

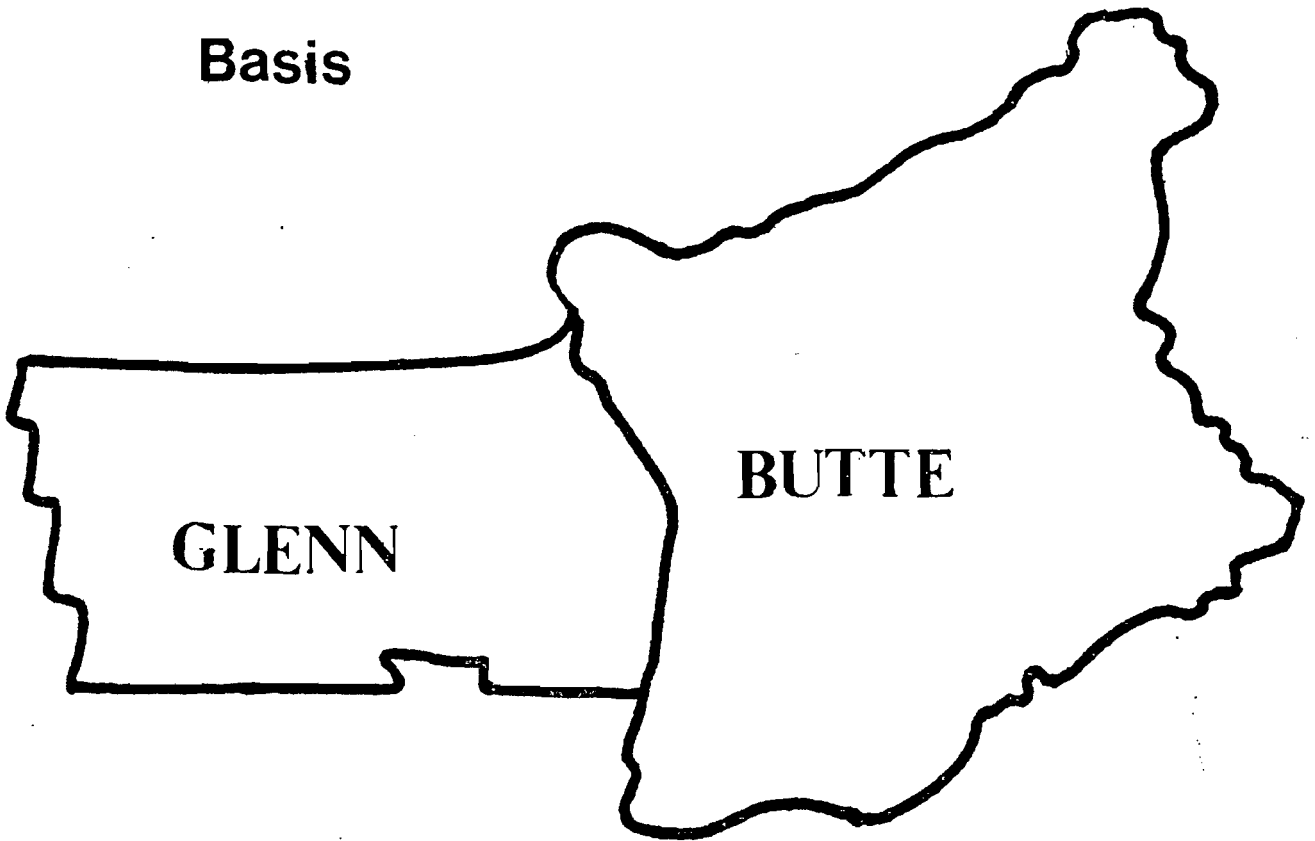
Grain Sorghum

Production Costs

Tenant

Landowner

Basis



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BASIS OF SAMPLE COSTS FOR IRRIGATED GRAIN SORGHUM

(Tenant-Landowner Basis)

1. This cost study is an attempt to outline a basis of sample costs for producing irrigated grain sorghum in Glenn and Butte Counties. While this cost study may best represent a single crop planting, it could be adapted to a double crop planting situation. Several different methods of growing grain sorghum are used. They include pre-irrigation and planting into moisture with row crop planters and pre-irrigation and drilling into moisture with a grain drill, bedding and 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 pre-irrigation and planting into moisture, on 30-inch rows is used. A planting time incorporated herbicides is included. Growers using another method of establishing the crop can adjust cultural operations and costs to their specific situations. Irrigation methods also vary. They include open ditch and siphons or gates, and gated pipe or valves from underground pipe. This study is based on open-ditch with siphons. Also an example of a fertilizer, herbicide and insecticide program was used. This also varies from grower to grower and year to year.
2. This sample cost study for grain sorghum is based on a 1500 acre field crop operation with 150 acres of grain sorghum. Other crops grown on the ranch may include one or more of the following crops: small grain, alfalfa hay, field corn, sugarbeets, beans, legume seed, rice, etc. Much of the equipment listed will be used on the entire acreage sometime during the year. The landowner receives 25% of the gross income from the crop with the tenant paying all cash production costs.
3. In allocating the equipment cost per acre the following calculations were made: (a) "Original Cost" of equipment is the new cost including sales tax. (b) "Depreciation" is the new cost per acre divided by the years of life. The new cost per acre is figured as the new cost per acre divided by the acres the equipment will be used on. (c) "Interest" on investment is figured as one-half of the new cost per acre multiplied by 13%. One-half of the new cost is the average value of the equipment during its useful life. (e) The investment per acre used in the cost study is calculated at 60% of the depreciation and interest costs for all new equipment to reflect a mix of new and used equipment.
4. Miscellaneous expenses have been found to be about 10% of the total cultural and harvest costs. They include such costs as preparing roadways, general weed control, office, bookkeeping, etc.
5. Labor costs are based on a \$7.25 hourly rate for skilled labor and \$5.50 hourly rate for irrigators. Included are cash wages, compensation insurance, Social Security, unemployment insurance and other benefits that the employer must pay.
6. 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.

Grain sorghum growers representing Glenn and Butte Counties furnished basic information for this study. Appreciation is expressed to these growers.

SAMPLE COSTS TO PRODUCE GRAIN SORGHUM

Butte & Glenn Counties 1985

Labor rate \$	7.25	/hr. tractor operator
	5.50	/hr. irrigators
Yield	6500	lbs
Roadside sale \$	5.00	per cwt

Operation	Hours per Acre	Cash and Labor Costs per Acre			Total Cost	Your Cost
		Labor	Fuel & Repairs	Materials Kind and Quantity		
Cultural costs:						
Stubble disk & roll	.33	2.42	10.13		12.54	
Chisel	.13	.91	2.84		3.74	
Disk, offset 1X	.13	.91	3.44		4.34	
Triplane	.10	.73	2.85		3.57	
Fertilize	.16	1.16	2.00	150 lbs N	33.38	36.54
				rig rental	2.00	2.00
Bed with starter fert.	.16	1.16	2.00	starter fertilizer	20.00	23.16
Ditch prep. (season)	.20	1.45	2.55			4.00
Pre-irrigate	.67	3.69		8 ac in @ \$15/ac ft.	10.00	13.69
Plant & incorporate	.25	1.81	5.78	12 lbs seed @ \$80/cwt	9.60	17.19
herbicide				herbicide material	5.68	5.68
Cultivate 1X	.13	.94	1.97			2.91
Irrigate 7x	2.24	12.32		2 1/3 ac-ft @ 15.00/acft	35.00	47.32
Aphid control (1/4 acreage)				Material, \$3.20/acre	.80	.80
				Aerial applic. \$5/acre	1.25	1.25
Misc. labor & downtime	.50	5.00				5.00
Interest on operating capital @ 12% for 6 mo.						12.86
TOTAL CULTURAL COSTS	4.99	32.48	33.55		117.71	196.60
Harvest costs:						
Combine	.33	2.42	11.16			13.57
Cash overhead:						
Office, telephone, etc.						21.02
Rent				25% of 325.00		81.25
TOTAL CASH OVERHEAD COSTS						102.27
TOTAL CASH COSTS						312.45
Investment						
				Annual Cost		
				Depreciation	Interest @ 12%	
Equipment & buildings				25.82	19.57	45.39
TOTAL CASH COSTS PER ACRE						357.84
Cost per cwt. @ 65 cwt. yield						5.51

Sorghum equipment list

EQUIPMENT AND BUILDING LIST

Interest on capital is 13%

ITEM	ORIGINAL COST	ANNUAL	LIFE (YEARS)	---ANNUAL COST---		
		USE (ACRES)		DEPREC- ATION	INTEREST AT 12%	COST/ HOUR
Tractors						
125HP track diesel	125000	1500	15	5.56	5.42	18.86
200 HP 4WD diesel	100000	1500	10	6.67	4.33	19.20
120 HP wheel diesel	55000	1500	10	3.67	2.38	12.52
100 HP wheel diesel	45000	1500	10	3.00	1.95	10.35
Disk, stubble, 12'	18000	1000	15	1.20	1.17	8.64
Disk, offset, 21'	18000	1500	15	.80	.78	8.64
Chisel (heavy duty) 16'	8000	1500	15	.36	.35	3.84
Field cultivator, 32'	10000	1500	15	.44	.43	4.80
Spiketooth adjust. -30 ft.	8000	1500	15	.36	.35	3.84
Rolling cultivator	6000	1000	10	.60	.39	2.88
Ring Roller	4500	1000	15	.30	.29	2.16
Planter, sled and incorp. 6 row	18000	1000	10	1.80	1.17	12.75
Triplane - 16 ft.	16000	1500	15	.71	.69	9.60
Bedding tool - 6 row	3000	1000	15	.20	.20	1.44
Ditcher - 5 ft.	4000	1500	20	.13	.17	2.40
Combine - 24 ft, SP	100000	1000	10	10.00	6.50	33.47
Saddle tanks (2 sets)	8000	1000	10	.80	.52	
Tool carrier	10000	1500	20	.33	.43	
Truck - 2 ton	26000	1500	15	1.16	1.13	
2 pickups	20000	1500	5	2.67	.87	
Siphons & irrigation equip.	3000	1000	7	.43	.20	
Shop tools	10000	1500	15	.44	.43	
Buildings	50000	1500	30	1.11	2.17	
Fuel tank, equipment, pump	7000	1500	15	.31	.30	
TOTAL COST	672500			43.04	32.62	
60% OF NEW COSTS	403500			25.82	19.57	

Cost of Producing Grain Sorghum at Varying Yields

	POUNDS PER ACRE				
	4500	5500	6500	7500	8500
Cultural costs	196.60	196.60	196.60	196.60	196.60
Harvest cost	13.57	13.57	13.57	13.57	13.57
Cash overhead	77.27	89.77	102.27	114.77	127.27
Total cash cost	287.44	299.94	312.44	324.94	337.44
Investment cost	45.39	45.39	45.39	45.39	45.39
Total cost	332.83	345.33	357.83	370.33	382.83

Income Above Cash Costs at Varying Yields & Prices

\$/CWT	POUNDS PER ACRE				
	4500	5500	6500	7500	8500
4.00	-107.44	-79.94	-52.44	-24.94	2.56
4.50	-84.94	-52.44	-19.94	12.56	45.06
5.00	-62.44	-24.94	12.56	50.06	87.56
5.50	-39.94	2.56	45.06	87.56	130.06
6.00	-17.44	30.06	77.56	125.06	172.56

Income Above Total Costs at Varying Yields & Prices

\$/CWT	POUNDS PER ACRE				
	4500	5500	6500	7500	8500
4.00	-152.83	-125.33	-97.83	-70.33	-42.83
4.50	-130.33	-97.83	-65.33	-32.83	-.33
5.00	-107.83	-70.33	-32.83	4.67	42.17
5.50	-85.33	-42.83	-.33	42.17	84.67
6.00	-62.83	-15.33	32.17	79.67	127.17