

BL-IR-70-1

BARLEY PRODUCTION

LASSEN COUNTY

Honey Lake and Long Valley Area

1970

FLOOD AND SPRINKLER IRRIGATED

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COST TO PRODUCE BARLEY

SPRINKLER IRRIGATED, FALL PLANTED

Lassen County growers assisted in the formation of this cost study on fall planted, sprinkler irrigated barley or wheat.

The total farm size used was 300 acres, of which 200 acres is planted to grain production and 100 acres to alfalfa production. Equipment costs are spread over the entire 300 acres, except for equipment that is specific to one particular crop.

The acreage is all irrigated from well water.

Yields shown are currently being produced in the area. Barley variety used in the study is Alpine.

The yields shown are attainable with careful management, adequate water supply, proper land preparation, and optimum amount of fertilization.

Land preparation includes plowing, discing, and land planing. Fifty pounds of actual nitrogen is applied at planting time, three acre inches of water is applied to sprinkle the stand up. After the stand becomes established, cattle are grazed on it to encourage tillering of plants.

In the spring, 50 pounds additional nitrogen is applied, a total of 10 acre inches is applied in two irrigations in the spring.

Weed control is done by a pull-type sprayer. Harvesting is done by custom operator, because investment in a combine for 200 acres of grain is not warranted. Extra cultipacking is required to break the crust in establishing the stand.

Fall planted wheat would have about the same practices and costs as fall planted barley. Gaines is a good variety to use, and will yield around 5,500 pounds per acre.

MACHINE AND EQUIPMENT

INVESTMENT FOR BARLEY - FLOOD IRRIGATED

Lassen County, September 16, 1969

Based on 100 Acres of Barley on a ³⁰⁰100-Acre Farm

Item	Cost	Annual Use (Acres)	Cost Per Acre	Life (Yrs.)	Depreciation	7% Interest	Cash Costs per Hour		
							Fuel	Repairs	Total
Tractor-60 H.P.W.D.	\$8,000	300	\$26.67	10	\$2.66	.93	.60	.80	1.40
Tractor - ³⁰ 55 H.P.W.	4,200	300	14.00	10	1.40	.49	.50	.50	1.00
Plow - 3 bottom 14"	1,400	300	4.67	15	.31	.16	---	.95	.95
Disk - 10' offset	1,500	300	5.00	15	.33	.18	---	1.00	1.00
Border disk	500	300	1.67	20	.08	.06	---	.20	.20
Ditcher - 4'	^{1,600} 300	300	1.00	15	.07	.04	---	.25	.25
Drill - 10'	1,500	300	5.00	15	.33	.18	---	1.00	1.00
Easy-Flow Spreader -10'	700	300	2.33	10	.23	.08	---	.40	.40
Cultipacker - 10'	⁷⁵⁰ 680	300	2.27	15	.15	.07	---	.35	.35
Sprayer	⁵⁰⁰ 350	300	1.17	10	.75	.26	---	.55	.55
TOTAL			63.78		6.31	2.45			
<u>Irrigation System:</u>									
Well-400' 14" dia.	^{6,000} 5,600	100	^{60.00} 56.00	30	1.86	1.96			
Pump - 1,000 gpm. 80' lift 30 H.P.	^{4,500} 4,000	100	^{45.00} 40.00	20	2.00	1.40			
TOTAL	9,600		96.00		3.86	3.36			

MACHINE AND EQUIPMENT
INVESTMENT FOR BARLEY - SPRINKLER IRRIGATED

Lassen County, September 16, 1969

Based on 100 Acres of Barley on a 300 Acre Farm

Item	Cost	Annual Use (Acres)	Cost per Acre	Life (Yrs.)	Depreciation	7% Interest	Cash Costs per Hour		
							Fuel	Repairs	Total
Tractor-60 H.P.W.D.	\$8,000	300	26.67	10	2.66	.93	.60	.80	1.40
Tractor - 35 H.P.W.	4,200	300	14.00	10	1.40	.49	.50	.50	1.00
Plow - 3 bottom 14"	1,400	300	4.67	15	.31	.16	---	.95	.95
Disk - 10' offset	1,500	300	5.00	15	.33	.18	----	1.00	1.00
Drill - 10'	1,500	300	5.00	15	.33	.18	---	1.00	1.00
Cultipacker - 10'	680	300	2.27	15	.15	.07	---	.35	.35
Sprayer	350	300	1.17	10	.75	.26	---	.55	.55
Fertilizer Injector	75	200	.38	15	.03	.01	---		
TOTAL			59.16		5.96	2.28			
Irrigation System: (see alfalfa study August, 1969)									
Well and pump		100	¹³⁵ 126.00		5.37	4.41			
Sprinklers		100	¹⁷⁵ 165.00		11.00	5.78			

SAMPLE COSTS TO PRODUCE BARLEY

Lassen County - September, 1969

Flood Irrigated, Fall Planted

Production Data: 4,500 lbs.

Operation	Hrs. Per Acre	Cash and Labor Cost per Acre				Total
		Labor	Fuel & Repairs	Materials Kind & Quantity	Cost	
Cultural Costs:						
Plow ⁶⁰	.5	1.00	1.18			\$2.18
Disk ⁶⁰	.3	.60	.72			1.32
Landplane (contract)					\$5.00	5.00
Run borders ⁶⁰	.5	1.00	1.08			2.08
Plane checks	.3	.60	.65			1.25
Pre-irrigate	.6	1.20		Power to pump 1/2 a.ft. @ 2.20	1.10	2.30
Drill seed, fertilize, & cultipack ³⁰	.5	1.00	1.38	75 lbs. seed	4.00	6.38
Fertilizer				50# N. @ 12¢	6.00	6.00
Fertilize in spring - Ground rig ³⁰	.3	.60	.36	50 N. @ 12¢	6.00	6.96
Cultipack for crust ³⁰	.2	.40	.27			.67
Irrigate 2X	1.0	2.00		Pwr. to pump 1 1/3 a.ft. @ 2.20	2.93	4.93
Weed spray ³⁰	.2	.40	.28	1 1/2 pts. 2,4-D	.70	1.38

TOTAL CULTURAL COSTS 8.80 5.92 ^{UC BARLEY} 25.73 40.45

Harvest Cost:

Combine (contract) 1/2 hr. @ 13.50 6.75

TOTAL HARVEST COSTS 6.75

Cash Overhead

Misc., office, etc. ^{5% of total harvest costs} 2.36

Taxes 6.00

TOTAL CASH OVERHEAD 8.36

TOTAL CASH COST ^{\$60/ton} 55.56

Management - 5% of 45 cwts. @ 250 5.63

INVESTMENT

Per Acre	Annual Cost 7%		Total
	Depreciation	Interest	
Land	300.00	21.00	
Land grading	75.00	5.25	
Irrig. system-well & pump	96.00	3.36	
Equipment	63.78	2.45	
Total	534.78	32.06	42.23

TOTAL COST PER ACRE 103.42

Cost per cwt. @ 45 cwts. yield 2.30

SAMPLE COSTS TO PRODUCE BARLEY
LASSEN COUNTY

Sprinkler Irrigated-Fall Planted

Production Data: 4,500 lbs.

Operation	Hours Per Acre	Cash and Labor Cost per Acre				Total
		Labor	Fuel & Repairs	Materials		
				Kind and Quantity	Cost	
Cultural Costs:						
Plow	.5	1.00	1.18			2.18
Disk	.3	.60	.72			1.32
Landplane (contract)					\$5.00	5.00
Drill, seed, fertilize, and cultipack	.5	1.00	1.38	75 lbs. seed	4.00	6.38
Fertilizer				50 lbs. N. @ 12¢	6.00	6.00
Fertilizer-Spring				50# N.@ 12¢ in water	6.00	6.00
Sprinkle up 1 x	.4	.80		3 ac. in. @ 5.55	1.39	2.19
Cultipack for crust	.2	.40	.27			.67
Irrigation - 2 x	1.0	2.00		7 ac. in. @ 5.55	3.22	5.22
Weed spray	.2	.40	.28	1½ pt. 2,4-D	.70	1.38
TOTAL CULTURAL COSTS		6.20	3.83		26.31	36.34
Harvest Costs:						
Combine (contract)				½ hr. @ 13.50		6.75
TOTAL HARVEST COSTS						6.75
Cash Overhead						
Misc., Office, etc.						2.15
Taxes						6.25
TOTAL CASH OVERHEAD						8.40
TOTAL CASH COST						51.49
Management - 5% of 45 cwts. @ \$2.50						5.63
				<u>Annual Cost</u>		
<u>Investment</u>	<u>Per Acre</u>	<u>Depreciation</u>	<u>Interest 7%</u>			
Land	300.00		21.00			
Irrig System:						
Well and pump	126.00	5.37	4.41			
Sprinklers	165.00	11.00	5.78			
Equipment	59.16	5.96	2.28			
Total	650.16	22.33	33.47			55.80
TOTAL COST PER ACRE						112.92
Cost per cwt. @ 45 cwt. yield						2.51