160 Acre Center Pivot Example
Estimating Annual Irrigation Operation Costs

Standard 160 acre system and end gun with actual irrigated area of 132 acres installed at a cost of $48,000 with a power and water source and connecting equipment cost of $30,000.

Ownership Cost

Depreciation: (original cost - salvage value)/years of use
(pivot cost + installation cost - salvage value)/10 years =
($48,000 - 15,000)/10 = $3,300

(well cost - salvage value) / 20 years =
($30,000 - 10,000)/20 = $1,000

Interest: interest rate * average investment value
9.5% * (original cost + salvage value/2) =
9.5% * ($78,000 + $25,000/2) = $ 51,500
9.5% * $51,500 = $4,893

Repair: estimated to between 2 to 5% of original cost
well cost * 2% =
$30,000 * 2% = $600

pivot cost * 3% =
$48,000 * 3% = $1,440

Taxes: no personal property tax in Michigan
the addition irrigation equipment should not increase property taxes

Insurance: estimated at 0.5% * Average Investment Value
0.5% * (original cost + salvage value/2)
0.5% * ($78,000 + $25,000/2)
0.5% * ($ 51,500) = $258

Total Ownership Cost = $4,300 + $4,893 + $2,040 + $258 = $11,491
$ 11,491/132 acres = $87.05/irrigated acre/year

Operating Cost (per acre) or total actual annual cost
These costs are best handled annually calculated using actual costs at the end of season.
Power: use actual fuel or power bill is recommended
estimated power cost:
$3.50/ acre in. * 6 in. * 132 acres = $2,772 annually
$3 to $5.50/acre in. range

Labor cost: recommend use of actual labor bills
Range of $1 to $3.50/acre in.
$1 * 6 acre in. * 132 acres = $792 annually

Total Operating cost annually = $ 3,564

Grand Total Estimated Annual Cost = $3,564 + $11,491 + = $15,055
$15,055/132 acres = $114.05/acre at 6"