

TABLE 1. Basic cost information for the Arch Hurley Conservancy District, Quay County, 2002.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$7.55
General & Irrigators	\$/hour		\$6.75
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)	\$/pound		\$0.32
Phosphate (P205)	\$/pound		\$0.30
(16-4-12-12)	\$/pound		\$0.11
Seed:			
Alfalfa	\$/pound		\$2.90
Wheat	\$/pound		\$0.16
Grain Sorghum	\$/pound		\$1.11
Jose Wheatgrass	\$/pound		\$1.60
Wire	\$/pound		\$0.37
Canal water			
Assessment	\$/acre		\$7.00
Water 1 - 18 inches	\$/acre foot		\$7.00
Energy:			
Diesel	\$/gallon		\$1.05
Gasoline	\$/gallon		\$1.00
LP Gas	\$/gallon		\$0.86
Electricity	\$/KwHr		5.84
Employee Liability Insurance	\$/ \$1,000 wages		\$20.00
Employee Benefits	percent/wages		18.00%
Labor Downtime	percent		25.00%
Financial Rates:			
Operating Capital Interest Rate	percent		8.00%
Land Interest Rate	percent		7.50%
Equipment Interest Rate	percent		8.00%
Real Interest Rate	percent		4.00%
Land Taxes	\$96.00 /acre (full value)		\$0.84
Personal Property Tax Rate - NR	\$/ \$1,000 (Assessed Value)		\$26.16
- R			\$25.14
Supervision Factors			
Field Crop - Irrigation	\$/labor hour		\$1.00
Field Crop - Equipment & General	\$/labor hour		\$0.50
Management Rate	percent		7.00%

BUDGET AREA..... ARCH-HURLEY CONSERVANCY DISTRICT,
QUAY COUNTY, 2002.

FARM SIZE..... 640 ACRES
IRRIGATION TYPE..... FLOOD
NUMBER OF CROPS..... 5

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	17.00 *	8.0	136.0
ALFALFA	100.00	24.0	2,400.0
WHEAT	127.50	16.0	2,040.0
APR	0.00		
FLEX IN GRAIN SORGHUM	22.50	16.0	360.0
GRAIN SORGHUM	120.00	16.0	1,920.0
APR	7.50		
FLEX IN GRAIN SORGHUM	22.50	16.0	360.0
BERMUDA PASTURE	100.00	18.0	1,800.0
JOSE WHEATGRASS ESTAB.	13.00 *	8.0	104.0
JOSE WHEATGRASS	100.00	24.0	2,400.0
ROADS, DITCHES, HOMESTEAD	40.00		
TOTAL	640.00		11,520.0
ACRE FEET PER ACRE OF WATER RIGHTS			1.50

* DOUBLE-CROPPED

TABLE 1a. Overhead cost information for the Arch Hurley Conservancy District, Quay County, 2002.

ITEM	CROP ENTERPRISE		LIVESTOCK ENTERPRISE		TOTAL
Electricity (Domestic & Shop)	\$205.00	per month	\$2,460	\$246	2706
Telephone	\$105.00	per month	\$1,260	\$126	1386
Accounting & Legal			1565		1565
Misc. Supplies & Hand Tools			2155	\$216	2370.5
Vehicles	Crop	Livestock			
miles	20,600	10,300	@	\$0.345	per mile
Insurance			7107	\$3,554	10660.5
- general liability (non-employee)			\$1,585		1585
- fire/theft			1585		1585
Property Taxes					
- non-farm land			\$40		39.7632
- other than land & machinery			560		560
Building repairs and maintenance			1195	\$120	1314.5
Dues, fees, publications			350	\$60	410
Farmstead Equipment			155	\$16	170.5
Total			\$20,017	\$4,336	\$24,353
Total per planted acre			\$33.78		
Total per mature cow				\$17.21	
Total per animal unit				\$12.38	

TABLE 2a. Equipment summary for a 640 acre flood irrigated farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.

EQUIPMENT ITEM & SIZE	ANNUAL		VARIABLE COSTS					FIXED COSTS		
	HOURS OF USE	NUMBER	TOTAL VALUE	FUEL AND LUBRICANT	REPAIR	FUEL,LUBE PER HR	REPAIR PER HR	DEPRE- CIATION	TAXES	TOTAL PER HOUR
TRACTOR 70 HP	256	1	\$8,400	\$993	\$736	\$3.88	\$2.88	\$705	\$92	\$3.11
TRACTOR 145 HP	353	1	\$39,110	\$3,351	\$2,367	\$9.48	\$6.70	\$4,652	\$304	\$14.03
TRUCK 2 TON	56	1	\$11,500	\$389	\$448	\$6.99	\$8.05	\$2,300	\$100	\$43.12
COMBINE 95 HP	56	1	\$1,200	\$337	\$98	\$6.05	\$1.76	\$338	\$59	\$7.12
GRAIN HEAD 18 FT	56	1	\$3,800		\$41		\$0.73	\$443	\$29	\$8.48
SWATHER 14 FT	64	1	\$5,100	\$252	\$204	\$3.93	\$3.19	\$1,450	\$126	\$24.63
BALER, PTO 2-WIRE	84	1	\$1,500		\$110		\$1.31	\$385	\$34	\$4.98
BALE WAGON, PTO	80	1	\$1,850		\$333		\$4.16	\$800	\$70	\$10.87
PLANTER 6-ROW	28	1	\$4,250		\$169		\$6.04	\$850	\$37	\$31.62
CHISEL 9-PT	50	1	\$1,350		\$43		\$0.86	\$180	\$12	\$3.87
ROLLING CULT 6-ROW	21	1	\$3,000		\$50		\$2.34	\$400	\$26	\$19.87
FLOAT 12 FT	63	1	\$500		\$9		\$0.14	\$53	\$3	\$0.90
DISC 14 FT	93	1	\$3,000		\$168		\$1.80	\$400	\$26	\$4.57
DRILL 13 FT	30	1	\$2,150		\$91		\$3.05	\$430	\$19	\$15.06
HARROW 21 FT	47	1	\$450		\$5		\$0.12	\$60	\$4	\$1.37
LISTER 6-ROW	40	1	\$2,150		\$58		\$1.46	\$287	\$19	\$7.70
SPRAYER (MTD) 4-ROW	28	1	\$1,400		\$56		\$1.99	\$187	\$12	\$7.09
ROD WEEDER 6-ROW	13	1	\$625		\$7		\$0.54	\$83	\$5	\$6.73
DITCHER	32	1	\$1,250		\$8		\$0.25	\$167	\$11	\$5.63
FERT SPREADER	32	1	\$2,300		\$91		\$2.90	\$307	\$20	\$10.36
			\$94,885	\$5,321	\$5,093			\$14,477	\$1,009	

Table 2b. Value of Resources for Livestock Enterprise

	UNIT	QUANTITY	\$/UNIT	TOTAL	USEFULL LIFE	DEPRE- CIATION
Cattle:						
Cows	NO	252	\$700	\$176,400		
Replacement Heifers	NO	25	\$700	\$17,500		
Heifer Calves	NO	99	\$442	\$43,758		
Steer Calves	NO	124	\$504	\$62,496		
Bulls	NO	9	\$1,000	\$9,233		
Horses	NO	1	\$1,000	\$1,000		
Subtotal				\$310,387		
Other Range Facilities:						
Fencing						
- Permanent	MI	6	\$1,500	\$9,000	25	\$360
- Temporary	MI	10	\$250	\$2,500	10	\$250
Pipelines	MI	2	\$300	\$600	20	\$30
Tanks and Reservoirs	NO	8	\$500	\$4,000	40	\$100
Corrals	NO	1	\$5,000	\$5,000	25	\$200
Livestock Trailer	NO	1	\$2,500	\$2,500	5	\$500
Subtotal				\$23,600		
Total				\$333,987		\$1,440

Table 3a. Livestock Production Parameters

NUMBER OF COWS	252
COWS PER BULL	30
NUMBER OF HORSES	1
REPLACEMENT RATE (%)	10.00%
CALF DEATH LOSS (%)	3.00%
YEARLING DEATH LOSS (%)	1.25%
COW DEATH LOSS (%)	1.00%
BULL DEATH LOSS (%)	0.00%
CALF CROP (%)	92.50%
PRODUCTIVE LIFE OF BULLS (YEARS)	5
PERCENT SOLD AS YEARLINGS:	
HEIFERS	100.00%
STEERS	100.00%

Table 3b. Forage Sources for Livestock

	ACRES	AUMS/ ACRE	GRAZING MONTHS	AU/ MONTH	AUMS PROVIDED
JOSE WHEATGRASS	100	14.00	7	200	1,400
BERMUDA PASTURE	100	10.00	4	250	1,000
ALFALFA AFTERMATH	100	4.00	3	133	400
WHEAT	128	4.00	4.5	114	512
ASCS DIVERTED	8	8.30	6.5	10	62
GRAIN SORGHUM	165	4.00	5.0	132	660
PURCHASED HAY		69.00 ton		14	173
TOTAL	601			853	4,207

Value of Land, Buildings and Improvements	\$0.00
Machinery and Equipment	\$0
Cattle	\$0
Appreciation/Depreciation Rate (%)..	0.00%

Table 3c. STOCK COUNT CHART CALVES WERE BORN IN: MARCH

SEASON	CALVES WERE BORN IN:										TOTAL AUMs REQUIRED
	BULLS 1.4	REPLACEMENT COWS 1.0	HEIFERS 0.7	YEARLING STEERS 0.7	YEARLING HEIFERS 0.7	STEERS CALVES 0.5	HEIFER CALVES 0.5	HORSES 1.25			
JANUARY	9	252				124	124	1			390
FEBUARY	9	252				124	124	1			390
MARCH	9	252	25	124	99			1			440
APRIL	9	252	25					1			284
MAY	9	252	25					1			284
JUNE	9	252	25					1			284
JULY	9	252	25					1			284
AUGUST	9	252	25					1			284
SEPTEMBER	9	252				128	128	1			394
OCTOBER	9	252				124	124	1			390
NOVEMBER	9	252				124	124	1			390
DECEMBER	9	252				124	124	1			390
											<u>4,203</u>

Table 3d. Forage Balance Chart

	JOSE		ALFALFA		ASCS	GRAIN	HAY	TOTAL	TOTAL	OVER
	WHEATGRASS	BERMUDA	AFTERMATH	WHEAT	DIVERTED	SORGHUM		AUMs REQUIRED	AUMs SUPPLIED	OR UNDER
JANUARY	0	0	0	156	18	134	82	390	390	0
FEBRUARY	0	0	0	156	18	134	82	390	390	0
MARCH	130	0	0	156	14	132	9	440	442	2
APRIL	267	0	0	0	0	17	0	284	284	0
MAY	284	0	0	0	0	0	0	284	284	0
JUNE	119	165	0	0	0	0	0	284	284	0
JULY	0	284	0	0	0	0	0	284	284	0
AUGUST	0	284	0	0	0	0	0	284	284	0
SEPTEMBER	127	267	0	0	0	0	0	394	394	0
OCTOBER	230	0	160	0	0	0	0	390	390	0
NOVEMBER	243	0	135	12	0	0	0	390	390	0
DECEMBER	0	0	105	30	12	243	0	390	390	0
Total	1400	1000	400	510	62	660	173	4203	4205	2

TABLE 4. Alfalfa establishment, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.
Planting dates: August 1 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<u>PURCHASED INPUTS</u>								
SEED	\$2.90	16 LBS		\$46.40				\$46.40
OAT SEED	\$0.23	40 LBS		\$9.20				\$9.20
NITROGEN	\$0.32	30 LBS		\$9.60				\$9.60
PHOSPHATE (P205)	\$0.30	60 LBS		\$18.00				\$18.00
CANAL WATER	\$7.00	8 AC. IN.		\$4.67				\$4.67
SUBTOTAL				\$87.87				\$87.87
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
CHISEL	145 HP	0.15 HR		\$1.13	\$1.42	\$1.13	\$2.68	\$6.37
DISC	145 HP	0.14 HR		\$1.06	\$1.33	\$1.19	\$2.60	\$6.18
FLOAT	145 HP	0.19 HR		\$1.43	\$1.80	\$1.30	\$2.84	\$7.37
FERT SPREADER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
LISTER	145 HP	0.12 HR		\$0.91	\$1.14	\$0.98	\$2.61	\$5.63
DRILL	70 HP	0.18 HR		\$1.36	\$0.70	\$1.07	\$3.27	\$6.40
DITCHER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17
IRRIG ATE (2X)		1.20 HR		\$8.10				\$8.10
SUBTOTAL		2.08 HR		\$14.74	\$6.78	\$6.12	\$15.12	\$42.75
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.21 HR		\$1.57				\$1.57
EMPLOYEE BENEFITS				\$2.65				\$2.65
INSURANCE			\$0.29					\$0.29
SUPERVISION AND MANAGEMENT				\$10.76				\$10.76
SUBTOTAL		0.21 HR	0.29	14.98				15.27
TOTAL OPERATING EXPENSES		2.29 HR	\$88.16	\$29.72	\$6.78	\$6.12	\$15.12	\$145.89

TABLE 6. Wheat, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.
 Planting dates: August 15 - September 15
 Harvesting dates: June 15 - July 10
 Grazing dates: November 1 - March 15

ITEM	PRICE	YIELD							TOTAL
GROSS RETURNS									
WHEAT	\$3.40	40.00	BUSHEL						\$136.00
ASCS DEFICIENCY	\$0.474	40.00	BUSHEL						\$18.96
ASCS DIVERSION	\$0.00								\$0.00
GRAZING	\$12.00	4.00	AUM						\$48.00
TOTAL								\$202.96	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS					TOTAL
SEED	\$0.16	60	LBS	\$9.60					\$9.60
NITROGEN (N)	\$0.32	80	LBS	\$25.60					\$25.60
PHOSPHATE (P205)	\$0.30	20	LBS	\$6.00					\$6.00
HERBICIDE	\$14.71	1	ACRE	\$14.71					\$14.71
CANAL WATER: Assessment	\$7.00	1	ACRE	\$7.00					\$7.00
Water	\$7.00	16	AC. IN.	\$9.33					\$9.33
MANURE CREDIT	\$1.00	4	AUM	\$4.00					\$4.00
CROP INSURANCE	\$0.39			\$0.39					\$0.39
SUBTOTAL				\$76.64					\$76.64
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
CHISEL	145 HP	0.15	HR		\$1.13	\$1.42	\$1.13	\$2.68	\$6.37
DISC (2X)	145 HP	0.28	HR		\$2.11	\$2.66	\$2.38	\$5.21	\$12.36
FLOAT	145 HP	0.19	HR		\$1.43	\$1.80	\$1.30	\$2.84	\$7.37
FERT SPREADER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
PRE-IRRIGATE		0.75	HR		\$5.06				\$5.06
LISTER	145 HP	0.12	HR		\$0.91	\$1.14	\$0.98	\$2.61	\$5.63
HARROW	70 HP	0.10	HR		\$0.76	\$0.39	\$0.30	\$0.45	\$1.89
DRILL	70 HP	0.18	HR		\$1.36	\$0.70	\$1.07	\$3.27	\$6.40
DITCHER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17
IRRIGATE (3X)		1.50	HR		\$10.13				\$10.13
SUBTOTAL		3.37	HR	\$0.00	\$23.64	\$8.49	\$7.61	\$18.17	\$57.91
HARVEST OPERATIONS									
COMBINE	18 FT	0.19	HR	\$0.00	\$1.43	\$1.15	\$0.47	\$2.96	\$6.02
HAUL	2 TON	0.19	HR	\$0.00	\$1.43	\$1.33	\$1.53	\$8.19	\$12.48
SUBTOTAL		0.38	HR	\$0.00	\$2.87	\$2.48	\$2.00	\$11.16	\$18.50
OVERHEAD EXPENSES									
DOWNTIME		0.36	HR		\$2.74				\$2.74
EMPLOYEE BENEFITS					\$4.77				\$4.77
INSURANCE				\$0.53					\$0.53
LAND TAXES							\$0.84		\$0.84
SUPERVISION AND MANAGEMENT					\$16.43				\$16.43
OTHER EXPENSES				\$33.78					\$33.78
SUBTOTAL		0.36	HR	\$34.31	\$23.94			\$0.84	\$59.09
TOTAL OPERATING EXPENSES		4.11	HR	\$110.95	\$50.45	\$10.97	\$9.61	\$30.16	\$212.14
NET OPERATING PROFIT									(\$9.18)
INTEREST ON OPERATING CAPITAL	(	\$42.72	@	8.00%					\$3.42
INTEREST ON EQUIPMENT INVESTMENT									\$16.22
ASCS ACR (SET-ASIDE)	(	0.10	@	\$40.85					\$4.08
RETURN TO LAND AND RISK									(\$32.91)
BUDGET SUMMARY									
GROSS RETURN		\$202.96							
VARIABLE OPERATING EXPENSES	\$131.53								
RETURN OVER VARIABLE EXPENSES		\$71.43	(GROSS MARGIN)						
FIXED EXPENSES	\$30.16								
NET FARM INCOME		\$41.27	(RETURN TO CAPITAL, LABOR, LAND & RISK)						
LABOR AND MANAGEMENT COST	\$50.45								
NET OPERATING PROFIT		(\$9.18)	(RETURN TO CAPITAL, LAND & RISK)						
CAPITAL COSTS	\$23.73								
RETURN TO LAND AND RISK		(\$32.91)							

TABLE 7. Grain sorghum, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.

Planting dates: May 15 - July 1

Harvesting dates: October 15 - December 15

Grazing dates: November 1 - March 30

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
GRAIN SORGHUM	\$3.75	45.00	CWT					\$168.75	
ASCS DEFICIENCY	\$0.58	45.00	CWT					\$26.10	
ASCS DIVERSION	\$0.00	0.00	CWT					\$0.00	
GRAZING	\$8.00	4.00	AUM					\$32.00	
TOTAL								\$226.85	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS				TOTAL	
SEED	\$1.11	7	LBS	\$7.77				\$7.77	
NITROGEN (N)	\$0.32	80	LBS	\$25.60				\$25.60	
PHOSPHATE (P205)	\$0.30	20	LBS	\$6.00				\$6.00	
HERBICIDE	\$15.60	1	ACRE	\$15.60				\$15.60	
CANAL WATER: Assessment	\$7.00	1	ACRE	\$7.00				\$7.00	
Water	\$7.00	16	AC. IN.	\$9.33				\$9.33	
MANURE CREDIT	\$1.00	4	AUM	\$4.00				\$4.00	
CROP INSURANCE	\$0.30			\$0.30				\$0.30	
SUBTOTAL								\$75.61	
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
CHISEL	145 HP	0.15	HR		\$1.13	\$1.42	\$1.13	\$2.68	\$6.37
DISC	145 HP	0.14	HR		\$1.06	\$1.33	\$1.19	\$2.60	\$6.18
FLOAT	145 HP	0.19	HR		\$1.43	\$1.80	\$1.30	\$2.84	\$7.37
DISC & SPRAY	145 HP	0.17	HR		\$1.28	\$1.61	\$1.78	\$4.37	\$9.04
FERT SPREADER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
LISTER	145 HP	0.12	HR		\$0.91	\$1.14	\$0.98	\$2.61	\$5.63
PRE-IRRIGATE		0.75	HR		\$5.06				\$5.06
ROD WEED	70 HP	0.08	HR		\$0.60	\$0.31	\$0.27	\$0.79	\$1.97
PLANTER	145 HP	0.17	HR		\$1.28	\$1.61	\$2.16	\$7.76	\$12.82
ROLLING CULT	70 HP	0.13	HR		\$0.98	\$0.50	\$0.68	\$2.99	\$5.15
DITCHER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17
IRRIGATE (2X)		1.00	HR		\$6.75				\$6.75
SUBTOTAL		3.00	HR	0.00	21.25	10.12	9.95	27.75	69.06
HARVEST OPERATIONS									
COMBINE	18 FT	0.19	HR		\$1.43	\$1.15	\$0.47	\$2.96	\$6.02
HAUL	2 TON	0.19	HR		\$1.43	\$1.33	\$1.53	\$8.19	\$12.48
SUBTOTAL		0.38	HR	\$0.00	\$2.87	\$2.48	\$2.00	\$11.16	\$18.50
OVERHEAD EXPENSES									
DOWNTIME		0.40	HR		\$2.98				\$2.98
EMPLOYEE BENEFITS					\$4.34				\$4.34
INSURANCE				\$0.48					\$0.48
LAND TAXES							\$0.84		\$0.84
SUPERVISION AND MANAGMENT					\$18.42				\$18.42
OTHER EXPENSES				\$33.78					\$33.78
SUBTOTAL		0.40	HR	\$34.27	\$25.74		\$0.84		\$60.85
TOTAL OPERATING EXPENSES		3.78	HR	\$109.87	\$49.86	\$12.59	\$11.95	\$39.74	\$224.02
NET OPERATING PROFIT									
INTEREST ON OPERATING CAPITAL	(\$43.19	@	8.00%)				\$3.46
INTEREST ON EQUIPMENT INVESTMENT									\$21.03
ASCS ACR (SET-ASIDE)	(\$0.10	@	\$40.85)				\$4.08
RETURN TO LAND AND RISK								(\$25.74)	
BUDGET SUMMARY									
GROSS RETURN		\$226.85							
VARIABLE OPERATING EXPENSES	\$134.42								
RETURN OVER VARIABLE EXPENSES	\$92.43	(GROSS MARGIN)							
FIXED EXPENSES	\$39.74								
NET FARM INCOME	\$52.70	(RETURN TO CAPITAL, LABOR, LAND & RISK)							
LABOR AND MANAGEMENT COST	\$49.86								
NET OPERATING PROFIT	\$2.83	(RETURN TO CAPITAL, LAND & RISK)							
CAPITAL COSTS	\$28.57								
RETURN TO LAND AND RISK		(\$25.74)							

TABLE 8. Bermudagrass, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.
Harvesting dates: June 1 - October 1

ITEM	PRICE	YIELD							TOTAL
GROSS RETURNS									
BERMUDAGRASS	\$14.00	10.00	AUM						\$140.00
TOTAL									\$140.00
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS					TOTAL
FERTILIZER (16-4-12-12)	\$0.11	235	LBS	\$25.85					\$25.85
CANAL WATER: Assessment	\$7.00	1	ACRE	\$7.00					\$7.00
Water	\$7.00	18	AC. IN.	\$10.50					\$10.50
MANURE CREDIT	\$1.00	10	AUM	\$10.00					\$10.00
SUBTOTAL				\$53.35					\$53.35
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
HARROW	70 HP	0.10	HR		\$0.76	\$0.39	\$0.30	\$0.45	\$1.89
FERT SPREADER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
DITCHER	70 HP	0.05	HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17
IRRIGATE (3X)		1.50	HR		\$10.13				\$10.13
SUBTOTAL		1.70	HR		\$11.64	\$0.78	\$0.74	\$1.56	\$14.72
OVERHEAD EXPENSES									
DOWNTIME		0.05	HR		\$0.38				\$0.38
EMPLOYEE BENEFITS					\$2.09				\$2.09
INSURANCE				\$0.23					\$0.23
LAND TAXES								\$0.84	\$0.84
SUPERVISION AND MANAGMENT					\$11.38				\$11.38
OTHER EXPENSES				\$33.78					\$33.78
SUBTOTAL		0.05	HR		\$34.02	\$13.85		\$0.84	\$48.70
TOTAL OPERATING EXPENSES		1.75	HR		\$87.37	\$25.48	\$0.74	\$2.40	\$116.77
NET OPERATING PROFIT									\$23.23
INTEREST ON OPERATING CAPITAL	(	\$27.06	@	8.00%	)				\$2.16
INTEREST ON EQUIPMENT INVESTMENT									\$1.19
RETURN TO LAND AND RISK									\$19.88

BUDGET SUMMARY

GROSS RETURN	\$140.00	
VARIABLE OPERATING EXPENSES	\$88.89	
RETURN OVER VARIABLE EXPENSES	\$51.11	(GROSS MARGIN)
FIXED EXPENSES	\$2.40	
NET FARM INCOME	\$48.72	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$25.48	
NET OPERATING PROFIT	\$23.23	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$3.35	
RETURN TO LAND AND RISK	\$19.88	

TABLE 9. Jose Wheatgrass establishment, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL
<u>PURCHASED INPUTS</u>									
SEED	\$1.60	15 LBS		\$24.00					\$24.00
NITROGEN (N)	\$0.32	30 LBS		\$9.60					\$9.60
PHOSPHATE (P205)	\$0.30	60 LBS		\$18.00					\$18.00
CANAL WATER	\$7.00	8 AC. IN.		\$4.67					\$4.67
SUBTOTAL				\$56.27					\$56.27
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL	
CHISEL	145 HP	0.15 HR		\$1.13	\$1.42	\$1.13	\$2.68	\$6.37	
DISC	145 HP	0.14 HR		\$1.06	\$1.33	\$1.19	\$2.60	\$6.18	
FLOAT	145 HP	0.19 HR		\$1.43	\$1.80	\$1.30	\$2.84	\$7.37	
LISTER	145 HP	0.12 HR		\$0.91	\$1.14	\$0.98	\$2.61	\$5.63	
HARROW	70 HP	0.10 HR		\$0.76	\$0.39	\$0.30	\$0.45	\$1.89	
DRILL	70 HP	0.18 HR		\$1.36	\$0.70	\$1.07	\$3.27	\$6.40	
FERT SPREADER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53	
DITCHER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17	
IRRIGATE (2X)		1.00 HR		\$6.75					\$6.75
SUBTOTAL		1.98 HR		\$14.15	\$7.16	\$6.42	\$15.56	\$43.29	
<u>OVERHEAD EXPENSES</u>									
DOWNTIME		0.23 HR		\$1.76					\$1.76
EMPLOYEE BENEFITS				\$2.55					\$2.55
INSURANCE			\$0.28					\$0.28	
SUPERVISION AND MANAGEMENT				\$8.43					\$8.43
SUBTOTAL		0.23 HR	0.28	12.74					13.02
TOTAL OPERATING EXPENSES		2.21 HR	\$56.55	\$26.89	\$7.16	\$6.42	\$15.56	\$112.58	

TABLE 10. Jose Wheatgrass, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 2002.
Harvesting dates: March 1 - June 30 & September 1 - December 1

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
JOSE WHEATGRASS	\$12.00	14.00	AUM OF G RAZING					\$168.00
TOTAL								\$168.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS		FIXED COST			TOTAL
FERTILIZER (16-4-12-12)	\$0.11	235 LBS	\$25.85					\$25.85
ESTABLISHMENT: Principal		15 YEARS			\$7.51			\$7.51
: Interest					\$4.87			\$4.87
CANAL WATER: Assessment	\$7.00	1 ACRE	\$7.00					\$7.00
Water	\$7.00	24 AC. IN.	\$14.00					\$14.00
MANURE CREDIT	\$1.00	14 AUM	\$14.00					\$14.00
SUBTOTAL				\$60.85	\$12.37			\$73.22
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
HARROW	70 HP	0.10 HR		\$0.76	\$0.39	\$0.30	\$0.45	\$1.89
FERT SPREADER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
DITCHER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.16	\$0.44	\$1.17
IRRIGATE (4X)		2.00 HR		\$13.50				\$13.50
SUBTOTAL		2.20 HR		15.01	0.78	0.74	1.56	18.09
OVERHEAD EXPENSES								
DOWNTIME		0.04 HR		\$0.28				\$0.28
EMPLOYEE BENEFITS				\$2.70				\$2.70
INSURANCE			\$0.30					\$0.30
LAND TAXES							\$0.84	\$0.84
SUPERVISION AND MANAGEMENT				\$13.84				\$13.84
OTHER EXPENSES			\$33.78					\$33.78
SUBTOTAL		0.04 HR	\$34.08	\$16.82			\$0.84	\$51.74
TOTAL OPERATING EXPENSES		2.24 HR	\$94.93	\$31.83	\$0.78	\$0.74	\$14.77	\$143.05
NET OPERATING PROFIT								\$24.95
INTEREST ON OPERATING CAPITAL	(	\$30.81	@	8.00%				\$2.46
INTEREST ON EQUIPMENT INVESTMENT								\$1.19
RETURN TO LAND AND RISK								\$21.29
BUDGET SUMMARY								
GROSS RETURN		\$168.00						
VARIABLE OPERATING EXPENSES	\$96.45							
RETURN OVER VARIABLE EXPENSES	\$71.55	(GROSS MARGIN)						
FIXED EXPENSES	\$14.77							
NET FARM INCOME	\$56.78	(RETURN TO CAPITAL, LABOR, LAND & RISK)						
LABOR AND MANAGEMENT COST	\$31.83							
NET OPERATING PROFIT	\$24.95	(RETURN TO CAPITAL, LAND & RISK)						
CAPITAL COSTS	\$3.65							
RETURN TO LAND AND RISK	\$21.29							

TABLE 11. ASCS diverted land, flood irrigated, budgeted per acre costs and returns for a farm with above average management, Arch Hurley Conservancy District, Quay County, 1998.
 Planting dates: August 15 - September 15
 Harvesting dates: (with ASCS) November 1 - April 15
 Harvesting dates: (without ASCS) November 1 - May 30

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ASCS DIVERTED (WHEAT)	\$12.00	8.30 AUM	\$99.62
TOTAL			\$99.62

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	TOTAL
SEED	\$0.16	60 LBS	\$9.60	\$9.60
NITROGEN (N)	\$0.32	80 LBS	\$25.60	\$25.60
PHOSPHATE (P205)	\$0.30	20 LBS	\$6.00	\$6.00
CANAL WATER: Assessment	\$7.00	1 ACRE	\$7.00	\$7.00
Water	\$7.00	8 AC. IN.	\$4.67	\$4.67
MANURE	\$1.00	8.30 AUM	\$8.30	\$8.30
SUBTOTAL			\$61.17	\$61.17

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
CHISEL	126 HP	0.15 HR		\$1.13	\$1.42	\$1.13	\$2.68	\$6.37
DISC (2X)	126 HP	0.28 HR		\$2.11	\$2.66	\$2.38	\$5.21	\$12.36
FLOAT	126 HP	0.19 HR		\$1.43	\$1.80	\$1.30	\$2.84	\$7.37
FERT. SPREADER	70 HP	0.05 HR		\$0.38	\$0.19	\$0.29	\$0.67	\$1.53
PRE-IRRIGATE		0.75 HR		\$5.06				\$5.06
LISTER	126 HP	0.12 HR		\$0.91	\$1.14	\$0.98	\$2.61	\$5.63
HARROW	70 HP	0.10 HR		\$0.76	\$0.39	\$0.30	\$0.45	\$1.89
DRILL	70 HP	0.18 HR		\$1.36	\$0.70	\$1.07	\$3.27	\$6.40
DITCHER	70 HP	0.05 HR		\$0.38	\$0.58	\$0.47	\$1.31	\$2.74
IRRIGATE (1X)		0.50 HR		\$3.38				\$3.38
SUBTOTAL		2.37 HR	\$0.00	\$16.89	\$8.88	\$7.92	\$19.04	\$52.73

OVERHEAD EXPENSES

DOWNTIME	0.27 HR		\$2.02					\$2.02
EMPLOYEE BENEFITS			\$3.04					\$3.04
INSURANCE			\$0.34					\$0.34
LAND TAXES						\$0.84		\$0.84
SUPERVISION AND MANAGEMENT				\$9.01				\$9.01
OTHER EXPENSES								\$0.00
SUBTOTAL	0.27 HR	\$0.34	\$14.07	\$0.84	\$15.24			

TOTAL OPERATING EXPENSES	2.64 HR	\$61.51	\$30.96	\$8.88	\$7.92	\$19.88	\$129.15
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NET OPERATING PROFIT							(\$29.53)
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INTEREST ON OPERATING CAPITAL	(\$34.78	@	8.00%)		\$2.78
INTEREST ON EQUIPMENT INVESTMENT							\$8.54

RETURN TO LAND AND RISK							(\$40.85)
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BUDGET SUMMARY

GROSS RETURN	\$99.62		
VARIABLE OPERATING EXPENSES	\$78.30		
RETURN OVER VARIABLE EXPENSES	\$21.31	(GROSS MARGIN)	
FIXED EXPENSES	\$19.88		
NET FARM INCOME	\$1.43	(RETURN TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$30.96		
NET OPERATING PROFIT	(\$29.53)	(RETURN TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$11.32		
RETURN TO LAND AND RISK	(\$40.85)		

Table 12. Livestock Enterprise, cost and returns for a 640 acre farm with livestock as the primary enterprise, with above average management, Arch Hurley Conservancy District, Quay County, 1998.

GROSS RETURNS			Sale Weight (CWT)	Total (\$)	Guideline Value (\$/Cow)	Guideline Value (\$/AU)
NUMBER		\$/CWT				
97	YEARLING HEIFERS	\$85.00	7.35	\$60,601	\$240.48	\$173.01
122	YEARLING STEERS	90.00	7.50	82,350	326.79	\$235.11
0	HEIFER CALVES	104.00	4.25	0	0.00	\$0.00
0	STEER CALVES	112.00	4.50	0	0.00	\$0.00
2	BULLS	41.00	16.50	1,353	5.37	\$3.86
23	CULL COWS	38.00	10.00	8,740	34.68	\$24.95
4,188	MANURE	0.13	8.00	4,188	16.62	\$11.96
TOTAL				\$157,232	\$623.94	\$448.89

NUMBER	PURCHASED INPUTS	Unit	\$/Unit	Total	Guideline Value (\$/Cow)	Guideline Value (\$/AU)
FORAGE:						
1400	JOSE WHEATGRASS	AUM	\$12.00	\$16,800	\$66.67	\$47.96
1000	BERMUDAGRASS	AUM	10.00	\$10,000	39.68	28.55
660	GRAIN SORGHUM	AUM	8.00	\$5,280	20.95	15.07
510	WHEAT	AUM	12.00	\$6,120	24.29	17.47
62	ASCS DIVERSION	AUM	12.00	\$747	2.96	2.13
400	ALFALFA AFTERMATH	AUM	8.00	\$3,200	12.70	9.14
SUBTOTAL				\$42,147	\$167.25	\$120.33

LABOR, FEED, LIVESTOCK:		Unit	\$/Unit	Total	(\$/Cow)	(\$/AU)
5	PROTEIN SUPPLEMENT	TON	\$250	\$1,250	\$4.96	\$3.57
2	SALT & MINERALS	TON	210	420	1.67	1.20
69	HAY	TON	80	5,520	21.90	15.76
0	GRAIN	TON	200	0	0.00	0.00
0	GRAIN CUBES	TON	200	0	0.00	0.00
	FUEL AND REPAIRS	ANNUAL		0	0.00	0.00
	VETERINARY AND MEDICINE	ANNUAL		1,953	7.75	5.58
2	BULLS PURCHASED	HEAD	1300	2,600	10.32	7.42
	LIVESTOCK TAXES	ANNUAL		1,675	6.65	4.78
	MAINTENANCE	ANNUAL		0	0.00	0.00
277	PREGNANCY TEST	HEAD	2	554	2.00	1.58
395	LABOR	HOUR	5	1,975	7.84	5.64
244	BEEF CHECKOFF PROGRAM	HEAD	1	244	0.97	0.70
	MISCELLANEOUS	ANNUAL		0	0.00	0.00
SUBTOTAL				\$16,191	\$64.05	\$46.23

OVERHEAD EXPENSES

	EMPLOYEE BENEFITS	0	\$0.00	\$0.00
	INSURANCE	0	0.00	0.00
	DEPRECIATION	1,440	5.71	4.11
	SUPERVISION AND MANAGEMENT	7,458	29.60	21.29
	OTHER EXPENSES	4,336	17.21	12.38
SUBTOTAL		\$13,234	\$52.52	\$37.78

TOTAL OPERATING EXPENSES \$71,573 \$284.02 \$204.34

NET OPERATING PROFIT \$85,659 \$339.92 \$244.55

CAPITAL COST

	INTEREST ON OPERATING CAPITAL	2,034	8.07	5.81
	INTEREST ON MACHINERY AND IMPROVEMENTS	2,242	8.90	6.40
	INTEREST ON LIVESTOCK	29,487	117.01	84.18

TOTAL CAPITAL COST 33,762 133.98 96.39

RETURN TO RISK \$51,897 205.94 148.16

BUDGET SUMMARY

GROSS RETURN	\$157,232
VARIABLE OPERATING EXPENSES	\$58,338
RETURN OVER VARIABLE EXPENSES	\$98,894
FIXED EXPENSES	\$5,776
NET FARM INCOME	\$93,118
LABOR AND MANAGEMENT COST	\$7,458
NET OPERATING PROFIT	\$85,659
CAPITAL COST	\$33,762
RETURN TO LAND AND RISK	\$51,897

Table 13. Summary of per acre costs and returns for an above-average managed farm, Arch Hurley
 Conservancy District, Quay County, 2002.

	ASCD DIVERTED	ALFALFA EST.	ALFALFA HAY	WHEAT	GRAIN SORGHUM FLOOD	BERMUDA PASTURE	JOSE WHEAT EST.	GRASS PASTURE
PRIMARY YIELD	8.30		4.50	40.00	45.00	10.00		14.00
PRIMARY PRICE	12.00		120.00	3.40	3.75	14.00		12.00
GOVERNMENT PAYMENTS	0.00		0.00	18.96	26.10	0.00		0.00
SECOND INCOME	0.00		32.00	48.00	32.00	0.00		0.00
GROSS RETURN	\$99.62		\$572.00	\$202.96	\$226.85	\$140.00		\$168.00
CASH OPERATING EXPENSES								
SEED	\$9.60	\$55.60		\$9.60	\$7.77		\$24.00	
FERTILIZER	\$39.90	\$27.60	\$22.00	\$35.60	\$35.60	\$35.85	\$27.60	\$39.85
CHEMICALS				\$14.71	\$15.60			
CROP INSURANCE				\$0.39	\$0.30			
OTHER PURCHASED INPUTS			\$14.33					
CANAL WATER	\$11.67	\$4.67	\$21.00	\$16.33	\$16.33	\$17.50	\$4.67	\$21.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$8.88	\$6.78	\$14.14	\$10.97	\$12.59	\$0.78	\$7.16	\$0.78
FUEL-IRRIGATION								
REPAIRS	\$7.92	\$6.12	\$14.99	\$9.61	\$11.95	\$0.74	\$6.42	\$0.74
CUSTOM CHARGES			\$0.00	\$0.00	\$0.00			
LAND TAXES			\$0.84	\$0.84	\$0.84	\$0.84		\$0.84
OTHER EXPENSES	\$0.34	\$0.29	\$34.43	\$34.31	\$34.27	\$34.02	\$0.28	\$34.08
TOTAL CASH EXPENSES	\$78.30	\$101.05	\$121.72	\$132.36	\$135.25	\$89.72	\$70.13	\$97.29
RETURN OVER CASH EXPENSES	\$21.31	(\$101.05)	\$450.28	\$70.60	\$91.60	\$50.28	(\$70.13)	\$70.71
FIXED EXPENSES	\$19.88	\$15.12	\$74.85	\$29.32	\$38.90	\$1.56	\$15.56	\$13.93
TOTAL EXPENSES	\$98.18	\$116.17	\$196.57	\$161.69	\$174.15	\$91.28	\$85.69	\$111.22
NET FARM INCOME	\$1.43	(\$116.17)	\$375.43	\$41.27	\$52.70	\$48.72	(\$85.69)	\$56.78
LABOR AND MANAGEMENT COSTS	\$30.96	\$29.72	\$83.96	\$50.45	\$49.86	\$25.48	\$26.89	\$31.83
NET OPERATING PROFIT	(\$29.53)	(\$145.89)	\$291.47	(\$9.18)	\$2.83	\$23.23	(\$112.58)	\$24.95
CAPITAL COSTS								
INTEREST ON OPERATING CAPITAL	\$2.78		\$2.51	\$3.42	\$3.46	\$2.16		\$2.46
INTEREST ON EQUIPMENT INVESTMENT	\$8.54		\$31.36	\$16.22	\$21.03	\$1.19		\$1.19
ASCS ACR (SET ASIDE)				\$4.08	\$4.08			
TOTAL CAPITAL COSTS	\$11.32	\$0.00	\$33.87	\$23.73	\$28.57	\$3.35	\$0.00	\$3.65
RETURN TO LAND AND RISK	(\$40.85)	(\$145.89)	\$257.60	(\$32.91)	(\$25.74)	\$19.88	(\$112.58)	\$21.29

Table 14. Whole Farm Summary, Arch Hurley Conservancy District,
Quay County, 2002.

GROSS RETURNS		
ALFALFA HAY	100 ACRES	
CROP		\$51,240
GRAZING		\$3,200
WHEAT	128 ACRES	
CROP		\$17,408
GRAZING		\$6,144
ASCS DEFICIENCY		\$2,427
ASCS DIVERSION		\$0
GRAIN SORGHUM	165 ACRES	
CROP		\$27,844
GRAZING		\$5,280
ASCS DEFICIENCY		\$3,132
ASCS DIVERSION		\$0
BERMUDAGRASS	100 ACRES	
CROP		\$14,000
JOSE WHEATGRASS	100 ACRES	
CROP		\$16,800
ASCS DIVERSION	8 ACRES	\$747
LIVESTOCK		\$157,232
GROSS RETURN		<u>\$305,454</u>
CASH OPERATING EXPENSES		
FORAGE		\$42,147
FEED AND LIVESTOCK		\$14,216
SEED		\$3,840
FERTILIZER		\$21,328
CHEMICALS		\$4,457
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$1,433
CANAL WATER		\$10,963
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$5,326
FUEL-IRRIGATION		\$0
REPAIRS		\$5,096
CUSTOM CHARGES		\$0
LAND TAXES		\$496
OTHER EXPENSES		\$24,646
TOTAL CASH EXPENSES		<u>\$134,049</u>
RETURN OVER CASH EXPENSES		\$171,405
FIXED EXPENSES		\$18,073
TOTAL EXPENSES		<u>\$152,122</u>
NET FARM INCOME		\$153,332
LABOR AND MANAGEMENT COSTS		\$39,332
NET OPERATING PROFIT		\$113,999
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$1,742
INTEREST ON EQUIPMENT INVESTMENT		\$8,985
INTEREST ON LIVESTOCK ENTERPRISE		\$33,762
TOTAL CAPITAL COSTS		<u>\$44,489</u>
RETURN TO LAND AND RISK		<u>\$69,510</u>

LAND VALUE	TOTAL INVESTMENT	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	\$556,872	\$64,390	20.47%
\$300 /ACRE	620,872	61,830	18.36%
\$400 /ACRE	684,872	59,270	16.65%
\$500 /ACRE	748,872	56,710	15.22%
\$600 /ACRE	812,872	54,150	14.02%
\$700 /ACRE	876,872	51,590	13.00%
\$800 /ACRE	940,872	49,030	12.12%
\$900 /ACRE	1,004,872	46,470	11.34%
\$1,000 /ACRE	1,068,872	43,910	10.67%
\$1,100 /ACRE	1,132,872	41,350	10.06%
\$1,200 /ACRE	1,196,872	38,790	9.52%

* RETURN TO LAND AND RISK MINUS (INTEREST RATE TIMES LAND VALUE TIMES ACREAGE)

** NET OPERATING PROFIT DIVIDED BY (MACHINERY AND EQUIPMENT VALUE PLUS LIVESTOCK AND LIVESTOCK RESOURCES PLUS LAND VALUE)