

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

COUNTY: Cochise FARM: Cochise County 98 WATER SOURCE: Ks Settlement, NG TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Kansas Settlement YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Sorghum(Milo), Grain DATE: 2/4/99

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)					43.73	_____
Tractor/Self Propelled				23.70		_____
Irrigation				20.04		_____
Chemicals and Custom Applications					55.79	_____
Fertilizer				13.38		_____
Insecticide				29.95		_____
Herbicide				12.46		_____
Farm Machinery and Vehicles					32.83	_____
Diesel Fuel				12.44		_____
Repairs and Maintenance				20.39		_____
Irrigation Water (excluding labor)					147.33	_____
Natural Gas/Pumping				125.88		_____
Repairs and Maintenance				21.45		_____
Other Purchased Inputs & Seed/Transplants					8.02	_____
					8.02	_____

					287.70	_____
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					3.34	_____
Tractor/Self Propelled				3.34		_____
Farm Machinery and Vehicles					3.42	_____
Diesel Fuel				1.44		_____
Repairs and Maintenance				1.97		_____
Custom Harvest/Post Harvest					59.10	_____

					65.86	_____
OPERATING OVERHEAD PICKUP USE						
					10.30	_____
OPERATING INTEREST AT 10.0%						
					12.23	_____

					\$376.09	_____

					(\$24.09)	_____

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

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

COUNTY: Cochise FARM: Cochise County 98 WATER SOURCE: Ks Settlement, NG TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Kansas Settlement YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Sorghum(Milo), Grain DATE: 2/4/99

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	\$376.09		\$376.09	
RETURN OVER CASH OPERATING EXPENSES		(\$24.09)		(\$24.09)
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	3.75		3.75	
Wells and Irrigation System	12.65		12.65	
General and Office Overhead (5.0% of Total Operating Exp.)	18.80		18.80	
General Farm Maintenance (3.0% of Total Operating Exp.)	11.28		11.28	
Total Cash Overhead Expenses	46.48		46.48	
Total Cash Operating and Overhead Cost	422.57		422.57	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		(\$70.57)		(\$70.57)
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			21.00	
Wells and Irrigation System			47.08	
Interest on Equity, Machinery and Vehicles			11.24	
Wells and Irrigation System			24.00	
Total Capital Allocations			103.32	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		(\$70.57)		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				(\$173.90)
Land Cost / Ownership (100% Equity)				
Property Taxes (\$368.00 X 16.0% X 0.144)	8.54		8.54	
Opportunity Interest on Land (100% X 6.0 X \$368.00)			22.08	
Total Land Costs	8.54		30.62	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$79.11)		
RETURNS TO MANAGEMENT AND RISK ----->				(\$204.51)
Management Services (8% of Total Operation Expenses)			30.09	
TOTAL OWNERSHIP COST	55.02		210.51	
TOTAL COST	\$431.11		\$586.60	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$79.11)		
RETURNS TO RISK (PROFITS) ----->				(\$234.60)
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$0.12		\$0.12
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.02		\$0.07
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.13		\$0.18

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

COUNTY: Cochise FARM: Cochise County 98 WATER SOURCE: Ks Settlement, NG TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Kansas Settlement YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Sorghum(Milo), Grain DATE: 2/4/99

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	Nov	Plow	0.360	0.400	5.33	3.28			8.60	1.0	8.60	L
2	Nov	Disk	0.129	0.143	2.00	1.17			3.18	1.0	3.18	L
3	Feb	Landplane	0.900	1.000	11.88	8.19			20.07	1.0	20.07	L
4	Mar	List	0.225	0.250	3.40	2.05		12.46	17.91	1.0	17.91	L
5	Apr	Apply Fert/Inject	0.150	0.167	1.66	1.37		13.38	16.40	1.0	16.40	G
6	Apr	Buck Rows	0.022	0.025	0.16	0.20			0.37	1.0	0.37	G
7	Apr	Preirrigate		0.704	35.08	4.80			39.88	1.0	39.88	G
8	Apr	Mulch	0.150	0.167	1.07	1.37			2.44	1.0	2.44	L
9	Apr	Plant	0.225	0.250	2.89	2.05		8.02	12.96	1.0	12.96	L
10	May	Remove Cap	0.150	0.167	1.07	1.37			2.44	1.0	2.44	G
11	Jun	Irrigate		0.279	14.03	1.90			15.94	8.0	127.48	G
12	Jun	Apply Insecticide/Air					4.58	15.32	19.90	1.0	19.90	G
13	Jul	Cultivate	0.164	0.182	1.36	1.49			2.85	1.0	2.85	G
14	Jul	Apply Insecticide/Air					4.23	5.82	10.05	1.0	10.05	G
15	Oct	Prepare Ends	0.023	0.025	0.35	0.20			0.56	1.0	0.56	H
16	Oct	Combine Harvest					50.10		50.10	1.0	50.10	H
17	Oct	Field Transport	0.180	0.200	1.61	1.64			3.24	1.0	3.24	H
18	Oct	Haul 5					9.00		9.00	1.0	9.00	H
19	Nov	Cut Stalks 36 CW	0.164	0.183	1.46	1.50			2.96	1.0	2.96	P
20	Nov	Disk Residue 36 CW	0.129	0.143	2.00	1.17			3.18	1.0	3.18	L
		Pickup Use40 Mi/Acre	1.333		10.30						10.30	
		Operating Interest at 10.0					12.23				12.23	
=====												
TOTAL CASH OPERATING EXPENSES (includes all times over):												
376.09 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.

OPERATING COST SUMMARY BY CLASS		SENSITIVITY OF THE NET REVENUES OVER TOTAL CASH EXPENSES (\$/ACRE)							
		Prices	- 25%	- 10%	Budgeted	+ 10%	+ 25%		
Land Preparation (L)	68.33	Yields	\$0.08	\$0.10	\$0.11	\$0.12	\$0.14	Break-even Price	
Growing (G)	219.38	- 25%	2,400.0	-161.63	-122.03	-95.63	-69.23	-29.63	0.15
Harvest (H)	62.90	- 10%	2,880.0	-131.91	-84.39	-52.71	-21.03	26.49	0.13
Post Harvest (P)	2.96	Budgeted	3,200.0	-112.09	-59.29	-24.09	11.11	63.91	0.12
Marketing (M)	0.00	+ 10%	3,520.0	-92.28	-34.20	4.52	43.24	101.32	0.11
Operating Overhead (O)	22.53	+ 25%	4,000.0	-62.56	3.44	47.44	91.44	157.44	0.10
Total (T)	376.09	Break-even Yield		5,010.33	3,956.12	3,469.46	3,089.41	2,653.42	

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

COUNTY: Cochise FARM: Cochise County 98 WATER SOURCE: Ks Settlement, NG TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Kansas Settlement YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Sorghum(Milo), Grain DATE: 2/4/99

Month *	Number Irrigations	Water Applied (inches)	Total Labor (Hrs)	Operating Costs (\$/ACRE *)						
				Purchased Water	Fuel, Oil and Repairs	Labor	Chemicals	Other Purchases	Services	Total
NOV P			0.27		3.67	2.22				5.89
DEC P			0.27		3.67	2.22				5.89
FEB C			1.00		11.88	8.19				20.07
MAR C			0.25		3.40	2.05	12.46			17.91
APR C	1.0	10.0	1.19		39.42	8.77	13.38	4.01		65.57
MAY C			0.29		2.52	2.39		4.01		8.92
JUN C	2.0	8.0	0.56		28.06	3.81	15.32		4.58	51.77
JUL C	3.0	12.0	1.02		43.46	7.20	5.82		4.23	60.71
AUG C	2.0	8.0	0.56		28.06	3.81				31.87
SEP C	1.0	4.0	0.28		14.03	1.90				15.94
OCT C			0.24		1.31	1.19			34.00	36.50
NOV C			0.47		4.11	3.32			25.10	32.53
Pickup Use 40 Mi/Acre					10.30					10.30
Operating Interest at 10.0									12.23	12.23
Total	9.0	42.0	6.40		193.88	47.07	46.98	8.02	80.14	376.09
%					51.55	12.52	12.49	2.13	21.31	100.00

TOTAL RESOURCE REQUIREMENTS (per Acre)

Total N 65.6
 Total P 0.0
 Total K 0.0
 Total Labor 6.4
 Total Water 42.0

TOTAL ENERGY REQUIREMENTS (per Acre)

Diesel Fuel 17.8 Gal
 Unleaded Gas 4.0 Gal
 Nat Gas/Pumping 339.6 Therms
 All Direct Energy 36.9 M BTU

EQUIPMENT REQUIREMENTS (per Acre)

Fertilizer Injector, 4 Row	0.15 Hr	Grain Cart, 400 BU	0.18 Hr	Landplane 12'X 45'	0.90 Hr
Lister, 5 Bottom	0.22 Hr	Moldboard Plow, 4-16 2	0.36 Hr	Offset Disk, 16.5'	0.28 Hr
Pickup Truck, 1/2 Ton	1.33 Hr	Planter, Drill Type, 4 Row	0.22 Hr	Rolling Cultivator, 4 Rw	0.16 Hr
Rotary Stalk Cutter, 4 Row	0.16 Hr	Rowbuck, 10'	0.02 Hr	Saddle Tk Sprayer, 2 Tk 8	0.22 Hr
Section Harrow, 3 Section	0.30 Hr	Tractor, 100 PTO HP,	1.21 Hr	Tractor, 125 PTO HP	1.76 Hr

MATERIALS REQUIREMENT (per Acre)

82-00-00, Anhyd.	80.00 Lb	Grain Sorghum Sd	8.00 Lb	Malathion	1.50 Pt
Metolachlor	1.50 Pt	Phorate	6.66 Lb	Water, Pump	42.00 AI

LABOR REQUIREMENT (per Acre)

Irrigators 2.94 Hr Tractor 3.30 Hr

*NOTE: P = Previous Year C = Current Year N = Next Year

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

COUNTY: Cochise FARM: Cochise County 98 WATER SOURCE: Ks Settlement, NG TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Kansas Settlement YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Sorghum(Milo), Grain DATE: 2/4/99

First No.	Month	Times	Operation	Equipment/ Custom Oper		Job Rate Acres/Hr	Material Use and Cost				Service Cost \$ / Unit	Labor Type
				HP	Self-Prop./ Implement		Name	Appl. Rate	\$ / Unit			
1	Nov	1.0	Plow	125	Moldboard Plow, 4-16 2	2.50						Tractor
2	Nov	1.0	Disk	125	Offset Disk, 16.5'	7.00						Tractor
3	Feb	1.0	Landplane	125	Landplane 12'X 45'	1.00						Tractor
4	Mar	1.0	List	125	Lister, 5 Bottom	4.00	Metolachlor	1.50	Pt	63.00	Ga	Tractor
5	Apr	1.0	Apply Fert/Inject	100	Fertilizer Injector, 4 Row	6.00	82-00-00, Anhyd.	80.00	Lb	317.00	Tn	Tractor
6	Apr	1.0	Buck Rows	100	Rowbuck, 10'	40.00						Tractor
7	Apr	1.0	Preirrigate	1.42	Water, Pump	10.00		10.00	Al	42.09	AF	Irrigators
8	Apr	1.0	Mulch	100	Section Harrow, 3 Section	6.00						Tractor
9	Apr	1.0	Plant	100	Planter, Drill Type, 4 Row	4.00	Grain Sorghum Sd	8.00	Lb	95.00	CW	Tractor
10	May	1.0	Remove Cap	100	Section Harrow, 3 Section	6.00						Tractor
11	Jun	8.0	Irrigate	3.58	Water, Pump	4.00		4.00	Al	42.09	AF	Irrigators
12	Jun	1.0	Apply Insecticide/Air	CST	Air Apply Granules 50lbs		Phorate	6.66	Lb	2.18	Lb	4.58 Ac
13	Jul	1.0	Cultivate	100	Rolling Cultivator, 4 Rw	5.50						Tractor
14	Jul	1.0	Apply Insecticide/Air	CST	Air Spray, 3 Gal Mix		Malathion	1.50	Pt	29.42	Ga	4.23 Ac
15	Oct	1.0	Prepare Ends	125	Offset Disk, 16.5'	40.00						Tractor
16	Oct	1.0	Combine Harvest	CST	Combine Grain Sorghum							37.50 Ac
17	Oct	1.0	Field Transport	100	Grain Cart, 400 BU	5.00						Tractor
18	Oct	1.0	Haul	CST	Haul Grain							0.25 C
19	Nov	1.0	Cut Stalks	100	Rotary Stalk Cutter, 4 Row	5.50						Tractor
20	Nov	1.0	Disk Residue	125	Offset Disk, 16.5'	7.00						Tractor
			Pickup use 40 Mi/Ac	Pickup	Truck, 1/2 Ton	0.75						

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

ARIZONA COOPERATIVE EXTENSION
 Department of Ag and Resource Economics
 University of Arizona F 7 / 76