

MISSOURI 1988 IRRIGATION SURVEY

Presented at the Irrigation Conference

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<u>TYPES OF SYSTEMS</u>	<u>PERCENT</u>
Center Pivot	85.6
Traveling Gun	13.5
Other	1.0

<u>TYPES OF WATER SUPPLIES</u>	
Reservoir	46.3
Well	39.3
Stream	5.9
Combination	9.3

<u>TYPES OF PUMPING POWER</u>	
Diesel	46.9
Electricity	29.1
Propane	16.6
Natural Gas	2.2
Combination	6.2

WATER SUPPLY ADEQUATE? 69% Yes

RESERVOIR FULL IN JUNE? 55% Yes

APPLIED:

Fertilizer through 9 systems
Insecticides through 2 systems
No herbicides

1988 Irrigation Survey Results

	<u>Corn</u>	<u>Single Crop Soybeans</u>	<u>Dble-Crop Soybeans</u>	<u>Alfalfa</u>
Number Reporting	91	62	25	3
Acres Irrigated	119	98	68	62
Inches/application	1.2	1.2	1.3	1.4
Times irrigated	<u>6.2</u>	<u>4.0</u>	<u>3.7</u>	<u>5.0</u>
Total inches applied	7.5	4.8	4.7	7.2
Irrigated yield/acre (bu.,ton/ac)	140.1	44.1	26.9	4.7
Dryland yield/acre	64.5	32.3	12.2	2.5
Increase (bu. or ton/acre)	75.6	11.8	14.7	2.2

11-year Survey CORN Yields, average:

Irrigated	135.9 bu./acre
Dryland	89.9
Difference	46.1

11-year Survey SOYBEAN Yields, average:

Irrigated	43.7 bu./acre
Dryland	31.3
Difference	12.3

1988 AVERAGE CORN PLANTING RATE
Stalks per acre

Irrigated	23,300
Dryland	20,200

1988 AVERAGE FUEL COST PER ACRE-INCH

Natural Gas	\$3.35
Diesel	2.92
L.P.	2.59
Electricity	2.03
Combination	1.24
Average (92 farms)	\$2.51/ac-in

1988 AVERAGE REPAIR COSTS

Average/farm (98 farms)	\$717
(drop highest)	(\$630)
Average/acre	\$3.77
(drop highest)	(\$2.99)

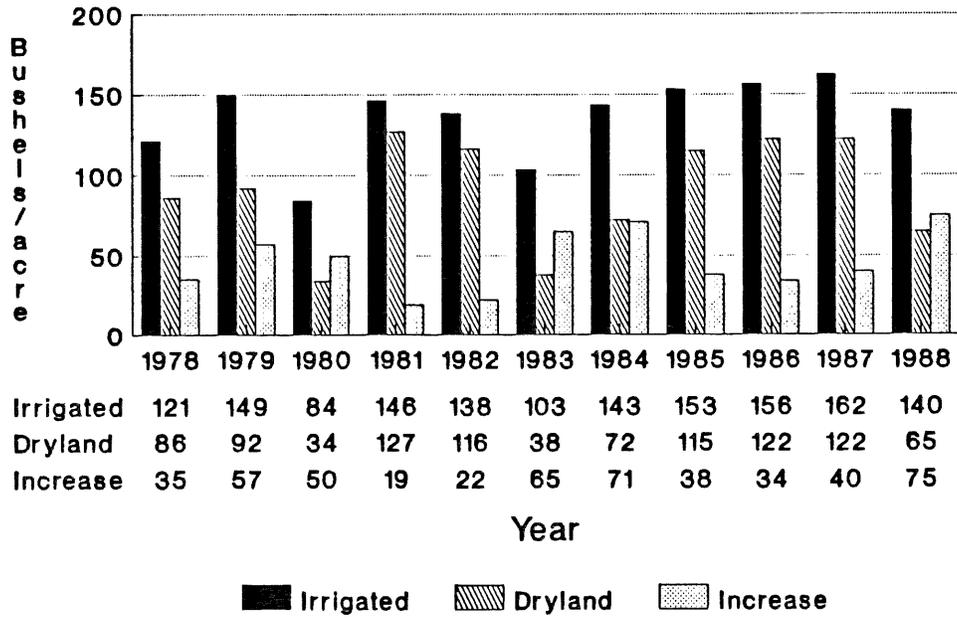
ESTIMATED COSTS AND RETURN PER ACRE
FOR IRRIGATED CROPS IN MISSOURI, 1988

	Corn	Single-Crop Soybeans	Double-Crop Soybeans
Yield/acre (bu.)	140.1	44.1	26.9
Price/bushel	\$2.65	\$7.70	\$7.70
Gross Income	\$371.27	\$339.57	\$207.13
Operating Costs:			
Seed	\$18.70	\$9.50	\$9.50
Fertilizer and Lime	\$46.25	\$12.25	\$10.25
Chemicals	\$20.00	\$19.50	\$19.50
Machinery fuel, etc.	\$38.00	\$29.50	\$27.00
Drying @ 10¢	\$14.00		
Irrigation fuel (\$2.51/ac-i	\$18.82	\$12.05	\$11.80
Irrigation repairs	\$3.77	\$3.77	\$3.77
Interest (11% one-half op.c	\$6.68	\$4.76	\$4.50
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	\$166.22	\$91.33	\$86.32
Ownership Costs:			
Machinery	\$27.00	\$22.00	\$22.00
Irrigation equip.(\$400 @15%	\$60.00	\$60.00	\$60.00
Labor	\$30.00	\$25.00	\$20.00
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	\$117.00	\$107.00	\$102.00
TOTAL NON-LAND COSTS	\$283.22	\$198.33	\$188.32
RETURN TO LAND AND MANAGEMENT	\$88.05	\$141.24	\$18.81
RETURN including deficiency	\$137.37		

ESTIMATED ADDED COSTS AND RETURNS PER ACRE
FOR IRRIGATED CROPS IN MISSOURI, 1988

	Corn	Single-Crop Soybeans	Double-Crop Soybeans
Yield/acre (bu.)	75.4	11.7	14.7
Price/bushel	\$2.65	\$7.70	\$7.70
Added Gross Income	\$199.81	\$90.09	\$113.19
Added Operating Costs:			
Seed	\$3.00		
Fertilizer and Lime	\$12.00	\$3.00	\$3.00
Chemicals			
Machinery fuel, etc.			
Drying @ 10¢	\$7.54		
Irrigation fuel (\$2.51/ac-i	\$18.82	\$12.05	\$11.80
Irrigation repairs	\$3.77	\$3.77	\$3.77
Interest (11% one-half op.c	\$2.48	\$1.04	\$1.02
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	\$47.61	\$19.86	\$19.59
Added Ownership Costs:			
Machinery			
Irrigation equip.(\$400 @15%	\$60.00	\$60.00	\$60.00
Labor	\$5.00	\$5.00	\$5.00
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	\$65.00	\$65.00	\$65.00
TOTAL ADDED NON-LAND COSTS	\$112.61	\$84.86	\$84.59
ADDED RETURN, LAND&MANAGEMENT	\$87.20	\$5.23	\$28.60
ADDED RETURN incl deficiency	\$113.74		

11-year Survey CORN Yields



11-year Survey SOYBEAN Yields

