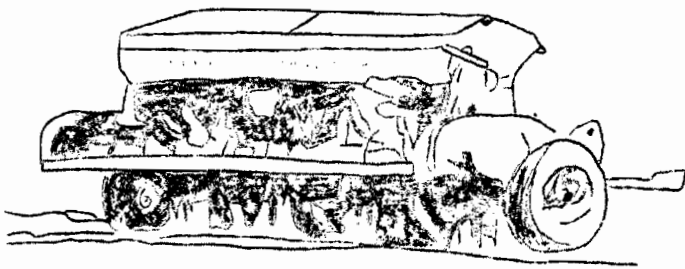


# SAMPLE COST OF PRODUCTION FOR DRYLAND WHEAT & BARLEY



FARM & HOME ADVISORS OFFICE  
Yolo County  
70 Cottonwood Street  
Woodland, California 95695

YOLO  
COUNTY  
1977



We wish to thank the growers for their help in developing this cost study. The growers provided the basic information on the operations, machinery, and costs. We also wish to thank the agricultural industry who provided us with cost data.

We also wish to express our appreciation to Melvin P. Zobel, Farm Advisor, Yolo County, for his guidance and review of this cost study.

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Prepared by  
University of California  
Agricultural Extension Service  
Woodland, California  
1977

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## INTRODUCTION

This dryland cost study for Yolo County shows detailed costs for owner-operator dryland barley and wheat production. Renter-operator costs are shown in a summary sheet. The study is broken down for the three main classes of soil--II, III, and IV--where most of the dryland production occurs. Refer to the soil survey of Yolo County, California for detailed explanations of the various soil classes. The major important separation between soil classes is effective rooting depth.

This study is based on a summer fallow, crop rotation. The Class II soils are nearly level and the major portion of the acreage is Rincon Silty Clay Loam and Tehama Loam. The Class III soils are quite steep with slopes ranging from 2 - 50%. The major soil series are Balcom Silty Loam and Sehorn Clay. The Class IV soils usually range from 2 - 15% slopes and the main series is Corning Gravelly Loam.

The yields given in this study are based on 90% of the actual yields obtained from trials where comparable practices were conducted. The varieties used were Briggs Barley and Anza Wheat. The yields do not represent long time average yields, but rather show production obtained in the more normal years. Long term average yields would be considerably lower because the yield figures do not include crop failures due to drowning in 1973 and drought in 1976. A considerable acreage of the dryland grain production is still grown with little or no fertilization using broadcast methods. The yields from this type of operation are considerably below the yields used in this study. The barley yields on Class III soil are lower than might be expected because considerable shattering occurred in several of the trials. Whereas, little shattering occurred in the wheat.

There are no storage facilities in this study. However, a considerable amount of the dryland grain production in Yolo County is farm stored. In the past, farm storage has been an economical advantage and most growers would consider at least being able to store part of their production.

This cost study was based on 1500 acres planted and 1500 acres summer fallowed.

WHEAT - Class II  
Yield - 2700 lbs/ac

	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs		Materials	
			Tractor	Implt.		
<b>SEED BED PREPARATION</b>						
<b>Spring</b>						
Plow	.29	1.37	3.14	1.86	--	6.37
Disc	.11	.52	1.19	1.61	--	3.32
Herbicide (mornningglory) ½ acreage						
2,4-D amine @ 16 oz/ac @ \$9.47/gal					1.19	1.19
Air - \$3.00/ac					1.50	1.50
Float	.13	.61	1.41	.07	--	2.09
<b>Fall</b>						
Harrow (Springtine)	.08	.38	.87	.37	--	1.62
Harrow (Spiketooth)	.05	.24	.54	.10	--	.88
Drill & fert. (2 men)	.075	.70	.81	.50	--	2.01
Seed 100# @ \$7.75/cwt					7.75	7.75
100# 16-20-0 @ \$159.60/ton					7.98	7.98
Herbicide (¾ acreage)						
2,4-D amine @ 10 oz/ac @ \$9.47/gal					1.13	1.13
Air - \$3.00/ac					2.25	2.25
Topdress						
100# NH <sub>4</sub> NO <sub>3</sub> @ \$7.15/cwt					7.15	7.15
Air - \$3.00/ac					3.00	3.00
Move equip., setup & service @ 10% of operating time	<u>.07</u>	<u>.33</u>	<u>--</u>	<u>.04</u>	<u>--</u>	<u>.37</u>
Total Cultural	.81	4.15	7.96	4.55	31.95	48.61
<b>TAXES</b>						
Land - 2X (Cropped 1 year out of 2)						<u>5.92</u>
Total Costs Pre-Harvest						54.53
Pre-Harvest Cost Per Cwt						2.02
<b>HARVEST</b>						
Combine (new-½ acreage)	.13	.66	--	4.57	--	5.23
Combine (used-½ acreage)	.13	.66	--	2.52	--	3.18
Haul @ \$1.00/ton						<u>1.35</u>
Total Harvest	.26	1.32	--	7.09	--	9.76

## WHEAT - Class II

	Hours/ Acre	<u>Cash &amp; Labor Costs Per Acre</u>			Materials	Total
		Labor	<u>Fuel &amp; Repairs</u> Tractor Implt.			
<u>MISCELLANEOUS COSTS</u>						
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage						1.53
✓ Misc. Production & Operation costs @ 12% of production costs						7.12
✓ Fire Insurance (30¢/\$100 value)						.32
✓ Crop comprehensive insurance						1.00
Management charge @ 5% of gross income - 27 @ \$4.00/cwt						<u>5.40</u>
Total Miscellaneous						<u>15.37</u>
Total Growing, Harvest & Production Costs						79.66
Cost Per Cwt						2.95
<u>INVESTMENT COSTS</u>						
Land - \$400 @ 8.8%						70.40
Buildings						.25
Tractors and Equipment						<u>9.28</u>
Total Investment						79.93
Investment Cost Per Cwt						<u>2.96</u>
						TOTAL ALL COSTS 159.59
<u>INCOME</u>						
Stubble Value @ \$1.00/acre						<u>1.00</u>
						TOTAL CROP COSTS \$158.59
						COST PER CWT \$5.87

WHEAT - Class III  
Yield - 2300 lbs/ac

	Hours/ Acre	Cash & Labor Costs Per Acre				Materials	Total
		Labor	Fuel & Repairs				
			Tractor	Implt.			
<u>SEED BED PREPARATION</u>							
<u>Spring</u>							
Plow	.33	1.56	2.55	1.52	--	--	5.63
Disc	.14	.66	1.08	.57	--	--	2.31
Float	.14	.66	1.08	.07	--	--	1.81
<u>Fall</u>							
Harrow (Springtine)	.10	.47	.77	.28	--	--	1.52
Harrow (Spiketooth)	.06	.28	.46	.10	--	--	.84
Drill & fert. (2 men)	.10	.94	.77	.39	--	--	2.10
Seed - 100# @ \$7.75/cwt						7.75	7.75
100# 16-20-0 @ \$159.60/ton						7.98	7.98
Herbicide (3/4 acreage)							
2,4-D amine @ 10 oz/ac @ \$9.47/gal						1.13	1.13
Air - \$3.00/ac						2.25	2.25
Move equip., setup & service @ 10% of operating time	.09	.43	--	.04	--	--	.47
<b>Total Cultural</b>	<b>.96</b>	<b>5.00</b>	<b>6.71</b>	<b>2.97</b>	<b>19.11</b>		<b>33.79</b>
<u>TAXES</u>							
Land - 2X (Cropped 1 year out of 2)							3.96
<b>Total Cost Pre-Harvest</b>							<b>37.75</b>
<b>Pre-Harvest Cost Per Cwt</b>							<b>1.64</b>
<u>HARVEST COSTS</u>							
Combine (new-1/2 acreage)	.17	.86	--	4.60	--	--	5.46
Combine (used-1/2 acreage)	.17	.86	--	2.58	--	--	3.44
Haul @ \$1.00/ton							1.15
<b>Total Harvest</b>	<b>.34</b>	<b>1.72</b>	<b>--</b>	<b>7.18</b>	<b>--</b>	<b>--</b>	<b>10.05</b>
<u>MISCELLANEOUS</u>							
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage							1.88
Misc. Production & Operation costs @ 12% of production costs							5.40
Fire Insurance (30¢/\$100 value)							.28
Crop comprehensive insurance							1.00
Management charge @ 5% of gross income - 23 cwt @ \$4.00/cwt							4.60
<b>Total Miscellaneous</b>							<b>13.16</b>
<b>Total Growing, Harvest &amp; Production Costs</b>							<b>60.96</b>
<b>Cost Per Cwt</b>							<b>2.65</b>

## WHEAT - Class III

	Hours/ Acre	<u>Cash &amp; Labor Costs Per Acre</u>			Total
		Labor	<u>Fuel &amp; Repairs</u> Tractor Implt.	Materials	
<u>INVESTMENT COSTS</u>					
Land - \$325 @ 8.8%					57.20
Buildings					.25
Tractors and Equipment					<u>8.65</u>
Total Investment					66.10
Investment Cost Per Cwt					<u>2.87</u>
					TOTAL ALL COSTS
					127.06
<u>INCOME</u>					
Stubble Value @ \$1.00/acre					<u>1.00</u>
					TOTAL CROP COSTS
					\$126.06
					COST PER CWT
					\$5.48



WHEAT - Class IV  
Yield - 1600 lbs/ac

	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs		Materials	
			Tractor	Implt.		
<b>SEED BED PREPARATION</b>						
<u>Spring</u>						
Plow	.31	1.47	2.43	2.43	--	6.33
Disc	.13	.61	1.02	1.35	--	2.98
Float	.13	.61	1.02	.11	--	1.74
<u>Fall</u>						
Harrow (Springtine)	.09	.43	.71	.58	--	1.72
Harrow (Spiketooth)	.06	.28	.47	.16	--	.91
Drill & fert. (2 men)	.09	.86	.71	.69	--	2.26
Seed - 100#/ac @ \$7.75/cwt					7.75	7.75
150# 16-20-0 @ \$159.60/ton					12.00	12.00
Herbicide (3/4 acreage)						
2,4-D amine @ 10 oz/ac @ \$9.47/gal					1.13	1.13
Air - \$3.00/ac					2.25	2.25
Move equip., setup & service @ 10% of operating time	.08	.38	--	.04	--	.42
<b>Total Cultural</b>	<b>.89</b>	<b>4.64</b>	<b>6.36</b>	<b>5.36</b>	<b>23.13</b>	<b>39.49</b>
<u>TAXES</u>						
Land - 2X (Cropped 1 year out of 2)						3.24
<b>Total Cost Pre-Harvest</b>						<b>42.73</b>
<b>Pre-Harvest Cost Per Cwt</b>						<b>3.05</b>
<u>HARVEST</u>						
Combine(new-1/2acreage)	.15	.76	--	4.30	--	5.06
Combine(used-1/2acreage)	.15	.76	--	2.40	--	3.16
Haul @ \$1.00/ton						.80
<b>Total Harvest</b>	<b>.30</b>	<b>1.52</b>	<b>--</b>	<b>6.70</b>	<b>--</b>	<b>9.02</b>
<u>MISCELLANEOUS</u>						
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage						1.72
Misc. Production & Operation costs @ 12% of production costs						5.95
Fire Insurance (30¢/\$100 value)						.19
Crop comprehensive insurance						1.00
Management charge @ 5% of gross income - 16 cwt @ \$4.00/cwt						3.20
<b>Total Miscellaneous</b>						<b>12.06</b>
<b>Total Growing, Harvesting &amp; Production Costs</b>						<b>63.81</b>
<b>Cost Per Cwt</b>						<b>3.99</b>



BARLEY - Class II  
Yield - 2700 lbs/ac

	Hours/ Acre	<u>Cash &amp; Labor Costs Per Acre</u>				Total
		Labor	Fuel & Repairs Tractor	Implt.	Materials	
<u>SEED BED PREPARATION</u>						
<u>Spring</u>						
Plow	.29	1.37	3.14	1.86	--	6.37
Disc	.11	.52	1.19	1.61	--	3.32
Herbicide (morningglory) ½ acreage						
2,4-D amine @ 16 oz/ac @ \$9.47/gal					1.19	1.19
Air - \$3.00/ac					1.50	1.50
Float	.13	.61	1.41	.07	--	2.09
<u>Fall</u>						
Harrow (Springtine)	.08	.38	.87	.37	--	1.62
Harrow (Spiketooth)	.05	.24	.54	.10	--	.88
Drill & fert. (2 men)	.075	.70	.81	.50	--	2.01
Seed 100# @ \$7.75/cwt					7.75	7.75
100# 16-20-0 @ \$159.60/ton					7.98	7.98
Herbicide (¾ acreage)						
2,4-D amine @ 10 oz/ac @ \$9.47/gal					1.13	1.13
Air - \$3.00/ac					2.25	2.25
Topdress						
100# NH <sub>4</sub> NO <sub>3</sub> @ \$7.15/cwt					7.15	7.15
Air - \$3.00/ac					3.00	3.00
Move equip., setup & service @ 10% of operating time	.07	.33	--	.04	--	.37
<u>Total Cultural</u>	.81	4.15	7.96	4.55	31.95	48.61
<u>TAXES</u>						
Land - 2X (Cropped 1 year out of 2)						5.92
<u>Total Cost Pre-Harvest</u>						54.53
Pre-Harvest Cost Per Cwt						2.02
<u>HARVEST</u>						
Combine (new-½ acreage)	.13	.66	--	4.57	--	5.23
Combine (used-½ acreage)	.13	.66	--	2.52	--	3.18
Haul @ \$1.00/ton						1.35
<u>Total Harvest</u>	.26	1.32	--	7.09	--	9.76

## BARLEY - Class II

	Hours/ Acre	Cash & Labor Costs Per Acre			Total
		Labor	Fuel & Repairs Tractor Implt.	Materials	
<u>MISCELLANEOUS COSTS</u>					
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage					1.53
Misc. Production & Operation costs @ 12% of production costs					7.04
Fire Insurance (30¢/\$100 value)					.37
Crop comprehensive insurance					1.00
Management charge @ 5% of gross income - 27 cwt @ \$4.50/cwt					<u>6.08</u>
Total Miscellaneous					<u>16.02</u>
Total Growing, Harvest & Production Costs					80.31
Cost Per Cwt					2.97
<u>INVESTMENT COSTS</u>					
Land - \$400 @ 8.8%					70.40
Buildings					.25
Tractors and Equipment					<u>9.28</u>
Total Investment					79.93
Investment Cost Per Cwt					<u>2.96</u>
					TOTAL ALL COSTS
					160.24
<u>INCOME</u>					
Stubble Value @ \$2.00/acre					<u>2.00</u>
					TOTAL CROP COSTS
					\$158.24
					COST PER CWT
					\$5.86

BARLEY - Class III  
Yield - 1700 lbs/ac

	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs		Materials	
			Tractor	Implt.		
<u>SEED BED PREPARATION</u>						
<u>Spring</u>						
Plow	.33	1.56	2.55	1.52	--	5.63
Disc	.14	.66	1.08	.57	--	2.31
Float	.14	.66	1.08	.07	--	1.81
<u>Fall</u>						
Harrow (Springtine)	.10	.47	.77	.28	--	1.52
Harrow (Spiketooth)	.06	.28	.46	.10	--	.84
Drill & fert. (2 men)	.10	.94	.77	.29	--	2.10
Seed - 100# @ \$7.75/cwt					7.75	7.75
100# 16-20-0 @ \$159.60/ton					7.98	7.98
Herbicide (3/4 acreage)						
2,4-D amine @ 10 oz/ac @ \$9.47/gal					1.13	1.13
Air - \$3.00/ac					2.25	2.25
Move equip., setup & service @ 10% of operating time	.09	.43	--	.04	--	.47
Total Cultural	.96	5.00	6.71	2.97	19.11	33.79
<u>TAXES</u>						
Land - 2X (Cropped 1 year out of 2)						3.96
Total Cost Pre-Harvest						37.75
Pre-Harvest Cost Per Cwt						2.22
<u>HARVEST COSTS</u>						
Combine (new-1/2 acreage)	.17	.86	--	4.60	--	5.46
Combine (used-1/2 acreage)	.17	.86	--	2.58	--	3.44
Haul @ \$1.00/ton						.85
Total Harvest	.34	1.72	--	7.18	--	9.75
<u>MISCELLANEOUS</u>						
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage						1.88
Misc. Production & Operation costs @ 12% of production costs						5.36
Fire Insurance (30¢/\$100 value)						.23
Crop comprehensive insurance						1.00
Management charge @ 5% of gross income - 17 @ \$4.50/cwt						3.83
Total Miscellaneous						12.30
Total Growing, Harvesting & Production Costs						59.80
Cost Per Cwt						3.52

## BARLEY - Class III

	Hours Acre	<u>Cash &amp; Labor Costs Per Acre</u>			Total
		Labor	<u>Fuel &amp; Repairs</u> Tractor Implt.	Materials	
<u>INVESTMENT COSTS</u>					
Land - \$325 @ 8.8%					57.20
Buildings					.25
Tractors and Equipment					<u>8.65</u>
Total Investment					66.10
Investment Cost Per Cwt					<u>3.89</u>
			TOTAL ALL COSTS		125.90
<u>INCOME</u>					
Stubble Value @ \$2.00/acre					<u>2.00</u>
			TOTAL CROP COSTS		\$123.90
			COST PER CWT		\$7.29

BARLEY - Class IV  
Yield - 1400 lbs/ac

	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs		Materials	
			Tractor	Implt.		
<u>SEED BED PREPARATION</u>						
<u>Spring</u>						
Plow	.31	1.47	2.43	2.43	--	6.33
Disc	.13	.61	1.02	1.35	--	2.98
Float	.13	.61	1.02	.11	--	1.74
<u>Fall</u>						
Harrow (Springtine)	.09	.43	.71	.58	--	1.72
Harrow (Spiketooth)	.06	.28	.47	.16	--	.91
Drill & fert. (2 men)	.09	.86	.71	.69	--	2.26
Seed - 100#/ac @ \$7.75/cwt					7.75	7.75
150# 16-20-0 @ \$159.60/ton					12.00	12.00
Herbicide (3/4 acreage)						
2,4-D amine @ 10 oz/ac @ \$9.47/gal					1.13	1.13
Air - \$3.00/ac					2.25	2.25
Move equip., setup & service @ 10% of operating time	.08	.38	--	.04	--	.42
Total Cultural	.88	4.64	6.36	5.36	23.13	39.49
<u>TAXES</u>						
Land - 2X (Cropped 1 year out of 2)						3.24
Total Cost Pre-Harvest						42.73
Pre-Harvest Cost Per Cwt						3.05
<u>HARVEST</u>						
Combine(new-1/2acreage)	.15	.76	--	4.30	--	5.06
Combine(used-1/2acreage)	.15	.76	--	2.40	--	3.16
Haul @ \$1.00/ton						.70
Total Harvest	.30	1.52	--	6.70	--	8.92
<u>MISCELLANEOUS</u>						
Soc. Sec., comp. ins., bonuses, vac., etc. @ 28% of hourly wage						1.72
Misc. Production & Operation costs @ 12% of production costs						5.94
Fire Insurance (30¢/\$100 value)						.19
Crop comprehensive insurance						1.00
Management charge @ 5% of gross income - 14 cwt @ \$4.50/cwt						3.15
Total Miscellaneous						12.00
Total Growing, Harvest & Production Costs						63.65
Cost Per Cwt						4.55

## BARLEY - Class IV

	Hours/ Acre	<u>Cash &amp; Labor Costs Per Acre</u>			Total
		Labor	<u>Fuel &amp; Repairs</u> Tractor Implt.	Materials	
<u>INVESTMENT COSTS</u>					
Land - \$275 @ 8.8%					48.40
Buildings					.25
Tractors and Equipment					<u>8.28</u>
Total Investment					56.93
Investment Cost Per Cwt					<u>4.07</u>
			TOTAL ALL COSTS		120.58
<u>INCOME</u>					
Stubble Value @ \$2.00/acre					<u>2.00</u>
			TOTAL CROP COSTS		\$118.58
			COST PER CWT		\$8.47



SHARE RENT-OPERATOR  
Share Rent @ 1/3

WHEAT

	Class II 27 Cwt	Class III 23 Cwt	Class IV 16 Cwt
Growing Cost (Inc. Harvest)	\$79.66	\$60.96	\$63.81
- 1/3 Fertilizer & App. Cost	6.04	2.66	4.00
- 1/3 Herbicide Cost	2.02	1.13	1.13
- Land Tax	<u>5.92</u>	<u>3.96</u>	<u>3.24</u>
	\$65.68	\$53.21	\$55.44
+ Buildings	.25	.25	.25
+ Tractors and Equipment	9.28	8.65	8.28
+ Rent	<u>36.00</u>	<u>30.67</u>	<u>21.33</u>
<b>Total Costs Per Acre</b>	<b>\$111.21</b>	<b>\$92.78</b>	<b>\$85.30</b>
<b>Cost Per Cwt</b>	<b>\$4.12</b>	<b>\$4.03</b>	<b>\$5.33</b>

BARLEY

	Class II 27 Cwt	Class III 17 Cwt	Class IV 14 Cwt
Growing Cost (Inc. Harvest)	\$80.31	\$59.80	\$63.65
- 1/3 Fertilizer & App. Cost	6.04	2.66	4.00
- 1/3 Herbicide Cost	2.02	1.13	1.13
- Land Tax	<u>5.92</u>	<u>3.96</u>	<u>3.24</u>
	\$66.33	\$52.05	\$55.28
+ Buildings	.25	.25	.25
+ Tractors and Equipment	9.28	8.65	8.28
+ Rent	<u>40.50</u>	<u>25.50</u>	<u>21.00</u>
<b>Total Costs Per Acre</b>	<b>\$116.36</b>	<b>\$86.45</b>	<b>\$84.81</b>
<b>Cost Per Cwt</b>	<b>\$4.31</b>	<b>\$5.09</b>	<b>\$6.06</b>

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COSTS TO GROW WHEAT OR BARLEY  
Varying Yields and Several Prices  
Class III - Share Rent @ 1/3

Yield Cwt/ Acre	\$4.00/ Cwt	\$4.50/ Cwt	\$5.00/ Cwt	\$5.50/ Cwt	\$6.00/ Cwt	\$6.50/ Cwt	\$7.00/ Cwt
10	7.17	7.37	7.56	7.75	7.95	8.14	8.33
15	5.31	5.51	5.70	5.89	6.09	6.28	6.47
20	4.38	4.58	4.77	4.96	5.16	5.35	5.54
25	3.83	4.02	4.21	4.41	4.60	4.79	4.99
30	3.45	3.65	3.84	4.03	4.23	4.42	4.61
35	3.19	3.38	3.58	3.77	3.96	4.15	4.35
40	2.99	3.18	3.39	3.57	3.76	3.96	4.15