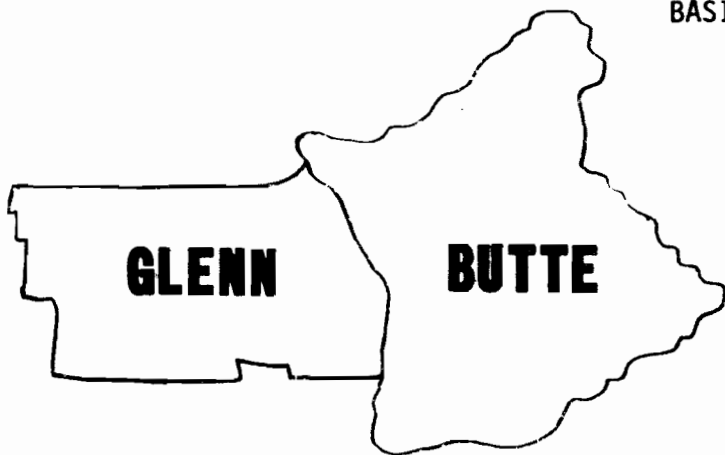


Grain Sorghum

Production Costs

(Single Crop)

TENANT
LANDOWNER
BASIS



Robert L. Sailsbery
Farm Advisor

Lee C. Benson
Economist-Farm Management

University of California
Agricultural Extension Service
Glenn-Butte Counties

UC Cooperative Extension

INVESTMENT FOR GRAIN SORGHUM PRODUCTION IN
BUTTE-GLENN COUNTIES

Item	Year Bought	Original Cost		Years Life	Annual Use (Acres)	Non-Cash Overhead	
		Total	Per Acre			Depreciation	Interest at 8%
Crawler Tractor - Diesel 90 HP	1977	\$ 50,000	\$ 62.50	15	800	\$ 4.16	\$ 2.50
Wheel Tractor - Diesel 120 HP	1977	27,000	33.75	15	800	2.25	1.35
Wheel Tractor - Diesel 100 HP	1977	22,000	27.50	15	800	1.83	1.10
Stubble Disk - 12'	1977	12,000	30.00	15	400	2.00	1.20
Offset Disk - 18' (hydraulic)	1977	12,000	15.00	15	800	1.00	.60
Field Cultivator 32 ft.	1977	4,800	6.00	10	800	.60	.24
Adjustable Harrow - 25 ft.	1977	1,000	1.25	15	800	.08	.05
Triplane - 14'	1977	7,000	11.67	15	600	.78	.47
Planter - 8 row w/Bait Boxes	1977	3,200	8.00	10	400	.80	.32
Saddle Tanks Installed	1977	2,500	4.17	10	600	.42	.17
Tool Barn Cultivator 8 row	1977	2,500	6.25	15	400	.42	.25
Ditcher - 4 ft.	1977	1,600	2.00	15	800	.13	.08
Stalk Shredder - 14 ft.	1977	3,500	8.75	10	400	.88	.35
Combine (used) - 16 ft.	1977	10,000	20.00	10	500	2.00	.80
Tool Carrier (used)	1977	2,000	2.50	15	800	.17	.10
Truck (used) - 2 ton	1977	6,000	7.50	10	800	.75	.30
Pickup	1977	5,500	6.88	5	800	1.38	.28
Shop Building	1977	10,000	12.50	40	800	.31	.50
Shop Tools	1977	4,000	5.00	15	800	.33	.20
Siphons	1977	300	.50	5	600	.10	.02
Totals		\$186,900	\$271.72			\$20.39	\$10.88

BASIS OF SINGLE CROP IRRIGATED GRAIN SORGHUM
(Tenant - Landowner Basis)

1. This cost study as a single crop study is based on an 800 acre field crop operation with 200 acres of grain sorghum. Other crops grown on the ranch may include one or more of the following crops: other grain crops, alfalfa hay, sugar beets, beans, legume seed, rice, etc. Much of the equipment listed will be used on the entire acreage sometime during the year. This study is on a tenant-landowner basis. It is doubtful if production costs would be any less on a landowner basis since interest on the land and land taxes should be significant.
2. This cost study is an attempt to outline a basis of sample costs for producing single crop irrigated grain sorghum in Glenn and Butte Counties. Various methods are used in establishing grain sorghum. Most typical are preirrigation and planting into moisture with row crop planters, preirrigation and drilling into moisture with a grain drill, bedding, then planting dry and irrigating up the sorghum. The method selected varies with soil type, grower equipment, irrigation system, etc. For the purpose of this study the procedure of preirrigation and planting into moisture on 20-inch rows is used. A grower using another method of establishing the crop can adjust cultural operations and costs to this specific situation. Irrigation methods also vary; open-ditch and siphons or gates, pipeline, etc. This study is based on open-ditch with either siphons and/or gates.
3. In allocating the equipment cost per acre in the equipment list the following calculations were made: (a) "Original Cost" of equipment is generally estimated new cost. Unless otherwise indicated, the equipment listed is based on the estimated new costs including sales tax. (b) "Cost Per Acre" is the new or used cost divided by the acres the equipment will be used on. (c) "Depreciation" is based on "Per Acre Cost" divided by the expected life of the equipment. (d) "Interest" on investment is figured on one-half of the new or used cost per acre multiplied by 8%.
4. Miscellaneous expenses have been found to be about 6% of the total cultural and harvest costs. They include such costs as preparing roadways, general weed control, office, bookkeeping, interest on operating money (6 months or less), etc.
5. Labor costs are based on a \$5.50 hourly rate for skilled labor and \$3.50 hourly rate for unskilled (irrigator). Included are cash wages, compensation insurance, Social Security, unemployment insurance and other benefits that the employer must pay.
6. Equipment operating costs are listed under fuel and repair. Included is the cost of fuel, maintenance, replacement parts, tires, etc. Tractor charges per hour are: 90 HP crawler diesel, \$6.30; 120 HP wheel diesel, \$3.55; and 100 HP wheel diesel, \$2.95.
7. Management (what the grower's decision making is worth) is figured at 5% of the market value of the crop.
8. There is a column provided entitled "Your Cost Per Acre" which growers can use to insert their individual costs. Growers are encouraged to use this column which in turn should assist them with budget questions as well as evaluate their cost-income relationship with this crop.
9. Grain sorghum growers from Glenn and Butte Counties furnished basic information for this study. Appreciation is expressed to these growers.

SAMPLE COSTS TO PRODUCE GRAIN SORGHUM
Glenn-Butte Counties

Operation	Hrs. Per/A	Cash and Labor Costs Per Acre				Total	Your Cost Per Acre
		Labor	Fuel & Repairs	Description of Materials	Total Materials		
<u>Cultural Costs</u>							
Stubble disk 2x	.60	\$ 3.30	\$ 6.66			\$ 9.96	
Disk, offset 1x	.16	.88	1.46			2.34	
Triplane 2x	.40	2.20	3.24			5.44	
Fertilize	.10	.55	.55	\$1.00/A Rental, 150 lbs. N/A @ \$.16/lb.	\$25.00	26.10	
Ditch and Irrigation Preparation	.20	1.10	1.48			2.58	
Preirrigation	.64	2.24		8 ac-in @ \$5.00/ac-ft	3.34	5.58	
Springtooth and Spiketooth	.10	.55	.70			1.25	
Plant & Starter Fertilizer	.33	1.82	2.56	17 lbs. N & 50 lbs. P205 @ \$197/T=\$20.49, 10 lbs. seed @ \$.50/lb. = \$5.00	25.49	29.87	
Cultivate 1x	.15	.83	.78			1.61	
Crop Irrigations 7x	2.24	7.84		2 1/3 ac-ft @ \$5.00 per ac-ft	11.65	19.49	
Herbicide (ground commercial)				Material \$8.53. Application \$3.00	11.53	11.53	
Greenbug Control (air)				Material \$1.68, flying \$3.50	5.18	5.18	
(i.e. down-time)	.50	2.75	.50			3.25	
TOTAL	5.42	\$24.06	\$17.93		\$82.19	\$124.18	
<u>Harvest Costs</u>							
Combine	.50	\$ 2.75	\$ 6.03			\$ 8.78	
Shred stalks	.33	1.81	1.80			3.61	
TOTAL HARVEST						\$ 12.39	
<u>Cash Overhead</u>							
Misc., office, etc. (6% of \$136.57)						\$ 8.19	
Taxes and Insurance (\$3.75 + \$.31)						4.06	
Rent 25% of 6,500 lbs. @ \$4.00 per cwt.						65.00	
TOTAL CASH OVERHEAD						\$ 77.25	
Management 5% of 6,500 lbs. @ \$4.00 per cwt.						\$ 13.00	
<u>Annual Costs</u>							
<u>INVESTMENT</u>	<u>Per Acre</u>	<u>Depreciation</u>	<u>Interest</u>				
Equipment & Bldgs.	\$271.72	\$20.39	\$10.88			\$ 31.27	
TOTAL COST PER ACRE						\$258.09	
per cwt. @ 6,500 lbs.per acre yield						\$ 3.97	

NET PER ACRE @ 6,500 LBS./A AND VARYING SORGHUM PRICES

Price/Cwt. \$	3.00	3.50	4.00	4.50	5.00	5.50
Income/A	-\$43.95	-\$20.85	+\$1.91	+\$24.65	+\$47.41	+\$70.16

NET/A AT \$4.00 PER CWT. AND VARYING YIELD IN LBS. PER ACRE

Lbs./A	5,500	6,000	6,500	7,000	7,500
Income/A	-\$26.09	-\$12.09	+\$ 1.91	+\$15.91	+\$29.91

RELATIONSHIP BETWEEN YIELD LBS./A, TOTAL COSTS AND COSTS/CWT. AT \$4.00/CWT. SELLING PRICE

Lbs./A	5,500	6,000	6,500	7,000	7,500
Total Costs	\$246.09	\$252.09	\$258.09	\$264.09	\$270.09
Cost/Cwt.	\$ 4.47	\$ 4.20	\$ 3.97	\$ 3.77	\$ 3.60

MANAGEMENT INCOME FROM VARYING YIELDS AT \$4.00/CWT.

Yield Lbs./A	5,500	6,000	6,500	7,000	7,500
Cash, Dep., Int., Costs	\$235	\$240	\$245	\$250	\$255
Gross Income	\$220	\$240	\$260	\$280	\$300
Management Income	-\$ 15	0	+\$ 15	+\$ 30	+\$ 45

Consult your farm advisor if you have questions regarding this production cost study or grain sorghum production.

Farm Advisor's Office
Glenn County

January 1977
400 copies

"The University of California's Agricultural Extension programs are available to all, with regard to race, color, or national origin."