

THE ORGANIZATION AND STRUCTURE OF COTTON FARMS IN YALOBUSHA COUNTY, MISSISSIPPI

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Abstract

A January 2002 survey identified ten commercial cotton farms in Yalobusha County. The average cotton farm had 1,898 acres of cropland of which 1,508 acres were planted to cotton in 2001.

Foreword

During the 2000 and 2001 growing seasons, researchers in the Department of Agricultural Economics at Mississippi State University (Starkville) and the Delta Research and Extension Center at Stoneville have been cooperating in research designed to estimate the costs and returns associated with alternative methods of cotton production. This research has been associated with CRIS Project 0172983 entitled, "Adjustment Opportunities for Row Crop Farmers to Changes in Technology, Regulations, and Economic Conditions," and CRIS Project 0172977 entitled, "Economic Impact of New Crops and New Technologies on Mississippi Row Crop Agriculture."

A third project funded by Cotton Incorporated (Project No. 01-988MS) entitled, "A Whole Farm Systems Approach to Increasing Cotton Farm Profitability in Mississippi," resulted in the need to survey Mississippi cotton farmers on the organization and structure of their commercial cotton farming operations. A mail questionnaire was developed to obtain estimates of farm size, acreage by crops, equipment complement, labor force, etc.

This report summarizes the information obtained during the pretest of the survey instrument. The pretest was conducted in Yalobusha County for several reasons. There are few cotton farmers in Yalobusha County. A 100 percent response was expected with a high degree of probability and hence the difficult and time-consuming effort to determine if the non-responders had similar characteristics as the responders would likely not be required. The authors are familiar with many of the cotton farms in the county and the county agent is very familiar with all cotton farms in the county. Yalobusha is known to have a few young cotton producers (growers in their twenties or thirties), as well as one or more growers in their forties, fifties, and sixties. Additionally, the researchers have a long-standing history of excellent cooperation with the county agent.

Introduction

In January of 2002, the survey instrument was hand delivered to each of the cotton farmers in Yalobusha County. They were instructed that the instrument was a pretest and the purpose was to determine if growers understood the questions. Each grower was instructed to complete the form and note any difficulties associated with understanding the question(s) asked or exact information being sought. None of the growers reported any problems with the instrument. The county agent, based on his knowledge of the farms involved, concluded that the information provided was accurate, i.e. the growers understood what information was being requested and were willing to provide the information.

Results

The sampling process determined that there were ten commercial operations centered in Yalobusha County and one non-commercial operation. The 11th grower is "retired" and "farms" 56 acres of cotton with four mainline tractors and two 2-row

cotton pickers. He was designated a hobby farmer and his information was excluded from this report. Table 1 reports total cropland acres and acreage by crops for the ten producers.

Total Cropland

The largest producer reported 3,360 acres of cropland. The smallest producer reported total cropland of 900 acres. Four of the growers had total cropland in excess of 2,000 acres, five had total cropland ranging from 1,000 to 2,000 acres, and only one grower had cropland acreage less than 1,000. The average number of cropland acres for the sample was 1,898.

On average the sample owned 15.8 percent of their cropland. Grower number nine owned no cropland. Grower number ten, 28.5 percent owned, reported the largest percentage of owned cropland. Of the growers that owned some cropland, grower number eight reported the fewest number of acres owned and the smallest percent of acres owned at 3.6 percent.

Planted Acreage by Crops

Clearly the ten farms identified in Table 1 are cotton farms. Cotton acreage makes up almost 80 percent of the total cropland and growers two and nine are cotton monoculturists-they grow cotton and only cotton. Cotton acreage ranged from 850 to 2,560 and averaged 1,508.

The ten growers listed in Table 1 are considered Yalobusha County cotton farmers by the county agent. They reported 15,083 acres of cotton for 2001. The Mississippi Agricultural Statistical Service reported 11,000 acres of cotton planted in Yalobusha County in 2001 (10,900 acres harvested). Therefore, approximately 4,000 acres of the 15,083 acres reported are located in adjacent counties. Six of the growers produced soybeans, an average of 228 acres for the sample and an average of 380 acres for the six growers that produced soybeans. Five of the ten growers reported corn production. The five averaged 246 acres of corn. Cotton represented 79.5 percent of the total cropland acreage, while soybeans and corn represented 12.0 percent and 6.5 percent, respectively. Cotton, soybeans, and corn acreage totaled 18,598, indicating that 295 acres of the 730 acres of wheat was double cropped. Grower number three produced 50 acres of sweetpotatoes.

Intended 2002 Cotton Acreage

Four of the growers indicated that their intended cotton acreage for 2002 would remain unchanged. Four indicated their cotton acreage would increase and two indicated an acreage reduction. The average change was an increase of 4.1 percent.

Number of Mainline Tractors

Table 2 reports the number of mainline tractors (more than 250 annual hours of use), harvesters, sprayers, and planters for the farms sampled in Yalobusha County in January of 2002. Grower 1 reported six mainline tractors, most of the growers reported four. And the smaller growers, growers nine and ten, reported three and two, respectively. A total of 39 tractors were identified, indicating one tractor per 486.7 acres of cropland (one tractor per 386.7 acres of cotton).

Pickers

The survey identified a total of 18 four-row cotton pickers. Six of the farms reported two pickers, three reported one, and one grower had three pickers. Results indicate 837.9 acres of cotton per four-row cotton picker.

The survey identified one cotton stripper. Ultra-narrow or stripper cotton is a new crop in Yalobusha County, and growers are currently dependent upon strippers from other regions.

Combines

Six of the growers reported combines, and only one reported more than one combine. Six corn headers were identified, of which five were four row and one was six row.

Self-Propelled Sprayers

Nine of the ten farmers reported self-propelled spray rigs. Four of the nine reported two sprayers. The predominant width was 60 feet.

Planters

The four largest growers (more than 2,000 acres of cropland and more than 2,000 acres of cotton) reported two planters. The balance of the growers reported only one. One of the growers reported that his planters were six row. Nine of the growers reported eight-row planters.

Planting Patterns

Table 3 reports the cotton planting patterns and number of full-time and part-time laborers. All of the conventional cotton was reported to be solid planted in 38-inch rows. Five of the ten growers reported some ultra-narrow cotton.

Laborers

The number of full-time laborers ranged from five for producer number one to one for producers three and nine. A total of 25 full-time employees were identified for an average of 2.5 per farm. The survey instrument allowed the grower to identify part-time laborers employed during planting and harvest periods. Seven of the ten producers employed extra or part-time labor at planting. The duration of their employment ranged from 14 to 60 days. All growers employed additional help at harvest time. Twenty-five part-time laborers were identified as being employed during the harvest period. The length of employment ranged from 25 to 75 days and averaged 51 days.

Limitations

In the spring of 2002 the survey instrument was mailed to all cotton farmers in Mississippi's ten "all Delta" counties (Bolivar, Coahoma, Humphreys, Issaquena, Leflore, Quitman, Sharkey, Sunflower, Tunica, and Washington). The pretest was not completely successful. When the instrument was utilized for all cotton growers in Mississippi's Delta counties, a problem with mainline tractors owned or lease emerged. That difficulty should be corrected before this instrument is utilized again.

Summary

The average cotton farm in Yalobusha County in 2001 was comprised of 1,898 acres of cropland of which 1,508 acres were cotton. It had (on average) 3.9 mainline tractors, 1.8 4-row cotton pickers, 1.3 self-propelled sprayers, 1.4 8-row planters, and employed 2.5 full-time laborers.

Table 1. Yalobusha county cotton farms, 2001, total cropland and acres by crops and 2002 intended cotton acreage, January 2002 survey results.

Producer	Total							Intended	% change
	Cropland	Owned	Cotton	Soybean	Corn	Wheat	Other	2002 Cotton	
1	3,360	800	2,560	800	-	-	-	2,850	11.3
2	2,350	400	2,350	-	-	-	-	2,350	0.0
3	2,350	350	2,000	-	300	-	50	2,000	0.0
4	2,185	400	2,000	-	180	200	-	2,050	2.5
5	1,880	100	1,500	80	300	-	-	1,500	0.0
6	1,710	100	1,040	670	-	-	-	1,000	-3.8
7	1,748	400	983	335	100	330	-	1,300	32.2
8	1,100	40	900	200	-	200	-	1,000	11.1
9	900	-	900	-	-	-	-	900	0.0
10	1,400	400	850	200	350	-	-	750	-11.8
Σ	18,983	2,990	15,083	2,285	1,230	730	50	15,700	4.1

Table 2. Number of mainline tractors, harvesters, sprayers, and planters, Yalobusha County cotton farms, 2002.

Producer	Tractors	Pickers ¹	Strippers	Combines		Corn headers		Sprayers ⁴		Planters ⁵	
				No.	Width ²	No.	Width ³	No.	Width	No.	Rows
1	6	3	-	-	-	-	-	1	47	2	8
2	4	2	-	-	-	-	-	1	60	2	8
3	4	2	-	1	20	1	4	2	60	2	8
4	4	2	-	1	21	1	4	2	60	2	6
5	4	1	1	1	16	1	4	1	60	1	8
6	4	2	-	2	16,20	1	4	1	45	1	8
7	4	1	-	-	-	-	-	2	60	1	8
8	4	2	-	-	-	-	-	-	-	1	8
9	3	1	-	1	16	1	4	1	60	1	8
10	2	2	-	1	20	1	6	2	60	1	8
Σ	39	18	1	7	-	6	-	13	-	14	-

¹All 4-row.²Header width (ft.).³Number of rows.⁴Self-propelled, width in feet.⁵Row planters (not drills).

Table 3. Cotton pattern(s), number of full-time and part-time laborers, Yalobusha County cotton farms, 2002.

Producer	Planting patterns		Full-time laborers	Part-time			
				Planting		Harvest	
	No. 1 ¹	No. 2		Laborers	Days	Laborers	Days
1	38" 8-row	-	5	2	60	2	75
2	38" 8-row	UNR ²	4	-	-	1	25
3	38" 8-row	-	1	1	14	2	30
4	38" 6-row	UNR	3	6	30	6	80
5	38" 8-row	UNR	3	3	30	3	45
6	38" 8-row	UNR	2	1	14	3	45
7	38" 8-row	UNR	2	1	30	1	60
8	38" 8-row	-	2	-	-	3	45
9	38" 8-row	-	1	1	30	2	60
10	38" 8-row	-	2	-	-	2	45
Σ			25	15	208	25	510

¹All solid planted, no skip-row.²Ultra-narrow row.