

TABLE 1. Basic cost information for the Arch Hurley Conservancy District, Quay County, 2003.

| Item | | | |
|---------------------------------|----------------------------|--|---------|
| Labor Wage Rate: | | | |
| Equipment operators | \$/hour | | \$7.55 |
| General & Irrigators | \$/hour | | \$6.75 |
| Purchased Inputs: | | | |
| Fertilizer: | | | |
| Nitrogen (N) | \$/pound | | \$0.36 |
| Phosphate (P205) | \$/pound | | \$0.33 |
| Seed: | | | |
| Alfalfa | \$/pound | | \$3.00 |
| Grain Sorghum | \$/pound | | \$1.20 |
| Wheat | \$/pound | | \$0.13 |
| Wire | \$/pound | | \$0.39 |
| Canal Water | | | |
| Assessment | \$/acre | | \$7.00 |
| Water | \$/acre foot | | \$7.00 |
| Energy: | | | |
| Diesel fuel | \$/gallon | | \$1.30 |
| Gasoline | \$/gallon | | \$1.35 |
| LP Gas | \$/gallon | | \$1.21 |
| Electricity (Farmers Elec Coop) | cents/KwHr | | 6.13 |
| Employee Liability Insurance | \$/1,000 wages | | \$20.00 |
| Employee Benefits | percent/w ages | | 18.00% |
| Labor Downtime | percent | | 25.00% |
| Financial Rates: | | | |
| Operating Capital Interest Rate | percent | | 8.00% |
| Land Interest Rate | percent | | 7.00% |
| 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, 2003.

FARM SIZE 600 ACRES
 IRRIGATION TYPE..... SPRINKLER
 NUMBER OF CROPS... 3

| ACREAGE SUMMARY: | LAND USE (ACRES) | WATER USE | |
|------------------------------------|------------------|----------------|--------------|
| | | AC.IN. PER AC. | TOTAL AC.IN. |
| ALFALFA ESTABLISHMENT | 25.0 * | 6 | 150 |
| ALFALFA | 200.0 | 24 | 4,800 |
| GRAIN SORGHUM | 170.0 | 18 | 3,060 |
| ARP | 0.0 | | |
| FLEX IN GRAIN SORGHUM | 30.0 | 12 | 360 |
| WHEAT | 170.0 | 12 | 2,040 |
| ARP | 0.0 | | |
| FLEX IN GRAIN SORGHUM | 30.0 | 12 | 360 |
| TOTAL | 600.0 | | 10,410 |
| ACRE FEET PER ACRE OF WATER RIGHTS | | | 1.45 |

* DOUBLE-CROPPED

TABLE 1a. Overhead cost information for the Arch Hurley Conservancy District, Quay County, 2003.

| ITEM | | | |
|------------------------------------|----------|--------------------|----------|
| Electricity (Domestic & Shop) | | \$215.00 per month | \$2,580 |
| Telephone | | \$115.00 per month | \$1,380 |
| Accounting & Legal | | | \$1,715 |
| Misc. Supplies & Hand Tools | | | \$2,340 |
| Pickup and Auto | | | |
| miles | 20,600 @ | \$0.365 per mile | \$7,519 |
| Insurance | | | |
| - general liability (non-employee) | | | \$1,725 |
| - fire/theft | | | \$1,355 |
| Property Taxes | | | |
| - non-planted land | | | \$0 |
| - other than land & machinery | | | \$610 |
| Building repairs and maintenance | | | \$1,310 |
| Dues, fees, publications | | | \$390 |
| Farmstead Equipment | | | \$165 |
| Total | | | \$21,089 |
| Total per planted acre | | | \$35.15 |

TABLE 2. Pumping costs and data for irrigation wells, Arch Hurley Conservancy District, Quay County, 2003.

INPUT DATA

DELIVERY PSI:
 SPRINKLER 35

GALLONS PER MINUTE (GPM)... 700
 WORK HORSEPOWER 14

EFFICIENCY FACTOR:

ELECTRICITY. 0.540
 LP GAS..... 0.154
 DIESEL..... 0.160

FUEL COST PER HOUR:

ELECTRICITY. 6.13 CENTS/K wHr
 LP GAS..... \$1.21 \$/GAL
 DIESEL..... \$1.30 \$/GAL

PUMPING COSTS

ELECTRIC:

COST PER HOUR..... \$ \$1.24
 COST PER ACRE INCH\$ \$0.80

LP GAS:

COST PER HOUR..... \$ \$3.14
 COST PER ACRE INCH\$ \$2.03

DIESEL:

COST PER HOUR..... \$ \$2.11
 COST PER ACRE INCH\$ \$1.37

TABLE 3. Equipment summary for a 600 acre sprinkler-irrigated farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.

| EQUIPMENT ITEM & SIZE | ANNUAL | | VARIABLE COSTS | | | | | FIXED COSTS | | |
|---------------------------|-----------------|--------|----------------|------------------------|----------|--------------------|------------------|-------------------|---------|-------------------|
| | HOURS OF USE | NUMBER | TOTAL VALUE | FUEL, OIL LUBRICANT | REPAIR | FUEL,OIL PER HR | REPAIR PER HR | DEPRE- CIATION | TAXES | TOTAL PER HOUR |
| TRACTOR 70 HP | 303 | 1 | \$6,790 | \$1,458 | \$1,039 | \$4.80 | \$3.43 | \$705 | \$92 | \$2.63 |
| TRACTOR 165 HP | 424 | 1 | \$31,475 | \$4,978 | \$3,610 | \$11.74 | \$8.51 | \$4,652 | \$304 | \$11.69 |
| COMBINE 95 HP | 76 | 1 | \$38,150 | \$569 | \$9,834 | \$7.49 | \$129.40 | \$7,600 | \$497 | \$106.54 |
| GRAIN HEAD 18 FT | 76 | 1 | \$14,410 | | \$1,966 | | \$25.87 | \$1,519 | \$99 | \$21.30 |
| SWATHER 16 FT SP | 88 | 1 | \$24,740 | \$428 | \$446 | \$4.87 | \$5.07 | \$3,621 | \$316 | \$44.73 |
| TRUCK 2T | 76 | 1 | \$22,000 | \$628 | \$3,578 | \$8.26 | \$47.08 | \$4,400 | \$192 | \$60.42 |
| DISC 14 FT | 122 | 1 | \$3,000 | | \$206 | | \$1.68 | \$400 | \$26 | \$3.48 |
| ROD WEEDER 23 FT | 18 | 1 | \$625 | | \$9 | | \$0.49 | \$83 | \$5 | \$4.83 |
| CULTIVATOR 6-ROW | 30 | 1 | \$2,500 | | \$54 | | \$1.80 | \$333 | \$22 | \$11.88 |
| DRILL 13 FT | 35 | 1 | \$2,150 | | \$121 | | \$3.44 | \$430 | \$19 | \$12.78 |
| PLANTER 6-ROW | 39 | 1 | \$4,250 | | \$286 | | \$7.31 | \$850 | \$37 | \$22.69 |
| FLOAT 12 FT | 89 | 1 | \$500 | | \$16 | | \$0.18 | \$53 | \$3 | \$0.64 |
| SPRAYER TRACTOR MTD 16 FT | 39 | 1 | \$1,400 | | \$94 | | \$2.41 | \$187 | \$12 | \$5.09 |
| FERT SPREADER | 31 | 1 | \$2,300 | | \$91 | | \$2.90 | \$307 | \$20 | \$10.46 |
| BALER PTO 2-WIRE | 168 | 1 | \$1,500 | | \$0 | | \$0.00 | \$385 | \$34 | \$2.49 |
| SWEEP 23 FT | 34 | 1 | \$4,350 | | \$106 | | \$3.13 | \$580 | \$38 | \$18.17 |
| BALE WAGON, PTO | 160 | 1 | \$1,850 | | \$947 | | \$5.92 | \$800 | \$70 | \$5.44 |
| CENTER PIVOT SPRINKLER | 7196 | 1 | \$17,250 | \$3,598 | \$1,151 | \$0.50 | \$0.16 | \$2,300 | \$150 | \$0.34 |
| ELECTRIC BOOSTER PUMP | 7196 | 1 | \$2,500 | \$8,930 | \$1,346 | \$1.24 | \$0.19 | \$333 | \$22 | \$0.05 |
| | | | \$181,740 | \$20,589 | \$24,900 | | | \$29,539 | \$1,959 | |

TABLE 4. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.
Planting dates: August 1 - September 15

| ITEM | PRICE | QUANTITY | PURCHASED INPUTS | | | | | TOTAL |
|----------------------------|------------|---------------------|------------------|---------|------------|---------|------------|----------|
| <u>PURCHASE INPUTS</u> | | | | | | | | |
| SEED | \$3.00 | 16 LBS | | \$48.00 | | | | \$48.00 |
| OAT SEED | \$0.23 | 40 LBS | | \$9.20 | | | | \$9.20 |
| NITROGEN (N) | \$0.36 | 30 LBS | | \$10.80 | | | | \$10.80 |
| PHOSPHATE (P205) | \$0.33 | 60 LBS | | \$19.80 | | | | \$19.80 |
| CANAL WATER | \$7.00 | 6 AC. IN. | | \$3.50 | | | | \$3.50 |
| SUBTOTAL | | | | \$91.30 | | | | \$91.30 |
| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL |
| CHISEL | 145 HP | 0.08 HR | | \$0.60 | \$0.94 | \$0.93 | \$2.39 | \$4.86 |
| DISC | 145 HP | 0.14 HR | | \$1.06 | \$1.64 | \$1.43 | \$2.12 | \$6.25 |
| FLOAT | 145 HP | 0.19 HR | | \$1.43 | \$2.23 | \$1.65 | \$2.34 | \$7.66 |
| FERT SPREADER | 70 HP | 0.05 HR | | \$0.38 | \$0.24 | \$0.32 | \$0.65 | \$1.59 |
| DRILL | 70 HP | 0.18 HR | | \$1.36 | \$0.86 | \$1.24 | \$2.77 | \$6.23 |
| IRRIGATE (3X) | | 0.30 HR | | \$2.03 | \$6.75 | \$1.35 | \$1.51 | \$11.64 |
| SUBTOTAL | | 0.94 HR | \$0.00 | \$6.86 | \$12.67 | \$6.91 | \$11.80 | \$38.23 |
| <u>OVERHEAD EXPENSES</u> | | | | | | | | |
| DOWNTIME | | 0.24 HR | | \$1.77 | | | | \$1.77 |
| EMPLOYEE BENEFITS | | | | \$1.23 | | | | \$1.23 |
| INSURANCE | | | \$0.02 | | | | | \$0.02 |
| SUPERVISION AND MANAGEMENT | | | | \$9.65 | | | | \$9.65 |
| SUBTOTAL | | 0.24 HR | \$0.02 | \$12.66 | | | | \$12.69 |
| TOTAL OPERATING EXPENSES | | 1.18 HR | \$91.32 | \$19.52 | \$12.67 | \$6.91 | \$11.80 | \$142.22 |

TABLE 5. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.
Harvesting dates: May 25 - October 15

| ITEM | PRICE | YIELD | | | | | | TOTAL | |
|----------------------------------|------------|---------------------|------------------|---------|------------|---------|------------|----------|---------|
| GROSS RETURNS | | | | | | | | | |
| ALFALFA HAY | \$140.00 | 4.50 TONS (STACKED) | | | | | | \$630.00 | |
| GRAZING | \$48.00 | 1.00 ACRE | | | | | | \$48.00 | |
| TOTAL | | | | | | | | \$678.00 | |
| PURCHASED INPUTS | | | | | | | | | |
| PURCHASED INPUTS | PRICE | QUANTITY | PURCHASED INPUTS | | | | FIXED COST | TOTAL | |
| PHOSPHATE (P205) | \$0.33 | 60 LBS | \$19.80 | | | | | \$19.80 | |
| WIRE | \$0.39 | 39 LBS | \$15.04 | | | | | \$15.04 | |
| ESTABLISHMENT: Principal | | 8 YEARS | | | | | \$17.78 | \$17.78 | |
| : Interest | | | | | | | \$6.39 | \$6.39 | |
| CANAL WATER: Assessment | \$7.00 | 1 ACRE | \$7.00 | | | | | \$7.00 | |
| Water | \$7.00 | 24 AC. IN. | \$14.00 | | | | | \$14.00 | |
| SUBTOTAL | | | \$55.84 | | | | \$24.17 | \$80.01 | |
| PREHARVEST OPERATIONS | | | | | | | | | |
| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL | |
| FERT SPREADER | 70 HP | 0.05 HR | | \$0.38 | \$0.24 | \$0.32 | \$0.65 | \$1.59 | |
| IRRIGATE | | 1.20 HR | | \$8.10 | \$27.01 | \$5.38 | \$6.05 | \$46.55 | |
| SUBTOTAL | | 1.25 HR | | \$8.48 | \$27.25 | \$5.70 | \$6.70 | \$48.14 | |
| HARVEST OPERATIONS | | | | | | | | | |
| SWATHER (4X) | 16 FT | 0.44 HR | | \$3.32 | \$2.14 | \$2.23 | \$19.68 | \$27.37 | |
| BALER (4X) | 70 HP | 0.84 HR | | \$6.34 | \$4.04 | \$2.88 | \$4.30 | \$17.56 | |
| BALE WAGON, PTO (4X) | 145 HP | 0.80 HR | | \$6.04 | \$9.39 | \$11.55 | \$13.70 | \$40.68 | |
| SUBTOTAL | | 2.08 HR | \$0.00 | \$15.70 | \$15.57 | \$16.66 | \$37.68 | \$85.61 | |
| OVERHEAD EXPENSES | | | | | | | | | |
| DOWNTIME | | 0.83 HR | | \$6.29 | | | | \$6.29 | |
| EMPLOYEE BENEFITS | | | | \$5.48 | | | | \$5.48 | |
| INSURANCE | | | \$0.08 | | | | | \$0.08 | |
| LAND TAXES | | | | | | | \$0.84 | \$0.84 | |
| SUPERVISION AND MANAGEMENT | | | | \$49.54 | | | | \$49.54 | |
| OTHER EXPENSES | | | \$35.15 | | | | | \$35.15 | |
| SUBTOTAL | | 0.83 HR | \$35.23 | \$61.31 | | | | \$0.84 | \$97.38 |
| TOTAL OPERATING EXPENSES | | 4.16 HR | \$91.07 | \$85.49 | \$42.82 | \$22.36 | \$69.39 | \$311.14 | |
| NET OPERATING PROFIT | | | | | | | | \$366.86 | |
| INTEREST ON OPERATING CAPITAL | (| \$38.84 | @ | 8.00% | | | | \$3.11 | |
| INTEREST ON EQUIPMENT INVESTMENT | | | | | | | | \$30.67 | |
| RETURN TO LAND AND RISK | | | | | | | | \$333.08 | |

BUDGET SUMMARY

| | | | |
|-------------------------------|----------|----------|---|
| GROSS RETURN | | \$678.00 | |
| VARIABLE OPERATING EXPENSES | \$156.25 | | |
| RETURN OVER VARIABLE EXPENSES | | \$521.75 | (GROSS MARGIN) |
| FIXED EXPENSES | \$69.39 | | |
| NET FARM INCOME | | \$452.35 | (RETURN TO CAPITAL, LABOR, LAND & RISK) |
| LABOR AND MANAGEMENT COST | \$85.49 | | |
| NET OPERATING PROFIT | | \$366.86 | (RETURN TO CAPITAL, LAND & RISK) |
| CAPITAL COSTS | \$33.78 | | |
| RETURN TO LAND AND RISK | | \$333.08 | |

TABLE 6. Grain sorghum, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.

Planting dates: May 15 - July 1

Harvesting dates: October 15 - December 15

| ITEM | PRICE | YIELD | TOTAL |
|--------------------------|---------|-----------|-----------------|
| GROSS RETURNS | | | |
| GRAIN SORGHUM | \$3.95 | 45.00 CWT | \$177.75 |
| DIRECT PAYMENT | \$0.625 | 45.00 CWT | \$28.13 |
| COUNTER CYCLICAL PAYMENT | \$0.00 | 0.00 CWT | \$0.00 |
| GRAZING | \$48.00 | 1.00 ACRE | \$48.00 |
| TOTAL | | | \$253.88 |

| PURCHASED INPUTS | PRICE | QUANTITY | PURCHASED INPUTS | TOTAL |
|-------------------------|---------|------------|------------------|----------------|
| SEED | \$1.20 | 7 LBS | \$8.40 | \$8.40 |
| NITROGEN (N) | \$0.36 | 80 LBS | \$28.80 | \$28.80 |
| PHOSPHATE (P205) | \$0.33 | 20 LBS | \$6.60 | \$6.60 |
| HERBICIDE (CUSTOM) | \$15.07 | 1 ACRE | \$15.07 | \$15.07 |
| CANAL WATER: Assessment | \$7.00 | 1 ACRE | \$7.00 | \$7.00 |
| Water | \$7.00 | 18 AC. IN. | \$10.50 | \$10.50 |
| CROP INSURANCE | \$0.22 | | \$0.22 | \$0.22 |
| SUBTOTAL | | | \$76.58 | \$76.58 |

| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL |
|----------------------------------|------------|---------------------|------------------|---------|------------|---------|------------|------------------|
| SWEEP | 145 HP | 0.08 HR | | \$0.60 | \$0.94 | \$0.93 | \$2.39 | \$4.86 |
| DISC | 145 HP | 0.14 HR | | \$1.06 | \$1.64 | \$1.43 | \$2.12 | \$6.25 |
| FLOAT | 145 HP | 0.19 HR | | \$1.43 | \$2.23 | \$1.65 | \$2.34 | \$7.66 |
| DISC & SPRAY | 145 HP | 0.17 HR | | \$1.28 | \$2.00 | \$2.14 | \$3.44 | \$8.87 |
| FERT SPREADER | 70 HP | 0.05 HR | | \$0.38 | \$0.24 | \$0.32 | \$0.65 | \$1.59 |
| ROD WEED | 145 HP | 0.08 HR | | \$0.60 | \$0.94 | \$0.72 | \$1.32 | \$3.58 |
| PLANTER | 70 HP | 0.17 HR | | \$1.28 | \$0.82 | \$1.83 | \$4.30 | \$8.23 |
| CULTIVATOR | 70 HP | 0.13 HR | | \$0.98 | \$0.62 | \$0.68 | \$1.89 | \$4.17 |
| IRRIGATE (12X) | | 1.20 HR | | \$8.10 | \$20.26 | \$4.04 | \$4.54 | \$36.94 |
| SUBTOTAL | | 2.21 HR | | \$15.73 | \$29.69 | \$13.73 | \$23.00 | \$82.15 |
| HARVEST OPERATIONS | | | | | | | | |
| COMBINE | 18 FT | 0.19 HR | | \$1.43 | \$1.42 | \$29.50 | \$24.29 | \$56.65 |
| HAUL | 2T | 0.19 HR | | \$1.43 | \$1.57 | \$8.95 | \$11.48 | \$23.43 |
| SUBTOTAL | | 0.38 HR | | \$2.87 | \$2.99 | \$38.45 | \$35.77 | \$80.08 |
| OVERHEAD EXPENSES | | | | | | | | |
| DOWNTIME | | 0.65 HR | | \$4.89 | | | | \$4.89 |
| EMPLOYEE BENEFITS | | | | \$4.23 | | | | \$4.23 |
| INSURANCE | | | \$0.08 | | | | | \$0.08 |
| LAND TAXES | | | | | | | \$0.84 | \$0.84 |
| SUPERVISION AND MANAGEMENT | | | | \$19.71 | | | | \$19.71 |
| OTHER EXPENSES | | | \$35.15 | | | | | \$35.15 |
| SUBTOTAL | | 0.65 HR | \$35.23 | \$28.83 | | | \$0.84 | \$64.89 |
| TOTAL OPERATING EXPENSES | | 3.89 HR | \$111.81 | \$47.42 | \$32.68 | \$52.18 | \$59.61 | \$303.70 |
| NET OPERATING PROFIT | | | | | | | | (\$49.83) |
| INTEREST ON OPERATING CAPITAL | (| \$52.60 | @ | 8.00% |) | | | \$4.21 |
| INTEREST ON EQUIPMENT INVESTMENT | | | | | | | | \$30.80 |
| RETURN TO LAND AND RISK | | | | | | | | (\$84.83) |

BUDGET SUMMARY

| | | | |
|-------------------------------|----------|-----------|---|
| GROSS RETURN | | \$253.88 | |
| VARIABLE OPERATING EXPENSES | \$196.67 | | |
| RETURN OVER VARIABLE EXPENSES | | \$57.20 | (GROSS MARGIN) |
| FIXED EXPENSES | \$59.61 | | |
| NET FARM INCOME | | (\$2.40) | (RETURN TO CAPITAL, LABOR, LAND & RISK) |
| LABOR AND MANAGEMENT COST | \$47.42 | | |
| NET OPERATING PROFIT | | (\$49.83) | (RETURN TO CAPITAL, LAND & RISK) |
| CAPITAL COSTS | \$35.00 | | |
| RETURN TO LAND AND RISK | | (\$84.83) | |

TABLE 7. Wheat, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.

Planting dates: August 15 - September 15

Harvesting dates: June 15 - July 10

| ITEM | PRICE | YIELD | TOTAL |
|--------------------------|---------|---------------|-----------------|
| GROSS RETURNS | | | |
| WHEAT | \$4.50 | 40.00 BUSHELS | \$180.00 |
| DIRECT PAYMENT | \$0.52 | 40.00 BUSHELS | \$20.80 |
| COUNTER CYCLICAL PAYMENT | \$0.00 | | \$0.00 |
| GRAZING | \$48.00 | 1.00 ACRE | \$48.00 |
| TOTAL | | | \$248.80 |

| PURCHASED INPUTS | PRICE | QUANTITY | PURCHASED INPUTS | TOTAL |
|-------------------------|---------|------------|------------------|----------------|
| SEED | \$0.13 | 60 LBS | \$7.80 | \$7.80 |
| NITROGEN (N) | \$0.36 | 80 LBS | \$28.80 | \$28.80 |
| PHOSPHATE (P205) | \$0.33 | 20 LBS | \$6.60 | \$6.60 |
| HERBICIDE | \$15.07 | 1 ACRE | \$15.07 | \$15.07 |
| CANAL WATER: Assessment | \$7.00 | 1 ACRE | \$7.00 | \$7.00 |
| Water | \$7.00 | 12 AC. IN. | \$7.00 | \$7.00 |
| CROP INSURANCE | \$0.29 | | \$0.29 | \$0.29 |
| SUBTOTAL | | | \$72.56 | \$72.56 |

| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL |
|-----------------------|------------|---------------------|------------------|---------|------------|---------|------------|---------|
| CHISEL | 145 HP | 0.08 HR | | \$0.60 | \$0.94 | \$0.93 | \$2.39 | \$4.86 |
| DISC (2X) | 145 HP | 0.28 HR | | \$2.11 | \$3.29 | \$2.85 | \$4.25 | \$12.50 |
| FLOAT | 145 HP | 0.24 HR | | \$1.81 | \$2.82 | \$2.09 | \$2.96 | \$9.68 |
| FERT SPREADER | 70 HP | 0.05 HR | | \$0.38 | \$0.24 | \$0.32 | \$0.65 | \$1.59 |
| DRILL | 70 HP | 0.18 HR | | \$1.36 | \$0.86 | \$1.24 | \$2.77 | \$6.23 |
| IRRIGATE (8X) | | 0.80 HR | | \$5.40 | \$13.51 | \$2.69 | \$3.02 | \$24.62 |
| SUBTOTAL | | 1.63 HR | | \$11.67 | \$21.66 | \$10.12 | \$16.05 | \$59.49 |

| HARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL |
|--------------------|------------|---------------------|------------------|--------|------------|---------|------------|---------|
| COMBINE | 18 FT | 0.19 HR | | \$1.43 | \$1.42 | \$29.50 | \$24.29 | \$56.65 |
| HAUL | 2T | 0.19 HR | | \$1.43 | \$1.57 | \$8.95 | \$11.48 | \$23.43 |
| SUBTOTAL | | 0.38 HR | | \$2.87 | \$2.99 | \$38.45 | \$35.77 | \$80.08 |

| OVERHEAD EXPENSES | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & OIL | REPAIRS | FIXED COST | TOTAL |
|----------------------------|---------------------|------------------|---------|------------|---------|------------|---------|
| DOWNTIME | 0.50 HR | | \$1.88 | | | | \$1.88 |
| EMPLOYEE BENEFITS | | | \$2.18 | | | | \$2.18 |
| INSURANCE | | \$0.05 | | | | | \$0.05 |
| LAND TAXES | | | | | | \$0.84 | \$0.84 |
| SUPERVISION AND MANAGEMENT | | | \$12.44 | | | | \$12.44 |
| OTHER EXPENSES | | \$35.15 | | | | | \$35.15 |
| SUBTOTAL | 0.50 HR | \$35.20 | \$16.50 | | | \$0.84 | \$52.54 |

TOTAL OPERATING EXPENSES 2.51 HR \$107.76 \$31.04 \$24.65 \$48.56 \$52.66 \$264.66

NET OPERATING PROFIT (\$15.86)

INTEREST ON OPERATING CAPITAL (\$47.68 @ 8.00%) \$3.81
 INTEREST ON EQUIPMENT INVESTMENT \$27.00

RETURN TO LAND AND RISK (\$46.68)

BUDGET SUMMARY

| | | |
|-------------------------------|-----------|---|
| GROSS RETURN | \$248.80 | |
| VARIABLE OPERATING EXPENSES | \$180.97 | |
| RETURN OVER VARIABLE EXPENSES | \$67.83 | (GROSS MARGIN) |
| FIXED EXPENSES | \$52.66 | |
| NET FARM INCOME | \$15.18 | (RETURN TO CAPITAL, LABOR, LAND & RISK) |
| LABOR AND MANAGEMENT COST | \$31.04 | |
| NET OPERATING PROFIT | (\$15.86) | (RETURN TO CAPITAL, LAND & RISK) |
| CAPITAL COSTS | \$30.82 | |
| RETURN TO LAND AND RISK | (\$46.68) | |

TABLE 8. Summary of per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, 2003.

| | ALFALFA ESTABLISHMENT | ALFALFA HAY -----SPRINKLER----- | GRAIN SORGHUM | WHEAT |
|----------------------------------|--------------------------|---------------------------------------|------------------|-----------|
| | | TONS | CWT | BU |
| PRIMARY YIELD | | 4.50 | 45.00 | 40.00 |
| PRIMARY PRICE | | 140.00 | 3.95 | 4.50 |
| GOVERNMENT PAYMENTS | | 0.00 | 28.13 | 20.80 |
| SECOND INCOME | | 48.00 | 48.00 | 48.00 |
| GROSS RETURN | | \$678.00 | \$253.88 | \$248.80 |
| CASH OPERATING EXPENSES | | | | |
| SEED | \$57.20 | | \$8.40 | \$7.80 |
| FERTILIZER | \$30.60 | \$19.80 | \$35.40 | \$35.40 |
| CHEMICALS | | | \$15.07 | \$15.07 |
| CROP INSURANCE | | | \$0.22 | \$0.29 |
| OTHER PURCHASED INPUTS | | \$15.12 | \$0.08 | \$0.05 |
| CANAL WATER | \$3.50 | \$21.00 | \$17.50 | \$14.00 |
| FUEL, OIL & LUBRICANTS-EQUIPMENT | \$5.92 | \$15.81 | \$12.42 | \$11.14 |
| FUEL-IRRIGATION | \$6.75 | \$27.01 | \$20.26 | \$13.51 |
| REPAIRS | \$6.91 | \$22.36 | \$52.18 | \$48.56 |
| CUSTOM CHARGES | | \$0.00 | | |
| LAND TAXES | | \$0.84 | \$0.84 | \$0.84 |
| OTHER EXPENSES | \$0.02 | \$35.15 | \$35.15 | \$35.15 |
| TOTAL CASH EXPENSES | \$110.91 | \$157.09 | \$197.51 | \$181.81 |
| RETURN OVER CASH EXPENSES | (\$110.91) | \$520.91 | \$56.37 | \$66.99 |
| FIXED EXPENSES | \$11.80 | \$68.56 | \$58.77 | \$51.82 |
| TOTAL EXPENSES | \$122.70 | \$225.65 | \$256.28 | \$233.62 |
| NET FARM INCOME | (\$122.70) | \$452.35 | (\$2.40) | \$15.18 |
| LABOR AND MANAGEMENT COSTS | \$19.52 | \$85.49 | \$47.42 | \$31.04 |
| NET OPERATING PROFIT | (\$142.22) | \$366.86 | (\$49.83) | (\$15.86) |
| CAPITAL COSTS | | | | |
| INTEREST ON OPERATING CAPITAL | | \$3.11 | \$4.21 | \$3.81 |
| INTEREST ON EQUIPMENT INVESTMENT | | \$30.67 | \$30.80 | \$27.00 |
| TOTAL CAPITAL COSTS | \$0.00 | \$33.78 | \$35.00 | \$30.82 |
| RETURN TO LAND AND RISK | (\$142.22) | \$333.08 | (\$84.83) | (\$46.68) |
| Flex Computation | | | \$4.74 | \$32.14 |

TABLE 9. Whole farm summary, Arch Hurley Conservancy District,
Quay County, 2003.

| | | |
|----------------------------------|-----------|------------------|
| GROSS RETURNS | | |
| ALFALFA HAY | 200 ACRES | |
| CROP | | \$126,000 |
| GRAZING | | \$9,600 |
| GRAIN SORGHUM | 230 ACRES | |
| CROP | | \$40,883 |
| GRAZING | | \$11,040 |
| DIRECT PAYMENT | | \$6,469 |
| COUNTER CYCLICAL PAYMENT | | \$0 |
| WHEAT | 170 ACRES | |
| CROP | | \$30,600 |
| GRAZING | | \$8,160 |
| DIRECT PAYMENT | | \$2,288 |
| COUNTER CYCLICAL PAYMENT | | \$0 |
| GROSS RETURN | | <u>\$235,039</u> |
| CASH OPERATING EXPENSES | | |
| SEED | | \$4,688 |
| FERTILIZER | | \$18,885 |
| CHEMICALS | | \$6,026 |
| CROP INSURANCE | | \$100 |
| OTHER PURCHASED INPUTS | | \$3,051 |
| CANAL WATER | | \$10,693 |
| FUEL, OIL & LUBRICANTS-EQUIPMENT | | \$8,061 |
| FUEL-IRRIGATION | | \$12,528 |
| REPAIRS | | \$24,900 |
| CUSTOM CHARGES | | \$0 |
| LAND TAXES | | \$502 |
| OTHER EXPENSES | | \$21,090 |
| TOTAL CASH EXPENSES | | <u>\$110,524</u> |
| RETURN OVER CASH EXPENSES | | \$124,515 |
| FIXED EXPENSES | | \$32,777 |
| TOTAL EXPENSES | | \$143,301 |
| NET FARM INCOME | | \$91,738 |
| LABOR AND MANAGEMENT COSTS | | \$33,770 |
| NET OPERATING PROFIT | | \$57,968 |
| CAPITAL COSTS | | |
| INTEREST ON OPERATING CAPITAL | | \$2,238 |
| INTEREST ON EQUIPMENT INVESTMENT | | \$17,808 |
| TOTAL CAPITAL COSTS | | <u>\$20,046</u> |
| RETURN TO LAND AND RISK | | <u>\$37,922</u> |

| LAND VALUE | RETURN TO RISK* | RETURN ON INVESTMENT** |
|---------------|-----------------|------------------------|
| \$200 /ACRE | \$33,122 | 19.21% |
| \$400 /ACRE | \$28,322 | 13.75% |
| \$600 /ACRE | \$23,522 | 10.70% |
| \$800 /ACRE | \$18,722 | 8.76% |
| \$1,000 /ACRE | \$13,922 | 7.42% |
| \$1,200 /ACRE | \$9,122 | 6.43% |

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

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