

# bed planted alfalfa seed

## sample costs and production

AF-SI-75-2



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

Cost Date Sheet No. 20

UC Cooperative Extension /

BED PLANTED ALFALFA SEED--PROJECTED PRODUCTION COSTS

1975

Mechanical operations at custom rates. Labor at \$3.50 per hour (\$3.00 plus Social Security, unemployment insurance, and fringe benefits) for irrigation.

Yield - 700 pounds clean seed, double cropped - 2 tons hay & 2 pasturings.

| OPERATIONS                    | Custom Rate | MATERIALS      |       | HAND LABOR |         | SAMPLE COSTS Per Acre |
|-------------------------------|-------------|----------------|-------|------------|---------|-----------------------|
|                               |             | Type           | Cost  | Hours      | Dollars |                       |
| <b>LAND PREPARATION</b>       |             |                |       |            |         |                       |
| Plow or subsoil               | \$ 13.50    |                |       |            |         | \$ 13.50              |
| Disc 2x                       | 4.50        |                |       |            |         | 9.00                  |
| Build and break borders       | 4.50        |                |       |            |         | 4.50                  |
| Flood                         |             | Water .8 ac ft | 2.80  | 1.0        | 3.50    | 6.30                  |
| Disc 2x                       | 4.50        |                |       |            |         | 9.00                  |
| Fertilize                     | 3.00        | 200# (0-45-0)  | 25.20 |            |         | 28.20                 |
| Float                         | 4.00        |                |       |            |         | 4.00                  |
| List                          | 5.00        |                |       |            |         | 5.00                  |
| <b>TOTAL LAND PREPARATION</b> |             |                |       |            |         | <b>\$ 79.50</b>       |

**COST OF ESTABLISHMENT**

|  |      |                |      |     |      |                 |
|--|------|----------------|------|-----|------|-----------------|
| Plant                                    | 7.00 | Seed 1-2 lbs   | 4.00 |     |      | 11.00           |
| Irrigate 2x                              |      | Water .8 ac ft | 2.80 | 1.0 | 3.50 | 6.30            |
| <b>COST OF ESTABLISHMENT</b>             |      |                |      |     |      | <b>\$ 17.30</b> |
| <b>TOTAL COST OF STAND ESTABLISHMENT</b> |      |                |      |     |      | <b>\$ 96.80</b> |

**ANNUAL COSTS**

|                           |       |               |       |     |              |                    |
|---------------------------|-------|---------------|-------|-----|--------------|--------------------|
| Irrigate 16x              |       | Water 6 ac ft | 21.00 | 8.0 | 28.00        | 49.00              |
| Cultivate 2x              |       |               |       |     |              | 10.00              |
| Fertilize                 | 3.00  | 200# (0-45-0) | 25.20 |     |              | 28.20              |
| Insect Control 7x         | 3.00  | Insecticides  | 32.00 |     |              | 53.00              |
| Bees 2x                   | 10.00 | 3 colonies    |       |     | 1x = (30.00) | 60.00 <sup>a</sup> |
| Defoliation 2x            | 3.50  |               | 9.00  |     | 1x = (12.50) | 25.00              |
| <b>TOTAL ANNUAL COSTS</b> |       |               |       |     |              | <b>\$ 225.20</b>   |

|   |  |  |  |  |  |                  |
|---|--|--|--|--|--|------------------|
| Land Rent (new lease)                                 |  |  |  |  |  | 125.00           |
| Depreciation 1/3 on total cost of stand establishment |  |  |  |  |  | 32.26            |
| Cash Overhead - 15% of preharvest cost and land rent  |  |  |  |  |  | 57.37            |
| <b>TOTAL PREHARVEST COST</b>                          |  |  |  |  |  | <b>\$ 439.83</b> |

**HAY HARVEST COSTS**

|                                |          |                                 |             |  |  |                 |
|--------------------------------|----------|---------------------------------|-------------|--|--|-----------------|
| Swather 2x                     | 4.00     | green chopping may be preferred |             |  |  | 8.00            |
| Bale 2 tons                    | 7.50/ton | 2 pasturing also return         | \$20.00 ea. |  |  | 15.00           |
| Haul & Stack                   | .15/bale |                                 |             |  |  | 5.40            |
| <b>TOTAL HAY HARVEST COSTS</b> |          |                                 |             |  |  | <b>\$ 28.40</b> |

**SEED HARVEST & POST HARVEST COSTS**

|  |                            |  |  |  |  |                  |
|--|----------------------------|--|--|--|--|------------------|
| Combining 2x                                       | 20.00                      |  |  |  |  | 40.00            |
| Hauling  | 5.00/ton                   |  |  |  |  | 1.75             |
| Cleaning seed                                      | 3.00/cwt plus cost of bags |  |  |  |  | 21.00            |
| <b>TOTAL SEED HARVEST &amp; POST HARVEST COSTS</b> |                            |  |  |  |  | <b>\$ 62.75</b>  |
| <b>TOTAL ALL COSTS</b>                             |                            |  |  |  |  | <b>\$ 530.98</b> |

Value of pasturing \$20 - 2x = \$40.00

Value of Hay \$45 - 2 tons = \$90.00

Total \$130.00

57.73¢ Cost per lb

Total all cost \$530.98 less return 130.00 = \$400.98 seed cost

<sup>a</sup>/This is for twenty days at 50¢ per colony. For each extra colony-day add 50¢.

**GENERAL INFORMATION:** The average yields for non-certified alfalfa seed during the last five years has ranged from 191 to 373 pounds per acre with average selling prices ranging from 34.5¢ to \$1.06 per pound. Certified alfalfa seed yields over the last five years have ranged from 204 to 800 pounds per acre and selling prices ranged from 38¢ to \$1.50. A part of the certified seed is planted on beds. Yields of over 1,000 pounds per acre have been obtained in the Imperial Valley.

**PLANTING DATES:** Late September through November is the preferred time for planting. Later plantings often result in poor germination. Spring plantings, if necessary, are suggested in February and March.

## SEEDING RATES

Plant 1 to 2 pounds of seed per acre on double row 40 inch beds. (14" by 26"). Approximately 100,000 plants per acre have given good yields. This would mean a spacing of 3 inches between plants. Options for plant populations are: planting to a stand, random thinning or synchronous thinning.

## VARIETIES

A number of non-dormant varieties are grown in Imperial County. Varieties that are resistant to the spotted alfalfa aphid, such as UC Salton and Mesa Sirsa, are recommended.

## STARTING DATES

Double cropping alfalfa seed in the Imperial Valley requires an early starting date. This date in general, should be between the last of April and the first of May. The first seed crop avoids a part of the Lygus, stink bug and alfalfa seed chalcid infestations which build up from early spring till late fall when the weather breaks. The late crop maturing in September may be damaged by rain and seed chalcid.

## IRRIGATION

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## 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. Tensiometers help to obtain a better irrigation.

## PEST CONTROL

Early crop control of Lygus is necessary and more important than later in the crop. Stink bugs can cause damage to maturing seed and should be controlled. See the Pest Control Recommendations for Imperial County Field Crops for more specific information on pests and control.

Control for the alfalfa seed chalcid has not proven successful and none is recommended.

## 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. Usually, at least 3 colonies of bees per acre are used in the higher yielding fields.

Five or more colonies are suggested on seed fields with both high plant and flower populations.

### HARVESTING

Most seed alfalfa is defoliated using a dinitro general spray applied by airplane at from 1 to 3 pints in 8 to 12 gallons of diesel oil per acre.

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