

## BARLEY COST ANALYSIS WORK SHEETS, FRESNO COUNTY - 1960

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Barley in Fresno County is the most important grain crop. It is produced in all areas of the county. Because of the widely variable conditions under which barley is grown, no one method of soil preparation, irrigation and management is applicable throughout the county.

The cultural practices and tools used will vary with soil type, crop sequence, rainfall and terrain. On the westside of the county, large acreages are planted following cotton with a minimum of land preparation. On the eastside foothill area, barley is dry-farmed. Cost analysis work sheets were prepared representing four methods of management practices in barley production.

Over 90% of the barley acreage in Fresno County is planted with California Mariout. It is a very early maturing variety with blue kernels.

Other varieties planted are:

Arivat a white seeded variety, medium early in maturity.

Blanco Mariout very similar to California Mariout except it is white seeded.

Barley is a cool weather crop. To obtain maximum yields in Fresno County, it should be planted between the second half of November through the first half of January. It can be broadcast, by aircraft or endgate seeders; or planted with a grain drill to a depth of  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches. The seed should be treated with a fungicide such as Ceresan M, liquid Ceresan or Panogen according to manufacturer's recommendations.

Seeding rates of 60 to 100 lbs. per acre are commonly used. Late plantings and broadcast seeding will require the higher rates. When drilled early winter, 60 lbs. per acre is adequate.

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The most serious limiting factor in barley production in Fresno County is lack of moisture at critical times in the development of the plant.

Barley dry-farmed is at the mercy of the elements. The field is cropped alternate years and if rainfall or moisture conditions are favorable, yields of 1,800 to 2,500 lbs. per acre can be expected. During the fallow year, the field should be kept free of weeds to conserve moisture for the crop year. Under irrigation the amount of water to use and the timing will depend on the soil type and rainfall. A pre-irrigation, wetting the soil to a depth of 4 to 5 feet is desirable. If only one crop irrigation is planned, it should be applied at late jointing or when the plants are in the boot stage.

Fertilization of barley should be governed by the fertility of the soil, cropping sequence and rainfall or irrigation. Under dry-farm management, 20 to 30 lbs. of actual nitrogen per acre has given economical response. Irrigated barley produced the most economical yields when fertilized with 60 to 70 pounds of actual nitrogen per acre. The application of phosphorus may be profitable in some areas.

Black mustard, London rocket, wild radish, fiddleneck and wild oats are troublesome weeds in many areas of the county. Through proper rotation and management, weed problems can be minimized. For broadleaf weed control, 2,4-D or MCP at  $\frac{1}{2}$  to  $\frac{3}{4}$  lbs. active chemical per acre is recommended.

Yields as well as cost of production of barley will vary greatly from farm to farm. Land values, taxes, water and labor costs vary from one area of the county to the other. Hauling cost is influenced by the location of the field to the storage site.

Four sample cost analysis work sheets were prepared, and it is hoped that it will be useful when planning a cropping program, to estimate needed cash and to make production cost comparisons between two or more crops. In the preparation of this cost analysis work sheet, we assumed that good management practices were followed.

# C O S T   A N A L Y S I S   W O R K   S H E E T

## Irrigated Barley, Fresno County, 1960

Based on a yield of 3,500 lbs. per acre, produced by complete tillage, pre-irrigation and one crop irrigation. Man labor at \$1.05 and equipment operator at \$1.30 per hour. Heavy tracklayer and 50 H.P. diesel wheel tractors. Barley charged with fixed costs 8 months per year.

	Sample Costs		My Costs	
	per acre	per cwt	per acre	per cwt
<b>PRE-HARVEST CASH AND LABOR COSTS:</b>				
Disc plow: 1 time, 1 acre/hr., 1 hr. man & tracklayer	3.95			
Disc harrow: 2 times at 6 acre/hr., 1/3 hr. man & tracklayer	1.32			
Land plane: 1 time, 3 acres/hr., 1/6 cost of 1/3 hr. man & tracklayer	.22			
Ditch and border: 1/8 hr. man & tracklayer	.46			
Irrigate: 1 pre & 1 crop, 18" water power cost 8.50/ft	12.75			
Man labor: 1 hr./acre	1.05			
Disc and harrow: 1 time, 6 acres/hr. 1/6 hr. man & heavy tractor	.66			
Plant: 4 acres/hr. - Seed, 100 lbs. at \$3.50 cwt	3.50			
Planting - 1/2 hr. man & wheel tractor	.65			
Fertilizer: 60 lbs. N at 7¢ applied	4.20			
Crop irrigation: 12" water - power for 1 ft. of water labor - 1 hr. man labor	8.50			
Office, car, operating capital: 5% of cash operating costs	2.25			
Misc. tractor work, filling ditches, etc.: 1/3 hr. men & tracklayer	1.32			
County taxes: 75% of \$5.00	3.75			
Repairs to equipment except tractors	2.00			
<b>Total Pre-Harvest Cash and Labor Costs</b>	<b>\$47.63</b>	<b>\$1.36</b>		
<b>HARVESTING COSTS:</b>				
Custom harvest at \$3.50 per acre plus 10¢/hundred lbs. of grain over the first 1,000 lbs per acre.	6.00			
Hauling: Field to storage at \$1.50/ton	2.63			
<b>Total Harvesting Costs</b>	<b>\$ 8.63</b>	<b>\$ .25</b>		
<b>TOTAL CASH AND LABOR COSTS</b>	<b>\$56.26</b>	<b>\$1.61</b>		
<b>DEPRECIATION:</b>				
Tracklayer: 2 hrs. at \$1.78	3.56			
Wheel tractor: 1/2 hr. at \$.60	.15			
Irrigation system and well: 2/3 of \$9.00	6.00			
Equipment except tractors	2.00			
<b>Total Depreciation</b>	<b>\$11.71</b>	<b>\$ .33</b>		
<b>INTEREST ON INVESTMENT AT 6%:</b>				
Tracklayer: 2 hrs. at \$.80	1.60			
Wheel tractor: 1/2 hr. at \$.30	.08			
Irrigation system & well: 2/3 of (6% x 1/2 of \$576.00)	11.52			
Equipment except tractors	.70			
Land at \$300.00: 2/3 annual cost	12.00			
<b>Total Interest on Investment</b>	<b>\$25.90</b>	<b>\$ .74</b>		
<b>TOTAL COST OF PRODUCTION</b>	<b>\$93.87</b>	<b>\$2.68</b>		

### Cost of Production per Hundred Pounds at Varying Yields

Yield per acre	2500 lbs	3000 lbs	3500 lbs	4000 lbs	4500 lbs	5000 lbs
Cost per cwt.	\$3.68	\$3.10	\$2.68	\$2.37	\$2.12	\$1.93