

TABLE 1. Basic cost information for San Juan County, 2003.

| Item | | | |
|---------------------------------|----------|------------------------------|---------|
| Labor Wage Rate: | | | |
| Equipment operators | | \$/hour | \$6.75 |
| General & Irrigators | | \$/hour | \$6.45 |
| Purchased Inputs: | | | |
| Fertilizer: | | | |
| Phosphate (P205) | | \$/pound | \$0.33 |
| Seed: | | | |
| Alfalfa | | \$/pound | \$3.00 |
| Oats | | \$/pound | \$0.40 |
| Wire | | \$/pound | \$0.39 |
| Canal Water | | \$/acre foot | \$10.75 |
| Energy: | | | |
| Diesel fuel | | \$/gallon | \$1.30 |
| Gasoline | | \$/gallon | \$1.35 |
| Electricity | | cents/KwHr | 8.87 |
| LP Gas | | \$/gallon | \$1.21 |
| Natural Gas | | \$/MCF | \$3.28 |
| (service charge) | | \$/month | \$10.00 |
| 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 | \$253.00 | /acre (full value) | \$2.07 |
| Personal Property Tax Rate - NR | | \$/ \$1,000 (Assessed Value) | \$24.60 |
| - R | | | \$20.83 |
| Supervision Factors | | | |
| Field Crop-Irrigation | | \$/labor hour | \$1.00 |
| Field Crop-Equipment & General | | \$/labor hour | \$0.50 |
| Management Rate | | percent | 7.00% |

TABLE 1a. Overhead cost information for San Juan County, 2003.

| ITEM | | | |
|------------------------------------|--------|------------------------|----------|
| Electricity (Domestic & Shop) | | \$120.00 per month | \$1,440 |
| Telephone | | \$80.00 per month | \$960 |
| Accounting & Legal | | | \$490 |
| Misc. Supplies & Hand Tools | | | \$825 |
| Pickup and Auto | | | |
| miles | 10,300 | @ \$0.365 per mile | \$3,760 |
| Insurance | | | |
| - general liability (non-employee) | | | \$1,020 |
| - fire/theft | | | \$665 |
| Property Taxes | | | |
| - non-farm land | | | \$0 |
| - other than land & machinery | | | \$320 |
| Building repairs and maintenance | | | \$510 |
| Dues, fees, publications | | | \$245 |
| Farmstead Equipment | | | \$165 |
| | | Total | \$10,399 |
| | | Total per planted acre | \$150.71 |

Table 2. Pumping costs and data for irrigation, San Juan County, 2003.

INPUT DATA

DELIVERY PSI:

BOOSTER PUMP.... 70

GALLONS PER MINUTE (GPM)... 800

WORK HORSEPOWER... 33

EFFICIENCY FACTOR:

ELECTRICITY. 0.540

NATURAL GAS. 0.154

LP GAS..... 0.154

DIESEL..... 0.160

FUEL COST PER UNIT:

ELECTRICITY. 8.87 CENTS/K wHr

NATURAL GAS. \$3.28 \$/MCF

LP GAS..... \$1.21 \$/GAL

DIESEL..... \$1.30 \$/GAL

PUMPING COSTS

ELECTRIC WELL:

COST PER HOUR.....\$ 4.03

COST PER ACRE INCH\$ 2.28

NATURAL GAS WELL:

COST PER HOUR.....\$ 1.97

COST PER ACRE INCH\$ 1.12

LP GAS WELL:

COST PER HOUR.....\$ 7.14

COST PER ACRE INCH\$ 4.04

DIESEL WELL:

COST PER HOUR.....\$ 4.80

COST PER ACRE INCH\$ 2.71

TABLE 3. Equipment summary for an 80 acre sprinkler-irrigated farm, San Juan County, 2003.

| EQUIPMENT | | VARIABLE COSTS | | | | | | FIXED COSTS | | |
|-----------------------------|---------------------|----------------|-------------|--------------------|------------------|--------|---------------|---------------|-------|----------------|
| ITEM & SIZE | ANNUAL HOURS OF USE | NUMBE | TOTAL VALUE | FUEL AND LUBRICANT | FUEL,LUBE REPAIR | PER HR | REPAIR PER HR | DEPRE-CIATION | TAXES | TOTAL PER HOUR |
| TRACTOR 40 HP | 51 | 1 | \$1,600 | \$208 | \$7 | \$4.04 | \$0.14 | \$50 | \$10 | \$1.17 |
| TRACTOR 95 HP | 65 | 1 | \$19,240 | \$604 | \$84 | \$9.24 | \$1.29 | \$1,430 | \$176 | \$24.55 |
| SWATHER 14 FT | 35 | 1 | \$4,300 | \$170 | \$61 | \$4.87 | \$1.74 | \$1,450 | \$119 | \$44.98 |
| BALER, PTO 2-WIRE | 46 | 1 | \$1,500 | | \$39 | | \$0.85 | \$385 | \$32 | \$9.10 |
| BALE WAGON, PTO | 44 | 1 | \$1,650 | | \$126 | | \$2.88 | \$800 | \$66 | \$19.85 |
| DISC 12 FT | 4 | 1 | \$2,250 | | \$10 | | \$2.79 | \$180 | \$18 | \$53.06 |
| PLOW 3-14 IN | 7 | 1 | \$3,350 | | \$25 | | \$3.35 | \$268 | \$27 | \$40.09 |
| DITCHER (DOUBLE MOLDBOARD) | 8 | 1 | \$1,250 | | \$0 | | \$0.05 | \$100 | \$10 | \$13.78 |
| HARROW 12 FT | 2 | 1 | \$300 | | \$0 | | \$0.01 | \$24 | \$2 | \$12.66 |
| DRILL 12 FT | 2 | 1 | \$2,200 | | \$2 | | \$1.06 | \$220 | \$18 | \$103.05 |
| FERT SPREADER DEALER FURNI: | 4 | | | | | | | | | |
| SIDEROLL SPRINKLER | 2,038 | 2 | \$5,000 | | \$96 | | \$0.05 | \$667 | \$41 | \$0.35 |
| NATURAL GAS BOOSTER PUMP | 2,038 | 1 | \$2,500 | \$4,018 | \$381 | \$1.97 | \$0.19 | \$333 | \$21 | \$0.23 |
| | | | \$45,140 | \$5,000 | \$831 | | | \$5,907 | \$540 | |

TABLE 4. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, 2003.

Planting dates: April 15 - June 1
Harvesting dates: June 15 - July 1

| ITEM | PRICE | YIELD | | | | | | TOTAL | |
|----------------------------------|------------|---------------------|------------------|----------------|----------------|----------------|-------------------|-----------------|-----------------|
| GROSS RETURNS | | | | | | | | | |
| OAT HAY | \$130.00 | 2.25 TONS (STACKED) | | | | | | \$292.50 | |
| GRAZING | \$10.00 | 1 AUM | | | | | | \$10.00 | |
| TOTAL | | | | | | | \$302.50 | | |
| PURCHASED INPUTS | | | | | | | | | |
| PURCHASED INPUTS | PRICE | QUANTITY | PURCHASED INPUTS | | | | | FIXED COST | TOTAL |
| ALFALFA SEED | \$3.00 | 20 LBS | \$60.00 | | | | | | \$60.00 |
| OAT SEED | \$0.40 | 45 LBS | \$18.00 | | | | | | \$18.00 |
| PHOSPHATE (P2O5) | \$0.33 | 45 LBS | \$14.85 | | | | | | \$14.85 |
| WIRE | \$0.39 | 19 LBS | \$7.52 | | | | | | \$7.52 |
| CANAL WATER | | 39 AC. IN. | | | | | | \$34.94 | \$34.94 |
| CANAL WATER (MAINTENANCE) | | 1 ACRE | | | | | | \$8.00 | \$8.00 |
| SUBTOTAL | | | \$100.37 | | | | | \$42.94 | \$143.31 |
| PREHARVEST OPERATIONS | | | | | | | | | |
| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & LUBE | REPAIRS | FIXED COST | TOTAL | |
| PLOW | 96 HP | 0.67 HR | | \$4.52 | \$6.19 | \$3.11 | \$43.31 | \$57.13 | |
| DISC (2X) | 96 HP | 0.34 HR | | \$2.30 | \$3.14 | \$1.39 | \$26.39 | \$33.21 | |
| HARROW | 96 HP | 0.19 HR | | \$1.28 | \$1.76 | \$0.25 | \$7.07 | \$10.36 | |
| FERTILIZE | 96 HP | 0.05 HR | | \$0.34 | \$0.46 | \$0.06 | \$1.23 | \$2.09 | |
| DRILL | 96 HP | 0.21 HR | | \$1.42 | \$1.94 | \$0.49 | \$26.80 | \$30.65 | |
| DITCHER (2X) | 40 HP | 0.10 HR | | \$0.68 | \$0.40 | \$0.02 | \$1.50 | \$2.59 | |
| IRRIGATE (9X) | | 2.25 HR | | \$14.51 | \$43.49 | \$5.16 | \$12.79 | \$75.95 | |
| SUBTOTAL | | 3.81 HR | | \$25.04 | \$57.38 | \$10.48 | \$119.08 | \$211.98 | |
| HARVEST OPERATIONS | | | | | | | | | |
| SWATHER | 14 FT | 0.16 HR | | \$1.08 | \$0.78 | \$0.28 | \$7.20 | \$9.33 | |
| BALER | 96 HP | 0.21 HR | | \$1.42 | \$1.94 | \$0.45 | \$7.07 | \$10.87 | |
| BALE WAGON | 96 HP | 0.20 HR | | \$1.35 | \$1.85 | \$0.83 | \$8.88 | \$12.91 | |
| SUBTOTAL | | 0.57 HR | | \$3.85 | \$4.57 | \$1.56 | \$23.15 | \$33.12 | |
| OVERHEAD EXPENSES | | | | | | | | | |
| DOWNTIME | | 1.74 HR | | \$11.71 | | | | \$11.71 | |
| EMPLOYEE BENEFITS | | | | \$5.20 | | | | \$5.20 | |
| INSURANCE | | | \$0.58 | | | | | \$0.58 | |
| LAND TAXES | | | | | | | \$2.07 | \$2.07 | |
| SUPERVISION AND MANAGEMENT | | | | \$28.19 | | | | \$28.19 | |
| SUBTOTAL | | 1.74 HR | \$0.58 | \$45.10 | | | | \$2.07 | \$47.75 |
| TOTAL OPERATING EXPENSES | | 6.12 HR | \$100.95 | \$73.99 | \$61.95 | \$12.04 | \$187.24 | \$436.16 | |
| NET OPERATING PROFIT | | | | | | | (\$133.66) | | |
| INTEREST ON OPERATING CAPITAL | (| \$67.66 | @ | 8.00% | | | | \$5.41 | |
| INTEREST ON EQUIPMENT INVESTMENT | | | | | | | | \$123.42 | |
| RETURN TO LAND AND RISK | | | | | | | (\$262.48) | | |

TABLE 5. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, 2003.
Harvesting dates: June 1 - October 15

| ITEM | PRICE | YIELD | | | | | | TOTAL | |
|--|------------|---|------------------|----------|-------------|---------|------------|------------|----------|
| GROSS RETURNS | | | | | | | | | |
| ALFALFA HAY | \$140.00 | 5.50 TONS (STACKED) | | | | | | \$770.00 | |
| GRAZING | \$10.00 | 2.00 AUM | | | | | | \$20.00 | |
| TOTAL | | | | | | | | \$790.00 | |
| PURCHASED INPUTS | | | | | | | | | |
| PURCHASED INPUTS | PRICE | QUANTITY | PURCHASED INPUTS | | | | | FIXED COST | TOTAL |
| PHOSPHATE (P2O5) | \$0.33 | 40 LBS | \$13.20 | | | | | | \$13.20 |
| INSECTICIDE (AERIAL) | \$19.20 | 1 ACRE | \$19.20 | | | | | | \$19.20 |
| WIRE | \$0.39 | 43 LBS | \$16.77 | | | | | | \$16.77 |
| LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal | | 6 YEARS | | | | | \$5.00 | \$5.00 | |
| : Interest | | | | | | | \$43.75 | \$43.75 | |
| CANAL WATER | | 46 AC. IN. | | | | | \$22.33 | \$22.33 | |
| CANAL WATER (MAINTENANCE) | | 1 ACRE | | | | | \$41.21 | \$41.21 | |
| | | | | | | | \$8.00 | \$8.00 | |
| SUBTOTAL | | | \$49.17 | | | | \$120.28 | \$169.45 | |
| PREHARVEST OPERATIONS | | | | | | | | | |
| PREHARVEST OPERATIONS | POWER UNIT | ACCOMPLISHMENT RATE | PURCHASED INPUTS | LABOR | FUEL & LUBE | REPAIRS | FIXED COST | TOTAL | |
| FERTILIZE | 96 HP | 0.05 HR | | \$0.34 | \$0.46 | \$0.06 | \$1.23 | \$2.09 | |
| DITCHER (2X) | 40 HP | 0.10 HR | | \$0.68 | \$0.40 | \$0.02 | \$1.50 | \$2.59 | |
| IRRIGATE (13X) | | 3.25 HR | | \$20.96 | \$51.30 | \$6.09 | \$15.08 | \$93.43 | |
| SUBTOTAL | | 3.40 HR | | \$21.98 | \$52.16 | \$6.17 | \$17.81 | \$98.12 | |
| HARVEST OPERATIONS | | | | | | | | | |
| SWATHER (3X) | 14 FT | 0.48 HR | | \$3.24 | \$2.34 | \$0.84 | \$21.59 | \$28.00 | |
| BALER (3X) | 40 HP | 0.63 HR | | \$4.25 | \$2.54 | \$0.62 | \$6.47 | \$13.89 | |
| BALE WAGON (3X) | 96 HP | 0.60 HR | | \$4.05 | \$5.54 | \$2.50 | \$26.64 | \$38.74 | |
| SUBTOTAL | | 1.71 HR | | \$11.54 | \$10.42 | \$3.96 | \$54.70 | \$80.63 | |
| OVERHEAD EXPENSES | | | | | | | | | |
| DOWNTIME | | 0.44 HR | | \$2.97 | | | | \$2.97 | |
| EMPLOYEE BENEFITS | | | | \$6.03 | | | | \$6.03 | |
| INSURANCE | | | \$0.67 | | | | \$0.67 | | |
| LAND TAXES | | | | | | | \$2.07 | \$2.07 | |
| SUPERVISION AND MANAGEMENT | | | | \$59.43 | | | | \$59.43 | |
| OTHER EXPENSES | | | \$150.71 | | | | \$150.71 | | |
| SUBTOTAL | | 0.44 HR | \$151.38 | \$68.43 | | | | \$2.07 | \$221.89 |
| TOTAL OPERATING EXPENSES | | 5.55 HR | \$200.55 | \$101.95 | \$62.58 | \$10.13 | \$194.87 | \$570.09 | |
| NET OPERATING PROFIT | | | | | | | | \$219.91 | |
| INTEREST ON OPERATING CAPITAL | (| \$40.37 | @ | 8.00% | | | | \$3.23 | |
| INTEREST ON EQUIPMENT INVESTMENT | | | | | | | | \$53.84 | |
| RETURN TO LAND AND RISK | | | | | | | | \$162.85 | |
| BUDGET SUMMARY | | | | | | | | | |
| GROSS RETURN | | \$790.00 | | | | | | | |
| VARIABLE OPERATING EXPENSES | \$273.27 | | | | | | | | |
| RETURN OVER VARIABLE EXPENSES | \$516.73 | (GROSS MARGIN) | | | | | | | |
| FIXED EXPENSES | \$194.87 | | | | | | | | |
| NET FARM INCOME | \$321.86 | (RETURN TO CAPITAL, LABOR, LAND & RISK) | | | | | | | |
| LABOR AND MANAGEMENT COST | \$101.95 | | | | | | | | |
| NET OPERATING PROFIT | \$219.91 | (RETURN TO CAPITAL, LAND & RISK) | | | | | | | |
| CAPITAL COSTS | \$57.07 | | | | | | | | |
| RETURN TO LAND AND RISK | \$162.85 | | | | | | | | |

TABLE 6. Summary of per acre costs and returns for an 80 acre farm, San Juan County, 2002.

| | ALFALFA ESTABLISHMENT -----SPRINKLER----- | ALFALFA HAY |
|----------------------------------|---|----------------|
| | TONS | TONS |
| PRIMARY YIELD | 2.25 | 5.50 |
| PRIMARY PRICE | 130.00 | 140.00 |
| GOVERNMENT PAYMENTS | 0.00 | 0.00 |
| SECOND INCOME | 10.00 | 20.00 |
| GROSS RETURN | \$302.50 | \$790.00 |
| CASH OPERATING EXPENSES | | |
| SEED | \$78.00 | |
| FERTILIZER | \$14.85 | \$13.20 |
| CHEMICALS | | \$19.20 |
| CROP INSURANCE | | |
| OTHER PURCHASED INPUTS | \$7.52 | \$16.77 |
| CANAL WATER | | |
| FUEL, OIL & LUBRICANTS-EQUIPMENT | \$18.46 | \$11.29 |
| FUEL-IRRIGATION | \$43.49 | \$51.30 |
| REPAIRS | \$12.04 | \$10.13 |
| CUSTOM CHARGES | | |
| LAND TAXES | \$2.07 | \$2.07 |
| OTHER EXPENSES | \$0.58 | \$151.38 |
| TOTAL CASH EXPENSES | \$177.01 | \$275.34 |
| RETURN OVER CASH EXPENSES | \$125.49 | \$514.66 |
| FIXED EXPENSES | \$185.16 | \$192.80 |
| TOTAL EXPENSES | \$362.17 | \$468.14 |
| NET FARM INCOME | (\$59.67) | \$321.86 |
| LABOR AND MANAGEMENT COSTS | \$73.99 | \$101.95 |
| NET OPERATING PROFIT | (\$133.66) | \$219.91 |
| CAPITAL COSTS | | |
| INTEREST ON OPERATING CAPITAL | \$5.41 | \$3.23 |
| INTEREST ON EQUIPMENT INVESTMENT | \$123.42 | \$53.84 |
| TOTAL CAPITAL COSTS | \$128.83 | \$57.07 |
| RETURN TO LAND AND RISK | (\$262.48) | \$162.85 |

TABLE 7. Whole farm summary, San Juan County, 2002.

| | | |
|----------------------------------|----------|----------|
| GROSS RETURNS | | |
| OAT HAY | 11 ACRES | |
| CROP | | \$3,328 |
| ALFALFA HAY | 69 ACRES | |
| CROP | | \$53,130 |
| GRAZING | | \$1,380 |
| GROSS RETURN | | \$57,838 |
| CASH OPERATING EXPENSES | | |
| SEED | | \$858 |
| FERTILIZER | | \$1,074 |
| CHEMICALS | | \$1,325 |
| CROP INSURANCE | | \$0 |
| OTHER PURCHASED INPUTS | | \$1,240 |
| CANAL WATER | | \$0 |
| FUEL, OIL & LUBRICANTS-EQUIPMENT | | \$982 |
| FUEL-IRRIGATION | | \$4,018 |
| REPAIRS | | \$831 |
| CUSTOM CHARGES | | \$0 |
| LAND TAXES | | \$166 |
| OTHER EXPENSES | | \$10,452 |
| TOTAL CASH EXPENSES | | \$20,946 |
| RETURN OVER CASH EXPENSES | | \$36,892 |
| FIXED EXPENSES | | \$12,321 |
| TOTAL EXPENSES | | \$33,267 |
| NET FARM INCOME | | \$24,571 |
| LABOR AND MANAGEMENT COSTS | | \$7,848 |
| NET OPERATING PROFIT | | \$16,722 |
| CAPITAL COSTS | | |
| INTEREST ON OPERATING CAPITAL | | \$282 |
| INTEREST ON EQUIPMENT INVESTMENT | | \$5,072 |
| TOTAL CAPITAL COSTS | | \$5,355 |
| RETURN TO LAND AND RISK | | \$11,368 |

| LAND VALUE | RETURN TO RISK* | RETURN ON INVESTMENT** |
|---------------|-----------------|------------------------|
| \$1,000 /ACRE | \$8,168 | 13.36% |
| \$2,500 /ACRE | \$3,368 | 6.82% |
| \$4,000 /ACRE | (\$1,432) | 4.58% |
| \$5,500 /ACRE | (\$6,232) | 3.45% |
| \$7,000 /ACRE | (\$11,032) | 2.76% |
| \$8,500 /ACRE | (\$15,832) | 2.31% |

* 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)