

BARLEY AND OTHER CEREAL GRAIN PRODUCTION
DESERT VALLEYS RIVERSIDE COUNTY

Acreage in the Palo Verde Valley the last five years has ranged from 5,300 to 14,500 acres. Coachella Valley acreage has ranged from 900 to 1,400 acres. Yields of over 5,000 pounds of barley per acre are possible in the desert area under careful management. Barley also works well on a double crop basis in that it is harvested early enough (May to June) to be followed by many summer crops, such as Sudangrass, Blackeye beans, Sesbania, or sorghums.

VARIETIES: California Mariout barley is the highest yielder, followed closely by Arivat which is stiffer strawed. Ramona 50 wheat is the recommended wheat. Oats for grain are not recommended because of high shatter losses. For hay or green chop, Kanota oats have been the standard variety.

SOILS: Cereal grains will grow on a wide range of soil types and are, especially California Mariout barley, reasonably tolerant to alkali. Because they are irrigated by flooding, they are often used in soil which is still being reclaimed.

LAND PREPARATION: Disc two ways, border, plant preferably by drill, and irrigate.

PLANTING: December 1st to February 1st. December 1st to 15th is optimum. Beyond January 1st, yields get progressively lower. For late plantings, use California Mariout; for plantings earlier than November 1st, unless planting pasture in the winter, use Arivat barley. If planting for winter pasture or green chop, plant September 15th to October 30th.

FERTILIZERS: On land low in both nitrogen and phosphate, 80 to 120 pounds of actual nitrogen and 60 to 80 pounds of actual phosphate are necessary for maximum yields. Grains following alfalfa or other legumes could use the lower rate of nitrogen and, if the alfalfa has been fertilized heavily with phosphate, no phosphate is needed for the first grain crop following. Nitrogen should be applied early. A good practice is to apply all of the phosphate and one-half the nitrogen at or before planting and the remainder of the nitrogen before the grain gets in the boot.

IRRIGATION: The three most critical times for irrigation in cereal grains are as follows: 1. At approximately 6 inch height, this is when head size and floret numbers are being determined. A shortage of moisture at this stage would reduce yields. 2. Just before opening out of the boot. This is when the pollination will take place. A shortage of moisture at this stage would cause sterile florets. 3. Milk stage. Lack of moisture at this stage would cause pinched kernels with light weight. Moisture should be readily available until the grain is in the hard dough stage, but there is no object to irrigating after the hard dough stage.

PESTS AND DISEASES: Seed should be treated with a fungicide to control smut, stripe, and other seedling diseases. Growers should contact the Farm Advisor's office for latest information on insect control along with the precautions in the use of insecticides.

WEED CONTROL: Nearly all broadleaved weeds which are troublesome in grain can be completely controlled with 2,4-D at the rate of 8 to 12 ounces of the acid equivalent per acre in 10 to 50 gallons of water per acre, sprayed on between the time the grain is at least six inches high and before heading. Permits for spraying must be obtained from the Agricultural Commissioners' office.

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IN
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SAMPLE COSTS OF PRODUCTION

Based on 3,500 pounds yield per acre and 1/2 year land utilization.

	LABOR & EQUIP- MENT COST/Acre	MATERIALS KIND & COST/Acre	TOTAL COST/Acre
Disc-2x	\$ 5.00		\$ 5.00
Plant	2.00	100 lbs. seed \$ 4.00	6.00
Fertilize	1.00	50 lbs. N 5.00 50 lbs. P ₂ O ₅ 5.00	11.00
Border-1x	.75		.75
TOTAL LAND PREPARATION AND PLANTING			\$ 22.75
Fertilize (side-dress)-1x	1.00	50 lbs. N. 5.00	6.00
Irrigate-8x	3.20	Water, 1/2 yr. 6.00	9.20
Ditch work, miscellaneous	1.00		1.00
Weed control	1.00	2,4-D 1.00	2.00
TOTAL GROWING PERIOD			\$ 18.20
TOTAL CULTURAL COST			\$ 40.95
(Land preparation, planting, plus growing period)			
Taxes - 1/2 year			3.00
Cash overhead (Office, car, phone, insurance, etc.) - 1/2 year			5.50
Depreciation on buildings and equipment - 1/2 year			1.00
Interest on investment on land, buildings, and equipment - 1/2 year			18.50
TOTAL CASH AND NON-CASH OVERHEAD - 1/2 year			\$ 28.00
TOTAL PREHARVEST COST			\$ 68.95
Harvest			
Combine @ \$5/Acre plus 10¢/cwt.			8.50
Haul @ 10¢/cwt.			3.50
TOTAL HARVEST COST			\$ 12.00
TOTAL ALL COSTS			\$ 80.95
TOTAL COST PER TON		\$46.26	

The above sample costs are based on contract rates and include interest on investment and depreciation on equipment.

PRICES: Average prices over the last 5 years as reported by the Agricultural Commissioners' office have ranged from \$2.17 to \$2.30 per cwt. in the Palo Verde Valley.