

Table 5A. Income and Cash Operating Summary; Alfalfa Hay Production, 1998

COUNTY: Yuma FARM: Yuma County 98 WATER SOURCE: Yuma County Water TILLAGE: Conventional
 CROP: Alfalfa Hay w/Graze ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam
 AREA: Yuma Valley North YIELD: 8.4 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 1/25/99

Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME	Alfalfa	Ton	8.40	\$96.70	\$812.28	\$830.28
	Grazing	Head Days	200.00	\$0.09	\$18.00	
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
	Paid Labor (including benefits)				35.31	
	Tractor/Self Propelled			5.79		
	Irrigation			29.52		
	Chemicals and Custom Applications				46.38	
	Fertilizer			15.37		
	Insecticide			21.37		
	Herbicide			9.65		
	Farm Machinery and Vehicles				4.68	
	Diesel Fuel			1.79		
	Repairs and Maintenance			2.89		
	Irrigation Water (excluding labor)				25.83	
	Water Assessment (See Note Below) **					
	Other Purchased Inputs & Seed/Transplants			15.90	15.90	
	TOTAL CASH LAND PREPARATION AND GROWING EXPENSES				128.11	
CASH HARVEST AND POST HARVEST EXPENSES						
	Paid Labor (including benefits)				31.29	
	Tractor/Self Propelled			15.44		
	Farm Machinery and Vehicles				111.24	
	Diesel Fuel			12.43		
	Repairs and Maintenance			98.81		
	Other Materials				27.58	
	TOTAL HARVEST AND POST HARVEST EXPENSE				170.11	
	OPERATING OVERHEAD PICKUP USE				10.08	
	OPERATING INTEREST AT 10.0%				20.83	
	TOTAL CASH OPERATING EXPENSES				\$329.12	
	RETURNS OVER CASH OPERATING EXPENSES				\$501.16	

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

** A water assessment charge of \$62.00 per Acre is included as an ownership cost in Table B.

Table 5B. Allocations of Ownership Costs; Alfalfa Hay Production, 1998

COUNTY: Yuma FARM: Yuma County 98 WATER SOURCE: Yuma County Water TILLAGE: Conventional
 CROP: Alfalfa Hay w/Graze ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam
 AREA: Yuma Valley North YIELD: 8.4 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 1/25/99

Item	-- CASH COST BASIS (\$/ACRE) --		-- TOTAL COST BASIS (\$/ACRE) --	
	Income and Costs	Net Returns	Income and Costs	Net Returns
TOTAL INCOME at \$96.70 / Tn	\$830.28		\$830.28	
TOTAL OPERATING EXPENSES	\$329.12		\$329.12	
RETURN OVER CASH OPERATING EXPENSES		\$501.16		\$501.16
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	11.70		11.70	
General and Office Overhead (5.0% of Total Operating Exp.)	16.46		16.46	
General Farm Maintenance (3.0% of Total Operating Exp.)	9.87		9.87	
Total Cash Overhead Expenses	38.03		38.03	
Total Cash Operating and Overhead Cost	367.16		367.16	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		\$463.12		\$463.12
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			81.18	
Interest on Equity, Machinery and Vehicles			6.10	
Stand Establishment (3 year crop)	153.59		153.59	
Total Capital Allocations	153.59		240.87	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		\$309.53		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				\$222.25
Land Cost / Ownership (100% Equity)				
Property Taxes (\$1,314. X 16.0% X 0.132)	27.79		27.79	
Opportunity Interest on Land (100% X 6.0 X \$1,314.)			78.84	
Water Assessment	62.00		62.00	
Total Land Costs	89.79		168.63	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$219.74		
RETURNS TO MANAGEMENT AND RISK ----->				\$53.62
Management Services (8% of Total Operation Expenses)			26.33	
TOTAL OWNERSHIP COST	281.42		473.87	
TOTAL COST	\$610.54		\$802.99	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$219.74		
RETURNS TO RISK (PROFITS) ----->				\$27.29
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$37.04		\$37.04
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$33.50		\$56.41
BREAK-EVEN PRICE TO COVER TOTAL COST		\$70.54		\$93.45

Table 5C. Variable Operating Costs; Alfalfa Hay Production, 1998

COUNTY: Yuma FARM: Yuma County 98 WATER SOURCE: Yuma County Water TILLAGE: Conventional
 CROP: Alfalfa Hay w/Graze ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam
 AREA: Yuma Valley North YIELD: 8.4 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 1/25/99

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	Jan	Irrigate		0.267			1.74		1.29	3.03	16.0	48.43	G
2	Feb	Rerun Borders	0.090	0.100	0.47	0.78				1.25	4.0	5.01	G
3	Jan	Swathing	0.180	0.200	2.67	1.30				3.97	9.0	35.76	H
4	Jan	Raking	0.069	0.077	0.64	0.60				1.24	9.0	11.15	H
5	Jan	Baling	0.129	0.143	3.44	1.12		3.06		7.62	9.0	68.60	H
6	Jan	Roadsiding	0.064	0.071	5.60	0.46				6.07	9.0	54.59	H
7	Feb	Apply Herbicide/Ground	0.150	0.167	1.45	1.30			9.65	12.39	1.0	12.39	G
8	Feb	Apply Insecticide/Air						4.23	2.78	7.01	1.0	7.01	G
9	Aug	Apply Insecticide/Air						4.23	10.13	14.36	1.0	14.36	G
10	Sep	Irrigate/Run Fertilizer		0.270		1.75			20.54	22.29	1.0	22.29	G
11	Oct	Renovate	0.196	0.219	1.46	1.71				3.17	0.3	0.95	G
12	Oct	Plant	0.330	0.367	3.00	2.86		53.00		58.86	0.3	17.66	L
		Pickup Use40 Mi/Acre	1.333		10.08							10.08	
		Operating Interest at 10.0						20.83				20.83	
TOTAL CASH OPERATING EXPENSES (includes all times over):											329.12	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 \$62.00 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%	Break-even Price	
Land Preparation (L)	17.66	Yields	\$72.52	\$87.03	\$96.70	\$106.37	\$120.88		
Growing (G)	110.45	- 25%	6.3	178.09	269.47	330.39	391.31	482.69	44.26
Harvest (H)	170.11	- 10%	7.6	243.95	353.61	426.71	499.82	609.48	40.26
Post Harvest (P)	0.00	Budgeted	8.4	287.86	409.70	490.93	572.16	694.00	38.26
Marketing (M)	0.00	+ 10%	9.2	331.77	465.80	555.15	644.50	778.53	36.62
Operating Overhead (O)	30.91	+ 25%	10.5	397.64	549.94	651.47	753.01	905.31	34.65
Total (T)	\$329.12	Break-even Yield		2.89	2.26	1.98	1.76	1.50	

Table 5D. Resource and Cash Flow Requirements; Alfalfa Hay Production, 1998

COUNTY: Yuma FARM: Yuma County 98 WATER SOURCE: Yuma County Water TILLAGE: Conventional
 CROP: Alfalfa Hay w/Graze ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam
 AREA: Yuma Valley North YIELD: 8.4 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 1/25/99

Month *	Number Irrigations	Water Applied (inches)	Total Labor (Hrs)	Operating Costs (\$/ACRE *)						
				Purchased Water	Fuel, Oil and Repairs	Labor	Chemicals	Other Purchases	Services	Total
JAN C	1.0	5.0	0.76		12.36	5.21		3.06		20.64
FEB C	1.0	5.0	0.53		1.92	3.82	11.04		2.12	18.89
MAR C	1.0	5.0	0.76		12.36	5.21	1.39	3.06	2.12	24.14
APR C	2.0	10.0	1.02		12.36	6.95		3.06		22.37
MAY C	2.0	10.0	1.13		12.83	7.73		3.06		23.62
JUN C	2.0	10.0	1.02		12.36	6.95		3.06		22.37
JUL C	2.0	10.0	1.13		12.83	7.73		3.06		23.62
AUG C	1.0	5.0	0.76		12.36	5.21	10.13	3.06	4.23	34.99
SEP C	2.0	10.0	1.13	10.33	12.83	7.75	15.37	3.06		49.35
OCT C	1.0	5.0	0.27	5.17		1.74				6.90
NOV C	1.0	5.0	0.93	5.17	13.70	6.58		18.96		44.41
DEC C	1.0	5.0	0.27	5.17		1.74				6.90
Pickup Use40 Mi/Acre					10.08					10.08
Operating Interest at 10.0									20.83	20.83
Water Assessment				**						
Total	17.0	85.0	9.70	25.83	125.99	66.60	37.92	43.48	29.30	329.12
%				7.85	38.28	20.24	11.52	13.21	8.90	100.00

TOTAL RESOURCE REQUIREMENTS (per Acre)	TOTAL ENERGY REQUIREMENTS (per Acre)
Total N 5.0	Diesel Fuel 18.4 Gal
Total P 26.0	Unleaded Gas 4.0 Gal
Total K 0.0	All Direct Energy 3.0 M BTU
Total Labor 9.7	
Total Water 85.0	

EQUIPMENT REQUIREMENTS (per Acre)		
Bale Wagon, SP PRC 0.58 Hr	Baler, 3 wire w/motor 1.16 Hr	Border Disk, Heavy Duty 0.36 Hr
Fertilizer Spreader, 18' 0.15 Hr	Grain Drill, 12' 0.10 Hr	Pickup Truck, 1/2 Ton 1.33 Hr
Rake, 9.5' LH AND RH 0.62 Hr	Spring Tooth Renovator, 0.06 Hr	Tractor, 50 PTO HP, 1.16 Hr
Tractor, 70 PTO HP, 1.29 Hr	Windrower, 14.0', HS, SC 1.62 Hr	

MATERIALS REQUIREMENT (per Acre)		
05-26-00-08, Phosfuric 10.00 Ga	Alfalfa Sd, Cert 6.00 Lb	Baling Twine (6500') 3.96 TF
Chlorpyrifos 1.50 Pt	Malathion 1.00 Pt	Trifluralin 10.00 Lb
Water, District 85.00 Al		

LABOR REQUIREMENT (per Acre)		
Harvest 2.44 Hr	Irrigators 4.54 Hr	Tractor 2.72 Hr

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

** A water assessment charge of \$62.00 per Acre is included as an ownership cost in Table B.

Table 5E. Schedule of Operations; Alfalfa Hay Production, 1998

COUNTY: Yuma FARM: Yuma County 98 WATER SOURCE: Yuma County Water TILLAGE: Conventional
 CROP: Alfalfa Hay w/Graze ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam
 AREA: Yuma Valley North YIELD: 8.4 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 1/25/99

First No.	Month	Times	Operation	Equipment/ Custom Oper		Job Rate	-----	Material Use and Cost			-----	Service Cost	Labor
				HP	Self-Prop./ Implement			Acres/Hr	Name	Appl. Rate			
1	Jan	16.0	Irrigate			3.70	Water, District	5.00	AI	3.10	AF		Irrigators
2	Feb	4.0	Rerun Borders	70	Border Disk, Heavy Duty	10.00							Tractor
3	Jan	9.0	Swathing		Windrower, 14.0', HS, SC	5.00							Harvest
4	Jan	9.0	Raking	70	Rake, 9.5' LH AND RH	13.00							Tractor
5	Jan	9.0	Baling	50	Baler, 3 wire w/motor	7.00	Baling Twine (6500')	0.44	TF	6.57	TF		Tractor
6	Jan	9.0	Roadsiding		Bale Wagon, SP PRC	14.10							Harvest
7	Feb	1.0	Apply Herbicide/Ground	70	Fertilizer Spreader, 18'	6.00	Trifluralin	10.00	Lb	0.91	Lb		Tractor
8	Feb	1.0	Apply Insecticide/Air		CST Air Spray, 3 Gal Mix		Malathion	1.00	Pt	21.00	Ga	4.23	Ac
9	Aug	1.0	Apply Insecticide/Air		CST Air Spray, 3 Gal Mix		Chlorpyrifos	1.50	Pt	50.95	Ga	4.23	Ac
10	Sep	1.0	Irrigate/Run Fertilizer			3.70	05-26-00-08, Phosfuric	10.00	Ga	290.00	Tn		Irrigators
							Water, District	5.00	AI	12.40	AF		
11	Oct	0.3	Renovate	70	Spring Tooth Renovator, 16'	4.60							Tractor
12	Oct	0.3	Plant	70	Grain Drill, 12'	2.70	Alfalfa Sd, Cert	20.00	Lb	250.00	CW		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 1 / 4