Production Update:

**Winter Irrigation:** Alfalfa water use from November through February averages about 3.5 inches per month in the low elevation desert areas. Winter rainfall cannot usually sustain maximum production in these areas and some supplemental irrigation is required. If we assume an irrigation efficiency of 0.7, then a single 5-inch irrigation every month can meet alfalfa water requirements during the winter on average. The actual irrigation requirement depends on soil type, weather conditions, rainfall, growth of the crop, and other factors. Growers sometimes use the winter as a time to replenish subsoil moisture and apply more water than is actually required by the crop during this time of the year.

**Insect Management:** Spotted alfalfa aphid caused severe damage to alfalfa in Arizona and California in the 1950s. A combination of introduced parasites and host plant resistance brought this pest under control. The host plant resistant developed by Dr. William Lehman and Dr. Merv Nielson are still the basis for aphid resistant alfalfa varieties used today. Spotted alfalfa aphid still occasionally causes problems, but generally only when susceptible cultivars are grown. Since 1996, spotted alfalfa aphid has occasionally appeared in damaging numbers in highly resistant alfalfa varieties. The reasons for the appearance of this aphid in highly resistant cultivars is being investigated. There is every reason to believe that the highly resistant cultivars will continue to keep the spotted alfalfa aphid in check along with the indigenous and introduced natural enemies. Spotted alfalfa aphid develops better under warm temperatures than pea aphid or blue alfalfa aphid.

**Weed Control:** Pursuit will control almost all broadleaf weeds except for sowthistle and goosefoot. When these are present, it may be best to also use two 4-DB (Butyrac, Butoxone). Follow label directions on the size of crop required at application.

**Market Summary**

<table>
<thead>
<tr>
<th>Past 2 Weeks (Dec 18, 2001 to Dec 31, 2001)</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
<th>Off grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110</td>
<td>100</td>
<td>105</td>
<td>90-100</td>
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<table>
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<tr>
<th>Last Year (Dec. 18, 2000 to Dec. 31, 2000)</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
<th>Off grade</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>105</td>
<td>90</td>
<td>100</td>
<td>70-90</td>
</tr>
</tbody>
</table>

10 Year Summary

(December 18, 1992 to December 31, 2001)

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