

Table 6A. Income and Cash Operating Cost Summary, Upland Cotton, 1996

COUNTY: Pima FARM: Pima County Farm WATER SOURCE: C-MID TILLAGE: Conventional  
 CROP: Cotton, Upland ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 1,103.0 Lb/Acre PREVIOUS CROP: Cotton, Upland DATE: 10/14/96

Item	Unit	Quantity	Price /Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME -> Lint	Pound	1,103.00	\$0.7200	\$794.16		
Cottonseed	Ton	0.97	114.6000	111.16	\$905.32	
CASH LAND PREPARATION AND GROWING EXPENSES (including sales tax)						
Paid Labor (including benefits)					66.52	
Tractor/Self Propelled				43.22		
Hand				6.66		
Irrigation				15.77		
Other/Contract				0.88		
Chemicals & Custom Applications					130.87	
Fertilizers				40.17		
Insecticides				60.43		
Herbicides				30.26		
Farm Machinery and Vehicles					45.13	
Diesel Fuel				19.69		
Repairs & Maint.				25.44		
Irrigation Water (excluding labor)					115.50	
Other Purchased Inputs & Services					18.07	
Seed/Transplants				9.07		
Other Services & Rentals				9.00		
TOTAL CASH LAND PREPARATION AND GROWING EXPENSES					376.10	
CASH HARVEST AND POST HARVEST EXPENSES						
Paid Labor (including benefits)					10.06	
Tractor/Self Propelled				4.69		
Other/Contract				5.37		
Chemicals & Custom Applications					20.84	
Other Chemicals				20.84		
Farm Machinery and Vehicles					49.40	
Diesel Fuel				7.06		
Repairs & Maint.				42.34		
Custom Harvest/Post Harvest					3.33	
Cotton Ginning					97.32	
Crop Assessments					7.99	
Other Materials					1.67	
TOTAL HARVEST AND POST HARVEST EXPENSE					190.62	
OPERATING OVERHEAD->PICKUP USE					15.07	
OPERATING INTEREST AT 9.0%					13.04	
TOTAL CASH OPERATING EXPENSES					\$594.82	
RETURNS OVER CASH OPERATING EXPENSES					\$310.50	

Notes: The above figures do not include ownership costs, see Table 6B on Next Page for detailed cost allocation.

Table 6B. Allocation of Ownership Costs; Upland Cotton, 1996

COUNTY: Pima	FARM: Pima County Farm	WATER SOURCE: C-MID	TILLAGE: Conventional
CROP: Cotton, Upland	ACRES: 1.0	IRRIGATION SYSTEM: Flood Furrow	SOIL: Sandy-Loam
AREA: Marana	YIELD: 1,103.0 Lb/Acre	PREVIOUS CROP: Cotton, Upland	DATE: 10/14/96

Item	- CASH COST BASIS (\$/ACRE) - Income & Costs	Net Returns	- TOTAL COST BASIS (\$/ACRE) - Income & Costs	Net Returns
TOTAL INCOME at \$ 0.7200/Lb + 2nd Crop	\$905.32		\$905.32	
TOTAL OPERATING EXPENSES	594.81		594.81	
RETURN OVER CASH OPERATING EXPENSES		\$310.50		\$310.50
CASH OVERHEAD EXPENSES				
Taxes, Housing & Insur., Farm Machinery	9.45		9.45	
Gen. & Off. Overhead ( 5% of Tot. Oper. Exp.)	29.74		29.74	
General Farm Maint. ( 3% of Tot. Oper. Exp.)	17.84		17.84	
Total Cash Overhead Expenses	57.03		57.03	
Total Cash Oper. & Over. Cost	651.85		651.85	
RETURNS OVER CASH OPER. & OVER. EXPENSES.		253.46		253.46
CAPITAL ALLOCATIONS (100% Equity)				
Capital Replacement, Machinery & Vehicles			65.45	
Interest on Equity, Machinery & Vehicles			28.75	
Total Capital Allocations			94.20	
RETURNS TO LAND, CAPITAL, MANAGEMENT & RISK		253.46		
RETURNS TO LAND, MANAGEMENT & RISK				159.26
LAND COSTS / OWNERSHIP (100% Equity)				
Property Taxes (\$540 X 16% X .14778)	12.76		12.76	
Opport. Inter. on Land (100% X 6.0% X \$540)			32.40	
Total Land Costs	12.76		45.16	
RETURNS TO MANAGEMENT, CAPITAL & RISK		240.70		
RETURNS TO MANAGEMENT & RISK				114.09
Management Services ( 8% of Tot. Oper. Exp.)			47.58	
TOTAL OWNERSHIP COST	69.79		243.98	
TOTAL COST	\$664.61		\$838.80	
RETURN TO MANAGEMENT, CAPITAL & RISK		\$240.70		
RETURN TO RISK (PROFITS)				\$66.51
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$0.4384		\$0.4384
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$0.0632		\$0.2212
BREAK-EVEN PRICE TO COVER TOTAL COST		\$0.5017		\$0.6596

Table 6C. Variable Operating Costs; Upland Cotton, 1996

COUNTY: Pima FARM: Pima County Farm WATER SOURCE: C-MID TILLAGE: Conventional  
 CROP: Cotton, Upland ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 1,103.0 Lb/Acre PREVIOUS CROP: Cotton, Upland DATE: 10/14/96

No.	Month	First Operation	— Hours * —		Operating Costs (\$/Acre*)				Total	Times	Tot. Cash		
			Machine	Labor	Fuel/Rps.	Labor	Cust/Ser.	Materials			Expense	Class	
1	Jan	Rip	0.360	0.400	4.31	3.36			7.67	0.5	3.83	L	
2	Jan	Plow	0.400	0.444	6.47	3.73			10.20	1.0	10.20	L	
3	Jan	Landplane	0.257	0.286	3.18	2.41			5.59	1.0	5.59	L	
4	Jan	Apply Herbicide/Ground	0.150	0.167	1.85	1.40		13.79	17.04	1.0	17.04	G	
5	Jan	Disk	0.225	0.200	3.21	1.68			4.89	1.0	4.89	L	
6	Jan	List	0.180	0.200	2.36	1.68			4.04	1.0	4.04	L	
7	Jan	Disk Ends	0.011	0.013	0.16	0.11			0.27	6.0	1.60	G	
8	Jan	Buck Rows	0.022	0.050	0.12	0.39			0.51	5.0	2.55	G	
9	Jan	Preirrigate		0.900		6.31		33.00	39.31	1.0	39.31	G	
10	Apr	Mulch	0.300	0.333	4.63	2.80			7.43	1.0	7.43	L	
11	Apr	Plant	0.225	0.250	2.65	2.10		9.07	13.82	1.0	13.82	L	
12	Apr	Remove Cap	0.129	0.143	1.40	1.20			2.60	1.0	2.60	G	
13	May	Cultivate	0.300	0.333	2.05	2.80			4.85	2.0	9.69	G	
14	Jun	Cultivate	0.164	0.182	1.12	1.53			2.65	2.0	5.30	G	
15	Jun	Hand Weeding		2.000		13.32			13.32	0.5	6.66	G	
16	Jun	Apply Herbicide/Ground	0.225	0.250	3.40	2.10		16.47	21.97	1.0	21.97	G	
17	Jun	Irrigate		0.450		3.78		16.50	20.28	2.0	40.56	G	
18	Jun	Soil Fertility						3.00	3.00	1.0	3.00	G	
19	Jun	Field Scouting						6.00	6.00	1.0	6.00	G	
20	Jun	Irrigate/Run Fertilizer		0.450		3.15		29.89	33.04	3.0	99.12	G	
21	Jun	Apply Insect./Ground	0.090	0.100	0.83	0.84		1.90	3.57	1.0	3.57	G	
22	Jun	Apply Insect./Ground	0.090	0.100	0.83	0.84		1.47	3.14	1.0	3.14	G	
23	Jul	Apply Insecticide/Air						6.00	14.43	20.43	1.0	20.43	G
24	Aug	Apply Insecticide/Air						6.00	12.32	18.32	2.0	36.64	G
25	Sep	Apply Defoliant/Air						8.32	12.51	20.83	1.0	20.83	H
26	Sep	Prepare Ends	0.022	0.025	0.31	0.21			0.52	1.0	0.52	H	
27	Sep	Cotton, First Pick	0.450	0.500	28.10	3.50			31.60	1.0	31.60	H	
28	Sep	Cotton, Make Modules	0.300	0.333	3.73	2.80		1.67	8.20	1.0	8.20	H	
29	Sep	Haul, Custom		0.2 Mu					0.00	1.0	0.00	H	

\* NOTES: See next page for notes.

Table 6C. Variable Operating Costs; Upland Cotton, 1996

COUNTY: Pima                      FARM: Pima County Farm                      WATER SOURCE: C-MID                      TILLAGE: Conventional  
 CROP: Cotton, Upland              ACRES: 1.0                      IRRIGATION SYSTEM: Flood Furrow              SOIL: Sandy-Loam  
 AREA: Marana                      YIELD: 1,103.0 Lb/Acre                      PREVIOUS CROP: Cotton, Upland              DATE: 10/14/96

No.	First Month	Operation	— Hours * —		Operating Costs (\$/Acre*)				Total	Times	Tot. Cash Expense	Class
			Machine	Labor	Fuel/Rps.	Labor	Cust/Ser.	Materials				
30	Nov	Cotton, Second Pick	0.300	0.333	18.73	2.33			21.06	0.8	16.85	H
31	Oct	Cotton Ginning 32.4 Cs						97.32	97.32	1.0	97.32	P
32	Dec	Cotton Classing 2.2 Ba						3.33	3.33	1.0	3.33	M
33	Dec	Crop Assessment 2.2 Ba						7.99	7.99	1.0	7.99	M
34	Nov	Cut Stalks	0.180	0.200	2.28	1.68			3.96	1.0	3.96	P
35	Nov	Disk Residue	0.300	0.333	4.28	2.80			7.08	1.0	7.08	L
		Pickup Use 60 Mi/Ac	2.000		15.06						15.06	O
		Operating Interest at 9.00%						12.85			12.85	O
TOTAL CASH OPERATING EXPENSES:					\$109.60	\$76.56	\$156.81	\$251.62			\$594.59	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 NET REVENUES OVER TOTAL CASH EXPENSES (\$/Acre)						
		Prices ->		-25%	-10%	Budgeted	+10%	+25%	
Land Preparation (L)	\$56.89								
Growing (G)	319.18								
Harvest (H)	77.99	Yields		\$0.54	\$0.64	\$0.72	\$0.79	\$0.90	Break-even
Post Harvest (P)	101.27								
Marketing (M)	11.31	-25%	827.2	-100.22	-10.88	48.67	108.23	197.58	0.66
Operating Overhead (O)	27.91	-10%	992.7	-39.47	67.73	139.21	210.68	317.89	0.57
		Budgeted	1,103.0	1.02	120.15	199.56	278.98	398.10	0.53
Total (T)	\$594.59	+10%	1,213.3	41.52	172.56	259.92	347.28	478.31	0.50
		+25%	1,378.7	102.28	251.18	350.45	449.72	598.63	0.46
		Break-even Yield		1,100.20	850.15	738.29	652.44	555.54	

COUNTY: Pima FARM: Pima County Farm WATER SOURCE: C-MID TILLAGE: Conventional  
 CROP: Cotton, Upland ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 1,103.0 Lb/Acre PREVIOUS CROP: Cotton, Upland DATE: 10/14/96

Month *	Number Irrig.	Water Applied (Inches)	Total Labor (Hrs)	Operating Cost (\$/Acre)						
				Purchased Water	Fuel, Oil & Repairs	Labor	Chemicals	Other Purchases	Services	Total
JAN C	0.1	1.2	1.59	3.30	18.80	13.21	13.79			49.10
FEB C	0.5	6.0	0.51	16.50	0.71	3.66				20.87
MAR C	0.4	4.8	0.37	13.20	0.16	2.63				15.99
APR C			0.52		6.66	4.45		4.54		15.65
MAY C			0.86		6.12	7.25		4.54		17.91
JUN C	2.0	12.0	2.71	33.00	6.15	20.38	25.00		9.00	93.54
JUL C	2.0	12.0	1.10	33.00	2.13	8.59	36.06		6.00	85.78
AUG C	1.0	6.0	0.50	16.50	0.12	3.54	38.03		12.00	70.19
SEP C			0.15		6.31	1.19	12.51	0.17	18.05	38.23
OCT C			0.49		19.10	3.78		1.00	38.93	62.81
NOV C			0.55		19.94	4.29		0.50	29.20	53.93
DEC C			0.43		8.34	3.60			30.78	42.73
Pickup Use 60 Mi/Ac					15.06					15.06
Operating Interest at 9.0%									12.86	12.86
<b>Total</b>	<b>6.0</b>	<b>42.0</b>	<b>9.83</b>	<b>115.50</b>	<b>109.60</b>	<b>76.59</b>	<b>125.39</b>	<b>10.75</b>	<b>156.82</b>	<b>594.64</b>
%				19.42	18.43	12.87	21.09	1.80	26.37	100.00

TOTAL RESOURCES REQUIREMENTS (/Acre)		TOTAL ENERGY REQUIREMENTS (/Acre)	
Total N	119.4 lbs	Diesel Fuel	31.0 Gal
Total P	0.0 lbs	Regular Gas	0.0 Gal
Total K	0.0 lbs	NonLead Gas	6.0 Gal
Total Labor	9.8 Hrs		
Total Water	42.0 AI	All Direct Energy	5.0 M BTU

EQUIPMENT REQUIREMENTS (/Acre)			
Tractor, 150 PTO HP, MFWD	2.61 Hrs	V-Ripper, 5 Shnk	0.18 Hrs
Landplane 12'X 45'	0.26 Hrs	Saddle Tk Sprayer, 2 Tk 8 Row	0.56 Hrs
Lister, 7 Bottom	0.18 Hrs	Tractor, 70 PTO HP, MFWD	1.44 Hrs
Power Mulcher, 6 Rw	0.30 Hrs	Planter, 6 Row	0.23 Hrs
Rolling Cultivator, 6 Rw	0.93 Hrs	Cultivator, Sweep, 6 Rw	0.23 Hrs
Cotton Picker, 4 Row	0.69 Hrs	Tractor, 80 PTO HP, MFWD	0.30 Hrs
Rotary Stalk Cutter, 4 Row	0.18 Hrs	Pickup Truck, 1/2 Ton	2.00 Hrs
		Moldboard Plow, 5-16 2 Way	0.40 Hrs
		Offset Disk, 13.5'	0.61 Hrs
		Rowbuck, 10'	0.11 Hrs
		Section Harrow, 3 Section	0.13 Hrs
		Directed Spray Rig, 16 Row	0.18 Hrs
		Module Builder	0.30 Hrs

MATERIALS REQUIREMENTS (/Acre)			
Prometryn	5.00 Pt	Trifluralin	1.00 Pt
Upl Cotton Sd+NU-Flow ND	12.00 Lb	Cyanazine	1.00 Qt
	0.50 Pt	Chlorpyrifos	0.25 Pt
Acephate	0.50 Lb	Lambdacyhalothrin	6.40 Oz
Thidiazuron	0.20 Lb	Endothall	0.75 Pt
		Water, District	42.00 AI
		32-00-00, URAN 32, Lqd	33.75 Ga
		Endosulfan	2.00 Pt
		Acephate	1.34 Lb
		Module Tarps	31.88 CW

LABOR REQUIREMENTS (/Acre)			
Tractor	5.70 Hrs	Other	0.13 Hrs
Hand Weeders	1.00 Hrs	Harvest	0.77 Hrs
		Irrigators	2.25 Hrs

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

COUNTY: Pima FARM: Pima County Farm WATER SOURCE: C-MID TILLAGE: Conventional  
 CROP: Cotton, Upland ACRES: 1.0 IRRIGATION SYSTEM: Flood Furrow SOIL: Sandy-Loam  
 AREA: Marana YIELD: 1,103.0 Lb/Acre PREVIOUS CROP: Cotton, Upland DATE: 10/14/96

No.	Month	First Times	Operation	Equipment/Custom Oper. HP Self-Prop./Implem.	Job Rate Acres/Hr	Material Use & Cost Name	Appl. Rate	\$/Unit	Service Cost \$/Unit	Labor Type
1	Jan	0.5	Rip	150 V-Ripper, 5 Shnk	2.50					Tractor
2	Jan	1.0	Plow	150 Moldboard Plow, 5-16 2	2.25					Tractor
3	Jan	1.0	Landplane	150 Landplane 12'X 45'	3.50					Tractor
4	Jan	1.0	Apply Herbicide/Groun	150 Saddle Tk Sprayer, 2 Tk	6.00	Prometryn Trifluralin	2.50 Pt 1.00 Pt	30.00 Ga 30.06 Ga		Tractor
5	Jan	1.0	Disk	150 Offset Disk, 13.5'	4.00					Tractor
6	Jan	1.0	List	150 Lister, 7 Bottom	5.00					Tractor
7	Jan	6.0	Disk Ends	150 Offset Disk, 13.5'	80.00					Tractor
8	Jan	5.0	Buck Rows	70 Rowbuck, 10'	40.00					Tractor Other
9	Jan	1.0	Preirrigate		1.11	Water, District	12.00 AI	33.00 AF		Irrigator
10	Apr	1.0	Mulch	150 Power Mulcher, 6 Rw	3.00					Tractor
11	Apr	1.0	Plant	70 Planter, 6 Row	4.00	Upl Cotton Sd+NU-F	12.00 Lb	72.00 CW		Tractor
12	Apr	1.0	Remove Cap	150 Section Harrow, 3 Secti	7.00					Tractor
13	May	2.0	Cultivate	70 Rolling Cultivator, 6 R	3.00					Tractor
14	Jun	2.0	Cultivate	70 Rolling Cultivator, 6 R	5.50					Tractor
15	Jun	0.5	Hand Weeding		0.50					Hand Weed
16	Jun	1.0	Apply Herbicide/Groun	150 Cultivator, Sweep, 6 Rw Saddle Tk Sprayer, 2 Tk	4.00	Prometryn Cyanazine	2.50 Pt 1.00 Qt	30.00 Ga 25.26 Ga		Tractor
17	Jun	2.0	Irrigate		2.22	Water, District	6.00 AI	33.00 AF		Tractor
18	Jun	1.0	Soil Fertility	CST Soil Analysis (Surf					3.00 Ac	
19	Jun	1.0	Field Scouting	CST Scout For Insects					6.00 Ac	
20	Jun	3.0	Irrigate/Run Fertiliz		2.22	Water, District	6.00 AI	33.00 AF		Irrigator
21	Jun	1.0	Apply Insect./Ground	70 Saddle Tk Sprayer, 2 Tk Directed Spray Rig, 16	10.00	32-00-00, URAN 32,	11.25 Ga 0.50 Pt	205.00 Tn 28.93 Ga		Tractor
22	Jun	1.0	Apply Insect./Ground	70 Saddle Tk Sprayer, 2 Tk Directed Spray Rig, 16	10.00	Chlorpyrifos	0.25 Pt	44.73 Ga		Tractor
23	Jul	1.0	Apply Insecticide/Air	CST Air Spray, 3 Gal Mi		Endosulfan	2.00 Pt	36.50 Ga	6.00 Ac	
24	Aug	2.0	Apply Insecticide/Air	CST Air Spray, 3 Gal Mi		Acephate Lambdacyhalothrin	0.50 Lb 3.20 Oz	9.23 Lb 234.04 Ga	6.00 Ac	
25	Sep	1.0	Apply Defoliant/Air	CST Air Spray, 5 Gal Mi		Acephate Thidiazuron Endothall	0.67 Lb 0.20 Lb 0.75 Pt	8.78 Lb 50.21 Lb 20.05 Ga	8.32 Ac	
26	Sep	1.0	Prepare Ends	150 Offset Disk, 13.5'	40.00					Tractor
27	Sep	1.0	Cotton, First Pick	Cotton Picker, 4 Row	2.00					Harvest
28	Sep	1.0	Cotton, Make Modules	80 Module Builder	3.00	Module Tarps	31.88 CW	0.05 CW		Tractor
29	Sep	1.0	Haul, Custom	CST Haul Cotton Modules					0.00 Mu	
30	Nov	0.8	Cotton, Second Pick	Cotton Picker, 4 Row	3.00					Harvest
31	Oct	1.0	Cotton Ginning	CST Gin Upland Cotton					3.00 Cs	
32	Dec	1.0	Cotton Classing	CST Class Cotton, HVI					1.50 Ba	
33	Dec	1.0	Crop Assessment	CST Upland (Low Elev)					3.60 Ba	
34	Nov	1.0	Cut Stalks	150 Rotary Stalk Cutter, 4	5.00					Tractor
35	Nov	1.0	Disk Residue	150 Offset Disk, 13.5'	3.00					Tractor

NOTES at the bottom of the next page.

Table 6E. Schedule of Operations; Upland Cotton, 1996

COUNTY: Pima	FARM: Pima County Farm	WATER SOURCE: C-MID	TILLAGE: Conventional
CROP: Cotton, Upland	ACRES: 1.0	IRRIGATION SYSTEM: Flood Furrow	SOIL: Sandy-Loam
AREA: Marana	YIELD: 1,103.0 Lb/Acre	PREVIOUS CROP: Cotton, Upland	DATE: 10/14/96

No.	Month	Times	Operation	Equipment/Custom Oper.		Job Rate Acres/Hr	Material Use & Cost		Service Cost \$/Unit	Labor Type
				HP	Self-Prop./Implem.		Name	Appl. Rate \$/Unit		
		First	Pickup Use	60 Mi/Ac	Pickup Truck, 1/2 Ton	0.50				

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

ARIZONA COOPERATIVE EXTENSION  
 Department of Ag & Resource Economics  
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