COUNTY: La Paz CROP: Sudan Hay AREA: Parker CRIR FARM: LaPaz County 98
ACRES: 1.0
YIELD: 6.0 Tn / Acre

WATER SOURCE: CRIR Irrigation Project IRRIGATION SYSTEM: Flood Basin PREVIOUS CROP: Wheat, Winter

TILLAGE: Conventional SOIL: Sandy-Loam DATE: 2/22/99

	Item	Unit	Quantity	Price/ Unit	Budgeted /Acre	Total /Acre	Your Farm Budget
INCOME	Sudan Hay	Ton	6.00	\$100.00	\$600.00	\$616.20	
	Grazing	Head Days	180.00	\$0.09	\$16.20		
Paid Labo	or (including benefits) or/Self Propelled	ROWING EXPENSES (incl	uding sales tax)		27.19 18.20	45.39	
Chemical Fertili Herbi		ns			77.06 15.79	92.86	
Diese	chinery and Vehicles el Fuel irs and Maintenance				17.04 22.20	39.24	
	Water (excluding labor) sessment (See Note Belo	ow) **				0.00	
	rchased Inputs & /Transplants				63.60	63.60	
		TOTAL CASH LAND PREP	ARATION AND GROW	ING EXPENSES		241.08	
CASH HARV	EST AND POST HARVE	EST EXPENSES					
Tracto	or (including benefits) or/Self Propelled r/Contract				9.01 15.32	24.33	
Diese Repa	chinery and Vehicles of Fuel irs and Maintenance				11.89 57.78	69.67	
Other Ma						13.65	
		TOTAL HARVEST AND PO	ST HARVEST EXPEN	SE		107.65	
	OVERHEAD PICKUI	P USE				7.69	
OPERATING	S INTEREST AT 10.0%	TOTAL CASH OPERATING) EVDENCEO			24.81 \$381.23	
		RETURNS OVER CASH		ES		\$381.23 \$234.97	

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

^{**} A water assessment charge of \$34.50 per Acre is included as an ownership cost in Table B.

COUNTY:La Paz FARM: LaPaz County 98 WATER SOURCE: CRIR Irrigation Project TILLAGE: Conventional CROP: Sudan Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam AREA: Parker CRIR YIELD: 6.0 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE: 2/22/99

	CASH COST BASI		TOTAL COST BASIS (\$/ACRE)			
Item	Income and Costs	Net Returns	Income and Costs Net Returns			
TOTAL INCOME at \$100.00 / Tn	\$616.20		\$616.20			
TOTAL OPERATING EXPENSES	\$381.23	#004.07	\$381.23			
RETURN OVER CASH OPERATING EXPENSES		\$234.97	\$234.97			
CASH OVERHEAD EXPENSES Taxes, Housing and Insurance, Farm Machinery	11.60		11.60			
General and Office Overhead (5.0% of Total Operating Exp.)	19.06		19.06			
General Farm Maintenance (3.0% of Total Operating Exp.)	11.44		11.44			
Total Cash Overhead Expenses	42.10		42.10			
Total Cash Operating and Overhead Cost	423.33	# 400.07	423.33			
RETURNS OVER CASH OPER. AND OVER. EXPENSES		\$192.87	\$192.87			
CAPITAL ALLOCATIONS (100% Equity) Capital Replacement, Machinery and Vehicles			71.44			
Interest on Equity, Machinery and Vehicles			15.74			
Total Capital Allocations			87.18			
RETURNS TO LAND, CAPITAL, MANAGEMENT AND RISK -			Ø405.00			
RETURNS TO LAND, MANAGEMENT AND RISK						
Land Cost / Rent or Lease Water Assessment	150.00 34.50		150.00 34.50			
Total Land Costs	184.50		184.50			
RETURNS TO CAPITAL, MANAGEMENT AND RISK	>	\$8.37				
RETURNS TO MANAGEMENT AND RISK			(\$78.81)			
Management Services (8% of Total Operation Expenses)			30.50			
TOTAL OWNERSHIP COST	226.60		344.27			
TOTAL COST	\$607.83		\$725.50			
RETURNS TO CAPITAL, MANAGEMENT AND RISK	>	\$8.37	(\$400.00)			
RETURNS TO RISK (PROFITS)						
BREAK-EVEN PRICE TO COVER OPERATING COST (PER Lb)		\$60.84	\$60.84			
BREAK-EVEN PRICE TO COVER OWNERSHIP COST		\$37.77	\$57.38			
BREAK-EVEN PRICE TO COVER TOTAL COST		\$98.60	\$118.22			

ARIZONA COOPERATIVE EXTENSION
Department of Ag and Resource Economics
University of Arizona F 2 / 178

COUNTY:La Paz FARM: LaPaz County 98 WATER SOURCE: **CRIR** Irrigation Project TILLAGE: Conventional CROP: Sudan Hay ACRES: 1.0 IRRIGATION SYSTEM: Flood Basin SOIL: Sandy-Loam AREA: Parker CRIR YIELD: 6.0 Tn / Acre PREVIOUS CROP: 2/22/99 Wheat, Winter DATE:

	First Hours *				Operating Costs (\$/ACRE *) Per Operation				Tot. Cash		
No.	Month	Operation	Machine	Labor	Fuel/Rps.	Labor Cu	st/Serv. Materials	Total	Times	Expenses	Class
1	Feb	Disk	0.360	0.400	5.40	3.39		8.78	3.0	26.35	L
2	Feb	Rip	0.300	0.333	5.28	2.82		8.11	1.0	8.11	L
3	Feb	List	0.180	0.200	2.34	1.69		4.04	1.0	4.04	L
4	Mar	Landplane	0.900	1.000	11.34	8.47		19.81	1.0	19.81	L
5	Mar	Disk Ends	0.011	0.013	0.11	0.11		0.22	1.0	0.22	G
6	Mar	Make Borders	0.023	0.024	0.17	0.20		0.38	1.0	0.38	G
7	Mar	Block Borders	0.011	0.013	0.08	0.11		0.19	1.0	0.19	G
8	Mar	Apply Herbicide/Ground	0.090	0.100	0.83	0.85	15.79	17.47	1.0	17.47	G
9	Mar	Apply Fert/Ground	0.113	0.125	0.72	1.06	22.58	24.36	1.0	24.36	G
10	Mar	Plant	0.180	0.200	2.17	1.69	63.60	67.47	1.0	67.47	L
11	Mar	Irrigate		0.286		2.02		2.02	5.0	10.11	G
12	Apr	Irrigate/Run Fertilizer		0.286		2.02	13.62	15.64	4.0	62.57	G
13	May	Swathing	0.150	0.167	2.25	1.18		3.43	5.0	17.16	Н
14	May	Crimping	0.180	0.200	1.35	1.41		2.77	5.0	13.83	Н
15	May	Baling	0.180	0.200	5.44	1.69	3.41	10.55	4.0	42.19	Н
16	May	Roadsiding	0.075	0.083	6.59	0.59		7.17	4.0	28.69	Н
17	Oct	Residue Disposal	0.237	0.263	3.55	2.23		5.78	1.0	5.78	Р
		Pickup Use30 Mi/Acre	1.000		7.69					7.69	
		Operating Interest at 10.0	10.0 24.81								
	TOTAL CASH OPERATING EXPENSES (includes all times over):									381.23	Т

*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 \$34.50 per Acre is included as an ownership cost in Table B.

OPERATING COST SUMMARY BY	CLASS
Land Preparation (L)	125.78
Growing (G)	115.30
Harvest (H)	101.87
Post Harvest (P)	5.78
Marketing (M)	0.00
Operating Overhead (O)	32.50
Total (T)	\$381.23

SENSITIVITY OF	SENSITIVITY OF THE NET REVENUES OVER TOTAL CASH EXPENSES (\$/ACRE)											
Prices		- 25%	- 10%	Budgeted	+ 10%	+ 25%						
Yields		\$75.00	\$90.00	\$100.00	\$110.00	\$125.00	Break-even Price					
- 25%	4.5	-4.64	62.86	107.86	152.86	220.36	76.03					
- 10%	5.4	46.72	127.72	181.72	235.72	316.72	66.35					
Budgeted	6.0	80.95	170.95	230.95	290.95	380.95	61.51					
+ 10%	6.6	115.19	214.19	280.19	346.19	445.19	57.55					
+ 25%	7.5	166.54	279.04	354.04	429.04	541.54	52.79					
Break-even Yield		4.58	3.63	3.19	2.84	2.44						

ARIZONA COOPERATIVE EXTENSION
Department of Ag and Resource Economics
University of Arizona F 2 / 178

COUNTY:La Paz FARM: LaPaz County 98 WATER SOURCE: **CRIR** Irrigation Project TILLAGE: Conventional CROP: Sudan Hay ACRES: IRRIGATION SYSTEM: Flood Basin Sandy-Loam SOIL: AREA: Parker CRIR YIELD: 2/22/99 6.0 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE:

Number Number Applied Total Purchased Fuel, Oil Labor Chemicals Difference Total	Water				Operating Costs (\$/ACRE *)								
FEB C	Month *						l ah	or	Chemicals		Services	Total	
MAR C 1.0 4.0 2.16	Month	irrigations	(mones)	Luboi (III3)	Water	una repairs	Lub	<u> </u>	Onemious	1 410114303	OCI VIOCS	Total	
APR C 2.0 8.0 0.57 MAY C 1.0 4.04 13.62 17.67 MAY C 1.0 4.04 13.62 3.41 25.94 MAY C 1.0 4.0 0.94 15.63 6.90 3.41 25.94 MAY C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 41.58 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 41.58 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 MAIG C 1.0 4.0 0.63 MIACRE C 1.0 0.63 7.69 MIACRE C 1.0 0.00 MIACRE	FEB C			1.33		18.42	11	.30				29.71	
MAY C 1.0 4.0 0.94	MAR C	1.0	4.0	2.16		20.82	17	.91	38.37	63.60		140.71	
JUN C 2.0 8.0 1.22 15.63 8.92 13.62 3.41 41.58 JUN C 2.0 8.0 1.22 15.63 8.92 13.62 3.41 41.58 JUN C 2.0 8.0 1.22 15.63 8.92 13.62 3.41 41.58 AUG C 1.0 4.0 0.94 15.63 8.92 13.62 3.41 39.56 OCT C 0.63 7.16 4.82 3.41 39.56 OCT C 0.63 7.16 4.82 3.41 39.56 OPERATING SERVING SERV	APR C	2.0	8.0	0.57			4	.04	13.62			17.67	
JUL C 2.0 8.0 1.22	MAY C	1.0	4.0	0.94		15.63	6	.90		3.41		25.94	
AUG C 1.0 4.0 0.94 0.63 15.63 6.90 13.62 3.41 39.56 OCT C 0.65 7.16 4.82 11.98 7.69 Pickup Use30 Mi/Acre		2.0	8.0				8	.92	13.62	3.41		41.58	
OCT C 0.63 7.16 4.82 11.98		2.0	8.0			15.63	8	.92	13.62	3.41		41.58	
Pickup Use30 Mi/Acre 7.69 24.81 24		1.0	4.0	0.94		15.63	6	.90	13.62	3.41		39.56	
Total 9.0 36.0 9.01 116.60 69.72 92.86 77.25 24.81 381.23 30.58 18.29 24.36 20.26 6.51 100.00 20.26 24.81 381.23 24.81	OCT C			0.63		7.16	4	.82				11.98	
Total 9.0 36.0 9.01 116.60 69.72 92.86 77.25 24.81 381.23 30.58 18.29 24.36 20.26 6.51 100.00						7.69							
Total 9.0 36.0 9.01 116.60 69.72 92.86 77.25 24.81 381.23 9.0 30.58 18.29 24.36 20.26 6.51 100.00			1								24.81	24.81	
30.58 18.29 24.36 20.26 6.51 100.00	Water Asses	ssment			**								
TOTAL RESOURCE REQUIREMENTS (per Acre) Total N 200.5 Diesel Fuel 35.3 Gal Total P 78.0 Unleaded Gas 3.0 Gal Total K 0.0 All Direct Energy 5.3 M BTU Total Labor 9.0 Total Water 36.0 EQUIPMENT REQUIREMENTS (per Acre) Bale Wagon, SP PRC 0.30 Hr Directed Spray Rig, 16 0.09 Hr Fertilizer Broadcaster, 0.11 Hr Grain Drill, 14' 0.18 Hr Hay Crimper 0.90 Hr Landplane 12'X 45' 0.90 Hr Lister, 7 Bottom 0.18 Hr Offset Disk, 16.5' 1.32 Hr Pickup Truck, 1/2 Toon 1.00 Hr Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.04 Hr Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al	Total	9.0	36.0	9.01		116.60	69	9.72	92.86	77.25	24.81	381.23	
Total N 200.5 Diesel Fuel 35.3 Gal Total P 78.0 Unleaded Gas 3.0 Gal Total K 0.0 All Direct Energy 5.3 M BTU EQUIPMENT REQUIREMENTS (per Acre) Bale Wagon, SP PRC 0.30 Hr Directed Spray Rig, 16 0.09 Hr Fertilizer Broadcaster, 0.11 Hr Grain Drill, 14' 0.18 Hr Hay Crimper 0.90 Hr Landplane 12'X 45' 0.90 Hr Lister, 7 Bottom 0.18 Hr Offset Disk, 16.5' 1.32 Hr Pickup Truck, 1/2 Ton 1.00 Hr Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.02 Hr Tractor, 150 PTO HP, 2.40 Hr Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) LABOR REQUIREMENT (per Acre) LABOR REQUIREMENT (per Acre)	%					30.58	18	3.29	24.36	20.26	6.51	100.00	
Bale Wagon, SP PRC 0.30 Hr Baler, 3 wire w/motor 0.72 Hr Blade Scraper, 10' 0.03 Hr Directed Spray Rig, 16 0.09 Hr Fertilizer Broadcaster, 0.11 Hr Grain Drill, 14' 0.18 Hr Hay Crimper 0.90 Hr Landplane 12'X 45' 0.90 Hr Lister, 7 Bottom 0.18 Hr Offset Disk, 16.5' 1.32 Hr Pickup Truck, 1/2 Ton 1.00 Hr Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.02 Hr Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500' 1.96 TF Water, District 36.00 Al	Total K Total Labo		0.0 9.0						TU				
Dbl. Offset Disk, 13'	EQUIPMEN	T REQUIREM	MENTS (per	Acre)									
Grain Drill, 14' 0.18 Hr Hay Crimper 0.90 Hr Landplane 12'X 45' 0.90 Hr Lister, 7 Bottom 0.18 Hr Offset Disk, 16.5' 1.32 Hr Pickup Truck, 1/2 Ton 1.00 Hr Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.02 Hr Tractor, 150 PTO HP, 2.40 Hr Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500' 1.96 TF Water, District 36.00 Al	Bale Wag	on, SP PRC	0.	30 Hr	Baler, 3 wire w/mo	otor ().72 Hr		Blade Scra	aper, 10'	0.03 Hr		
Lister, 7 Bottom 0.18 Hr Offset Disk, 16.5' 1.32 Hr Pickup Truck, 1/2 Ton 1.00 Hr Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 1.02 Hr Tractor, 150 PTO HP, 2.40 Hr Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al	Dbl. Offse	et Disk, 13'	0.	01 Hr	Directed Spray Rig	g, 16 ().09 Hr		Fertilizer E	Broadcaster,	0.11 Hr		
Tractor, 80 PTO HP, 1.02 Hr Tractor, 100 PTO HP, 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)													
Tractor, 175 PTO HP 0.30 Hr V-Ripper, 5 Shnk 0.30 Hr Windrower, 14.0', HS, SC 0.75 Hr MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)	,												
MATERIALS REQUIREMENT (per Acre) 11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)													
11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)	Tractor, 1	75 PTO HP	0.	30 Hr	V-Ripper, 5 Shnk	().30 Hr		Windrowe	r, 14.0', HS, SC	0.75 Hr		
11-52-00, Dry 150.00 Lb 46-00-00, Urea 46 400.00 Lb Atrazine 5.00 Lb Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)	MATERIAL S	REQUIREM	FNT (ner Ac	cre)									
Sudan Grass Sd 120.00 Lb Twine, Plastic, 6500 ' 1.96 TF Water, District 36.00 Al LABOR REQUIREMENT (per Acre)			\ I	,	46-00-00. Urea 46	400	0.00 Lb		Atrazine		5.00 Lb		
										strict			
11a1vest 2.17 111 111gators 2.57 111 11attor 4.27 111		QUIREMENT		17 Hr	Irrigators	,	257 Hr		Tractor		1 27 ⊔r		
	Harvest		۷.	тт ПІ	iiigatuis	4	±.3 <i>1</i> ⊞		Hacioi		4.∠1 ∏		

^{*}NOTE: P = Previous Year C = Current Year N = Next Year

^{**} A water assessment charge of \$34.50 per Acre is included as an ownership cost in Table B.

COUNTY:La Paz FARM: LaPaz County 98 WATER SOURCE: **CRIR** Irrigation Project TILLAGE: Conventional CROP: Sudan Hay ACRES: IRRIGATION SYSTEM: Flood Basin Sandy-Loam 1.0 SOIL: 2/22/99 AREA: Parker CRIR YIELD: 6.0 Tn / Acre PREVIOUS CROP: Wheat, Winter DATE:

No	First o.MonthTir	nes Operation	Equipment/ Custom Oper HP Self-Prop./ Implement	Job Rate Acres/Hr		Jse and Cost Appl. Rat	 e \$ / Unit	Service Cost \$ / Unit	Labor Type
1	Feb	3.0 Disk	150 Offset Disk, 16.5'	2.50		•••		•	Tractor
2	Feb	1.0 Rip	175 V-Ripper, 5 Shnk	3.00					Tractor
3	Feb	1.0 List	150 Lister. 7 Bottom	5.00					Tractor
4	Mar	1.0 Landplane	150 Landplane 12'X 45'	1.00					Tractor
5	Mar	1.0 Disk Ends	80 Dbl. Offset Disk. 13'	80.00					Tractor
6	Mar	1.0 Make Borders	100 Blade Scraper, 10'	40.00					Tractor
7	Mar	1.0 Block Borders	100 Blade Scraper, 10'	80.00					Tractor
8	Mar		d100 Directed Spray Rig, 16		Atrazine	5.00 Lb	2.98 LI	b	Tractor
9	Mar	1.0 Apply Fert/Ground	80 Fertilizer Broadcaster.	8.00	11-52-00, Dry	150.00 Lb	284.00 Ti	n	Tractor
10	Mar	1.0 Plant	100 Grain Drill, 14'		Sudan Grass Sd	120.00 Lb	50.00 CV	V	Tractor
11	Mar	5.0 Irrigate	,	3.50	Water, District	4.00 AI	0.00 AI	=	Irrigators
12	Apr	4.0 Irrigate/Run Fertilizer			Water, District	4.00 AI	0.00 AI		Irrigators
	•	3			46-00-00, Urea 46	100.00 Lb	257.00 Ti		· ·
13	May	5.0 Swathing	Windrower, 14.0', HS, SC	6.00	,				Harvest
14	May	5.0 Crimping	80 Hay Crimper	5.00					Harvest
15	May	4.0 Baling	100 Baler, 3 wire w/motor	5.00	Twine, Plastic, 6500 '	0.49 TF	6.57 TI	F	Tractor
16	May	4.0 Roadsiding	Bale Wagon, SP PRC	12.00	. ,				Harvest
17	Ocť	1.0 Residue Disposal	150 Offset Disk, 16.5'	3.80					Tractor
		Pickup use 30 Mi/Ac	Pickup Truck, 1/2 Ton	1.00					

^{*}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 2 / 178