THE COST OF GINNING COTTON – 2013 SURVEY RESULTS

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Introduction

The cost of ginning cotton is an important concern for producers and ginners. Data from this survey provides information about key variable costs as a component of the overall cost components of ginning cotton. These data also identify historical trends of gin operation and help to document the incorporation of new technology to maintain or reduce ginning costs. The survey was conducted for the 2013 cotton crop, which produced 12.5 million running bales (USDA-NASS, 2014). This crop was gathered from only 7.5 million acres due to the very high number of abandoned acres, primarily in the southwest due to drought conditions. In 2013, there were 610 operating gins, averaging a little over 20,500 bales per gin.

Procedure

Surveys were sent to gins with the understanding that gin identification would be kept confidential. Ginners were asked to identify variable costs, including labor (seasonal and full-time), bagging and ties, repairs, maintenance, drying, and electrical costs. Gin managers also reported performance information, which included number of bales, ginning rate, length of season, and type of cotton ginned (saw or roller ginning, picker or stripper harvested cotton). The survey also requested capital improvement cost. Ginners were also asked to report electrical usage (kWh), dryer fuel type and amount, and bale tie material used. In the Mid-South (MS), additional questions were developed to help assess the economic impact of cotton ginning to the economics of Mid-South states and quantify future cotton ginning trends, which will be reported later. The data were analyzed by production regions (Southeast (SE), Mid-South (MS), Southwest (SW), West (W)) and divided into four processing categories: gins producing fewer than 15,000 bales per year, 15,000 to 25,000 bales per year, 25,000 to 40,000 bales per year, and greater than 40,000 bales. Labor cost figures included wages, Workers Compensation Insurance, Social Security, fringe benefits, bonuses, etc. Only the seasonal labor cost was included in the total variable cost; full-time labor cost was considered a fixed cost.

Results

Ginners returned 119 surveys, which represented 2.6 million bales or about 21 percent of the bales ginned in the United States. Not all survey questions were completed, or in some cases, entry figures were identified as incomplete and omitted from the data set. Table 1 summarizes the Beltwide average, median, minimum, and maximum variable cost. Variable ginning cost and labor cost were summarized according to region and processing categories (Tables 2 & 3). Gin operational information collected from the returned surveys was reported in Tables 4a-c by regional averages. From previous survey data (Table 5), 2013 resulted in a large increase in variable ginning cost in almost every category, likely due to the low bale volume. (Valco et al., 2003, Valco et al., 2006, Valco et al., 2009, and Valco et al., 2012).

Table 1. 2013 Beltwide average variable ginning cost per bale summary.

Beltwide Survey		Average Cost per Bale ($/bale)					
	Bales Ginned	Bagging and Ties	Repairs	Electric	Dryer Fuel	Seasonal Labor	Total Variable
Average	22,302	$4.78	$6.08	$4.47	$1.67	$7.91	$24.91
Median	17,035	$4.78	$5.70	$4.04	$1.22	$7.30	$23.02
Min	556	$3.56	$0.53	$1.62	$0.23	$0.73	$12.60
Max	97,582	$6.24	$18.94	$21.58	$9.07	$34.62	$55.25
Reporting	119	106	98	116	112	115	79

Table 2. 2013 Regional and processing capacity average variable ginning cost per bale.

			Average Cost per Bale ($/bale)					
Region*	Bales Ginned	Reporting	Bag/Ties	Repairs	Elec.	Dryer Fuel	Seasonal Labor	Total Variable
BW	22,302	119	$4.78	$6.08	$4.47	$1.67	$7.91	$24.91
SE	35,880	17	$4.47	$4.03	$3.41	$1.85	$5.79	$19.56
MS	16,709	28	$4.55	$5.76	$3.97	$1.62	$7.19	$23.10
SW	20,683	53	$4.99	$6.85	$4.72	$1.26	$8.04	$25.87
W	22,851	21	$4.85	$6.54	$5.47	$2.71	$10.18	$29.75
Capacity (Bales X 1000)								
<15	8,045	53	$4.94	$7.03	$5.18	$1.68	$9.48	$28.31
15 - 25	19,657	33	$4.64	$6.49	$4.55	$1.63	$7.46	$24.77
25 - 40	30,730	10	$4.91	$4.55	$3.26	$1.49	$6.74	$20.95
>40	55,282	23	$4.63	$4.49	$3.28	$1.74	$5.45	$19.59

* BW- Beltwide, SE - Southeast, MS - Mid-South, SW - Southwest, W- West

Table 3. 2013 Regional and processing capacity average labor cost per bale and number of workers, seasonal and full-time

	Average Cost per Bale ($/bale)			Workers per 10K Bale	
Region*	Seasonal Labor	Full-time Labor	Total-Labor	Seasonal	Full-time
BW	$7.91	$6.90	$14.81	6.8	2.3
SE	$5.79	$4.45	$10.24	3.3	1.4
MS	$7.19	$7.89	$15.08	10.7	2.7
SW	$8.04	$7.06	$15.11	5.8	2.3
W	$10.18	$7.08	$17.26	7.9	2.0
Capacity Bales X 1000					
<15	$9.48	$9.02	$18.50	13.7	4.6
15 - 25	$7.46	$6.36	$13.82	7.8	2.2
25 - 40	$6.74	$5.03	$11.77	7.0	2.0
>40	$5.45	$3.49	$8.94	3.2	1.3

* BW- Beltwide, SE - Southeast, MS - Mid-South, SW - Southwest, W- West

Table 4a. 2013 Gin operational statistics by region.

Survey		Bales Ginned		Gin Operation (average)					
Region*	Reporting	Average	Total	Days	# of Shifts	Hours Per Shift	Gin Rate (bale/hr)	Rated Gin Cap.	kWh /bale
BW	119	22,302	2,653,893	56	1.7	11.6	27.2	33.8	44.46
SE	17	35,880	609,968	68	1.6	11.9	33.2	38.0	35.17
MS	28	16,709	467,856	37	1.5	11.5	30.4	36.9	38.05
SW	53	20,683	1,096,208	55	1.9	11.0	26.1	34.5	47.51
W	21	22,851	479,861	60	1.8	11.5	20.9	25.6	52.01

* BW- Beltwide, SE - Southeast, MS - Mid-South, SW - Southwest, W- West

Table 4b. 2013 Gin operational statistics by region.

Survey	Dryer Fuel Type %		Tie Usage %		Equip. Improvements	
Region*	Natural Gas	LPG	Wire	Plastic	Reporting	Average per Gin
BW	67.6	32.4	46.15	53.85	48	$236,127
SE	46.2	53.8	58.82	41.18	7	$577,780
MS	55.6	44.4	29.17	70.83	8	$111,634
SW	79.2	20.8	46.67	53.33	16	$210,310
W	58.8	41.2	55.56	44.44	11	$146,803

Table 4c. 2013 Gin operational statistics by region.

Survey	Harvest Method (%)				Gin Type (%)	
Region*	Picked	Stripped w/ FC	Stripped w/o FC	Round Modules	Saw Ginned	Roller Ginned
BW	65.1	32.1	2.7	22.5	92.9	7.1
SE	98.0	2.0	0.0	39.2	100.0	0.0
MS	100.0	0.0	0.0	47.3	100.0	0.0
SW	16.6	76.7	6.5	6.8	100.0	0.0
W	100.0	0.0	0.0	13.0	60.8	39.2

Table 5. Comparison average variable ginning cost from previous surveys.

Beltwide	Average Cost per Bale ($/bale)					
Survey Year	Bag/Ties	Repairs	Elec.	Dryer Fuel	Seasonal Labor	Total Variable
2001	$3.36	$4.26	$3.79	$1.26	$6.93	$19.59
2004	$3.72	$3.71	$3.56	$1.96	$7.27	$20.22
2007	$4.16	$4.75	$3.89	$1.84	$6.93	$21.57
2010	$4.33	$4.40	$3.79	$1.39	$7.04	$20.95
2013	$4.78	$6.08	$4.44	$1.67	$7.91	$24.88

Conclusions

The 2013 cotton crop was small in comparison to past years, which was reflected in increased costs in all categories, except for dryer fuel costs which decreased due to lower natural gas prices and a relatively dry harvest season. The average total variable cost was $24.91 per bale, an increase of 19 percent over 2010. Seasonal labor was the largest single expense item reported in this survey, averaging $7.91 per bale. Full-time labor cost was the second largest expense. Regional variable cost data revealed that the MS and SE region gins have the lowest per bale cost, while SW and W region gins had the highest cost. The W region gins reported the highest energy cost per bale. The highest capacity gins (>40,000 bales per year) had the lowest variable cost, primarily due to lower labor and energy costs per bale. Ginners are encouraged to compare their individual cost data with average values to help identify opportunities for reducing ginning costs.

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