

COOPERATIVE EXTENSION

University of Arizona and U.S. Department of Agriculture cooperating.



the Cochise County Master Gardener

NEWSLETTER

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AUGUST 1990

WHAT TO DO --- WHAT TO DO --- WHAT TO DO --- AUGUST

Jackie Dillon-Fast
Staff Writer

"Give weeds an inch and they'll take a yard."

* **FERTILIZE:** Give outdoor plants - roses, trees, flower beds - final fertilizing by the end of the month. Slow-acting fertilizers like ammonium sulfate, ammonium phosphate, fish emulsion, bone or blood meal, well-composted manure, and compost will break down during the following weeks and you should see healthy new growth in 3 to 4 weeks. This last feeding will help prepare your plant for the winter months ahead. If you wait too long to fertilize - mid-September or October - the new growth will be appearing in early November, much too close to the first frost date. New growth is always more susceptible to frost damage. Follow fertilizer directions carefully.

* **START PLANNING YOUR SPRING WILDFLOWER GARDEN:** If you are planning a spring wildflower garden, start gathering seeds this month. Ninety percent of desert wildflowers are of the "sow direct in fall" variety. Check with area nurseries for wildflower seed packets, and be sure to check mail order suppliers as well. A call to our Sierra Vista office on a weekday morning will get you a list of sources for native and adapted seeds. Spend some time preparing your wildflower bed. Although desert wildflowers self-seed in unimproved soil, you will increase your germination rate tremendously by loosening up the soil and adding a small quantity of organic matter. Most desert wildflowers require well-drained soil and full sun.

(Continued on next page)

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* **WATCH FOR NUTRIENT DEFICIENCIES:** If you have been fertilizing your gardens through the growing season, you should not be seeing deficiency symptoms. The following is a review of some common symptoms: **NITROGEN** - leaves are pale green or yellow throughout, older or lower leaves are more severely affected, top growth is stunted, leaves drop early; **PHOSPHORUS** - leaves are reddish or purple tinted, growth slows, roots and seeds fail to develop, symptoms worsen in cooler weather; **IRON** - leaf veins are green but rest of leaf is yellow, newer leaves and ends of branches are more severely affected; **ZINC** - overall yellowing of leaves though tips may stay green, leaves are small and clustered, foliage clusters at ends of branches ("pom-pom effect"), much like iron deficiency in appearance. Severe iron and zinc deficiencies can be corrected quickly using a foliar spray. Make sure the iron is in the chelated form.

* **OTHER PROBLEMS TO WATCH FOR:** **Sunburn** - large white spots develop on tops of leaves, usually in the center, which then turn brown. **Salt-burn** - burning starts at edges of leaves and moves inward, on narrow leaves it starts at tips and works down. **Overwatering** - roots begin to rot, plant is wilted even if you give it additional water, soil around plant never dries, internal leaves yellow and drop. **Texas root rot** - attacks quickly, initially resembles sunburn, watch for white sporemat beneath tree, plant dies but leaves remain on plant, positive diagnosis requires examining roots under microscope. **Cicadas** - dead branch ends with brown leaves, look for chewing marks on the branches. **Chewing insects** - random holes or skeletonized leaves indicates beetles, whole leaf being consumed except veins indicates caterpillars, tunneling

between leaf surfaces indicates leaf miner. **Sucking insects** - small white or yellow spots indicate presence of aphids, spider mites, plantbugs, leafhoppers, etc. The most positive identification you can make is to find the offending bug on the damaged plant. When you see damage, look for the source before resorting to a wide-spectrum pesticide. By targeting a specific pest, you may be able to avoid killing the "good guys" - ladybird beetles, praying mantis, lacewings - along with the bad.

* **PROLONGING ANNUALS:** Pinching off spent blossoms will encourage plants to continue flowering. It redirects plant energies into flower production rather than seed formation. You can cut back your spring planted tomatoes to encourage them to produce a fall crop. Cut them back to about one-third their current height. Remember to give them some fertilizer to fuel this new growth.

* **PLANT COOL-SEASON VEGIES:** Plant cabbage, carrots, chard, kale, lettuce, potatoes, spinach, and turnips.

* **PLANT COOL-SEASON FLOWER SEEDS:** Sow calendulas, carnations, pansies, Iceland poppies, snapdragons, and violas for fall color.

* **STAY ONE STEP AHEAD OF YOUR WEEDS:** When admiring your garden each morning keep pulling up those tiny weeds that pop up overnight. With all the rain we've been having, tiny weeds can become big problems very quickly.

CORRECTION

The telephone number listed in the June newsletter for Cathy Wertz, County Coordinator for the Global ReLeaf program should have been 364-5477.

"A CHANCE TO GET SOME PLANTS"

Jackie Dillon-Fast
Staff Writer

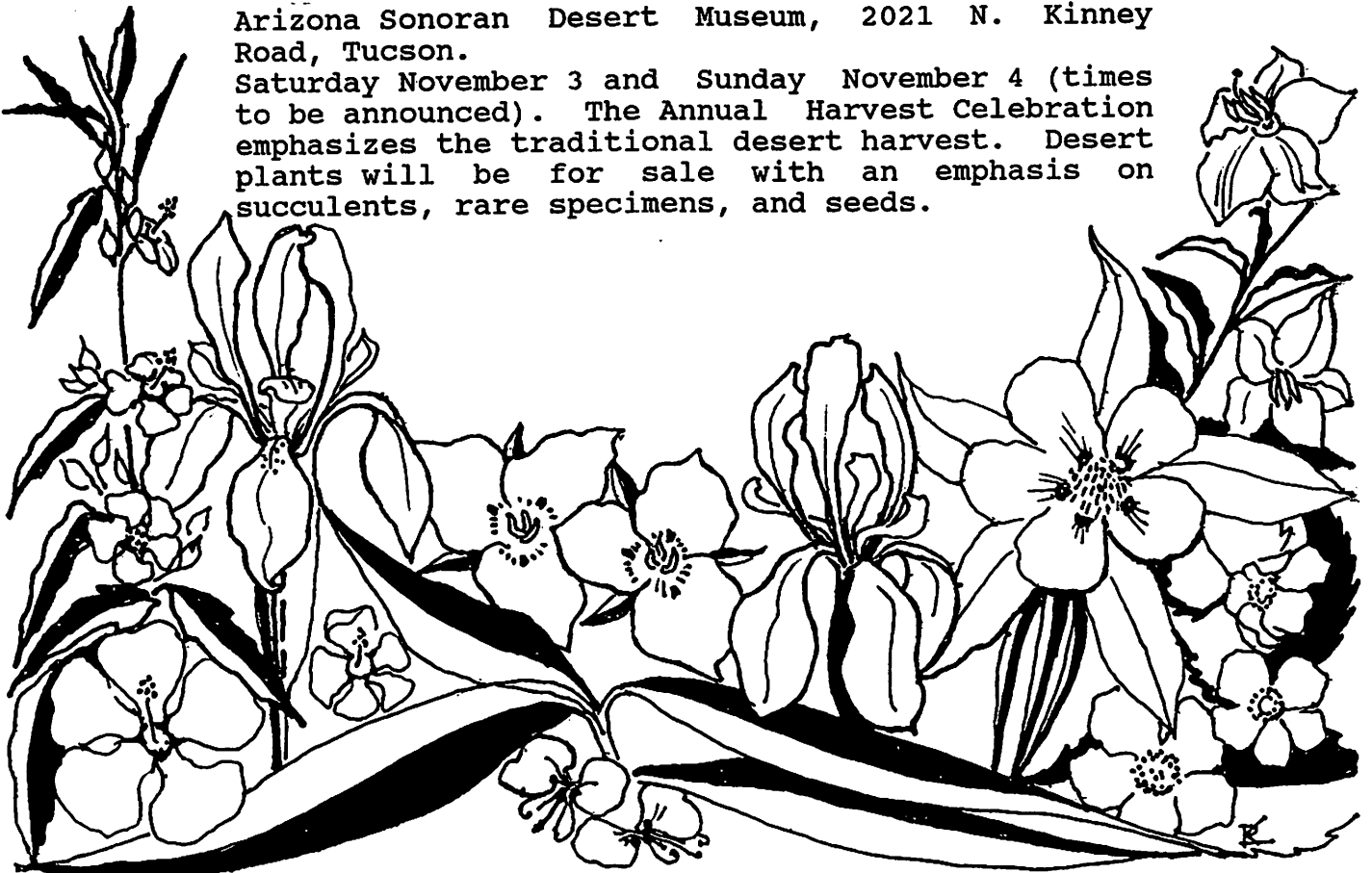
Without a doubt, fall is the best season for planting in the desert. Plants put in during September and October benefit from cool nights, mild days, and nine full months to develop a healthy, extensive root system before the hot, dry days of June come around again. Most of the beautiful desert wildflowers that grace our canyons and roadsides must be sown in the fall for spring bloom. Fall is also a marvelous time for hard-to-find native and adapted plants for your garden. If you've never taken a look at the wide variety of attractive and hardy plants available at some of the area plant shows and sales, you're in for a treat and a surprise. Are the shows/sales worth the trip? Definitely. But get there early!

If you do find a few additions for your garden, try to have them in the ground by mid-October, earlier if it looks like we're in for a cold winter. And, don't be surprised if your fall plantings don't produce much top growth before the temperatures drop. They will be busy developing roots all winter and will reward you with healthy new growth and blooms next spring. Be sure to pick up a few packets of wildflower seeds - poppies, mallows, flax, penstemons - to scatter in your flower or vegetable beds. They will brighten many spring mornings.

NEAR:

Arizona Sonoran Desert Museum, 2021 N. Kinney Road, Tucson.

Saturday November 3 and Sunday November 4 (times to be announced). The Annual Harvest Celebration emphasizes the traditional desert harvest. Desert plants will be for sale with an emphasis on succulents, rare specimens, and seeds.



Wildflowers pictured L to R (common names): Desert Mallow, Rocky Mt. Iris, Sego Lily, Tradescantia, Columbine, Thimble Berry, & Nightshade.

Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson.
Saturday October 6 and Sunday October 7, 10:00 am to 4:00 pm.
(Members-only sale 8:00 - 10:00 am.)

"All of the plants the T.B.G. offers are Arizona grown. This insures that they are pre-adapted to conditions that would destroy 'imports' . . . Some are native to the Sonoran desert, others to Australia and Africa where climatic conditions resemble ours." GET THERE EARLY!

A BIT FARTHER AWAY:

Boyce Thompson Arboretum, U.S. Highway 60, Superior, AZ (East of Phoenix). Saturday November 10 and Sunday November 11 (times to be announced but probably from 8:00 am to 4:00 pm). The Fall Landscaping Festival will include educational booths, special arboretum tours, and an arid lands plant show and sale.

(Don't neglect area nurseries. As demand for native and adapted plants increases so does availability. If your nursery doesn't carry what you want, ask them if they can get it.)

GIFTS FROM THE DESERT

Carolyn Gruenhagen
Staff Writer

In a short time your prickly pear cactus fruits (seed pods) will be turning red, falling off, and generally becoming a mess. Why not pick them and make some cactus jelly and cactus juice - it is not very hard, and they taste great! David Epele, President of Arizona Cactus & Succulent Research, Inc., a botanical garden in Bisbee, AZ shares his recipes with us.

To pick the fruit, use kitchen tongs, and be very careful because they have tiny spines on them. Gather and wash a bucket or grocery sack of the fruit. Use the tongs to transfer the fruits into a large kettle, add about an inch of water, and cover. Boil the fruit gently until it is softened - about 45 minutes. After it starts to cook, mash with a potato masher to make sure each fruit is broken open. Continue cooking for another 10 minutes until all of the fruit is tender. Pour the fruit and juice into a cloth bag,

or strain it through several thicknesses of cheesecloth. Any small spines, the seeds, and the skin will remain in the cloth. This makes great food for birds, pigs, or chickens, by the way.

Now you have about a gallon of cactus juice. To make never-fail prickly pear jelly, boil 4 cups of juice along with a package of powdered pectin. Add 5 or 6 cups of sugar and bring to a boil. You may add a little lemon juice for an interesting taste. Pour the liquid into sterilized jelly jars and seal them with melted paraffin or cap the jelly jars and put them in the freezer. That's all there is to it. When you send off your gifts to friends, stick in a jar of cactus jelly and they will be most grateful!

To make cactus juice, store the pure juice of the prickly pear fruit in freezer containers. At Arizona Cactus, the juice is frozen in plastic soda bottles. When ready to make the juice, thaw it, pour into a gallon jar, add 1/2 cup of lemon juice and three cups of sugar. Then fill the jar with water. Delicious!

SO WHAT'S A MASTER GARDENER ANYWAY? PART II - A NEW CLASS BEGINS?

Jackie Dillon-Fast
Program Coordinator

A fall Master Gardener Class is being offered beginning Thursday, September 6. The class will meet every Thursday from 6:00 - 9:00 pm for ten weeks, with optional field trips every Friday. Since each class covers an entire subject area, attendance at all ten classes is required.

Classes are taught by University of Arizona and Cooperative Extension specialists, as well as area gardeners, and emphasize urban horticulture in the desert environment. Master Gardeners pay \$25 for class materials (a large binder packed with information) and must pass a final exam to be certified as a Master Gardener. Since class size is limited to 25, potential Master Gardeners are asked to fill out an application outlining their interests and experience. Whereas some gardening experience is needed, enthusiasm and commitment are more essential to the program.

Applications will be available starting Monday, August 20, and accepted through Wednesday, August 29. If you're not sure if the Master Gardener Program is for you, the following answers may help you decide. If after reading through them, you still have questions about the Master Gardener Program, please call me at the Sierra Vista Office (458-1104) any Wednesday afternoon from 1:00 to 4:00 pm or drop me a note. If you've been saving your Newsletters, our premiere issue (December 1989) gave a quick overview of the history of

the Master Gardener program and some impressions of the program by a then brand-new Master Gardener.

WHAT IS A MASTER GARDENER? First and foremost, a Master Gardener is a volunteer. The volunteer portion of the program provides support for the community and personal opportunities for the volunteer. Master Gardeners staff the Sierra Vista Cooperative Extension Office, produce the Master Gardener Newsletter, and participate in community activities such as the Douglas 4H Mini-Fair and the Amazing Arizona Mini-Festival. Our goal is to provide basic gardening information to Cochise County gardeners and to coordinate with other county, state, and national programs to bring urban horticultural resources into Cochise County. We are especially important to the program right now since Cochise County is minus one Agriculture Extension Agent.

WHY DO PEOPLE WANT TO BE MASTER GARDENERS? One of the benefits of being a Master Gardener is the training we are given in the initial ten week Master Gardener Class. Because the Master Gardener Program is part of the Cooperative Extension Service under the University of Arizona, we have access to many horticulture and agriculture specialists. Specialists in soil science, entomology, plant pathology, water management, vegetable, fruit and nut crops, native plants, etc. provide us with the initial training and are available to us for follow-up or advanced training.

WHAT ARE MASTER GARDENERS MADE OF? Some of us come into the program having years of

experience in horticulture; some of us are newcomers to desert gardening. Some of us have jobs or businesses connected with horticulture; some of us have a plot out back. We are retired, full and part-time workers, homemakers, school teachers, landscapers, computer experts, artists, and engineers. At the end of our ten weeks of basic horticultural training, we certainly don't know everything there is to know about gardening, but we are better equipped to handle our own gardens and to help non-Master Gardeners find the information they need.

HOW MUCH TIME DOES IT REQUIRE?
One of the major volunteer efforts is staffing the Sierra Vista office weekday mornings. Whenever possible, Master Gardeners are requested to put in 30 hours answering questions at the office. Master Gardeners with full time jobs or other conflicts may volunteer this time in other ways. In addition, another 20 hours are volunteered to design a gardening project (this newsletter for example) that helps us apply what we've learned, gives us the opportunity to use new or existing skills, and makes a contribution to the gardening community. A total of 50 volunteer hours are required. There are as many ways of making this contribution as there are gardeners in the program. Projects usually begin soon after the training ends and are created, designed, and implemented by each individual so the size and scope is determined by the Master Gardener and the Program Coordinator.

DOES IT LAST FOREVER? At the end of our first year as a Master Gardener, we can remain active in the program or go on inactive

status, meaning we do not want to be contacted about upcoming Master Gardener activities or training. Some of us move on to other things after one year, others stay with the program and continue to benefit from and contribute to the gardening community. At the end of your year, the decision will be up to you.

CUTTINGS 'N' CLIPPINGS

* Occasional use of an aerator will improve the health of your lawn by allowing air, food, and water to penetrate more easily. Golfers have been known to aerate their lawns by walking on them in their golf shoes. (We didn't test this one to see if it works. Those shoes would have to have some hefty spikes to make deep enough holes.)

* An option for controlling those pesky weeds growing in the cracks in your patio, sidewalk, or driveway: repeated applications of boiling water will kill the top growth and possibly the root system as well. (OK, we didn't test this one either - Master Gardeners don't get weeds, right?)

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Articles to be published in next month's newsletter must be received at the Sierra Vista Extension Office no later than August 24.

WHAT'S BUGGING YOU?

by T.J. Martin

GRASSHOPPER CONTROL FOR THE HOME GARDEN

COMMON NAME: Grasshopper, Locust, or @!*%+\$!.

SCIENTIFIC NAME: *Acrididae*.

DESCRIPTION: Adults - These insects range from very small to over three inches in length and appear to be "armor-plated". The antennae are short, the mouthparts prominent and the hind legs are enlarged for great jumping power. The wings are well-developed and can be up to three inches in length. Colors include black, brown, red, green, yellow, or multi-colored.

Nymphs - These are simply smaller versions of the adults but without wings or with very short wing-stubs as they mature.

Eggs - The rice-shaped, yellow or cream-colored eggs are laid in soil or weeds. The eggs are surrounded by a hardened jelly-like substance and the clusters can contain up to 75 eggs in one "pod".

LIFE CYCLE: The eggs hatch in late spring or early summer (April - June). The young nymphs feed voraciously on just about anything they can find. When they have grown to their adult size and have developed wings, they then fly to find new food sources. These pests feed by day and spend the nights in tall weeds or shrubs. They can also be found on fence posts or the sides of buildings. In late summer they mate and the females lay clusters of eggs up to three inches deep in the soil. There is only one generation per year.

PLANTS USUALLY AFFECTED: Almost all garden and field crops.

TIME OF YEAR: From April until frost (usually late October). They become more visible when they are full grown and can fly to new areas. Large numbers of these pests can be seen in Cochise County in August and September.

WHAT TO LOOK FOR: Grasshoppers cause general, all-round damage to crops. They eat holes in the middle of leaves, chew large jagged chunks out of the side of the foliage or just eat the entire plant, leaves, stems and all! As you walk through your garden or move the foliage with your hands, they will jump or fly to get away from you.

PROBLEMS AND DAMAGE: Besides the general loss of foliage through voracious feeding, the grasshoppers chew right through leaves and stems and can cause large portions of a plant to fall to the ground.

CULTURAL CONTROLS: While it probably won't help with this year's pest problem, good cultural practices can go a long way toward decreasing next year's grasshopper population. Females prefer to lay their eggs in dry, undisturbed areas. Tilling the ground in the fall will discourage egg laying as well as uncover already deposited eggs and

expose them to the weather and predators. Keep ground litter cleared away and mow any stands of weeds as these areas offer food and cover for the grasshopper population. Get your neighbor to keep his weeds cut down also. Cultivate the ground again in the spring to expose any eggs that you may have missed in the fall. A heavy application of compost or mulch can prevent the emergence of many young in the spring.

COMPANION PLANTING AND REPELLENTS: Grasshoppers reportedly dislike onions, garlic, and hot peppers. So, make up a "tea" of one or more of these, add a bit of pure liquid soap to help it adhere, and spray it on your plants.

MECHANICAL CONTROLS, BARRIERS, AND TRAPS: Check your garden often, walk among your plants, or use your hands to move the foliage. This will cause the 'hoppers to jump or fly where you can see them. Hand picking is easiest in the early AM when the pest is cold and moves slower. Keeping your plants covered with an agricultural fleece product, netting, or cheesecloth will keep the 'hoppers away from your plants. Remove only for pollination or when the heat starts to build up. An effective grasshopper bait can be made from 1 part molasses and 9 parts water. Half fill quart jars with the solution and sink into the ground up to the neck. Check daily and remove the dead insects.

NATURAL CONTROLS: Grasshoppers make a tasty meal for spiders, mantids, ground beetles, blister beetles, Tachinid flies, Robber flies, and some parasitic nematodes. Red mites feed on all stages while snakes, skunks, toads, coyotes, ground squirrels, and field mice eagerly pursue the adults and nymphs. *Neosema locustae* is a commercially available protozoan parasite, but don't expect very quick results. Birds of all kinds get rid of grasshoppers much faster and many gardeners keep a small flock of chickens, ducks, guinea fowl, or even peacocks and allow them to patrol the garden for pests.

BIOLOGICAL INSECTICIDES: Sabadilla dust is effective for control of common grasshoppers. Its effects are not long-lasting and it would have to be applied frequently for continued control. Apply in the evening as it also affects bees.

CHEMICAL CONTROLS: Call your County Extension Agent or her staff for current recommendations. Check at your favorite garden supply store or nursery to see what they have available. Remember to check the label to make sure that the grasshopper is a listed target pest and FOLLOW THE DIRECTIONS EXACTLY! When it comes to pesticides, more is NOT better!! Wear protective clothing, watch out for non-target plants, pets, children, and other living things. Wash your skin and clothing after application and take care not to get the substance into your eyes, mouth, or breathing passages.

