THE COST OF GINNING COTTON – 2010 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 cost. The survey was conducted for the 2010 cotton crop, which produced 17.6 million running bales. This crop was gathered from 10.7 million acres and was ginned with 700 operating gins, averaging over 25,000 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 the cost of hauling modules, module covers, and capital improvements. Ginners were also asked to report dryer fuel type and bale tie material. 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 126 surveys, which represented 3.9 million bales or about 22 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 and 3). Gin operational information collected from the returned surveys was reported in Tables 4a-c by regional averages. Previous survey data (Table 5) shows an increase in variable ginning costs every year

except for the 2010 season, where there was a slight reduction in total variable cost. (Valco et al., 2003, Valco et al., 2006, and Valco et al., 2009).

Table 1. 2010 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	31,144	$4.36	$4.40	$3.79	$1.39	$7.04	$20.95
Median	27,130	$4.31	$4.22	$3.46	$0.94	$6.34	$19.27
Min	2,849	$3.11	$0.21	$1.80	$0.06	$1.98	$10.74
Max	112,023	$5.65	$11.77	$10.14	$12.28	$17.03	$37.77
Count	126	98	110	124	119	119	82

Table 2. 2010 Regional and processing capacity average variable ginning cost per bale.

Region*			Average Cost per Bale ($/bale)					
	Bales Ginned	Count	Bag/Ties	Repairs	Elec.	Dryer Fuel	Seasonal Labor	Total Variable
BW	31,144	126	$4.33	$4.40	$3.79	$1.39	$7.04	$20.95
SE	24,122	20	$4.14	$3.72	$3.62	$1.89	$6.69	$20.06
MS	23,695	35	$3.94	$4.63	$3.59	$0.65	$5.84	$18.65
SW	39,639	49	$4.57	$4.52	$3.57	$1.05	$7.36	$21.07
W	27,014	16	$4.42	$4.41	$5.19	$3.60	$8.83	$26.44
Capacity (Bales X 1000)								
<15	9,806	39	$4.51	$4.74	$4.82	$1.79	$8.98	$24.83
15 - 25	19,187	20	$4.40	$4.23	$3.50	$1.30	$6.46	$19.89
25 - 40	32,901	32	$4.15	$4.27	$3.52	$1.40	$6.20	$19.54
>40	60,147	35	$4.36	$4.24	$3.08	$0.91	$5.80	$18.39

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

Table 3. 2010 Regional and processing capacity average labor cost per bale and number of workers, seasonal and full-time

Region*	Average Cost per Bale ($/bale)			Workers	
	Seasonal Labor	Full-time Labor	Total-Labor	Seasonal	Full-time
BW	$7.04	$4.96	$12.00	21.9	5.4
SE	$6.69	$4.40	$11.09	17.2	5.2
MS	$5.84	$5.68	$11.51	20.9	5.2
SW	$7.36	$3.92	$11.28	24.4	5.4
W	$8.83	$7.97	$16.80	20.7	5.6
Capacity Bales X 1000					
<15	$8.98	$6.76	$15.74	13.6	3.1
15 - 25	$6.46	$3.92	$10.38	20.4	3.7
25 - 40	$6.20	$4.99	$11.19	20.5	5.3
>40	$5.80	$3.59	$9.39	30.2	7.5

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

Table 4a. 2010 Gin operational statistics by region.

Survey		Bales Ginned		Gin Operation					
Region*	# of Returns	Average	Total	Days	# of Shifts	hr/shift	Gin rate (bale/hr)	Rated Gin Cap.	Roller Gin (%)
BW	126	31,144	3,924,127	69	1.7	11.7	27.8	34.1	1.1
SE	20	24,122	482,434	75	1.5	11.4	24.6	29.7	0.0
MS	35	23,695	829,330	49	1.6	11.7	30.2	35.9	0.0
SW	55	39,639	2,180,143	80	1.7	11.9	29.1	36.4	0.1
W	16	27,014	432,220	67	1.8	11.5	23.0	28.2	9.8

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

Table 4b. 2010 Gin operational statistics by region.

Survey	Dryer Fuel Type %		Tie Usage %		Equip. Improvements	
Region	Natural Gas	LPG	Wire	Plastic	Gins Reporting	Average per Gin
BW	65	35	53	47	48	$205,033
SE	22	78	65	35	9	$69,148
MS	71	29	33	67	6	$181,231
SW	76	24	52	48	27	$275,186
W	73	26	63	38	6	$169,642

Table 4c. 2010 Gin operational statistics by region.

Survey	Harvest Method (%)				Module Costs	
Region	Picked	Stripped w/ FC	Stripped w/o FC	Round Modules	Hauling ($/bale)	Tarps ($/Bale)
BW	55.2	41.8	2.9	5.2	$5.01	$0.93
SE	98.3	1.7	0.0	9.9	$4.64	$0.79
MS	99.9	0.1	0.0	8.2	$4.68	$0.74
SW	19.9	74.7	5.2	4.1	$4.64	$1.10
W	98.9	0.5	0.0	0.0	$6.91	$1.02

Table 5. Comparison of past year's average variable ginning cost.

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

Conclusions

The average total variable cost was $20.95 per bale, with seasonal labor as the largest single expense item reported in this survey. 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 per bale cost. Ginners are encouraged to compare their individual cost data with average values to help identify operational status.

Acknowledgments

The authors would like to thank the ginners who returned survey forms and hope that this activity provides them, as well as other ginners, with useful information to make informed management decisions. Additional ginning cost information is available on the USDA, ARS Ginning Technology website, GinTech, at http://msa.ars.usda.gov/gintech.

References

Valco, T.D., B. Collins, D.S. Findley, Jr., J.K. Green, L. Todd, R. Isom, and M. Willcutt, 2003, The Cost of Ginning Cotton – 2001 Survey Results, 2003 Proceedings of Beltwide Cotton Conferences. National Cotton Council, Memphis, TN. CDROM.

Valco, T.D., J.K. Green, D.S. Findley, Jr., T.L. Price, and R.A. Isom, 2006, The Cost of Ginning Cotton – 2004 Survey Results, 2006 Proceedings of Beltwide Cotton Conferences, National Cotton Council, Memphis, TN. CDROM

Valco, T.D., J.K. Green, R.A. Isom, D.S. Findley, T. L. Price, and H Ashley, 2009, The Cost Of Ginning Cotton – 2007 Survey Results, 2009 Proceedings of Beltwide Cotton Conferences, National Cotton Council, Memphis, TN. CDROM

USDA-NASS, Cotton Ginning 2010 Summary, May 2011, http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1042.