

**Table 4A. Income and Cash Operating Summary; Alfalfa Hay Production, 1998**

COUNTY: Maricopa      FARM: Maricopa County 98      WATER SOURCE: Salt River Project      TILLAGE: Conventional  
 CROP: Alfalfa Hay      ACRES: 1.0      IRRIGATION SYSTEM: Flood Basin      SOIL: Sandy-Loam  
 AREA: Salt River Project      YIELD: 8.0 Tn / Acre      PREVIOUS CROP: Cotton, Upland      DATE: 2/3/99

Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME	Hay	Ton	8.00	\$96.70	\$773.60	\$773.60
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
Paid Labor (including benefits)					48.26	
Tractor/Self Propelled				4.39		
Irrigation				43.87		
Chemicals and Custom Applications					50.72	
Insecticide				11.76		
Herbicide				38.95		
Farm Machinery and Vehicles					3.91	
Diesel Fuel				1.17		
Repairs and Maintenance				2.74		
Irrigation Water (excluding labor)					112.50	
Water Assessment (See Note Below) **						
Other Purchased Inputs & Seed/Transplants				66.09	66.09	
TOTAL CASH LAND PREPARATION AND GROWING EXPENSES					281.48	
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					39.65	
Tractor/Self Propelled				21.15		
Other/Contract				18.49		
Farm Machinery and Vehicles					94.58	
Diesel Fuel				13.16		
Repairs and Maintenance				81.42		
Other Materials					23.83	
TOTAL HARVEST AND POST HARVEST EXPENSE					158.06	
OPERATING OVERHEAD PICKUP USE					10.19	
OPERATING INTEREST AT 10.0%					32.03	
TOTAL CASH OPERATING EXPENSES					\$481.76	
RETURNS OVER CASH OPERATING EXPENSES					\$291.84	

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 4B. Allocations of Ownership Costs; Alfalfa Hay Production, 1998**

COUNTY: Maricopa FARM: Maricopa County 98 WATER SOURCE: Salt River Project TILLAGE: Conventional  
 CROP: Alfalfa Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam  
 AREA: Salt River Project YIELD: 8.0 Tn / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/3/99

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	\$773.60		\$773.60	
TOTAL OPERATING EXPENSES	\$481.76		\$481.76	
RETURN OVER CASH OPERATING EXPENSES		\$291.84		\$291.84
CASH OVERHEAD EXPENSES				
Taxes, Housing and Insurance, Farm Machinery	10.01		10.01	
General and Office Overhead (5.0% of Total Operating Exp.)	24.09		24.09	
General Farm Maintenance (3.0% of Total Operating Exp.)	14.45		14.45	
Total Cash Overhead Expenses	48.55		48.55	
Total Cash Operating and Overhead Cost	530.31		530.31	
RETURNS OVER CASH OPER. AND OVER. EXPENSES		\$243.29		\$243.29
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery and Vehicles			68.70	
Interest on Equity, Machinery and Vehicles			5.41	
Stand Establishment (3 year crop)	110.89		110.89	
Total Capital Allocations	110.89		185.00	
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK ----->		\$132.40		
RETURNS TO LAND, MANAGEMENT AND RISK ----->				\$58.29
Land Cost / Ownership (100% Equity)				
Property Taxes (\$619.00 X 16.0% X 0.141)	13.98		13.98	
Opportunity Interest on Land (100% X 6.0 X \$619.00)			37.14	
Water Assessment	20.00		20.00	
Total Land Costs	33.98		71.12	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$98.41		
RETURNS TO MANAGEMENT AND RISK ----->				(\$12.84)
Management Services (8% of Total Operation Expenses)			38.54	
TOTAL OWNERSHIP COST	193.43		343.22	
TOTAL COST	\$675.19		\$824.98	
RETURNS TO CAPITAL, MANAGEMENT AND RISK ----->		\$98.41		
RETURNS TO RISK (PROFITS) ----->				(\$51.38)
BREAK-EVEN PRICE TO COVER OPERATING COST ( PER Lb )		\$60.22		\$60.22
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$24.18		\$42.90
BREAK-EVEN PRICE TO COVER TOTAL COST		\$84.40		\$103.12

**Table 4C. Variable Operating Costs; Alfalfa Hay Production, 1998**

COUNTY: Maricopa FARM: Maricopa County 98 WATER SOURCE: Salt River Project TILLAGE: Conventional  
 CROP: Alfalfa Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam  
 AREA: Salt River Project YIELD: 8.0 Tn / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/3/99

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	Irrigate		0.300		2.92			2.78	5.70	9.0	51.32	G
2	Mar	Irrigate/Run Herbicide		0.300		2.92			21.08	24.00	6.0	144.00	G
3	Apr	Apply Insecticide/Air						4.23	7.53	11.76	1.0	11.76	G
4	Apr	Swathing	0.180	0.200	2.69	1.95				4.64	7.0	32.51	H
5	Apr	Raking	0.150	0.167	1.49	1.63				3.12	7.0	21.85	H
6	Apr	Baling	0.129	0.143	3.71	1.39			3.40	8.51	7.0	59.54	H
7	Apr	Roadsiding	0.064	0.071	5.62	0.69				6.31	7.0	44.15	H
8	Oct	Renovate	0.180	0.200	1.26	1.95				3.21	1.0	3.21	G
9	Oct	Plant	0.225	0.250	2.66	2.44			66.09	71.19	1.0	71.19	L
		Pickup Use40 Mi/Acre	1.333		10.19							10.19	
		Operating Interest at 10.0						32.03				32.03	
TOTAL CASH OPERATING EXPENSES (includes all times over):											481.76	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

Land Preparation (L)	71.19
Growing (G)	210.29
Harvest (H)	158.06
Post Harvest (P)	0.00
Marketing (M)	0.00
Operating Overhead (O)	42.22
Total (T)	\$481.76

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

Prices	- 25%	- 10%	Budgeted	+ 10%	+ 25%		
Yields	\$72.52	\$87.03	\$96.70	\$106.37	\$120.88	Break-even Price	
- 25%	6.0	4.19	91.22	149.24	207.26	294.29	71.83
- 10%	7.2	67.52	171.95	241.58	311.20	415.64	63.15
Budgeted	8.0	109.73	225.77	303.13	380.49	496.53	58.81
+ 10%	8.8	151.94	279.59	364.68	449.78	577.42	55.26
+ 25%	10.0	215.26	360.31	457.01	553.71	698.76	51.00
Break-even Yield		5.92	4.64	4.06	3.61	3.09	

**Table 4D. Resource and Cash Flow Requirements; Alfalfa Hay Production, 1998**

COUNTY: Maricopa FARM: Maricopa County 98 WATER SOURCE: Salt River Project TILLAGE: Conventional  
 CROP: Alfalfa Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam  
 AREA: Salt River Project YIELD: 8.0 Tn / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/3/99

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	1.0	6.0	0.30			2.92					2.92
MAR C	1.0	6.0	0.30	5.00		2.92	6.49				14.42
APR C	2.0	12.0	1.18	16.50	13.51	11.51	14.03	3.40	4.23		63.19
MAY C	1.0	6.0	0.88		13.51	8.59		3.40			25.50
JUN C	2.0	12.0	1.18	16.50	13.51	11.51	6.49	3.40			51.42
JUL C	2.0	12.0	1.18	21.50	13.51	11.51	6.49	3.40			56.42
AUG C	1.0	6.0	0.88	5.00	13.51	8.59		3.40			30.50
SEP C	2.0	12.0	1.18	21.50	13.51	11.51	6.49	3.40			56.42
OCT C	2.0	12.0	1.63	21.50	17.42	15.90	6.49	69.50			130.81
NOV C	1.0	6.0	0.30	5.00		2.92					7.92
Pickup Use40 Mi/Acre					10.19						10.19
Operating Interest at 10.0									32.03		32.03
Water Assessment				**							
<b>Total</b>	<b>15.0</b>	<b>90.0</b>	<b>9.02</b>	<b>112.50</b>	<b>108.69</b>	<b>87.90</b>	<b>46.49</b>	<b>89.92</b>	<b>36.26</b>		<b>481.76</b>
<b>%</b>				<b>23.35</b>	<b>22.56</b>	<b>18.25</b>	<b>9.65</b>	<b>18.66</b>	<b>7.53</b>		<b>100.00</b>

**TOTAL RESOURCE REQUIREMENTS ( per Acre)**

Total N 0.0  
 Total P 0.0  
 Total K 0.0  
 Total Labor 9.0  
 Total Water 90.0

**TOTAL ENERGY REQUIREMENTS ( per Acre)**

Diesel Fuel 17.8 Gal  
 Unleaded Gas 4.0 Gal  
 All Direct Energy 3.0 M BTU

**EQUIPMENT REQUIREMENTS ( per Acre)**

Bale Wagon, SP PRC 0.45 Hr	Baler, 3 wire w/motor 0.90 Hr	Grain Drill, 14' 0.22 Hr
Pickup Truck, 1/2 Ton 1.33 Hr	Rake, 9.5' LH AND RH 1.05 Hr	Spring Tooth Renovator, 0.18 Hr
Tractor, 50 PTO HP 0.18 Hr	Tractor, 80 PTO HP 0.22 Hr	Tractor, 80 PTO HP, 1.95 Hr
Windrower, 14.0', HS, SC 1.26 Hr		

**MATERIALS REQUIREMENT ( per Acre)**

Alfalfa Sd, Cert 25.00 Lb	Dimethoate 1.50 Pt	EPTC 8.40 Pt
Twine, Plastic, 6500 ' 3.43 TF	Water, District 90.00 AI	

**LABOR REQUIREMENT ( per Acre)**

Harvest 1.90 Hr	Irrigators 4.50 Hr	Tractor 2.62 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 4E. Schedule of Operations; Alfalfa Hay Production, 1998**

COUNTY: Maricopa FARM: Maricopa County 98 WATER SOURCE: Salt River Project TILLAGE: Conventional  
 CROP: Alfalfa Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam  
 AREA: Salt River Project YIELD: 8.0 Tn / Acre PREVIOUS CROP: Cotton, Upland DATE: 2/3/99

First No.	Month	Times	Operation	Equipment/ Custom Oper		Job Rate Acres/Hr	Material Use Name	Material Use and Cost		Service Cost \$ / Unit	Labor Type
				HP	Self-Prop./ Implement			Appl. Rate	\$ / Unit		
1	Feb	9.0	Irrigate			3.33	Water, District	6.00	AI 5.56	AF	Irrigators
2	Mar	6.0	Irrigate/Run Herbicide			3.33	Water, District	6.00	AI 29.17	AF	Irrigators
							EPTC	1.40	Pt 35.08	Ga	
3	Apr	1.0	Apply Insecticide/Air	CST	Air Spray, 3 Gal Mix		Dimethoate	1.50	Pt 38.00	Ga	4.23 Ac
4	Apr	7.0	Swathing		Windrower, 14.0', HS, SC	5.00					Harvest
5	Apr	7.0	Raking		80 Rake, 9.5' LH AND RH	6.00					Tractor
6	Apr	7.0	Baling		80 Baler, 3 wire w/motor	7.00	Twine, Plastic, 6500'	0.49	TF 6.57	TF	Tractor
7	Apr	7.0	Roadsiding		Bale Wagon, SP PRC	14.10					Harvest
8	Oct	1.0	Renovate		50 Spring Tooth Renovator, 16'	5.00					Tractor
9	Oct	1.0	Plant		80 Grain Drill, 14'	4.00	Alfalfa Sd, Cert	25.00	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.

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