

Table 5A. Income and Cash Operating Summary; Barley (Double Crop), 1998

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Double Cropped
 CROP: Barley ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Marana YIELD: 4,800.0 Lb / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/5/99

Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME Grain	Pound	4,800.00	\$0.06	\$302.40	\$302.40	_____
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
Paid Labor (including benefits)					24.55	_____
Tractor/Self Propelled				12.27		_____
Irrigation				12.28		_____
Chemicals and Custom Applications					55.41	_____
Fertilizer				55.41		_____
Farm Machinery and Vehicles					18.42	_____
Diesel Fuel				6.12		_____
Repairs and Maintenance				12.30		_____
Irrigation Water (excluding labor)					90.00	_____
Water Assessment (See Note Below) **						_____
Other Purchased Inputs & Seed/Transplants				25.20	25.20	_____
					-----	_____
					213.58	_____
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					0.11	_____
Tractor/Self Propelled				0.11		_____
Farm Machinery and Vehicles					0.19	_____
Diesel Fuel				0.06		_____
Repairs and Maintenance				0.13		_____
Custom Harvest/Post Harvest					67.50	_____
					-----	_____
					67.80	_____
OPERATING OVERHEAD PICKUP USE						
					4.94	_____
OPERATING INTEREST AT 10.0%						
					8.44	_____
					=====	=====
					\$294.76	_____
TOTAL CASH OPERATING EXPENSES						
					=====	=====
RETURNS OVER CASH OPERATING EXPENSES						
					\$7.64	_____

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

** A water assessment charge of \$20.00 per Acre is included as an ownership cost in Table B.

Table 5B. Allocations of Ownership Costs; Barley (Double Crop), 1998

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Double Cropped
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 AREA: Marana YIELD: 4,800.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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 \$0.06 / Lb	\$302.40		\$302.40	
TOTAL OPERATING EXPENSES	\$294.76		\$294.76	
RETURN OVER CASH OPERATING EXPENSES		\$7.64		\$7.64
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	2.02		2.02	
General and Office Overhead (5.0% of Total Operating Exp.)	14.74		14.74	
General Farm Maintenance (3.0% of Total Operating Exp.)	8.84		8.84	
Total Cash Overhead Expenses	25.60		25.60	
Total Cash Operating and Overhead Cost	320.36		320.36	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		(\$17.96)		(\$17.96)
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			11.62	
Interest on Equity, Machinery and Vehicles			6.06	
Total Capital Allocations			17.68	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		(\$17.96)		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				(\$35.64)
Land Cost / Ownership (100% Equity)				
Property Taxes (\$540.00 X 16.0% X 0.183)	7.94		7.94	
Opportunity Interest on Land (100% X 6.0 X \$540.00)			16.20	
Water Assessment	20.00		20.00	
Total Land Costs	27.94		44.14	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$45.90)		
RETURNS TO MANAGEMENT AND RISK ----->				(\$79.77)
Management Services (8% of Total Operation Expenses)			23.58	
TOTAL OWNERSHIP COST	53.54		111.00	
TOTAL COST	\$348.30		\$405.76	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		(\$45.90)		
RETURNS TO RISK (PROFITS) ----->				(\$103.36)
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$0.06		\$0.06
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.01		\$0.02
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.07		\$0.08

Table 5C. Variable Operating Costs; Barley (Double Crop), 1998

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Double Cropped
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 AREA: Marana YIELD: 4,800.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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	Nov	Apply Fert/Ground	0.075	0.083	0.42	0.68		25.27	26.37	1.0	26.37	G
2	Nov	Disk	0.225	0.250	3.78	2.05			5.82	1.0	5.82	L
3	Nov	Landplane	0.257	0.286	3.70	2.34			6.04	1.0	6.04	L
4	Dec	List	0.180	0.200	2.67	1.64			4.30	1.0	4.30	L
5	Dec	Plant	0.277	0.308	2.52	2.52		25.20	30.24	1.0	30.24	L
6	Dec	Disk Ends	0.011	0.013	0.19	0.11			0.30	1.0	0.30	G
7	Dec	Buck Rows	0.023	0.025	0.12	0.20			0.33	1.0	0.33	G
8	Dec	Irrigate		0.600		4.09		30.00	34.09	1.0	34.09	G
9	Mar	Irrigate		0.300		2.05		15.00	17.05	2.0	34.09	G
10	Mar	Irrigate/Run Fertilizer		0.300		2.05		30.07	32.11	2.0	64.23	G
11	May	Prepare Ends	0.011	0.013	0.19	0.11			0.30	1.0	0.30	H
12	May	Combine Harvest						55.00	55.00	1.0	55.00	H
13	May	Haul, Custom 50 CW						12.50	12.50	1.0	12.50	H
14	Jun	Disk Residue 50 CW	0.300	0.333	5.03	2.73			7.76	1.0	7.76	L
		Pickup Use20 Mi/Acre	0.667		4.94				4.94		4.94	
		Operating Interest at 10.0					8.44		8.44		8.44	
TOTAL CASH OPERATING EXPENSES (includes all times over):											294.76	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 \$20.00 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)	54.17	Yields						Break-even Price	
Growing (G)	159.41		\$0.05	\$0.06	\$0.06	\$0.07	\$0.08		
Harvest (H)	67.80								
Post Harvest (P)	0.00	- 25%	3,600.0	-108.86	-74.84	-52.16	-29.48	4.54	0.08
Marketing (M)	0.00	- 10%	4,320.0	-85.01	-44.18	-16.97	10.25	51.07	0.07
Operating Overhead (O)	13.38	Budgeted	4,800.0	-69.11	-23.75	6.49	36.73	82.09	0.06
		+ 10%	5,280.0	-53.21	-3.31	29.95	63.22	113.11	0.06
Total (T)	\$294.76	+ 25%	6,000.0	-29.36	27.34	65.14	102.94	159.64	0.05
		Break-even Yield		6,886.22	5,357.78	4,667.18	4,134.28	3,529.74	

Table 5D. Resource and Cash Flow Requirements; Barley (Double Crop), 1998

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Double Cropped
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 AREA: Marana YIELD: 4,800.0 Lb / Acre PREVIOUS CROP: Cotton, Upland 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
NOV P			0.62		7.90	5.07	25.27			38.24
DEC P	1.0	12.0	1.15	30.00	5.49	8.56		25.20		69.26
MAR C	1.0	6.0	0.30	15.00		2.05	15.07			32.11
APR C	2.0	12.0	0.60	30.00		4.09	15.07			49.16
MAY C	1.0	6.0	0.31	15.00	0.19	2.15			12.00	29.34
JUN C			0.33		5.03	2.73			55.50	63.26
Pickup Use20 Mi/Acre					4.94					4.94
Operating Interest at 10.0 Water Assessment				**					8.44	8.44
Total	5.0	36.0	3.31	90.00	23.55	24.66	55.41	25.20	75.94	294.76
%				30.53	7.99	8.37	18.80	8.55	25.76	100.00

TOTAL RESOURCE REQUIREMENTS (per Acre)

Total N 138.2
 Total P 40.0
 Total K 0.0
 Total Labor 3.3
 Total Water 36.0

TOTAL ENERGY REQUIREMENTS (per Acre)

Diesel Fuel 9.1 Gal
 Unleaded Gas 2.0 Gal
 All Direct Energy 1.5 M BTU

EQUIPMENT REQUIREMENTS (per Acre)

Fertilizer Broadcaster, 0.08 Hr	Grain Drill, 12' 0.28 Hr	Landplane 12'X 45' 0.26 Hr
Lister, 7 Bottom 0.18 Hr	Offset Disk, 16.5' 0.55 Hr	Pickup Truck, 1/2 Ton 0.67 Hr
Rowbuck, 10' 0.02 Hr	Tractor, 60 PTO HP 0.37 Hr	Tractor, 150 PTO HP 0.98 Hr

MATERIALS REQUIREMENT (per Acre)

16-20-00, Dry 200.00 Lb	32-00-00, URAN 32, Lqd 30.00 Ga	Barley Sd, Cert 100.00 Lb
Water, District 36.00 Al		

LABOR REQUIREMENT (per Acre)

Irrigators 1.80 Hr	Tractor 1.51 Hr
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*NOTE: P = Previous Year C = Current Year N = Next Year

** A water assessment charge of \$20.00 per Acre is included as an ownership cost in Table B.

Table 5E. Schedule of Operations; Barley (Double Crop), 1998

COUNTY: Pima FARM: Pima County 98 WATER SOURCE: Cortaro-Marana TILLAGE: Double Cropped
 CROP: Barley ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam
 AREA: Marana YIELD: 4,800.0 Lb / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/5/99

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	Nov	1.0	Apply Fert/Ground	60	Fertilizer Broadcaster,	12.00	16-20-00, Dry	200.00	Lb	240.67	Tn	Tractor
2	Nov	1.0	Disk	150	Offset Disk, 16.5'	4.00						Tractor
3	Nov	1.0	Landplane	150	Landplane 12'X 45'	3.50						Tractor
4	Dec	1.0	List	150	Lister, 7 Bottom	5.00						Tractor
5	Dec	1.0	Plant	60	Grain Drill, 12'	3.25	Barley Sd, Cert	100.00	Lb	24.00	CW	Tractor
6	Dec	1.0	Disk Ends	150	Offset Disk, 16.5'	80.00						Tractor
7	Dec	1.0	Buck Rows	60	Rowbuck, 10'	40.00						Tractor
8	Dec	1.0	Irrigate			1.67	Water, District	12.00	Al	30.00	AF	Irrigators
9	Mar	2.0	Irrigate			3.33	Water, District	6.00	Al	30.00	AF	Irrigators
10	Mar	2.0	Irrigate/Run Fertilizer			3.33	Water, District	6.00	Al	30.00	AF	Irrigators
							32-00-00, URAN 32,	15.00	Ga	173.00	Tn	
11	May	1.0	Prepare Ends	150	Offset Disk, 16.5'	80.00						Tractor
12	May	1.0	Combine Harvest		CST Combine Barley							37.50 Ac
13	May	1.0	Haul, Custom		CST Haul Grain							0.25 C
14	Jun	1.0	Disk Residue	150	Offset Disk, 16.5'	3.00						Tractor
			Pickup use 20 Mi/Ac		Pickup Truck, 1/2 Ton	1.50						

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

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