

Table 10A. Income and Cash Operating Summary; Grain Sorghum (Late), 1998

COUNTY: Pinal FARM: Pinal County 98 WATER SOURCE: Central Arizona TILLAGE: Double Cropped
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Maricopa YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Durum DATE: 2/18/99

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)					43.93	_____
Tractor/Self Propelled				15.80		_____
Irrigation				28.13		_____
Chemicals and Custom Applications					71.44	_____
Fertilizer				71.44		_____
Farm Machinery and Vehicles					19.15	_____
Diesel Fuel				6.92		_____
Repairs and Maintenance				12.24		_____
Irrigation Water (excluding labor)					132.00	_____
Water Assessment (See Note Below) **						_____
Other Purchased Inputs & Seed/Transplants				10.07	10.07	_____
					-----	_____
					276.59	_____
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					1.84	_____
Tractor/Self Propelled				1.84		_____
Farm Machinery and Vehicles					2.63	_____
Diesel Fuel				1.00		_____
Repairs and Maintenance				1.63		_____
Custom Harvest/Post Harvest					59.10	_____
					-----	_____
					63.58	_____
OPERATING OVERHEAD PICKUP USE						
					7.71	_____
OPERATING INTEREST AT 10.0%						
					7.35	_____
					=====	=====
					\$355.23	_____
					-----	-----
					(\$3.23)	_____

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

** A water assessment charge of \$9.90 per Acre is included as an ownership cost in Table B.

Table 10B. Allocations of Ownership Costs; Grain Sorghum (Late), 1998

COUNTY: Pinal FARM: Pinal County 98 WATER SOURCE: Central Arizona TILLAGE: Double Cropped
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Maricopa YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Durum DATE: 2/18/99

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	\$355.23		\$355.23	
RETURN OVER CASH OPERATING EXPENSES		(\$3.23)		(\$3.23)
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	2.31		2.31	
General and Office Overhead (5.0% of Total Operating Exp.)	17.76		17.76	
General Farm Maintenance (3.0% of Total Operating Exp.)	10.66		10.66	
Total Cash Overhead Expenses	30.72		30.72	
Total Cash Operating and Overhead Cost	385.95		385.95	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		(\$33.95)		(\$33.95)
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			13.02	
Interest on Equity, Machinery and Vehicles			6.59	
Total Capital Allocations			19.61	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		(\$33.95)		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				(\$53.56)
Land Cost / Ownership (100% Equity)				
Property Taxes (\$447.00 X 16.0% X 0.169)	6.08		6.08	
Opportunity Interest on Land (100% X 6.0 X \$447.00)			13.41	
Water Assessment	9.90		9.90	
Total Land Costs	15.98		29.39	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$49.93)		
RETURNS TO MANAGEMENT AND RISK ----->				(\$82.95)
Management Services (8% of Total Operation Expenses)			28.42	
TOTAL OWNERSHIP COST	46.70		108.14	
TOTAL COST	\$401.93		\$463.36	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$49.93)		
RETURNS TO RISK (PROFITS) ----->				(\$111.36)
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$0.11		\$0.11
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.01		\$0.03
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.13		\$0.14

Table 10C. Variable Operating Costs; Grain Sorghum (Late), 1998

COUNTY: Pinal FARM: Pinal County 98 WATER SOURCE: Central Arizona TILLAGE: Double Cropped
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Maricopa YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Durum DATE: 2/18/99

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	Apply Fert/Ground	0.075	0.083	0.42	0.68		31.89	32.99	1.0	32.99	G
2	Jun	Disk	0.225	0.250	3.92	2.05			5.97	1.0	5.97	L
3	Jun	List	0.180	0.200	2.43	1.64			4.07	1.0	4.07	L
4	Jun	Mulch	0.300	0.333	3.01	2.73			5.73	1.0	5.73	L
5	Jun	Plant	0.180	0.200	2.18	1.64		10.07	13.89	1.0	13.89	L
6	Jun	Buck Rows	0.225	0.250	1.21	2.05			3.25	1.0	3.25	G
7	Jun	Irrigate		0.750		5.12		24.00	29.12	1.0	29.12	G
8	Jul	Cultivate	0.164	0.182	1.03	1.49			2.52	2.0	5.05	G
9	Jul	Irrigate/Run Fertilizer		0.562		3.84		31.18	35.02	3.0	105.05	G
10	Sep	Irrigate		0.562		3.84		18.00	21.83	3.0	65.50	G
11	Oct	Prepare Ends	0.022	0.025	0.23	0.20			0.43	1.0	0.43	H
12	Oct	Combine Harvest					50.10		50.10	1.0	50.10	H
13	Oct	Haul, Custom 36 CW					9.00		9.00	1.0	9.00	H
14	Nov	Cut Stalks 36 CW	0.180	0.200	2.41	1.64			4.05	1.0	4.05	P
15	Nov	Disk Residue 36 CW	0.225	0.250	3.92	2.05			5.97	1.0	5.97	L
		Pickup Use30 Mi/Acre	1.000		7.71						7.71	
		Operating Interest at 10.0					7.35				7.35	
TOTAL CASH OPERATING EXPENSES (includes all times over):											355.23	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 \$9.90 per Acre is included as an ownership cost in Table B.

OPERATING COST SUMMARY BY CLASS

Land Preparation (L)	35.63
Growing (G)	240.96
Harvest (H)	59.53
Post Harvest (P)	4.05
Marketing (M)	0.00
Operating Overhead (O)	15.06
Total (T)	355.23

SENSITIVITY OF THE NET REVENUES OVER TOTAL CASH EXPENSES (\$/ACRE)

		Prices					Break-even Price
		- 25%	- 10%	Budgeted	+ 10%	+ 25%	
Yields		\$0.08	\$0.10	\$0.11	\$0.12	\$0.14	
- 25%	2,400.0	-141.69	-102.09	-75.69	-49.29	-9.69	0.14
- 10%	2,880.0	-111.62	-64.10	-32.42	-0.74	46.78	0.12
Budgeted	3,200.0	-91.58	-38.78	-3.58	31.62	84.42	0.11
+ 10%	3,520.0	-71.54	-13.46	25.26	63.98	122.06	0.10
+ 25%	4,000.0	-41.48	24.52	68.52	112.52	178.52	0.09
Break-even Yield		4,662.21	3,690.09	3,239.74	2,887.36	2,482.35	

Table 10D. Resource and Cash Flow Requirements; Grain Sorghum (Late), 1998

COUNTY: Pinal FARM: Pinal County 98 WATER SOURCE: Central Arizona TILLAGE: Double Cropped
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Maricopa YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Durum DATE: 2/18/99

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	0.5	4.0	1.47	12.00	11.47	11.49	31.89	5.03		71.89
JUL C	1.5	10.0	1.53	30.00	3.76	11.22	13.18	5.03		63.19
AUG C	2.0	12.0	1.12	36.00		7.67	26.37			70.04
SEP C	2.0	12.0	1.12	36.00		7.67				43.67
OCT C	1.0	6.0	0.59	18.00	0.23	4.04			29.55	43.27
NOV C			0.22		3.17	1.84			29.55	26.01
DEC C			0.22		3.17	1.84				5.01
Pickup Use30 Mi/Acre					7.71					7.71
Operating Interest at 10.0									7.35	7.35
Water Assessment				**						
Total	7.0	44.0	6.28	132.00	29.49	45.78	71.44	10.07	66.45	355.23
%				37.16	8.30	12.89	20.11	2.83	18.71	100.00

TOTAL RESOURCE REQUIREMENTS (per Acre)

Total N 178.0
 Total P 50.0
 Total K 0.0
 Total Labor 6.3
 Total Water 44.0

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)

Fertilizer Broadcaster, 0.08 Hr	Lister, 7 Bottom 0.18 Hr	Offset Disk, 13.5' 0.02 Hr
Offset Disk, 16.5' 0.45 Hr	Pickup Truck, 1/2 Ton 1.00 Hr	Planter, Drill Type, 6 Row 0.18 Hr
Power Mulcher, 4 Rw 0.30 Hr	Rolling Cultivator, 4 Rw 0.33 Hr	Rotary Stalk Cutter, 4 Row 0.18 Hr
Rowbuck, 10' 0.22 Hr	Tractor, 70 PTO HP, 0.81 Hr	Tractor, 100 PTO HP, 0.32 Hr
Tractor, 125 PTO HP 0.36 Hr	Tractor, 150 PTO HP 0.45 Hr	

MATERIALS REQUIREMENT (per Acre)

16-20-00, Dry 250.00 Lb	32-00-00, URAN 32, Lqd 39.00 Ga	Grain Sorghum Sd 10.00 Lb
Water, District 44.00 Al		

LABOR REQUIREMENT (per Acre)

Irrigators 4.12 Hr	Tractor 2.15 Hr
--------------------	-----------------

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

** A water assessment charge of \$9.90 per Acre is included as an ownership cost in Table B.

Table 10E. Schedule of Operations; Grain Sorghum (Late), 1998

COUNTY: Pinal FARM: Pinal County 98 WATER SOURCE: Central Arizona TILLAGE: Double Cropped
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Maricopa YIELD: 3,200.0 Lb / Acre PREVIOUS CROP: Wheat, Durum DATE: 2/18/99

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			\$ / Unit
1	Jun	1.0	Apply Fert/Ground	70	Fertilizer Broadcaster,	12.00	16-20-00, Dry	250.00	Lb	240.67	Tn	Tractor
2	Jun	1.0	Disk	150	Offset Disk, 16.5'	4.00						Tractor
3	Jun	1.0	List	125	Lister, 7 Bottom	5.00						Tractor
4	Jun	1.0	Mulch	100	Power Mulcher, 4 Rw	3.00						Tractor
5	Jun	1.0	Plant	70	Planter, Drill Type, 6 Row	5.00	Grain Sorghum Sd	10.00	Lb	95.00	CW	Tractor
6	Jun	1.0	Buck Rows	70	Rowbuck, 10'	4.00						Tractor
7	Jun	1.0	Irrigate			1.33	Water, District	8.00	Al	36.00	AF	Irrigators
8	Jul	2.0	Cultivate	70	Rolling Cultivator, 4 Rw	5.50						Tractor
9	Jul	3.0	Irrigate/Run Fertilizer			1.78	Water, District	6.00	Al	36.00	AF	Irrigators
							32-00-00, URAN 32,	13.00	Ga	173.00	Tn	
10	Sep	3.0	Irrigate			1.78	Water, District	6.00	Al	36.00	AF	Irrigators
11	Oct	1.0	Prepare Ends	100	Offset Disk, 13.5'	40.00						Tractor
12	Oct	1.0	Combine Harvest		CST Combine Grain Sorghum							37.50 Ac
13	Oct	1.0	Haul, Custom		CST Haul Grain							0.25 C
14	Nov	1.0	Cut Stalks	125	Rotary Stalk Cutter, 4 Row	5.00						Tractor
15	Nov	1.0	Disk Residue	150	Offset Disk, 16.5'	4.00						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.

ARIZONA COOPERATIVE EXTENSION
 Department of Ag and Resource Economics
 University of Arizona F 5 / 78