**IRRIGATION PAY?** **HERE'S EVIDENCE** **YOU DECIDE**

## NOT IRRIGATED 2008

| INPUTS | ACRES | TOTAL COST | COST/ACRE | COMMENTS |
|---|---|---|---|---|
| SEED | 35 | $ 1,891.40 | $ 54.04 | ROUNDUP READY CORN |
| HERBICIDE COST | 35 | $ 1,926.40 | $ 55.04 | NO TILL |
| FERTILIZER | 35 | $ 6,156.15 | $ 175.89 | 166 N, 58 P, 52 K, 7MG, 2.5 SULFUR, .4 BORON, 2 ZINC |
| | | | **$ 284.97** | **INPUT COST PER ACRE** |
| | | | 113 | NON IRRIGATED YIELD PER ACRE 2008 |
| | | | $ 5.00 | PRICE PER BU (AVERAGE CONTRACTED PRICE) |
| | | | $ 565.00 | GROSS PER ACRE |
| | | | $ (284.97) | INPUT COST PER ACRE |
| | | | **$ 280.03** | **GROSS PROFIT PER ACRE** |

## IRRIGATED 2008

| INPUTS | ACRES | TOTAL COST | COST/ACRE | COMMENTS |
|---|---|---|---|---|
| SEED | 125 | $ 6,755.00 | $ 54.04 | 38 BAGS |
| HERBICIDE COST | 125 | $ 6,880.00 | $ 55.04 | NO TILL ROUNDUP READY CORN |
| FERTILIZER | 125 | $ 21,986.25 | $ 175.89 | 166 N, 58 P, 52 K, 7MG, 2.5 SULFUR, .4 BORON, 2 ZINC |
| 32-0-0 LIQUID N | 125 | $ 5,683.75 | $ 45.47 | INJECTED IN PIVOT AT 8 GAL/ACRE 3 TIMES 7/7-7/14 |
| HEADLINE & HERO | 125 | $ 1,140.00 | $ 9.12 | 6oz HEADLINE & 4oz HERO |
| | | $ 42,445.00 | **$ 330.44** | **INPUT COST PER ACRE** |
| IRRIGATION LEASE COST | 125 | $ 12,250.00 | $ 98.00 | 10 YEAR LEASE PAYMENT |
| FUEL COST | 125 | $ 8,400.00 | $ 67.20 | 448 HRS X 5 GPH X $3.75 FOR 7.25" OF IRRIGATION |
| | | | **$ 165.20** | **COST OF IRRIGATION PER ACRE** |
| | | | 264 | BU PER ACRE W/IRRIGATION 2008 |
| | | | $ 5.00 | PRICE PER BU (AVERAGE CONTRACTED PRICE) |
| | | | $ 1,320.00 | GROSS PER ACRE |
| | | | $ (495.64) | INPUT COST PER ACRE IRRIGATED |
| | | | **$ 824.36** | **GROSS PROFIT PER ACRE** |
| | | | $ 824.36 | GROSS PROFIT PER ACRE (IRRIGATED) |
| | | | $ 280.03 | GROSS PROFIT PER ACRE (NOT IRRIGATED) |
| | | | **$ 544.33** | **NET INCREASE PER ACRE FOR IRRIGATION** |
| | | | 125 | ACRES UNDER IRRIGATION |
| | | | $ 544.33 | NET INCREASE PER ACRE FOR IRRIGATION |
| | | | **$ 68,041.25** | **TOTAL 2008 NET INCOME INCREASE FOR IRRIGATION** |

A T-L hydraulic powered center pivot was installed in a 160 acre field along Red River in south Logan County Kentucky for Armistead Farms in March of 2008. The pivot covers 125 acres of the 160 acre field. The rainfall from June 1 thru August 30 2008 was 7.0". During that time a total of 7.25" of water, 24 Gal of 32% liquid N, along with Headline & Hero was applied through the center pivot system.

The yield on the 35 acres of corn that was outside the coverage area of the pivot and did not receive any additional water was 113 bushels per acre. This resulted in a gross profit per acre of $280.03.

The 125 acres under the pivot that did receive the additional 7.25" of water along with the extra nitrogen, fungicide, & insecticide had a yield of 264 bushels per acre or an increase of 151 bushels per acre over the non irrigated corn in the same field.

After deducting the additional cost incurred by installing the pivot and adding the water, nitrogen, etc the net return per acre was $544.33 greater on the irrigated corn versus the non irrigated corn in the same field.

The first year results were $68,041.25 of additional net profits were realized over and above what would have been received if the system had not been installed.

If there were a tractor, or planter, or combine, or sprayer that had the potential to add that kind of net profits to your normal bottom line, how long would it take to make the investment? Equipment is required but water will determine profitability.

## NOT IRRIGATED 2009

| INPUTS | ACRES | TOTAL COST | COST/ACRE | COMMENTS |
|---|---|---|---|---|
| SEED | 17 | $ 1,209.72 | $ 71.16 | ROUNDY READY BT CORN |
| HERBICIDE COST | 17 | $ 816.85 | $ 48.05 | NO TILL |
| FERTILIZER | 17 | $ 2,020.79 | $ 118.87 | 40 GAL 32%, 2.5GAL SURE K, 2.5GAL PRO GERM .5GAL MICRO 500 |
| | | | **$ 238.08** | **INPUT COST PER ACRE** |
| | | | 190.48 | NON IRRIGATED YIELD PER ACRE 2009 |
| | | | $ 3.85 | PRICE PER BU (AVERAGE CONTRACTED PRICE) |
| | | | $ 733.35 | GROSS PER ACRE |
| | | | $ (238.08) | INPUT COST PER ACRE |
| | | | **$ 495.27** | **GROSS PROFIT PER ACRE** |

## IRRIGATED 2009

| INPUTS | ACRES | TOTAL COST | COST/ACRE | COMMENTS |
|---|---|---|---|---|
| SEED | 168 | $ 15,200.64 | $ 90.48 | ROUNDY READY BT CORN |
| HERBICIDE COST | 168 | $ 8,072.40 | $ 48.05 | NO TILL ROUNDUP READY CORN |
| FERTILIZER | 168 | $ 19,970.16 | $ 118.87 | 40 GAL 32%, 2.5GAL SURE K, 2.5GAL PRO GERM .5GAL MICRO 500 |
| 32-0-0 LIQUID N | 168 | $ 11,744.88 | $ 69.91 | INJECTED IN PIVOT 43 GAL PER ACRE (COST $294/T) |
| HEADLINE & HERO | 168 | $ 3,297.84 | $ 19.63 | 6oz HEADLINE & 4oz HERO |
| | | $ 58,285.92 | **$ 327.31** | **INPUT COST PER ACRE** |
| IRRIGATION LEASE COST | 223 | $ 23,626.00 | $ 105.95 | 10 YEAR LEASE PAYMENT ON TWO PIVOTS |
| FUEL COST PER ACRE | 168 | $ 1,402.80 | $ 8.35 | 283 HRS X 3.3 GPH X $1.50 FOR 2.4" OF IRRIGATION |
| | | | **$ 114.30** | **COST OF IRRIGATION PER ACRE** |
| | | | 252.72 | BU PER ACRE W/IRRIGATION 2009 |
| | | | $ 3.85 | PRICE PER BU (AVERAGE CONTRACTED PRICE) |
| | | | $ 972.97 | GROSS PER ACRE |
| | | | $ (441.61) | INPUT COST PER ACRE IRRIGATED |
| | | | **$ 531.37** | **GROSS PROFIT PER ACRE** |
| | | | $ 531.37 | GROSS PROFIT PER ACRE (IRRIGATED) |
| | | | $ 495.27 | GROSS PROFIT PER ACRE (NOT IRRIGATED) |
| | | | **$ 36.10** | **NET INCREASE PER ACRE FOR IRRIGATION** |
| | | | 168 | ACRES UNDER IRRIGATION |
| | | | $ 36.10 | NET INCREASE PER ACRE FOR IRRIGATION |
| | | | **$ 6,064.43** | **TOTAL 2009 NET INCOME INCREASE FOR IRRIGATION** |

In 2009 another pivot was added to Armistead Farms operation. This was a towable pivot which covers 46 acres of corn. When the corn is mature enough the pivot is relocated to an adjacent field of double crop soybeans where it can irrigate 55 acres.

In 2009 the rainfall from June 1 thru August 30 was a whopping 15.8". This allowed the non irrigated corn yield to jump from 113 bu/acre in 2008 up to a much better 190 bu/acre in 2009. Even though the average contracted price dropped from $5.00/bu in 2008 to $3.85 in 2009 the gross profit per acre on non irrigated corn jumped from $280.03 up to $495.27 which in fact brings out the point that sufficient water does result in higher yields and additional profits.

2009 would be a prime example for those not convinced that irrigation is required to confirm their beliefs and delay the decision to purchase an irrigation system another year. You already missed out on increasing yields in 2008 along with all other years before that and you assume that irrigation would not pay off in a year with rainfall like 2009 so why not wait and see what happens next year. AGAIN.

The data from Armistead Farms experience in 2008 & 2009 is evidence why this is not the best choice. As you can see even with 15.8" of rainfall during the growing season and 32% liquid N at a cost of $294/ton there was still a net return of an additional $36.10 per acre on irrigated corn versus non irrigated corn. If you can add to the bottom line in a year like 2009 there is no doubt that it can be done each and every year.

Each year more is at stake and great effort is made to maximize returns. Why do all that planning & just hope for rainfall to make it all work? Why not do something about it? Look at the evidence!! Irrigation pays.