# alfalfa seed

## sample costs and production


University of California
Agricultural Extension Service
Imperial County
Court House, El Centro

Cost Data Sheet No. 8

## ALFALFA SEED--SAMPLE PRODUCTION COSTS

Costs based on custom rates and 300 lbs. clean seed* in 90 days on an established alfalfa stand.

| ITEMS | SAMPLE COSTS Per Acre | Per Pound |
|---|---|---|
| LABOR AND MATERIALS | | |
| Irrigation labor - 4x @ .86 | $ 3.44 | |
| Water - 1.5 acre feet | 3.00 | |
| Insecticides - 5x ($3.00 per) | 15.00 | |
| Application costs ($1.25 air) | 6.25 | |
| Bees (3 colonies per acre) | 12.00 | |
| Defoliation | 7.00 | |
| Combining | 7.00 | |
| Hauling @ $2.00/ton | .35 | |
| Cleaning seed @ .01¢ lb. | 3.50 | |
| TOTAL | $ 57.54 | 19.2 cents |
| CASH OVERHEAD - 5% of LABOR AND MATERIALS | $ 2.87 | |
| DEPRECIATION OF STAND - $\frac{1}{4}$ yr. | 3.43 | |
| LAND RENT | 11.25 | |
| TOTAL ALL COSTS | $ 75.09 | 24.9 cents |

*Some straw is baled after combining, averaging 1 to $1\frac{1}{2}$ tons/acre. Use only if insecticides registered for hay were used.

## GENERAL INFORMATION

The costs included in this fact sheet are based mainly on contract prices and on an average of costs estimated by several alfalfa seed producers. Many producers use their own equipment and have lower costs.

High alfalfa seed production is dependent upon several factors:

- ✓ vigorous plants
- ✓ adequate insect control
- ✓ adequate pollination
- ✓ careful combining

Excluding any one of these factors can lower your production. Include them all for higher yields.

## STARTING DATES

Best possibilities for a good seed crop occur when the last hay is cut between May 1 and May 15. By June 1 to 15 the field is in full bloom. Seed crops made at this time of the year avoid the Lygus, stink-bug and alfalfa seed chalcid infestations which build up from early spring till late fall when the weather breaks. Also late crops maturing in August and September are five times as likely to be damaged by rain.





Earlier seed crops may not bloom properly due to cold weather and seed "set" may be light or delayed.

## VARIETIES

Moapa, African, Common and Chilean 21-5 are usually grown in Imperial County. Moapa is resistant to the spotted alfalfa aphid and is the preferred variety in this area.

There is no evidence available that one variety will produce more seed than another.

## IRRIGATION

Allow the plants to become slightly stressed for water up until the bloom period to prevent rank growth after bloom begins, the plants should be irrigated no more frequently than necessary to prevent wilting and to help produce well filled seed pods. The flowers of a slightly stressed plant contain higher concentrations of nectar and are more attractive to bees.

## POLLINATION

"Bees" are the only pollinators of any value on alfalfa. In Imperial County it is necessary to rely on honey bees because of a lack of sufficient solitary pollen collecting bees.

To get the most out of your honey bees

- ✓ Introduce strong colonies with 6-8 frames of brood. Make sure the colonies are not weakened by insecticides.
- ✓ Introduce at least 2 or 3 colonies per acre. Five or 6 are used in some areas for 1000 lb. seed crops, and up to 9 colonies have been used. More bees are necessary when other attractive nectar and pollen producing plants are near by.
- ✓ Introduce one-half the bees about 10 days after the first flowers appear and the remainder a week later. Most effective tripping occurs 3 to 4 days after a move.
- ✓ Distribute the colonies at 1/10 mile intervals in the field. Thirty per cent more seed is set 100 yards than 330 yards from a colony.

## PEST CONTROL

Early pest control for Lygus is necessary and much more important than later in the season. A blasted bud means a potential of many flowers lost. A blasted flower means only an average of





three to four seeds lost. Later only a single seed can be damaged at a time. This is the reason Lygus is considered 10 to 20 times as damaging at 1/10 bloom than during the period of seed set.

Control for the alfalfa seed chalcid has not proven successful and none is recommended. See the "Field Crops Pest and Disease Control Guide for specific control recommendations on other insects.

## HARVESTING

Most seed alfalfa is defoliated using a dinitro general spray applied by airplane at from 1 to 3 pints in 10 to 15 gallons of diesel oil per acre. Direct combining can start in 3 to 5 days after spraying.

The windrow-combine method of harvesting is done in some areas but is not recommended in areas like Imperial County where strong winds and low humidity are a hazard to seed harvest.

## YIELD

The county average is around 300 lbs. clean seed per acre. Some growers will produce 400-600 lbs. of clean seed. Usually, at least 3 colonies of bees per acre are utilized in the higher yielding fields.



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