

MISSOURI
1986 IRRIGATION SURVEY

<u>TYPES OF SYSTEMS</u>	<u>PERCENT</u>
Center Pivot	77.0
Traveling Gun	11.5
Gated Pipe	10.0
Other	1.5

<u>TYPES OF WATER SUPPLIES</u>	
Reservoir	59
Well	26
Stream	10
Stream-reservoir	5

<u>TYPES OF PUMPING POWER</u>	
Diesel	72
Electricity	20
Propane	8
Natural Gas	0

1986 MISSOURI IRRIGATION RESULTS
(without Bootheel)

	Corn	Single crop soybeans	Db1-crop soybeans	Milo	Alfalfa
Number reports	55	37	6	5	2
Acres irrigated	141	106	68	66	194
Inches/application	1.3	1.5	1.3	1.3	2.2
Times irrigated	<u>3.8</u>	<u>3.0</u>	<u>3.0</u>	<u>1.8</u>	<u>2.0</u>
Total inches/acre	5.1	4.5	3.8	2.4	4.3
Irrigated yield/acre	156.2	49.0	27.3	100.1	3.8
Dryland yield/acre	<u>121.7</u>	<u>37.3</u>	<u>27.5</u>	<u>69.0</u>	<u>2.5</u>
Difference	34.5	11.7	-0.2	31.1	1.3

Prepared by Herman E. Workman, Extension Project Leader, Agricultural Economics, for the Soybean/Irrigation Conference, February 3, 1987, Columbia, Missouri.

1986 AVERAGE FUEL COSTS
PER ACRE-INCH

Diesel	\$2.07
L.P	3.22
Electricity	3.20
Average (61 farms) .	\$2.39/ac./inch

1986 AVERAGE REPAIR COSTS

Average/farm	\$524
Average/acre	\$2.47

ESTIMATED COSTS AND RETURNS PER ACRE
FOR IRRIGATED CROPS IN MISSOURI, 1986

	CORN	SINGLE-CROP SOYBEANS
Yield/acre (bu.)	156.2	49.0
Price/bushel	\$1.90	\$4.90
Gross income	\$296.80	\$240.10
<u>Operating Costs</u>		
Seed	\$ 18.00	\$ 8.00
Fertilizer and lime	53.00	16.00
Chemicals	20.00	18.00
Machinery fuel, etc.	30.00	28.00
Drying @ 10¢	15.60	--
Irrigation fuel (\$2.39/ac-in.)	12.20	10.75
Irrigation repairs	2.50	2.50
Interest @ 11%	8.30	4.60
	\$159.60	\$ 87.85
<u>Ownership Costs</u>		
Machinery	\$ 34.00	\$ 27.00
Irrigation equipment	60.00	60.00
Labor	30.00	25.00
	\$124.00	\$112.00
TOTAL NON-LAND COSTS	\$283.60	\$199.85
RETURN TO LAND AND MANAGEMENT	\$ 13.20	\$ 40.25

ESTIMATED ADDED COSTS AND RETURNS PER ACRE
FOR IRRIGATED CROPS IN MISSOURI, 1986

	CORN	SINGLE-CROP SOYBEANS
Yield/acre (bu.)	34.5	11.7
Price/bushel	\$1.90	\$4.90
Added Gross income	\$ 65.55	\$ 57.35
<u>Added Operating Costs</u>		
Seed	\$ 3.00	--
Fertilizer and lime	14.00	\$ 4.00
Drying @ 10¢	3.45	--
Irrigation fuel (\$2.39/ac-in.)	12.20	10.75
Irrigation repairs	2.50	2.50
Interest @ 11%	<u>1.95</u>	<u>.95</u>
	\$ 37.10	\$ 18.20
<u>Added Ownership Costs</u>		
Irrigation equip. and water	\$ 60.00	\$ 60.00
Irrigation labor	<u>5.00</u>	<u>5.00</u>
	\$ 65.00	\$ 65.00
TOTAL ADDED NON-LAND COSTS	\$102.10	\$ 83.20
ADDED RETURN TO LAND AND MANAGEMENT	-\$36.55	-\$25.85

TEN YEAR SURVEY CORN YIELDS
(BU./ACRE)

YEAR	IRRIGATED	DRYLAND	DIFFERENCE
1977	130	95	35
1978	121	86	35
1979	149	92	57
1980	84	34	50
1981	146	127	19
1982	138	116	22
1983	103	38	65
1984	143	72	71
1985	153	115	38
1986	156	122	34
Average	132.3 bu.	89.7 bu.	42.6 bu.

TEN YEAR SURVEY SOYBEAN YIELDS
(BU./ACRE)

YEAR	IRRIGATED	DRYLAND	DIFFERENCE
1977	50	41	9
1978	42	32	10
1979	47	30	17
1980	37	22	15
1981	43	36	7
1982	45	39	6
1983	35	16	19
1984	41	18	23
1985	50	46	4
1986	49	37	12
Average	43.9 bu.	31.7 bu.	12.2 bu.

MIR CORN PRODUCERS 1985
TOP PROFIT VS. LOW PROFIT

	TOP 1/3	LOW 1/3	DIFFERENCE
No. farms	76	76	
Avg. no. acres	238	147	+
Avg. yield/acre (bu.)	126.6	97.4	+29.2
Price per bushel	\$2.29	\$2.29	
Gross value	\$289.90	\$223.05	+\$66.85
<u>Operating Costs/Acre</u>			
Seed	\$ 16.85	\$ 17.35	-
Plant food (fert. & lime)	41.40	44.65	-
Crop chemicals	16.30	19.85	-
Crop insurance	3.30	1.65	+
Machinery fuel, oil, & repair	26.00	34.30	-
Machinery hire & services	10.95	9.75	+
Miscellaneous	10.15	14.10	-
Operating interest	<u>7.75</u>	<u>9.00</u>	-
	\$132.70	\$150.65	-\$17.95
Machinery ownership	\$ 30.85	\$ 41.80	-
Real estate taxes & depr.	8.50	11.45	-
TOTAL NON-LAND COSTS	\$172.05	\$203.90	-\$31.85
RETURN TO LAND & MANAGEMENT	\$117.85	\$ 19.15	\$98.70