

**IRRIGATION COST SPREADSHEET**

ENTER YOUR DATA IN THE YELLOW HIGHLIGHTED CELLS

**Type: Center Pivot, 600 foot system, electricity powered**

**BRIEF DESCRIPTION:**

600 ft sprinkler system plus end gun. Full circle covers 31.5 acres. Power source is commercially supplied electricity. Adequate water required drilling a new well. Well capacity of 400 GPM is required. System operates 40.6 hours to apply 1 acre inch of water.

Enter effective acreage covered ==> **31.5** acres  
 Enter hours required to apply 1 acre inch ==> **40.6** hours

**INVESTMENT COST**

Item	Unit	Quantity	Cost/unit	Total	Per Acre
Power service		1	\$2,000.00	\$2,000	\$63.49
6"PVC pipe and fittings	Feet	600	\$5.83	\$3,498	\$111.05
Sprinkler System (3 towers)		1	\$33,782.00	\$33,782	\$1,072.44
Pump motor, 20 HP		1	\$6,500.00	\$6,500	\$206.35
Well		1	\$17,500.00	\$17,500	\$555.56
<b>Total investment cost:</b>				<b>\$63,280</b>	<b>\$2,008.89</b>

**ANNUAL FIXED COSTS**

Item	Investment Cost	Salvage Value	Useful Life Years	Depreciation <sup>1</sup>	Interest <sup>2</sup>	Tax & Ins <sup>2</sup>	Total DITI	Total Per Acre
Enter interest and property tax + insurance rate, as a percentage of value==>					8.50%	1.40%		
Power service	\$2,000	\$0.00	10	\$200.00	\$85.00	\$14.00	\$299	\$9.49
6"PVC pipe and fittings	\$3,498	\$0.00	20	\$174.90	\$148.67	\$24.49	\$348	\$11.05
Sprinkler System (3 towers)	\$33,782	\$0.00	20	\$1,689.10	\$1,435.74	\$236.47	\$3,361	\$106.71
Pump motor, 20 HP	\$6,500	\$0.00	20	\$325.00	\$276.25	\$45.50	\$647	\$20.53
Well	\$17,500	\$0.00	20	\$875.00	\$743.75	\$122.50	\$1,741	\$55.28
<b>Total Fixed Cost</b>	<b>\$63,280</b>			<b>\$3,264.00</b>	<b>\$2,689.40</b>	<b>\$442.96</b>	<b>\$6,396</b>	<b>\$203.06</b>

**ANNUAL OPERATING COST**

Item	Hours per acre inch	Rated Horse Power	Fuel Use KWH/HP-hr	Fuel Cost \$/KWH	Acre inches applied <sup>3</sup>	Total	Total Per Acre
<b>Fuel</b>							
Electricity	40.6	20	0.746	\$0.085	5.0	\$257	\$8.17
<b>Repairs and Maintenance</b>	<b>Initial Cost</b>	<b>Cost Factor</b>					
Power service	\$2,000	0.00%				\$0	\$0.00
6"PVC pipe and fittings	\$3,498	0.00%				\$0	\$0.00
Sprinkler System (3 towers)	\$33,782	0.50%				\$169	\$5.36
Pump motor, 20 HP	\$6,500	2.00%				\$130	\$4.13
Well	\$17,500	0.00%				\$0	\$0.00
<b>Labor</b>	<b>Hours</b>	<b>Cost/hour</b>					
Labor	1.5	\$9.03				\$14	\$0.43
<b>Total operating cost</b>						<b>\$570</b>	<b>\$18.09</b>

**TOTAL ANNUAL COST**

	Total	Per Acre
<b>Total Fixed and Operating Cost</b>	<b>\$6,966</b>	<b>\$221.15</b>

<sup>1</sup> Depreciation = (Initial cost - Salvage value) / years of life

<sup>2</sup> Based on the average investment = (Initial cost + Salvage value) / 2 multiplied by the indicated percentage rate

<sup>3</sup> The number of irrigation events likely will vary from 3 to 9 per season. A total application of five acre inches is used in this budget.

Costs estimates and the spreadsheet were developed by:

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