

**Table 7A. Income and Cash Operating Summary; Grain Sorghum, 1998**

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Conventional  
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/5/99

Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME Grain	Pound	3,200.00	\$0.11	\$352.00	\$352.00	_____
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
Paid Labor (including benefits)					25.81	_____
Tractor/Self Propelled				13.69		_____
Irrigation				12.12		_____
Chemicals and Custom Applications					43.51	_____
Fertilizer				30.14		_____
Herbicide				13.37		_____
Farm Machinery and Vehicles					18.76	_____
Diesel Fuel				6.02		_____
Repairs and Maintenance				12.74		_____
Irrigation Water (excluding labor)					75.00	_____
Water Assessment (See Note Below) **						_____
Other Purchased Inputs & Seed/Transplants				11.97	11.97	_____
TOTAL CASH LAND PREPARATION AND GROWING EXPENSES					175.05	_____
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					1.74	_____
Tractor/Self Propelled				1.74		_____
Farm Machinery and Vehicles					2.84	_____
Diesel Fuel				1.04		_____
Repairs and Maintenance				1.79		_____
Custom Harvest/Post Harvest					64.70	_____
TOTAL HARVEST AND POST HARVEST EXPENSE					69.28	_____
OPERATING OVERHEAD PICKUP USE					7.41	_____
OPERATING INTEREST AT 10.0%					6.28	_____
TOTAL CASH OPERATING EXPENSES					\$258.03	=====
RETURNS OVER CASH OPERATING EXPENSES					\$93.97	_____

Notes: The above figures do not include ownership costs, see table B for detailed cost allocation.

\*\* A water assessment charge of \$40.00 per Acre is included as an ownership cost in Table B.

**Table 7B. Allocations of Ownership Costs; Grain Sorghum, 1998**

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Conventional  
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 AREA: Marana YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/5/99

Item	-- CASH COST BASIS (\$/ACRE) --		-- TOTAL COST BASIS (\$/ACRE) --	
	Income and Costs	Net Returns	Income and Costs	Net Returns
TOTAL INCOME at \$0.11 / Lb	\$352.00		\$352.00	
TOTAL OPERATING EXPENSES	\$258.03		\$258.03	
RETURN OVER CASH OPERATING EXPENSES		\$93.97		\$93.97
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	2.37		2.37	
General and Office Overhead (5.0% of Total Operating Exp.)	12.90		12.90	
General Farm Maintenance (3.0% of Total Operating Exp.)	7.74		7.74	
Total Cash Overhead Expenses	23.01		23.01	
Total Cash Operating and Overhead Cost	281.04		281.04	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		\$70.96		\$70.96
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			13.80	
Interest on Equity, Machinery and Vehicles			6.43	
Total Capital Allocations			20.23	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		\$70.96		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				\$50.73
Land Cost / Ownership (100% Equity)				
Property Taxes (\$540.00 X 16.0% X 0.183)	15.87		15.87	
Opportunity Interest on Land (100% X 6.0 X \$540.00)			32.40	
Water Assessment	40.00		40.00	
Total Land Costs	55.87		88.27	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$15.09		
RETURNS TO MANAGEMENT AND RISK ----->				(\$37.54)
Management Services (8% of Total Operation Expenses)			20.64	
TOTAL OWNERSHIP COST	78.88		152.16	
TOTAL COST	\$336.91		\$410.18	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$15.09		
RETURNS TO RISK (PROFITS) ----->				(\$58.18)
BREAK-EVEN PRICE TO COVER OPERATING COST ( PER Lb )		\$0.08		\$0.08
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.02		\$0.05
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.11		\$0.13

**Table 7C. Variable Operating Costs; Grain Sorghum, 1998**

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Conventional  
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/5/99

No.	First Month	Operation	---- Hours * ----		---- Operating Costs (\$/ACRE *) Per Operation ----					Tot. Cash Expenses	Class	
			Machine	Labor	Fuel/Rps.	Labor	Cust/Serv.	Materials	Total			Times
1	Jun	Disk	0.225	0.250	3.78	2.05			5.82	1.0	5.82	L
2	Jun	List	0.180	0.200	2.67	1.64			4.30	1.0	4.30	L
3	Jun	Plant	0.225	0.250	2.66	2.05		11.97	16.67	1.0	16.67	L
4	Jun	Disk Ends	0.023	0.025	0.38	0.20			0.58	3.0	1.75	G
5	Jun	Buck Rows	0.022	0.025	0.09	0.20			0.29	3.0	0.87	G
6	Jun	Apply Herbicide/Ground	0.112	0.125	1.09	1.02		13.37	15.48	1.0	15.48	G
7	Jun	Irrigate		0.294		2.01		12.50	14.51	4.0	58.02	G
8	Jul	Cultivate	0.164	0.182	1.08	1.49			2.57	2.0	5.13	G
9	Jul	Irrigate/Run Fertilizer		0.300		2.05		27.57	29.62	2.0	59.23	G
10	Oct	Prepare Ends	0.011	0.013	0.19	0.11			0.30	1.0	0.30	H
11	Oct	Combine Harvest					52.20		52.20	1.0	52.20	H
12	Oct	Haul, Custom 50 CW					12.50		12.50	1.0	12.50	H
13	Nov	Cut Stalks 50 CW	0.180	0.200	2.65	1.64			4.28	1.0	4.28	P
14	Dec	Disk Residue 50 CW	0.300	0.333	5.03	2.73			7.76	1.0	7.76	L
		Pickup Use30 Mi/Acre	1.000		7.41						7.41	
		Operating Interest at 10.0					6.28				6.28	
TOTAL CASH OPERATING EXPENSES (includes all times over):											258.03	T

\*NOTES: Machine and labor hours and operating cost are for one time over the designated acreage. The "Tot. Cash Expense" column and the "TOTAL CASH OPERATING EXPENSES" row include all operations, all times over. Classes are defined below.  
 A water assessment charge of \$40.00 per Acre is included as an ownership cost in Table B.

OPERATING COST SUMMARY BY CLASS		SENSITIVITY OF THE NET REVENUES OVER TOTAL CASH EXPENSES (\$/ACRE)							
		Prices	- 25%	- 10%	Budgeted	+ 10%	+ 25%		
Land Preparation (L)	34.56	Yields	\$0.08	\$0.10	\$0.11	\$0.12	\$0.14	Break-even Price	
Growing (G)	140.49	- 25%	2,400.0	-43.43	-3.83	22.57	48.97	88.57	0.10
Harvest (H)	65.00	- 10%	2,880.0	-14.22	33.30	64.98	96.66	144.18	0.09
Post Harvest (P)	4.28	Budgeted	3,200.0	5.25	58.05	93.25	128.45	181.25	0.08
Marketing (M)	0.00	+ 10%	3,520.0	24.73	82.81	121.53	160.25	218.33	0.08
Operating Overhead (O)	13.69	+ 25%	4,000.0	53.93	119.93	163.93	207.93	273.93	0.07
Total (T)	\$258.03	Break-even Yield		3,113.67	2,449.47	2,144.50	1,907.06	1,635.45	

**Table 7D. Resource and Cash Flow Requirements; Grain Sorghum, 1998**

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Conventional  
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 AREA: Marana YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/5/99

Month *	Number Irrigations	Water Applied (inches)	Total Labor (Hrs)	Operating Costs (\$/ACRE *)						
				Purchased Water	Fuel, Oil and Repairs	Labor	Chemicals	Other Purchases	Services	Total
JUN C	1.0	5.0	1.17	12.50	10.65	9.17	13.37	11.97		57.66
JUL C	2.0	10.0	1.01	25.00	2.61	7.44	15.07			50.13
AUG C	2.0	10.0	0.64	25.00	0.46	4.46	15.07			44.99
SEP C	1.0	5.0	0.29	12.50		2.01				14.51
OCT C			0.01		0.19	0.11			32.35	32.65
NOV C			0.10		1.32	0.82			32.35	34.49
DEC C			0.43		6.36	3.55				9.90
Pickup Use30 Mi/Acre					7.41					7.41
Operating Interest at 10.0									6.28	6.28
Water Assessment				**						
<b>Total</b>	<b>6.0</b>	<b>30.0</b>	<b>3.66</b>	<b>75.00</b>	<b>29.01</b>	<b>27.56</b>	<b>43.51</b>	<b>11.97</b>	<b>70.98</b>	<b>258.03</b>
<b>%</b>				<b>29.07</b>	<b>11.24</b>	<b>10.68</b>	<b>16.86</b>	<b>4.64</b>	<b>27.51</b>	<b>100.00</b>

TOTAL RESOURCE REQUIREMENTS ( per Acre)

Total N 106.2  
 Total P 0.0  
 Total K 0.0  
 Total Labor 3.7  
 Total Water 30.0

TOTAL ENERGY REQUIREMENTS ( per Acre)

Diesel Fuel 10.4 Gal  
 Unleaded Gas 3.0 Gal  
 All Direct Energy 1.8 M BTU

EQUIPMENT REQUIREMENTS ( per Acre)

Directed Spray Rig, 8	0.11 Hr	Lister, 7 Bottom	0.18 Hr	Offset Disk, 16.5'	0.60 Hr
Pickup Truck, 1/2 Ton	1.00 Hr	Planter, Drill Type, 6 Row	0.22 Hr	Rolling Cultivator, 6 Rw	0.33 Hr
Rotary Stalk Cutter, 4 Row	0.18 Hr	Rowback, 10'	0.07 Hr	Tractor, 50 PTO HP,	0.07 Hr
Tractor, 70 PTO HP,	0.55 Hr	Tractor, 100 PTO HP	0.11 Hr	Tractor, 150 PTO HP	0.96 Hr

MATERIALS REQUIREMENT ( per Acre)

32-00-00, URAN 32, Lqd	30.00 Ga	Bromoxynil	1.50 Pt	Grain Sorghum Sd	12.00 Lb
Water, District	30.00 Al				

LABOR REQUIREMENT ( per Acre)

Irrigators	1.78 Hr	Tractor	1.88 Hr
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\*NOTE: P = Previous Year C = Current Year N = Next Year

\*\* A water assessment charge of \$40.00 per Acre is included as an ownership cost in Table B.

**Table 7E. Schedule of Operations; Grain Sorghum, 1998**

COUNTY:Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Conventional  
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/5/99

First No.	Month	Times	Operation	Equipment/ Custom Oper HP Self-Prop./ Implement	Job Rate Acres/Hr	----- Material Use and Cost Name	----- Appl. Rate \$ / Unit	----- Service Cost \$ / Unit	Labor Type
1	Jun	1.0	Disk	150 Offset Disk, 16.5'	4.00				Tractor
2	Jun	1.0	List	150 Lister, 7 Bottom	5.00				Tractor
3	Jun	1.0	Plant	70 Planter, Drill Type, 6 Row	4.00	Grain Sorghum Sd	12.00 Lb	95.00 CW	Tractor
4	Jun	3.0	Disk Ends	150 Offset Disk, 16.5'	40.00				Tractor
5	Jun	3.0	Buck Rows	50 Rowbuck, 10'	40.00				Tractor
6	Jun	1.0	Apply Herbicide/Ground	100 Directed Spray Rig, 8	8.00	Bromoxynil	1.50 Pt	67.93 Ga	Tractor
7	Jun	4.0	Irrigate		3.40	Water, District	5.00 AI	30.00 AF	Irrigators
8	Jul	2.0	Cultivate	70 Rolling Cultivator, 6 Rw	5.50				Tractor
9	Jul	2.0	Irrigate/Run Fertilizer		3.33	Water, District	5.00 AI	30.00 AF	Irrigators
						32-00-00, URAN 32,	15.00 Ga	173.00 Tn	
10	Oct	1.0	Prepare Ends	150 Offset Disk, 16.5'	80.00				Tractor
11	Oct	1.0	Combine Harvest	CST Combine Grain Sorghum				37.50 Ac	
12	Oct	1.0	Haul, Custom	CST Haul Grain				0.25 C	
13	Nov	1.0	Cut Stalks	150 Rotary Stalk Cutter, 4 Row	5.00				Tractor
14	Dec	1.0	Disk Residue	150 Offset Disk, 16.5'	3.00				Tractor
			Pickup use 30 Mi/Ac	Pickup Truck, 1/2 Ton	1.00				

\*NOTES: Machine times, labor times, and material rates are for one time over the designated acreage.

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