

**IRRIGATION COST SPREADSHEET**

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**Type: Center Pivot, 1,000 foot system, diesel powered**

**BRIEF DESCRIPTION:**

1000 ft sprinkler system plus end gun. Full circle covers 81 acres. Power source is a diesel pump and generator. Adequate water requires drilling a new well. Well capacity of 600 GPM is required. System operates 65.5 hours to apply 1 acre inch of water.

**Enter effective acreage covered ==> 81 acres**

**Enter hours required to apply 1 acre inch ==> 65.5 hours**

**INVESTMENT COST**

Item	Unit	Quantity	Cost/unit	Total	Per Acre
8" PVC pipe and fittings	Feet	1,000	\$7.20	\$7,200	\$88.89
Sprinkler system (5 towers)		1	\$52,543.00	\$52,543	\$648.68
Pump, 60 HP		1	\$17,500.00	\$17,500	\$216.05
Gearhead assembly and engine		1	\$20,500.00	\$20,500	\$253.09
Well		1	\$27,500.00	\$27,500	\$339.51
<b>Total investment cost:</b>				<b>\$125,243</b>	<b>\$1,546.21</b>

**ANNUAL OWNERSHIP 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
<b>Enter interest and property tax + insurance rate, as a percentage of value==&gt;</b>					8.50%	1.40%		
8" PVC pipe and fittings	\$7,200	\$0.00	20	\$360.00	\$306.00	\$50.40	\$716	\$8.84
Sprinkler system (5 towers)	\$52,543	\$0.00	20	\$2,627.15	\$2,233.08	\$367.80	\$5,228	\$64.54
Pump, 60 HP	\$17,500	\$0.00	20	\$875.00	\$743.75	\$122.50	\$1,741	\$21.50
Gearhead assembly and engine	\$20,500	\$0.00	20	\$1,025.00	\$871.25	\$143.50	\$2,040	\$25.18
Well	\$27,500	\$0.00	20	\$1,375.00	\$1,168.75	\$192.50	\$2,736	\$33.78
<b>Total Fixed Cost</b>	<b>\$125,243</b>			<b>\$6,262.15</b>	<b>\$5,322.83</b>	<b>\$876.70</b>	<b>\$12,462</b>	<b>\$153.85</b>

**ANNUAL OPERATING COST**

Item	Hours per acre inch	Rated Horse Power	Fuel Use Gals/HP/hr <sup>3</sup>	Fuel Cost \$/gallon	Acre-inches applied <sup>4</sup>	Total	Total Per Acre
Pump fuel	65.5	60	0.0746	\$2.50	5.0	\$3,665	\$45.24
Generator fuel	65.5	25	0.0746	\$2.50	5.0	\$1,527	\$18.85
<b>Repairs and Maintenance</b>	<b>Initial Cost</b>	<b>Cost Factor</b>					
8" PVC pipe and fittings	\$7,200	0.00%				\$0	\$0.00
Sprinkler system (5 towers)	\$52,543	0.50%				\$263	\$3.24
Pump, 60 HP	\$17,500	6.60%				\$1,155	\$14.26
Gearhead assembly and engine	\$20,500	6.60%				\$1,353	\$16.70
Well	\$27,500	0.00%				\$0	\$0.00
<b>Labor</b>	<b>Hours</b>	<b>Cost/hour</b>					
Labor	1.5	\$9.03				\$14	\$0.17
<b>Total operating cost</b>						<b>\$7,976</b>	<b>\$98.47</b>

**TOTAL ANNUAL COST**

Total Fixed and Operating Cost	Total	Per Acre
	<b>\$20,438</b>	<b>\$252.32</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> Fuel consumption will vary by engine manufacturer

<sup>4</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.

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