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Lloyd Murdock

Introduction

Irrigation in Kentucky has always been limited. This is due to a limited water supply in many parts of Kentucky and the high amount of rainfall in the state which reduces the chances for a consistent profitable response to field crops.

There are only small areas of Kentucky that have ground water available in sufficient quantities to reliability provide enough water to irrigate field crops. These are primarily located in parts of the Purchase area and along some major rivers and creeks. The source of water for much of the land that is irrigated is from surface water such as rivers, creeks, reservoirs, waste lagoons, and underground streams (blue holes).

One area, other than field crops, where the irrigated acreage has increased rapidly in Kentucky is turf. Estimates calculated from the 1989 Kentucky Turfgrass Survey include 9,000 acres of

golf courses, 3,000 acres of athletic turf, 500 acres in sod production, and 115,000 acres of home lawns and commercial turf are now irrigated. The economics of this industry places a higher value on irrigation and probably allows for irrigation of this crop at costs greater than those of field crops.

The economic incentives are not as high in field crops. Previous irrigation research in Kentucky and surrounding states indicates that, over many years, irrigation can be profitable for field crops. For any one year, profitability depends on rainfall during the growing season. However, over a 10-year period, irrigation appears to be profitable on corn, but only marginally profitable on soybeans¹. Tobacco is also irrigated when an adequate amount of water is available. It is more helpful when allotments are made on acreage basis. It is probably more profitable on turf and horticultural crops that have a potential of high returns which need to reduce the risk of failure.

Currently, there is no reliable source of information regarding the scale of irrigation of field crops in Kentucky. To try and estimate this acreage, County Extension Agricultural Agents were surveyed.

Survey Results

Most of the counties with irrigated acres responded (46). The results are summarized in Table 1. Almost 42,000 acres of irrigated field crops were estimated to be produced in these 46 counties of the state. Although this is more than some people would expect, it is only 1 to 2% of the total acres of field

crops grown in the state. Although the irrigated acreage is relatively small, it is likely to grow. These results are summarized by area in Table 2.

¹Don Shurley. 1982. An Investment Cost Analysis of Corn and Soybean Irrigation in West Kentucky. Ky. Agri-Business News. No. 21. July 1982.



Extension Soils Specialist

Irrigation of Field Crops in Kentucky 1999 Estimate

<u>COUNTY</u>	<u>CROP ACRES</u>	<u>TOTAL</u>
Allen	Horticulture	25
Anderson	Tobacco	250
Bourbon	Tobacco	1400
Boyd	Agriculture	5
Butler	Swine Waste 400 Tobacco 20	420
Caldwell	Corn-Soybeans	550
Calloway		1200
Carlisle	Row Crop 150 Tobacco 50	200
Carroll	Tobacco	1500
Christian		3250
Clay	Vegetables	15
Daviess	Row Crop & Tobacco	2500
Franklin	Tobacco 950 Vegetables 32	982
Fulton	Row Crop	2500
Grant		500
Graves		1250
Green	Tobacco	25
Hardin	Row Crop 160 Horticulture 50	210
Harrison	Tobacco 2500 Corn 1000	3500
Henderson	All Row Crop	7000
Henry	Tobacco	3000
Hickman	Row Crop	2000
Hopkins		1500
Jackson	Horticulture	6

<u>COUNTY</u>	<u>CROP ACRES</u>	<u>TOTAL</u>
Johnson	Vegetables	15
Laurel		20
Leslie		50
Logan		1000
Lyon	Row Crop & Tobacco	500
Madison	Tobacco	250
Marshall		20
Mason		450
McLean		1000
Mercer		500
Metcalfe	Horticulture 10 Tobacco 150	160
McCracken		150
Monroe	Tobacco	200
Montgomery		150
Muhlenburg		20
Pulaski		5
Rowan		3
Shelby	Horticulture 240 Tobacco 400	640
Simpson	Tobacco	60
Todd		400
Washington		2300
Wayne		100
KENTUCKY	TOTAL IRRIGATED ACRES	41,781

***Estimated Irrigated Field Crop Acres (1999)
by Area in Kentucky***

Purchase	7,320
Pennyrile	6,220
Green River	10,500
Mammoth Cave	1,865
Lake Cumberland	130
Lincoln Trail	2,510
Louisville	3,640
Northern Ky	2,000
Ft Harrod	1,732
Bluegrass	5,150
Licking River	603
Northeast Ky	20
Quicksand	50
Wilderness	41
TOTAL	41,781 Acres

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