

**COMPARISON OF REGIONAL  
COTTON PRODUCTION COSTS**  
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**Abstract**

This paper attempts to compare the cost of production for cotton for 7 cotton producing states in the southern United States. Cotton planning budgets for 1997 were collected from each land-grant university in each state. The paper found that Alabama had the highest average cost of production per acre among the 7 states observed. The paper also concluded that the delta area states had on average a lower total cost of production than the southeast area states.

**Introduction**

Cotton has long been a staple crop in the southern United States. The importance of cotton to southern agriculture is evident by the acreage planted and the value it adds to each state's economy.

Cost of production is a major factor in each state's ability to grow cotton profitably as well as their decision to plant cotton versus alternative crops. This paper will attempt to compare and discuss some of the state estimates for cost of production of cotton, as reported by each land grant university's cost of production budgets for cotton. There has been previous work on comparing production costs for cotton between areas (Paxton et al. 1995). This paper will only discuss the states mentioned below and will not discuss other regions within the United States. The states considered in this paper include; Mississippi, Alabama, Arkansas, Louisiana, Georgia, North Carolina and Tennessee. Salient statistics for cotton in each state are given in Table 1.

**Procedures**

The approach used for this paper was to obtain enterprise budgets and cost of production information from each state included in the paper. Each state provided 1997 enterprise budgets for cotton. The budgets for this paper did not include irrigated cotton. These budgets were averaged between different areas within the state and production systems. The different production systems included reduced and no till, narrow row, and 2 x 1 skip. In order to allow for comparisons between states only 8 row equipment budgets were used in this paper. Other adjustments to the budgets were necessary since not all the budgets included ginning expenses. Several states assumed that ginning expenses would be offset by the value of the seed produced.

To correct this, ginning expenses from the state were used to estimate a ginning cost (USDA).

Each state budget was compared with respect to total, fixed, and variable cost per acre and on a per pound of lint basis. Variations in cost are discussed along with differences and yield. States were separated into two different southern areas, similar to Paxton et al. 1995. The two areas included the delta area and the southeastern area. Although this paper looks primarily at differences between states in the same area, some limited discussion is presented comparing differences between areas.

**Results and Discussion**

Cotton production budgets were collected from 7 southern states for comparison. Only non-irrigated cotton budgets were used for this paper. Production costs for each state are summarized on a per acre basis and per pound basis.

Table 2 shows the average costs per acre for cotton production in the delta area states. The average total cost of production for the delta area states was \$381.26 per acre. Mississippi had the highest production costs at \$443.76 per acre. Tennessee reported the lowest cost per acre at \$298.18. Mississippi and Louisiana reported higher variable costs than the other states. These increased variable costs stem from chemicals used to control insects. The lowest average variable costs were reported by Tennessee. The average fixed cost for the delta area states ranged from \$64.74 (Tennessee) to \$71.74 (Mississippi).

Table 3 shows the average cotton production costs for the southeastern area states. The average total cost of production for the southeastern area was \$435.29 per acre. Alabama reported the highest total cost per acre at \$482.69. North Carolina had the lowest costs at \$374.25. The average fixed cost for the southeastern area states ranged from \$115.78 (North Carolina) to \$118.04 (Alabama). Much of the fixed costs were attributed to machinery and equipment expense.

Table 4 shows average costs per pound of lint for the delta area states. The average total cost per pound of lint for the delta area was \$.546 per pound of lint. Average total cost per pound ranged from \$.462 per pound in Tennessee to \$.62 per pound in Louisiana. Projected yield varied among states with Mississippi reporting the highest projected yield at 783 pounds of lint per acre, with Arkansas reporting the lowest projected yield at 635 pounds of lint per acre. Arkansas had the next to the lowest average total cost of production. Lower production costs allow Arkansas and Tennessee to be able to produce at lower yields and still remain profitable.

Table 5 shows the average costs of production per pound of lint for the southeastern area states. The average total cost of production per pound of lint for the southeastern area

states is \$.621 per pound. North Carolina reported the lowest cost per pound at \$.521 per pound. Georgia had the highest variable cost per pound of lint as well as the highest total cost per pound of lint at .70 per pound.

When the two regions are compared the delta region had a lower average total cost per pound of lint produced than the southeastern region. The delta area states also have lower average costs of production on a per acre basis. This is most dramatically seen by comparing the average fixed cost per acre of \$68.73 for the delta region to \$115.66 for the southeastern region. The average projected yield in the southeastern region is 706 pounds per acre compared to an average of 697 pounds per acre for the delta region based on each state's budget.

### Summary and Conclusions

1997 cotton production planning budgets were collected from 7 cotton producing states in the southern United States. These budgets were used to compare the cost of production for each state on a per acre and per pound of lint produced basis. The results found that Alabama had the highest average total cost of production per acre among the states included in the paper at \$482.69. Tennessee had the lowest average total cost of production at \$298.18 per acre. The delta area states were found to have on average a lower costs of production per acre than the southeastern area states. On a per pound of lint basis, Georgia had the highest average total cost per pound of lint at \$.70 per pound with Alabama following at \$.643 per pound.

### References

Paxton, K.W., R.J. Judice IV, and L.P. Champagne 1995. Beltwide Cotton Production Costs 1994. Proceedings Beltwide Cotton Conference. Pp.418-419

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USDA-ERS 1996. Cotton and Wool Situation and Outlook Yearbook.

Table 1. Salient statistics for cotton in southern states 1996

State	Acreage (1000 AC)	Avg. Yield (Lb/AC)	Bales (1000 480lb bales)
Mississippi	1030	839	1800
Louisiana	950	664	1300
Alabama	556	699	810
Arkansas	990	776	1600
Georgia	1375	698	2000
Tennessee	520	600	650
North Carolina	720	660	990

Table 2. Average cotton production costs per acre, Delta area 1997

State	AVC (\$/AC)	AFC (\$/AC)	ATC (\$/AC)
Mississippi	372.01	71.74	443.75
Tennessee	233.44	64.74	298.18
Arkansas	267.84	72.34	340.17
Louisiana	376.84	66.09	442.93
Average	310.69	68.73	381.26

Table 3. Average cotton production costs per acre, Southeastern area 1997

State	AVC (\$/AC)	AFC (\$/AC)	ATC (\$/AC)
Alabama	364.65	118.04	482.69
Georgia	337.26	113.18	450.44
North Carolina	258.48	115.78	374.25
Average	320.13	115.66	435.79

Table 4. Average costs per pound of lint, Delta area 1997

State	AVC (\$/lb lint)	AFC (\$/lb lint)	ATC (\$/lb lint)
Mississippi	0.475	0.094	0.569
Tennessee	0.359	0.103	0.462
Arkansas	0.422	0.114	0.536
Louisiana	0.528	0.092	0.620
Average	0.45	0.10	0.546

Table 5. Average costs per pound of lint, Southeastern area

State	AVC (\$/lb lint)	AFC (\$/lb lint)	ATC (\$/lb lint)
Alabama	0.486	0.157	0.643
Georgia	0.52	0.18	0.70
North Carolina	0.359	0.161	0.521
Average	0.455	0.166	0.621