

Table 6A. Income and Cash Operating Summary; Grain Sorghum, 1998

COUNTY: Greenlee FARM: Greenlee County 98 WATER SOURCE: Duncan East, Nat Gas TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Duncan Valley YIELD: 5,500.0 Lb / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/4/99

Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME Grain	Pound	5,500.00	\$0.11	\$605.00	\$605.00	_____
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
Paid Labor (including benefits)					52.74	_____
Tractor/Self Propelled				36.37		_____
Irrigation				16.36		_____
Chemicals and Custom Applications					84.25	_____
Fertilizer				71.53		_____
Insecticide				10.76		_____
Herbicide				1.97		_____
Farm Machinery and Vehicles					23.58	_____
Diesel Fuel				9.96		_____
Repairs and Maintenance				13.62		_____
Irrigation Water (excluding labor)					48.39	_____
Natural Gas/Pumping				42.81		_____
Repairs and Maintenance				5.57		_____
Other Purchased Inputs & Seed/Transplants					10.02	_____
					10.02	_____

					218.98	_____
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					4.36	_____
Tractor/Self Propelled				4.36		_____
Farm Machinery and Vehicles					3.89	_____
Diesel Fuel				1.81		_____
Repairs and Maintenance				2.08		_____
Custom Harvest/Post Harvest					79.50	_____

					87.76	_____
OPERATING OVERHEAD PICKUP USE						
					10.09	_____
OPERATING INTEREST AT 10.0%						
					15.16	_____

					\$331.99	_____

					\$273.01	_____

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

Table 6B. Allocations of Ownership Costs; Grain Sorghum, 1998

COUNTY: Greenlee FARM: Greenlee County 98 WATER SOURCE: Duncan East, Nat Gas TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Duncan Valley YIELD: 5,500.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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	\$605.00		\$605.00	
TOTAL OPERATING EXPENSES	\$331.99		\$331.99	
RETURN OVER CASH OPERATING EXPENSES		\$273.01		\$273.01
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	3.32		3.32	
Wells and Irrigation System	3.31		3.31	
General and Office Overhead (5.0% of Total Operating Exp.)	16.60		16.60	
General Farm Maintenance (3.0% of Total Operating Exp.)	9.96		9.96	
Total Cash Overhead Expenses	33.19		33.19	
Total Cash Operating and Overhead Cost	365.18		365.18	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		\$239.82		\$239.82
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			17.45	
Wells and Irrigation System			33.99	
Interest on Equity, Machinery and Vehicles			8.96	
Wells and Irrigation System			8.73	
Total Capital Allocations			69.14	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		\$239.82		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				\$170.69
Land Cost / Ownership (100% Equity)				
Property Taxes (\$400.00 X 16.0% X 0.084)	5.44		5.44	
Opportunity Interest on Land (100% X 6.0 X \$400.00)			24.00	
Total Land Costs	5.44		29.44	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$234.39		
RETURNS TO MANAGEMENT AND RISK ----->				\$141.25
Management Services (8% of Total Operation Expenses)			26.56	
TOTAL OWNERSHIP COST	38.63		158.32	
TOTAL COST	\$370.61		\$490.31	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$234.39		
RETURNS TO RISK (PROFITS) ----->				\$114.69
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$0.06		\$0.06
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.01		\$0.03
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.07		\$0.09

Table 6C. Variable Operating Costs; Grain Sorghum, 1998

COUNTY: Greenlee FARM: Greenlee County 98 WATER SOURCE: Duncan East, Nat Gas TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Duncan Valley YIELD: 5,500.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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	Feb	Rip	0.300	0.333	2.51	2.73			5.23	2.0	10.47	L
2	Mar	Disk	0.180	0.200	1.76	1.64			3.40	1.0	3.40	L
3	Mar	Landplane	0.257	0.286	2.18	2.34			4.53	1.0	4.53	L
4	Apr	Apply Fert/Ground	0.060	0.067	0.45	0.55		38.09	39.08	1.0	39.08	G
5	Apr	List	0.180	0.200	1.54	1.64			3.17	1.0	3.17	L
6	Apr	Buck Rows	0.030	0.033	0.22	0.27			0.49	1.0	0.49	G
7	Apr	Preirrigate		0.629	12.10	5.15			17.25	1.0	17.25	G
8	May	Mulch	0.150	1.670	1.06	13.68			14.73	1.0	14.73	L
9	May	Plant	0.257	0.286	3.28	2.34		10.02	15.64	1.0	15.64	L
10	May	Remove Cap	0.150	0.167	1.06	1.37			2.43	1.0	2.43	G
11	Jun	Cultivate	0.450	0.500	4.01	4.09			8.11	1.0	8.11	G
12	Jun	Irrigate/Run Fertilizer		0.314	6.05	2.57		33.44	42.06	1.0	42.06	G
13	Jun	Apply Herbicide/Ground	0.150	0.167	1.25	1.37		1.97	4.58	1.0	4.58	G
14	Jun	Irrigate		0.211	6.05	1.73			7.78	5.0	38.88	G
15	Aug	Apply Insecticide/Air						4.23	6.53	1.0	10.76	G
16	Nov	Prepare Ends	0.030	0.033	0.29	0.27			0.56	1.0	0.56	H
17	Nov	Combine Harvest						62.00	62.00	1.0	62.00	H
18	Nov	Haul, Custom 70 CW						17.50	17.50	1.0	17.50	H
19	Dec	Cut Stalks 70 CW	0.450	0.500	3.60	4.09			7.69	1.0	7.69	P
20	Dec	Disk Residue 70 CW	0.180	0.200	1.76	1.64			3.40	1.0	3.40	L
		Pickup Use40 Mi/Acre	1.333		10.09						10.09	
		Operating Interest at 10.0						15.16			15.16	
TOTAL CASH OPERATING EXPENSES (includes all times over):											331.99	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)	55.34	Yields	\$0.08	\$0.10	\$0.11	\$0.12	\$0.14	Break-even Price
Growing (G)	163.63	- 25%	4,125.0	30.27	98.33	143.70	189.08	257.14
Harvest (H)	80.06	- 10%	4,950.0	85.16	166.84	221.29	275.74	357.41
Post Harvest (P)	7.69	Budgeted	5,500.0	121.76	212.51	273.01	333.51	424.26
Marketing (M)	0.00	+ 10%	6,050.0	158.36	258.19	324.74	391.29	491.11
Operating Overhead (O)	25.25	+ 25%	6,875.0	213.26	326.70	402.32	477.95	591.39
Total (T)	331.99	Break-even Yield		3,670.19	2,940.96	2,596.97	2,325.02	2,009.39

Table 6D. Resource and Cash Flow Requirements; Grain Sorghum, 1998

COUNTY: Greenlee FARM: Greenlee County 98 WATER SOURCE: Duncan East, Nat Gas TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Duncan Valley YIELD: 5,500.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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
FEB C			0.67		5.02	5.45				10.47
MAR C			0.49		3.94	3.98				7.92
APR C	1.0	12.0	0.93		14.30	7.61	38.09			60.00
MAY C			2.12		5.40	17.38		10.02		32.80
JUN C	2.0	12.0	1.19		17.35	9.76	35.41			62.53
JUL C	2.0	12.0	0.42		12.10	3.46				15.55
AUG C	2.0	12.0	0.42		12.10	3.46	6.53		4.23	26.31
NOV C			0.03		0.29	0.27			79.50	80.06
DEC C			0.70		5.36	5.73				11.09
Pickup Use40 Mi/Acre					10.09					10.09
Operating Interest at 10.0									15.16	15.16
Water Assessment				**						
Total	7.0	48.0	6.97		85.95	57.10	80.02	10.02	98.89	331.99
%					25.89	17.20	24.10	3.02	29.79	100.00

TOTAL RESOURCE REQUIREMENTS (per Acre)

Total N 212.0
 Total P 60.0
 Total K 0.0
 Total Labor 7.0
 Total Water 48.0

TOTAL ENERGY REQUIREMENTS (per Acre)

Diesel Fuel 15.4 Gal
 Unleaded Gas 4.0 Gal
 Nat Gas/Pumping 103.7 Therms
 All Direct Energy 13.0 M BTU

EQUIPMENT REQUIREMENTS (per Acre)

Fertilizer Broadcaster,	0.06 Hr	Landplane 12'X 45'	0.26 Hr	Lister, 5 Bottom	0.18 Hr
Offset Disk, 12'	0.39 Hr	Pickup Truck, 1/2 Ton	1.33 Hr	Planter, Drill Type, 4 Row	0.26 Hr
Rotary Stalk Cutter, 2 Row	0.45 Hr	Rowbuck, 10'	0.03 Hr	Saddle Tk Sprayer, 2 Tk 8	0.15 Hr
Section Harrow, 3 Section	0.30 Hr	Sled Cultivator, 4Rw	0.45 Hr	Tractor, 100 PTO HP,	3.12 Hr
V-Ripper, 5 Shnk	0.60 Hr				

MATERIALS REQUIREMENT (per Acre)

16-20-00, Dry	300.00 Lb	2,4-d	1.00 Pt	82-00-00, Anhyd.	200.00 Lb
Dimethoate	2.00 Pt	Grain Sorghum Sd	10.00 Lb	Water, Pump	48.00 AI

LABOR REQUIREMENT (per Acre)

Irrigators	2.00 Hr	Tractor	4.97 Hr
------------	---------	---------	---------

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

Table 6E. Schedule of Operations; Grain Sorghum, 1998

COUNTY: Greenlee FARM: Greenlee County 98 WATER SOURCE: Duncan East, Nat Gas TILLAGE: Conventional
 CROP: Sorghum(Milo), Grain ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Duncan Valley YIELD: 5,500.0 Lb / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/4/99

First No.	Month	Times	Operation	Equipment/ Custom Oper		Job Rate Acres/Hr	Material Use and Cost				Service Cost \$ / Unit	Labor Types
				HP	Self-Prop./ Implement		Name	Appl. Rate	\$ / Unit			
1	Feb	2.0	Rip	100	V-Ripper, 5 Shnk	3.00						Tractor
2	Mar	1.0	Disk	100	Offset Disk, 12'	5.00						Tractor
3	Mar	1.0	Landplane	100	Landplane 12'X 45'	3.50						Tractor
4	Apr	1.0	Apply Fert/Ground	100	Fertilizer Broadcaster,	15.00	16-20-00, Dry	300.00	Lb	240.67	Tn	Tractor
5	Apr	1.0	List	100	Lister, 5 Bottom	5.00						Tractor
6	Apr	1.0	Buck Rows	100	Rowbuck, 10'	30.00						Tractor
7	Apr	1.0	Preirrigate			1.59	Water, Pump	12.00	Al	12.10	AF	Irrigators
8	May	1.0	Mulch	100	Section Harrow, 3 Section	6.00						Tractor
9	May	1.0	Plant	100	Planter, Drill Type, 4 Row	3.50	Grain Sorghum Sd	10.00	Lb	95.00	CW	Tractor
10	May	1.0	Remove Cap	100	Section Harrow, 3 Section	6.00						Tractor
11	Jun	1.0	Cultivate	100	Sled Cultivator, 4Rw	2.00						Tractor
12	Jun	1.0	Irrigate/Run Fertilizer			3.18	Water, Pump	6.00	Al	12.10	AF	Irrigators
							82-00-00, Anhyd.	200.00	Lb	317.00	Tn	
13	Jun	1.0	Apply Herbicide/Ground	100	Saddle Tk Sprayer, 2 Tk 8	6.00	2,4-d	1.00	Pt	14.92	Ga	Tractor
14	Jun	5.0	Irrigate			4.75	Water, Pump	6.00	Al	12.10	AF	Irrigators
15	Aug	1.0	Apply Insecticide/Air		CST Air Spray, 3 Gal Mix		Dimethoate	2.00	Pt	24.75	Ga	4.23 Ac
16	Nov	1.0	Prepare Ends	100	Offset Disk, 12'	30.00						Tractor
17	Nov	1.0	Combine Harvest		CST Combine Wheat							37.50 Ac
18	Nov	1.0	Haul, Custom		CST Haul Grain							0.25 C
19	Dec	1.0	Cut Stalks	100	Rotary Stalk Cutter, 2 Row	2.00						Tractor
20	Dec	1.0	Disk Residue	100	Offset Disk, 12'	5.00						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 9 / 76