

**Cotton Gin Operating Costs
in West Texas,
the Lower Rio Grande Valley,
and the Blacklands of Texas,
1973 Season**

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COTTON GIN OPERATING COSTS IN WEST TEXAS, THE LOWER RIO GRANDE VALLEY, AND THE BLACKLANDS OF TEXAS, 1973 SEASON. By Dale L. Shaw, Charles A. Wilmot, and Betty K. Heron, Commodity Economics Division, Economics Research Service, U.S. Department of Agriculture, Agricultural Economic Report No. 318.

ABSTRACT

Compared with the 1972 season, average ginning volumes and rates of capacity utilization in the 1973 season were substantially higher for cotton gins in West Texas, appreciably lower in the Lower Rio Grande Valley, and essentially unchanged in the Blacklands. Weighted average total costs per bale, compared with the 1972 season, were: West Texas--\$25.00, down 4 percent; Lower Rio Grande Valley--\$35.13, up 51 percent; and the Blacklands--\$25.74, up 12 percent. Weighted average out-of-pocket costs per bale, compared with the previous season, were \$0.08 lower in West Texas, \$9.64 higher in the Lower Rio Grande Valley, and \$2.78 higher in the Blacklands. During the 1973 season, average ginning revenues per bale from all sources were: West Texas--\$40.95, Lower Rio Grande Valley--\$45.97, and Blacklands--\$35.25. The resulting per bale weighted average profit margins above total costs were West Texas--\$15.75, the Lower Rio Grande Valley--\$10.84, and the Blacklands--\$9.51.

Keywords: Cotton, ginning, costs, rates, capacity, utilization.

PREFACE

This report is part of a series of ginning cost studies conducted by the U.S. Department of Agriculture in the major producing areas of the Cotton Belt. It covers three selected areas of Texas--West Texas, the Lower Rio Grande Valley, and the Blacklands. Similar studies are being conducted in the Midsouth and the San Joaquin Valley of California.

Objectives of the research are to (1) determine the current cost of ginning for each selected area and observe trends and changes over time, (2) analyze the effects of changes in ginning volumes on ginning costs, and (3) consider the possibilities of reducing operating costs through more efficient ginning.

Findings are derived from gin operating cost records received annually from a sample of gins in each area. Area ginners use these findings as benchmarks or guides in evaluating the efficiencies of their own operations.

Appreciation is extended to participating gins for their cooperation and assistance. Statistical analyses of ginning volume and cost data were carried out using computer facilities at the University of Arizona.

COTTON GIN OPERATING COSTS IN WEST TEXAS, LOWER
RIO GRANDE VALLEY, AND THE BLACKLANDS OF
TEXAS, 1973 SEASON

by

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INTRODUCTION

Continuous gin operating cost studies have been carried on for varying lengths of time in three major producing areas of Texas. In West Texas this study series commenced with the 1965/66 ginning season, while in the Lower Rio Grande Valley and the Blacklands similar studies began with the 1970 season. To facilitate a comparison of three geographic areas in the same report, each with a different growing season and harvest period, reference to a specific ginning season denotes the year in common when the first bale in each of the areas was ginned.

The gin sample in each area is stratified into four size groups based on rated hourly capacities of the gin stand complexes. For West Texas and the Lower Rio Grande Valley, these are: Group 1, 8 bales or less; group 2, 9-11 bales; group 3, 12-20 bales; and group 4, 21 bales or more. Due to a predominance of smaller gin plants in the Blacklands, the four size groups in this area are as follows: Group 1, 6 bales or less; group 2, 7 and 8 bales; group 3, 9-11 bales; and group 4, 12 bales or more. Size and content of each of the gin samples vary from year to year mainly because of periodic plant modifications frequently altering capacities. This necessitates an annual review including reclassification of some plants into other size groups and the filling of voids thus created.

During the 1973 ginning season, cost data were collected from a sample of 40 gins in West Texas, 20 gins in the Lower Rio Grande Valley, and 27 gins in the Blacklands. Although the ratios of total ginning capacities and total bales ginned for the sample plants compared to the total gin plant populations vary among areas, these 87 gins represented 19.8 percent of the total ginning capacity and 18.2 percent of the total bales ginned for all three areas combined.

1/ Shaw and Wilmot are agricultural economists; Heron is an economic assistant.

FINDINGS

Average volumes ginned among the sample gins were higher in 1973 in West Texas by 38 percent and lower in the other two areas--Lower Rio Grande Valley by 36 percent and the Blacklands by 2 percent (table 1). The direct relationship between volumes ginned and plant capacity utilization rate 2/ was evident in the averages of all three areas. In West Texas, higher capacity utilization rates accompanied the increases in volumes ginned, while in the Lower Rio Grande Valley capacity utilization rates followed the declines in ginning volumes. In the Blacklands, capacity utilization and ginning volumes remained about the same, falling only slightly from the 1972 season's level.

Costs per Bale at Actual Rates of Capacity Utilization 3/

The 1973 weighted average total costs, 4/ by areas, were: West Texas--\$25.20 per bale, a drop of 4 percent from 1972; Lower Rio Grande Valley--\$35.13 per bale, an increase of 51 percent; and the Blacklands--\$25.74 per bale, an increase of 12 percent (tables 2-7).

Standardized sample gin cost averages followed the same general pattern as total costs in 1973, ranging from a high of \$41.86 per bale in the Lower Rio Grande Valley to a low of \$27.75 per bale in West Texas.

Out-of-pocket costs ranged from \$30.16 per bale in the Lower Rio Grande Valley to \$23.15 in West Texas. Compared with last season, out-of-pocket costs per bale were \$0.08 lower in West Texas, \$2.78 higher in the Blacklands, and \$9.64 higher in the Lower Rio Grande Valley. Individual items making up the 1973 weighted average out-of-pocket costs were all higher in the Lower Rio Grande Valley. This was also true in the Blacklands except for insurance which was unchanged and bagging and ties which averaged \$0.18 per bale lower. In West Texas, costs increased in three items and declined in five others.

2/ Plant capacity utilization rate is the ratio of volume ginned to estimated total seasonal ginning capacity without seed cotton storage. It is based on a typical ginning season of 906 operating hours and a sustained seasonal ginning rate capability set at 85 percent of rated capacity. Several of the sample gins stored seed cotton either in the field or on the gin yard, in effect extending the ginning season and making it possible to exceed 100 percent capacity utilization.

3/ Taken from gin records and subjected to uniform allocation procedures as outlined in the appendix.

4/ See "Costing Methods" and "Weighting" procedures in the appendix.

Costs per Bale Assuming 70-Percent
Rate of Capacity Utilization

To allow cost comparisons at the same relative ginning volume levels, each group and the overall weighted average cost were adjusted to a uniform capacity utilization rate of 70 percent (tables 8-10). ^{5/} This adjustment lowered 1973 costs per bale in both the Blacklands and the Lower Rio Grande Valley, appreciably in the latter. However, it raised per bale costs slightly in West Texas since the actual rate of capacity utilization for that area was 74 percent or 4 percent higher, before this adjustment.

The 1973 estimated costs when adjusted to 70-percent capacity utilization and compared to 1972, were substantially higher for most items indicating that input costs have continued to rise at a more rapid rate than has productivity resulting from the employment of those inputs. The 1973 weighted average out-of-pocket cost estimated at 70-percent utilization compared to 1972 were: West Texas--\$23.57 per bale, an increase of 12 percent; Lower Rio Grande Valley--\$20.87, up 18 percent; and the Blacklands--\$21.26 per bale, an advance of 11 percent.

The combined weighted average standardized depreciation and interest cost estimates, per bale, at the 70-percent utilization rate were \$0.24 higher in West Texas, \$0.18 higher in the Lower Rio Grande Valley, and \$0.37 higher in the Blacklands. These cost increases reflect additional investment in machinery and equipment which does not increase rated ginning capacity. This would include such items as air pollution control and occupational safety equipment.

GINNING REVENUE

Revenue per bale varies among Texas gins depending upon the charges for ginning and for bagging and ties plus the profit margins or losses realized from buying and selling cottonseed and performing associated activities. Many gins assess the grower a fixed charge per hundredweight of seed cotton for ginning and make an additional charge for bagging and ties. An increasing number of gins are making only a per-hundredweight charge covering both ginning and bagging and ties.

During the 1973 season total revenues per bale from all sources for the sample gins, by area averages, were: West Texas \$40.95; Lower Rio Grande Valley \$45.97; and the Blacklands \$35.25 (table 11). Total revenues exceeded both total standardized and total cost averages in all three areas for all size groups (table 12). Weighted average profit margins ranged from \$4.11 per bale in the Lower Rio Grande Valley to \$13.20 in West Texas using total standardized costs; and from \$9.51 in the Blacklands to \$15.75 in West Texas based on total costs.

^{5/} See "Cost Adjustments" in appendix.

If seed margins and other miscellaneous income had been eliminated, however, leaving the charges for ginning and for bagging and ties as the sole sources of revenue, profit margins would have been greatly reduced. Total revenues, in this case, would have been insufficient to cover total standardized cost averages for any size group in any area except for groups 2 and 3 in West Texas and group 3 in the Blacklands. Losses would have ranged up to \$18.73 per bale for size group 2 in the Lower Rio Grande Valley. Total revenue based on ginning and bagging and ties alone would have been insufficient, also, to show profit margins above total costs except for three size groups in West Texas and two size groups in the Blacklands.

Table 11--Average revenue per bale, by item, sample gins, West Texas, Lower Rio Grande Valley, and the Blacklands of Texas, 1973

Revenue item	Revenue per bale		
	West Texas	Lower Rio Grande Valley	Blacklands
	<u>Dollars</u>		
Combined ginnings and bagging & ties charge:	27.26	27.17	25.94
Cottonseed margins.....	6.69	8.22	7.26
Other <u>1</u> /.....	7.00	10.58	2.05
Total.....	40.95	45.97	35.25

1/ Includes revenue from commissions, notes, loose cotton, green bolls, bur sales, margins on lint cotton and planting seed, regional dividends, and any other miscellaneous income.

APPENDIX: METHODOLOGY

Gins vary widely by type of organization, ownership structure, accounting procedures used, and in many other ways. In analyzing costs reported by sample gins, uniform allocation procedures described below were employed to compensate for some of the differences in accounting procedures.

Costs of hauling cottonseed and lint--such as truckdrivers' wages, truck depreciation, insurance, road-use taxes, associated truck-operating costs, and any other cost not directly related to gin processing were excluded.

Cost Allocations

Management: Where applicable, includes salaries, bonuses, commissions, expense allowances, house rent, and personal insurance policies for owners and managers; bookkeeping and other office salaries, and home office cost (line companies); social security; and workmen's compensation insurance and any other insurance on management and office personnel.

Depreciation: Includes allowances for depreciation exactly as carried on gin records except for standardized costs. (See standardized sample gin costs below.)

Interest: Includes interest exactly as carried on gin records except for standardized costs. (See standardized sample gin costs below.)

Insurance: Includes costs of all forms of insurance on gin buildings, equipment, housing furnished management and labor, cotton products, and automotive equipment (except large trucks and trailers).

Taxes: Includes all taxes on real property only.

Energy: Includes cost of all utilities--electricity, gas, and water--used in ginning and directly related operations.

Labor: Includes cost of gin wages, social security, and workmen's compensation and any other insurance on gin labor borne by the gin; plus any rental housing furnished labor (excludes gin repair labor; see repairs below).

Bagging and ties: Includes actual cost of bagging and ties purchased.

Repairs: Includes cost of gin repair wages, social security, and workmen's compensation and other insurance on gin repair labor borne by the gin, plus the cost of repair materials and supplies.

Miscellaneous: Includes pickup, tractor, and other automotive expenses; telephone, telegraph, advertising, and promotion costs; legal and audit fees; dues, memberships and subscriptions; annual meetings and director's fees and expenses; conventions and travel expenses; donations and contributions; cotton losses from fire; sampling, compressing, and related charges; gin and office supply costs; and any other costs not included elsewhere.

Costing Methods

Sample gin costs: Gin costs which have been subjected to the above allocations are identified in this report as sample gin costs.

Standardized sample gin costs: Uniform rates for computing depreciation and interest on investment were used in developing standardized sample gin costs. Depreciation was set at 7 percent of the initial purchase price of capital items carried on the depreciation schedule regardless of age or former method of depreciation. Interest was charged at 8 percent on the estimated average value of land comprising the gin site and 8 percent on one-half the cost of buildings, machinery, and equipment.

Out-of-pocket costs: Sample gin costs from which depreciation and interest have been excluded.

Cost Adjustments

Estimates of ginning costs at other than existing levels of capacity utilization were based on relationships assumed in the development of a series of model gins. See: Zolon M. Looney and Charles A. Wilmot, Economic Models for Cotton Ginning, U.S. Dept. Agr., Agr. Econ. Rpt. 214, Oct. 1971.

Weighting

In computing weighted averages, the simple weighted average cost per bale for each group was further weighted by its representative proportion of the total rated hourly ginning capacity in that area. This was done to reflect more accurately the cost of ginning an "average" bale of cotton in each area.

Table 1--Rated hourly capacities, volumes ginned, and capacity utilization, by ranges and averages for sample gins, West Texas, Lower Rio Grande Valley, and Blacklands of Texas, 1972 and 1973

Gin size group by areas	1972						1973					
	Rated hourly capacity 1/	Annual volume ginned	Rate of capacity utilization	Rated hourly capacity 1/	Annual volume ginned	Rate of capacity utilization	Rated hourly capacity 1/	Annual volume ginned	Rate of capacity utilization	Rated hourly capacity 1/	Annual volume ginned	Rate of capacity utilization
	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.	Range : Avg.
<u>West Texas</u>												
Group 1.....	7- 8 7.5	1,017- 7,166 3,061	17-116 53	7- 8 7.5	1,592- 7,732 4,535	30-126 80						
Group 2.....	9-11 9.9	1,872- 9,060 4,626	27-118 61	9-11 9.8	3,007-12,778 6,758	36-166 90						
Group 3.....	12-20 15.0	2,637- 7,494 5,114	24- 70 44	12-20 15.8	3,937-12,950 8,226	27-113 68						
Group 4.....	21-60 32.2	3,870-24,557 13,817	16-145 56	21-60 33.5	2,965-27,769 16,940	12-164 66						
Combined.....	7-60 17.6	1,017-24,557 7,345	16-145 54	7-60 17.9	1,592-27,769 10,171	12-166 74						
<u>Lower Rio Grande Valley:</u>												
Group 1.....	8- 8 8.0	2,005- 4,812 3,408	33- 78 55	8- 8 8.0	847- 3,305 2,076	14- 54 34						
Group 2.....	9-11 9.0	1,572- 3,701 2,598	23- 53 37	9-11 9.0	1,462- 2,850 1,904	21- 41 27						
Group 3.....	12-20 16.1	2,258- 7,949 5,577	15- 62 45	12-20 16.2	1,787- 5,702 3,351	14- 44 27						
Group 4.....	21-30 26.8	4,842-14,606 10,924	26- 73 53	21-33 25.4	848-10,399 6,438	5- 53 33						
Combined.....	8-30 15.6	1,572-14,606 5,685	15- 78 47	8-33 15.9	847-10,399 3,634	5- 54 30						
<u>Blacklands</u>												
Group 1.....	5- 6 5.8	863- 3,400 2,332	19- 74 52	5- 6 5.8	1,001- 2,975 2,123	22- 64 48						
Group 2.....	7- 8 7.1	1,373- 6,719 3,552	25-125 65	7- 8 7.2	1,085- 8,010 3,676	20-149 66						
Group 3.....	9-11 9.3	1,170- 5,845 3,513	15- 76 49	9-11 9.0	604- 4,200 2,745	9- 61 40						
Group 4.....	12-18 13.8	2,584- 7,244 3,968	25- 63 37	12-24 14.3	2,888- 6,946 4,031	23- 60 37						
Combined.....	5-18 8.6	863- 7,244 3,395	15-125 51	5-24 9.0	604- 8,010 3,343	9-149 48						

1/ Based on observations in plants operating under normal conditions.

Table 2--Costs per bale in sample gin plants by size group, and average for all plants, West Texas, 1972 ^{1/}

Cost item ^{2/}	Group 1		Group 2		Group 3		Group 4		Weighted : average ^{4/}
	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	
Dollars									
Management.....	.99-18.06	4.46	1.50- 6.26	3.41	2.59- 4.50	3.24	1.18- 4.31	2.18	3.16
Insurance.....	.29- 1.44	.66	.28- 1.01	.45	.31- .66	.45	.18- .71	.44	.48
Taxes.....	.16- 1.72	.55	.09- 1.44	.39	.15- .52	.31	.06- 1.02	.32	.38
Energy.....	1.75- 4.12	2.77	1.36- 4.70	2.26	1.66- 3.60	2.32	1.55- 3.20	2.30	2.37
Labor.....	6.30-11.24	8.19	5.71- 9.91	6.96	3.14- 9.65	6.77	4.69- 8.47	6.44	6.95
Bagging and ties:	3.29- 3.87	3.65	3.33- 3.89	3.54	3.45- 3.77	3.62	3.44- 3.93	3.68	3.62
Repairs.....	1.65- 6.36	3.42	1.85- 7.46	3.76	1.10- 4.12	3.26	2.27- 6.49	4.10	3.68
Miscellaneous.....	1.54- 6.44	2.47	1.07- 6.43	3.12	1.49- 5.52	2.88	1.02- 4.82	1.96	2.60
Out-of-pocket subtotal ^{4/}	20.84-45.89	26.16	18.93-31.32	23.88	20.20-27.81	22.87	17.85-26.71	21.42	23.23
Depreciation.....	1.02- 4.59	2.25	.67- 3.46	1.52	1.49- 5.73	3.35	1.47- 9.62	2.66	2.45
Interest.....	0 - 6.10	.98	0 - 5.42	.24	0 - .91	.34	0 - 1.59	.47	.45
Total.....	24.58-54.23	29.39	20.14-36.73	25.64	23.90-29.34	26.56	19.70-36.75	24.55	26.14
Standardized ^{4/} depreciation.....	1.87- 7.87	3.81	1.62- 6.82	2.90	2.52- 7.60	4.35	2.13-12.43	3.98	3.75
interest.....	1.27- 5.00	2.49	1.05- 4.49	1.90	1.62- 4.66	2.74	1.29- 7.65	2.43	2.37
Total ^{5/}	23.98-57.40	32.46	21.60-40.85	28.68	27.11-32.45	29.95	21.34-46.78	27.83	29.35

Individual cost items may not add to totals because of rounding.

^{1/} Rated hourly ginning capacity: Group 1, 8 bales or less; group 2, 9 to 11 bales; group 3, 12 to 20 bales; group 4, 21 bales or more. The universe includes all active gins in the study area. ^{2/} Taken from gin records and subjected to uniform allocation procedures--see appendix. ^{3/} Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to total shown. ^{4/} See appendix for definition. ^{5/} Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 3--Costs per bale in sample gin plants by size group, and average for all plants, West Texas, 1973 1/

Cost item 2/	Group 1		Group 2		Group 3		Group 4		Weighted Avg. : average4/
	Range3/	Avg.	Range3/	Avg.	Range3/	Avg.	Range3/	Avg.	
	Dollars								
Management.....	.76- 6.42	3.33	1.66- 5.00	3.18	1.57- 6.41	2.85	1.11- 5.83	2.24	2.86
Insurance.....	.43- 2.36	.79	.21- 1.00	.50	.49- 1.50	.85	.44- 1.52	.85	.74
Taxes.....	.10- .75	.38	.07- .90	.26	.10- .55	.27	.05- 1.32	.26	.29
Energy.....	1.50- 3.03	2.03	.75- 3.01	1.73	1.44- 3.22	1.90	1.76- 3.29	2.25	1.97
Labor.....	4.51-10.82	7.74	4.20- 8.41	6.19	4.73- 7.28	6.06	4.10- 9.82	6.87	6.58
Bagging and ties:	3.41- 4.71	3.73	3.12- 4.26	3.59	3.49- 3.92	3.66	3.09- 4.25	3.81	3.69
Repairs.....	2.85-10.19	4.92	2.78- 5.39	4.25	3.32- 5.12	4.11	3.25-10.17	5.41	4.62
Miscellaneous....	1.31- 3.71	2.15	1.55- 4.42	2.79	1.17- 4.82	2.29	.58- 4.38	2.30	2.41
Out-of-pocket subtotal 4/	18.32-32.13	25.08	19.68-27.41	22.50	19.53-27.21	21.98	18.79-34.22	24.00	23.15
Depreciation....	.60- 2.77	1.65	.54- 1.81	1.02	.91- 5.11	2.12	1.21- 9.60	2.13	1.74
Interest.....	0 - 1.14	.55	0 - 1.11	.15	0 - .35	.17	0 - 1.65	.48	.31
Total.....	21.29-34.68	27.27	21.25-27.97	23.67	21.61-32.63	24.27	21.29-43.83	26.61	25.20
Standardized 4/ depreciation....	1.44- 9.73	2.77	.93- 3.48	1.99	1.77- 8.63	3.06	1.96-15.64	3.47	2.82
interest.....	.98- 6.16	1.80	.67- 2.30	1.30	1.16- 5.28	1.91	1.18- 9.66	2.12	1.78
Total 5/.....	20.74-46.95	29.65	21.91-31.88	25.78	23.63-41.12	26.95	23.30-59.52	29.59	27.75

Individual cost items may not add to totals because of rounding.

1/ Rated hourly ginning capacity: Group 1, 8 bales or less; group 2, 9-11 bales; group 3, 12-20 bales; group 4, 21 bales or more. The universe includes all active gins in the study area. 2/ Taken from gin records and subjected to uniform allocation procedures--see appendix. 3/ Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to totals shown. 4/ See appendix for definition. 5/ Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 4--Costs per bale in sample gin plants by size group, and average for all plants, Lower Rio Grande Valley of Texas, 1972 ^{1/}

Cost item ^{2/}	Group 1		Group 2		Group 3		Group 4		Weighted : average ^{4/}
	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	
	Dollars								
Management.....	2.15- 6.70	3.49	1.75- 5.39	3.67	2.17- 5.64	3.32	2.01- 5.01	3.11	3.36
Insurance.....	.58- .66	.60	.51- 1.67	.99	.27- .78	.51	.51- .95	.65	.62
Taxes.....	.43- .79	.68	.68- 1.95	1.18	.31- 1.59	.69	.15- .96	.46	.71
Energy.....	1.53- 2.11	1.70	1.00- 1.78	1.42	.90- 2.82	1.43	1.03- 1.72	1.43	1.48
Labor.....	3.15- 7.28	4.37	4.79- 7.00	5.65	2.92- 7.38	4.22	4.37- 5.99	5.15	4.63
Bagging and ties:	3.86- 3.89	3.87	3.71- 3.89	3.84	3.74- 3.96	3.87	3.88- 4.02	3.96	3.88
Repairs.....	1.89- 2.33	2.20	2.34- 7.21	4.47	1.95- 6.50	3.00	1.95- 5.90	3.06	3.05
Miscellaneous....	2.05- 3.67	3.20	2.15- 5.76	3.18	1.47- 3.48	2.46	2.03- 4.51	2.87	2.79
Out-of-pocket									
subtotal ^{4/}	18.07-25.00	20.11	20.58-32.46	24.39	15.88-27.45	19.49	16.85-26.96	20.69	20.52
Depreciation.....	.79- 1.34	.95	.54- 5.55	2.35	1.97- 4.02	2.56	.71- 2.02	1.75	2.05
Interest.....	.02- 2.87	.86	.08- 4.11	.83	0 - 1.72	.53	0 - 1.51	.64	.66
Total.....	18.87-29.22	21.92	22.44-37.41	27.58	19.29-30.36	22.58	18.83-28.71	23.08	23.22
Standardized ^{4/}									
depreciation....	1.49- 3.90	2.19	4.24-12.24	6.50	2.43- 6.97	4.83	2.24- 6.63	3.91	4.34
interest.....	1.05- 2.71	1.54	2.96- 7.58	4.15	1.65- 4.19	3.00	1.42- 4.12	2.41	2.74
Total ^{5/}	20.60-31.60	23.84	28.32-52.27	35.04	20.83-37.90	27.33	23.23-34.03	27.00	27.60

Individual cost items may not add to totals because of rounding.

^{1/} Rated hourly ginning capacity: Group 1, 8 bales or less; group 2, 9 to 11 bales; group 3, 12 to 20 bales, group 4, 21 bales or more. The universe includes all active gins in the study area. ^{2/} Taken from gin records and subjected to uniform allocation procedures--see appendix. ^{3/} Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to totals shown. ^{4/} See appendix for definition. ^{5/} Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 5--Costs per bale in sample gin plants by size group, and average for all plants, Lower Rio Grande Valley, 1973 1/

Cost item 2/	Group 1		Group 2		Group 3		Group 4		Weighted Avg. : average 4/
	Range 3/	Avg.	Range 3/	Avg.	Range 3/	Avg.	Range 3/	Avg.	
	Dollars								
Management.....	2.65-12.18	4.60	3.98- 7.33	5.92	3.33-10.16	6.13	2.81-12.23	4.60	5.39
Insurance.....	1.25- 1.34	1.27	.81- 2.85	1.46	.42- 1.80	1.02	.56- 1.69	.86	1.09
Taxes.....	1.22- 1.35	1.32	.62- 1.99	1.39	.35- 2.29	1.24	.20- 2.68	.63	1.11
Energy.....	4.33- 4.43	4.41	1.14- 2.49	1.93	1.40- 3.70	2.25	1.32- 3.97	2.58	2.68
Labor.....	3.84-12.34	5.57	5.27- 9.70	7.25	4.57-11.31	6.71	6.32-10.07	8.46	7.08
Bagging and ties:	4.06- 4.55	4.16	3.85- 4.00	3.91	3.86- 4.19	3.98	3.72- 4.31	3.88	3.97
Repairs.....	4.94- 5.77	5.11	4.53- 8.68	5.74	3.95- 8.90	5.67	2.61- 9.90	3.72	5.03
Miscellaneous.....	3.95- 4.38	4.29	2.66- 4.18	3.63	1.77- 6.14	3.84	2.68- 8.31	3.54	3.81
Out-of-pocket subtotal 4/.....	26.90-45.68	30.73	30.32-32.65	31.23	20.70-41.33	30.84	23.18-50.77	28.27	30.16
Depreciation.....	3.00- 4.57	3.32	.84- 6.13	3.15	2.24- 8.78	4.82	.91- 5.01	3.29	3.87
Interest.....	.03- 8.52	1.77	0 - 4.73	1.39	0 - 2.86	1.04	0 - 2.00	.60	1.10
Total.....	29.93-58.78	35.82	31.95-41.18	35.77	23.32-46.14	36.70	25.84-57.59	32.17	35.13
Standardized 4/ depreciation.....	2.25- 9.41	3.71	4.38-15.00	8.96	3.29-16.12	8.97	3.43-14.91	6.00	7.19
interest.....	1.58- 6.51	2.58	2.89- 9.29	5.71	2.19- 9.93	5.53	2.12-10.41	3.70	4.51
Total 5/.....	30.72-61.60	37.02	37.74-56.92	45.90	26.18-58.82	45.35	33.54-76.09	37.97	41.86

Individual cost items may not add to totals because of rounding.

1/ Rated hourly ginning capacity; Group 1, 8 bales or less; group 2, 9-11 bales; group 3, 12-20 bales; group 4, 21 bales or more. The universe includes all active gins in the study area. 2/ Taken from gin records and subjected to uniform allocation procedures--see appendix. 3/ Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to totals shown. 4/ See appendix for definition. 5/ Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 6--Costs per bale in sample gin plants by size group, and average for all plants, Blacklands of Texas, 1972 ^{1/}

Cost item ^{2/}	Group 1		Group 2		Group 3		Group 4		Weighted :average ^{4/}
	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	Range ^{3/}	Avg.	
	Dollars								
Management.....	2.19- 5.03	3.26	1.33- 4.88	2.81	.81- 4.29	2.35	2.56- 6.68	4.00	2.95
Insurance.....	.41- 2.27	.97	.07- 1.91	.39	.13- .65	.54	.24- .86	.44	.53
Taxes.....	.16- 1.11	.32	.06- .50	.21	.13- .52	.35	.25- .83	.41	.27
Energy.....	1.92- 2.97	2.45	1.56- 4.08	2.25	.46- 4.04	1.76	2.04- 3.89	2.61	2.26
Labor.....	3.41- 8.36	6.53	3.39-10.73	6.22	5.81- 9.66	7.28	4.89- 8.88	7.20	6.53
Bagging and ties:	4.01- 4.42	4.11	3.22- 4.16	3.85	3.74- 4.44	3.99	4.03- 5.69	4.41	3.98
Repairs.....	.49- 3.80	2.70	1.48- 4.63	2.67	1.74- 4.40	2.69	1.44- 5.20	3.52	2.76
Miscellaneous....	.59- 2.44	1.39	.55- 3.68	1.49	.83- 1.85	1.23	.67- 1.30	1.00	1.38
Out-of-pocket									
subtotal ^{4/}	18.27-24.99	21.73	13.88-30.39	19.88	15.38-27.09	20.19	16.63-27.14	23.60	20.65
Depreciation.....	.72- 2.57	1.58	.22- 3.73	2.03	.33- 2.30	1.38	1.88- 4.16	2.73	1.92
Interest.....	0 - .14	.05	0 - 1.47	.37	0 - .90	.30	.38- 3.33	1.41	.40
Total.....	19.74-26.75	23.36	17.08-35.59	22.28	15.71-27.89	21.87	21.17-31.76	27.74	22.98
Standardized ^{4/} :									
depreciation....	1.54- 5.11	2.43	1.12- 7.54	2.91	1.50- 5.81	2.72	1.72- 4.58	3.55	2.86
interest.....	1.16- 4.03	1.80	.81- 4.90	1.94	1.22- 3.82	1.87	1.32- 3.05	2.33	1.94
Total ^{5/} :	20.98-31.36	25.97	18.40-42.83	24.72	18.37-30.39	24.78	23.55-33.32	29.48	25.45

Individual cost items may not add to totals because of rounding.

^{1/} Rated hourly ginning capacity: Group 1, 6 bales or less; group 2, 7 and 8 bales; group 3, 9 to 11 bales; group 4, 12 bales or more. The universe includes all active gins in the study area. ^{2/} Taken from gin records and subjected to uniform allocation procedures--see appendix. ^{3/} Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to totals shown. ^{4/} See appendix for definition. ^{5/} Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 7--Costs per bale in sample gin plants by size group, and average for all plants, Blacklands of Texas, 1973 1/

Cost item 2/	Group 1		Group 2		Group 3		Group 4		:Weighted :average4/
	Range3/	Avg.	Range3/	Avg.	Range3/	Avg.	Range3/	Avg.	
	Dollars								
Management.....	2.92- 5.80	4.28	1.60- 8.16	2.99	1.66- 3.46	2.53	2.92- 4.66	3.70	3.22
Insurance.....	.55- 1.38	.91	.11- 2.06	.37	.57- 2.39	.84	.27- 1.07	.64	.53
Taxes.....	.17- .73	.40	.05- 2.57	.33	.19- .37	.28	.25- .98	.47	.36
Energy.....	2.08- 3.50	2.89	1.69- 5.53	2.64	1.36- 5.97	2.18	2.15- 4.13	2.81	2.65
Labor.....	5.66- 9.62	7.43	4.16-16.47	7.99	5.89-16.64	6.81	4.54-16.96	9.27	7.99
Bagging and ties:	3.85- 4.04	3.99	3.36- 4.33	3.74	3.25- 4.07	3.76	3.67- 4.05	3.87	3.80
Repairs.....	1.22- 5.20	3.49	1.63-10.47	3.19	.91- 6.27	2.16	2.59- 6.81	4.11	3.27
Miscellaneous.....	.72- 2.50	1.44	.51- 3.89	1.75	1.08- 3.45	1.59	.90- 1.87	1.23	1.61
Out-of-pocket subtotal 4/	21.32-27.57	24.82	17.85-47.76	23.01	16.33-42.43	20.16	20.69-37.65	26.10	23.43
Depreciation.....	.46- 6.99	1.55	.52- 3.82	1.70	.51-15.26	2.93	1.91- 3.66	2.59	1.95
Interest.....	0 - .14	.05	0 - 2.08	.21	0 - .34	.14	.77- 2.72	1.38	.36
Total.....	22.43-29.58	26.42	18.59-52.53	24.91	16.84-57.69	23.24	25.62-41.27	30.07	25.74
Standardized 4/ depreciation.....	2.06- 5.09	3.26	1.16-11.46	3.24	1.91-22.87	3.35	2.08- 4.93	3.58	3.31
interest.....	1.56- 3.48	2.31	.79- 7.43	2.11	1.49-14.92	2.32	1.47- 3.12	2.35	2.20
Total 5/.....	25.46-33.28	30.39	20.13-66.66	28.36	20.60-80.22	25.83	26.35-45.70	32.03	28.93

Individual cost items may not add to totals because of rounding.

1/ Rated hourly ginning capacity: Group 1, 6 bales or less; group 2, 7-8 bales; group 3, 9-11 bales; group 4, 12 bales or more. The universe includes all active gins in the study area. 2/ Taken from gin records and subjected to uniform allocation procedures--see appendix. 3/ Low and high values shown for individual cost items indicate ranges among sample gins within a size group. Since the same gin plant was not consistently lowest or highest for all cost items, individual costs will not add to totals shown. 4/ See appendix for definition. 5/ Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 8--Estimated costs per bale in sample gin plants at 70-percent capacity utilization, by size group, and average for all plants, West Texas, 1972 and 1973 1/

Cost item 2/	1972				1973					
	Group 1	Group 2	Group 3	Group 4	Weighted average	Group 1	Group 2	Group 3	Group 4	Weighted average
					Dollars					
Management.....	3.66	3.10	2.41	1.92	2.55	3.64	3.71	2.80	2.16	2.98
Insurance.....	.52	.41	.33	.38	.39	.89	.61	.82	.81	.78
Taxes.....	.42	.34	.20	.26	.28	.44	.34	.26	.25	.30
Energy.....	2.60	2.19	2.08	2.19	2.22	2.09	1.81	1.89	2.22	1.99
Labor.....	7.27	6.56	5.51	5.85	6.16	8.14	6.77	5.98	6.70	6.72
Bagging and ties.....	3.65	3.54	3.62	3.68	3.62	3.73	3.59	3.66	3.81	3.69
Repairs.....	3.14	3.61	2.85	3.84	3.40	5.10	4.52	4.07	5.32	4.68
Miscellaneous.....	2.34	3.04	2.64	1.89	2.48	2.20	2.89	2.27	2.28	2.43
Out-of-pocket subtotal 3/.....	23.60	22.78	19.63	19.99	21.11	26.21	24.23	21.76	23.55	23.57
Depreciation.....	1.70	1.31	2.12	2.12	1.86	1.88	1.30	2.05	2.00	1.84
Interest.....	.74	.21	.21	.38	.34	.62	.19	.17	.45	.32
Total.....	26.05	24.30	21.97	22.48	23.31	28.71	25.73	23.98	26.00	25.73
Standardized 3/ depreciation.....	2.88	2.51	2.75	3.17	2.83	3.17	2.54	2.97	3.26	2.98
interest.....	1.88	1.65	1.73	1.93	1.79	2.05	1.66	1.85	1.99	1.88
Total 4/.....	28.37	26.94	24.12	25.09	25.74	31.42	28.44	26.58	28.79	28.43

Individual cost items may not add to total because of rounding.

1/ See appendix for Cost Adjustments and Weighting procedures. Rated hourly ginning capacity: Group 1, 8 bales or less; group 2, 9 to 11 bales; group 3, 12 to 20 bales; group 4, 21 bales or more. The universe includes all active gins in the study area. 2/ Taken from gin records and subjected to uniform allocation procedures--see appendix.

3/ See appendix for definition. 4/ Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 9--Estimated costs per bale in sample gin plants at 70-percent capacity utilization, by size group, and average for all plants, Lower Rio Grande Valley of Texas, 1972 and 1973 1/

Cost item 2/	1972				1973					
	Group 1	Group 2	Group 3	Group 4	Weighted average	Group 1	Group 2	Group 3	Group 4	Weighted average
	Dollars									
Management.....	2.96	2.33	2.50	2.65	2.48	2.66	2.93	3.14	2.84	2.76
Insurance.....	.51	.60	.38	.53	.47	.69	.67	.49	.49	.55
Taxes.....	.54	.63	.44	.35	.48	.64	.55	.48	.29	.47
Energy.....	1.55	1.10	1.20	1.29	1.27	3.33	1.38	1.59	1.92	1.94
Labor.....	3.95	4.21	3.46	4.57	3.88	3.91	4.50	4.10	5.86	4.59
Bagging and ties.....	3.87	3.84	3.87	3.96	3.88	4.16	3.91	3.98	3.88	3.97
Repairs.....	2.01	3.45	2.55	2.76	2.62	3.71	3.76	3.75	2.70	3.45
Miscellaneous.....	3.06	2.79	2.27	2.74	2.59	3.64	2.91	3.08	3.02	3.15
Out-of-pocket subtotal 3/.....	18.46	18.96	16.66	18.85	17.66	22.75	20.61	20.60	21.00	20.87
Depreciation.....	.75	1.26	1.65	1.32	1.37	1.60	1.24	1.84	1.55	1.63
Interest.....	.68	.45	.34	.48	.44	.85	.54	.40	.28	.46
Total	19.89	20.66	18.65	20.66	19.47	25.20	22.39	22.84	22.83	22.97
Standardized 3/ depreciation.....	1.73	3.48	3.10	2.96	2.91	1.79	3.52	3.43	2.82	3.03
interest.....	1.21	2.22	1.93	1.82	1.84	1.24	2.24	2.12	1.74	1.90
Total 4/.....	21.41	24.66	21.69	23.63	22.41	25.78	26.37	26.15	25.56	25.81

Individual cost items may not add to total because of rounding.

1/ See appendix for Cost Adjustments and Weighting procedures. Rated hourly ginning capacity, Group 1, 8 bales or less; group 2, 9 to 11 bales; group 3, 12 to 20 bales; group 4, 21 bales or more. The universe includes all active gins in the study area. 2/ Taken from gin records and subjected to uniform allocation procedures--see appendix. 3/ See appendix for definition. 4/ Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 10--Estimated costs per bale in sample gin plants at 70-percent capacity utilization, by size group, and average for all plants, Blacklands of Texas, 1972 and 1973 ^{1/}

Cost item ^{2/}	1972				1973					
	Group 1	Group 2	Group 3	Group 4	Weighted average	Group 1	Group 2	Group 3	Group 4	Weighted average
	Dollars									
Management.....	2.62	2.67	1.83	2.62	2.49	3.20	2.89	1.68	2.39	2.62
Insurance.....	.75	.37	.41	.29	.44	.65	.36	.53	.39	.43
Taxes.....	.24	.20	.25	.22	.22	.27	.31	.16	.24	.27
Energy.....	2.29	2.21	1.62	2.22	2.14	2.64	2.61	1.88	2.37	2.49
Labor.....	5.76	6.04	6.22	5.35	5.92	6.26	7.83	5.23	6.82	7.10
Bagging and ties.....	4.11	3.85	3.99	4.41	3.98	3.99	3.74	3.76	3.87	3.80
Repairs.....	2.44	2.61	2.41	2.87	2.59	3.04	3.15	1.79	3.35	3.02
Miscellaneous.....	1.31	1.47	1.15	.88	1.33	1.33	1.73	1.42	1.08	1.53
Out-of-pocket subtotal ^{3/}	19.53	19.41	17.87	18.86	19.11	21.38	22.62	16.45	20.52	21.26
Depreciation.....	1.18	1.89	.97	1.46	1.53	1.05	1.61	1.66	1.36	1.48
Interest.....	.04	.34	.21	.75	.32	.04	.19	.08	.72	.27
Total.....	20.74	21.64	19.05	21.07	20.96	22.47	24.43	18.19	22.59	23.02
Standardized ^{5/} depreciation.....	1.81	2.71	1.90	1.89	2.27	2.21	3.08	1.89	1.87	2.51
Interest.....	1.34	1.80	1.30	1.24	1.54	1.57	2.01	1.31	1.23	1.67
Total.....	22.68	23.92	21.08	21.99	22.92	25.16	27.70	19.66	23.62	25.44

Individual cost items may not add to total because of rounding.

^{1/} See appendix for Cost Adjustments and Weighting procedures. Rated hourly ginning capacity: Group 1--6 bales or less; group 2--7 and 8 bales; group 3--9-11 bales; group 4--12 bales or more. The universe includes all active gins in the study area. ^{2/} Taken from gin records and subjected to uniform allocation procedures--see appendix. ^{3/} See appendix for definition. ^{4/} Out-of-pocket costs plus standardized depreciation and standardized interest.

Table 12--Profit margin per bale, by revenue sources and costing methods, sample gins by size group, West Texas, Lower Rio Grande Valley, and Blacklands of Texas, 1973

Area and gin size group <u>1/</u>	Source of revenue			
	All sources combined <u>2/</u>		Ginning and bagging and ties charges only	
	Total standardized cost <u>3/</u>	Total cost <u>3/</u>	Total standardized cost <u>3/</u>	Total cost <u>3/</u>
	<u>Dollars</u>			
<u>West Texas</u>				
Group 1.....	11.30	13.68	-2.39	-0.01
Group 2.....	15.17	17.28	1.48	3.59
Group 3.....	14.00	16.68	0.31	2.99
Group 4.....	11.36	14.34	-2.33	0.65
Weighted average:	13.20	15.75	-0.49	2.06
<u>Lower Rio Grande Valley</u>				
Group 1.....	8.95	10.15	-9.85	-8.65
Group 2.....	0.07	10.20	-18.73	-8.60
Group 3.....	0.62	9.27	-18.18	-9.53
Group 4.....	8.00	13.80	-10.80	-5.00
Weighted average:	4.11	10.84	-14.69	-7.98
<u>Blacklands</u>				
Group 1.....	4.86	8.83	-4.45	-0.48
Group 2.....	6.89	10.34	-2.42	1.03
Group 3.....	9.42	12.01	0.11	2.70
Group 4.....	3.22	5.18	-6.09	-4.13
Weighted average:	6.32	9.51	-2.99	0.20

1/ Rated hourly ginning capacity, West Texas and Lower Rio Grande Valley: Group 1, 8 bales or less; group 2, 9-11 bales; group 3, 12-20 bales; group 4, 21 bales or more: Blacklands, group 1, 6 bales or less; group 2, 7 and 8 bales; group 3, 9-11 bales, group 4, 12 bales or more.

2/ Includes cottonseed margins and revenue from commissions, notes, loose cotton, green bolls, bur sales, margins on lint cotton and planting seed, regional dividends and other miscellaneous income in addition to ginning and bagging and ties charges.

3/ See "Costing Methods" in appendix.

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