately 25 minutes will be allowed to judge each site.

F. At the pit or the indoor lab sites, a card with information you cannot determine at the site will be provided to the participant. These data include site information, such as % slope, landforms, etc. or the results of soil pH, electrical conductivity, ESP, and other needed data.

G. The soil judging score card is divided into four parts:
   1. Part I- Characteristics of Surface and Subsurface Horizons
   2. Part II- Interpretation Related to the Surface and Subsurface Horizons
   3. Part III- Properties of the Soil Profile and Site
   4. Interpretations for Different Land Uses and Soil Degradation

   A sample score card with point values for each soil property can be found on the last page of the State Soils CDE manual.

H. Questions for the written portion of the event will be multiple choice or true/false, dealing with general soil topics.

I. Sample Questions:

1. The rate of water movement through soils is determined by
   a. Structure of the soil
   b. Organic matter content
   c. Exchangeable sodium
   d. All of the above

2. Soil Structure
   a. Is improved by cultivation
   b. Is the amount of sand, silt, and clay in a soil
   c. Is improved by the presence of sodium in the soil
   d. Is the arrangement of soil particles into aggregates

3. True or False
   Sodic soils contain excessive amounts of absorbed calcium.
# Soil Judging Scorecard

## I. Characteristics of Sur. and Sub. Horizons

<table>
<thead>
<tr>
<th>Soil Texture</th>
<th>14 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Sand or Loamy Sand</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Sandy Loam</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Loam or Silt Loam</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Clay Loam, Sandy Clay Loam or Silty Clay Loam</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Clay or Silty Clay</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Rock Fragments</th>
<th>6 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Less than 15 percent (by volume)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>15 to 35 percent (by volume)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Greater than 35 percent (by volume)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Structure</th>
<th>8 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Granular</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Angular or Subangular Blocky</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Platy</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Prismatic or Columnar</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Massive</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Single Grained</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Color (Wet Condition)</th>
<th>6 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Dark Brown or Grayish Brown</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Brown or Yellowish Brown</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Red or Yellowish Red</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Yellow or Olive Yellow</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Light Red, Brown or Yellow to White</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Mottled (Many colors)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Stickiness</th>
<th>6 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Non-Sticky</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Slightly Sticky</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately Sticky</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Very Sticky</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Plasticity</th>
<th>6 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Non-Plastic</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Slightly Plastic</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately Plastic</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Very Plastic</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Effervescence*</th>
<th>4 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>None to Very Slight Effervescent</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Slightly Effervescent</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Strongly Effervescent</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Violently Effervescent</td>
<td></td>
</tr>
</tbody>
</table>

## II. Interpretations Related to Sur. and Sub. Horizons

<table>
<thead>
<tr>
<th>Saturated Hydraulic Conductivity</th>
<th>8 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Very Low or Low - &lt;.036 cm/hr - (&lt;.014 in/hr)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately Low - .036 to .36 cm/hr - (.014-.14 in/hr)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately High - .36 to 3.6 cm/hr - (.14-.144 in/hr)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>High or Very High - &gt;3.6 cm/hr - (&gt;1.4 in/hr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Water Holding Capacity</th>
<th>8 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>High - &gt;3.8 cm/30 cm of soil - (&gt;1.5 in/12 in of soil)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately High - 2.5 to 3.8 cm/50 cm of soil - (1 to 1.5 in/12 in of soil)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately Low - 1.9 to 2.5 cm/30 cm of soil - (.75 to 1 in/12 in of soil)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Low - &lt;1.9 cm/50 cm of soil - (&lt;.75 in/12 in of soil)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Salinity</th>
<th>4 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR *</td>
<td>SUB *</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Non or Very Slightly Saline (&lt;4 dS/m)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Slightly Saline (4 to 8 dS/m)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Moderately Saline (8 to 16 dS/m)</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Strongly Saline (&gt;16 dS/m)</td>
<td></td>
</tr>
</tbody>
</table>

## III. Properties of Soil Profile and Site

<table>
<thead>
<tr>
<th>Effective Soil Depth</th>
<th>3 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Deep (&gt;100 cm to Limiting Layer)</td>
</tr>
<tr>
<td>□</td>
<td>Moderately Deep (50 to 100 cm to Limiting Layer)</td>
</tr>
<tr>
<td>□</td>
<td>Shallow (25 to 50 cm to Limiting Layer)</td>
</tr>
<tr>
<td>□</td>
<td>Very Shallow (&lt;25 cm to Limiting Layer)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Slope of Soil-Landscape</th>
<th>3 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Nearly Level (0 to 1% slope)</td>
</tr>
<tr>
<td>□</td>
<td>Gently Sloping (1 to 5% slope)</td>
</tr>
<tr>
<td>□</td>
<td>Moderately Sloping (5 to 10% slope)</td>
</tr>
<tr>
<td>□</td>
<td>Strong to Steeply Sloping (&gt;10% slope)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Parent Material</th>
<th>3 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Alluvium (Material Deposited by Water)</td>
</tr>
<tr>
<td>□</td>
<td>Colluvium (Material Moved by Gravity)</td>
</tr>
<tr>
<td>□</td>
<td>Eolian (Wind Blown Sands or Silts)</td>
</tr>
<tr>
<td>□</td>
<td>Residuum (Formed in Place from Rock)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geomorphic Landform</th>
<th>3 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Flood Plain of a River or Stream</td>
</tr>
<tr>
<td>□</td>
<td>Basin or Valley Floor</td>
</tr>
<tr>
<td>□</td>
<td>Foothills or Alluvial Fan</td>
</tr>
<tr>
<td>□</td>
<td>Sand Dunes</td>
</tr>
<tr>
<td>□</td>
<td>Upland or Mountains</td>
</tr>
</tbody>
</table>

## IV. Interpretation for Different Land Uses and Soil Degradation

### Limitation(s) For:

<table>
<thead>
<tr>
<th>Slight</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building a Home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Septic Tank Absorption Field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Roads and Streets</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Potential(s) For:

<table>
<thead>
<tr>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Topsoil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growing Irrigated Crops</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Surface and Subsurface Horizons  **Use Dilute HCl to Test Horizons