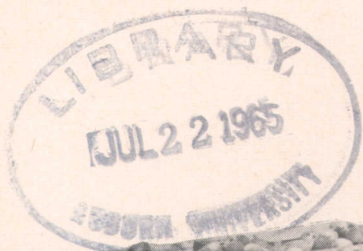


E2  
358

4

BULLETIN 358  
JUNE 1965



# Costs of Packing **FRESH PEACHES** in Chilton County, Ala.

 Agricultural Experiment Station  
**AUBURN UNIVERSITY**  
E. V. Smith Director Auburn, Alabama



## CONTAINER SIZE AND PEACH GRADE PINPOINTED IN PACKING COSTS

Packing costs make up a big part of the expense of marketing peaches.

Results of an Auburn University Agricultural Experiment Station study in Chilton County, Alabama, show a wide variation in packing cost among different types and sizes of containers. The range was from 69.5¢ for a ½-bushel crate to 102.4¢ for a crate holding 1 1/9 bushels. Although the ½-bushel crate was the cheapest container to pack, lowest per bushel cost resulted when the 1 1/9-bushel crate was used.

Generally, total costs were slightly higher when peaches were packed in baskets. Cost per container increased with container capacity, but total cost per bushel was lower for larger capacity crates or baskets, as shown by the following cost summary:

<i>Container</i>	<i>Cost per container</i>	<i>Cost per bushel</i>
1 1/9-bushel crate.....	102.42¢	93.20¢
1-bushel crate.....	101.51¢	101.50¢
¾-bushel crate.....	79.59¢	106.65¢
½-bushel crate.....	69.50¢	139.00¢
1-bushel basket.....	98.71¢	98.71¢
½-bushel basket.....	70.74¢	141.48¢

Quality of peaches, as indicated by proportion of No. 1 grade, also had a bearing on cost. Both per container and per bushel costs dropped as the proportion of No. 1 peaches in a lot increased.

Container costs accounted for approximately half of total packing expenses. Cost of containers varied according to size and type, but baskets cost more than crates of similar capacity. For both types of containers, cost went down as capacity decreased. Quantity discount offered about the only chance for any savings in container costs.

Labor was generally the second highest cost item, accounting for about 20 per cent of total cost. This figure varied widely, mainly because of differences in percentages of No. 1 peaches in a given lot. Much of the variation in total costs was caused by labor cost differences.

Overhead costs amounted to about 16 per cent of the total, making this item the third highest expense.

Operating costs accounted for about 15 per cent, regardless of container type or size. Managers had little opportunity to reduce either overhead or operating costs.

## CONTENTS

	<i>Page</i>
CONTAINER SIZE AND PEACH GRADE PINPOINTED IN PACKING COSTS.....	3
PEACH MARKETING PROBLEMS DEFINED AND PACKING COSTS STUDIED.....	6
PACKING COSTS DETERMINED.....	8
Fixed Costs.....	8
Variable Costs.....	9
Total Costs.....	11
COMPUTER ANALYSIS OF LABOR COST DATA.....	12
Returns.....	13
CONCLUSIONS AND IMPLICATIONS.....	14
APPENDIX.....	15

# Costs of Packing Fresh Peaches in Chilton County, Ala.\*

BANKS PERKINS, *Research Assistant in Agricultural Economics\*\**

MORRIS WHITE, *Professor of Agricultural Economics\*\*\**

PEACHES ARE GROWN in all 67 Alabama counties and are an important source of income for many Alabama farmers. In 1961 the State ranked 12th in the Nation in production, growing 1.4 million bushels (1.8 per cent of United States production). Sales value of Alabama peaches was \$2.9 million,<sup>1</sup> making this crop second only to pecans among the state's fruit and nut crops.

Only Chilton and Blount are important commercial peach producing counties. Chilton County, with 80 per cent of Alabama production, is by far the major producing area. Growers in this county produced 1.0 million bushels of peaches in 1960, with sales value of \$2.1 million. This went up to 1.1 million bushels worth \$2.5 million in 1961, which was 86 per cent of total sales value of all Alabama peaches.

Peaches are grown in Chilton County both for the fresh market and for processing. The fresh market is the most important outlet, with only a small proportion being utilized by processors. This is in contrast to figures for the United States, which show only 45 per cent of the Nation's production going to the fresh market.<sup>2</sup>

Although Alabama's total peach production varied widely before 1957, there has been a constantly increasing output since

---

\* The research project on which this report is based was financed by funds provided by the Agricultural Research and Marketing Act of 1946 and by State Research funds. It was carried out as Alabama Hatch project No. 593.

\*\* Resigned.

\*\*\* The authors are indebted to the peach growers, packing shed owners and managers, and to the county agent and assistant agents in Chilton County for their cooperation in making the study possible.

<sup>1</sup> ALABAMA AGRICULTURAL STATISTICS. Alabama Department of Agriculture and Industries, Division of Agricultural Statistics, Bul. 11, July 1962. p. 48.

<sup>2</sup> AGRICULTURAL STATISTICS 1961. U.S. Department of Agriculture, U.S. Government Printing Office, Washington, D.C. 1962. p. 187.

that year. Production more than tripled from 1957 to 1961, Appendix Table 1, and continued increases are expected.<sup>3</sup>

Packing sheds in Chilton County offer packing services to county growers on a fee basis. Title to peaches is maintained by growers throughout the packing and marketing process. Return to growers is selling price less packing, transportation, and selling charges. Charges for packing shed services are fairly stable, and do not fluctuate with selling price of peaches.

Four major steps are involved in marketing peaches: harvesting, packing, transporting, and selling. All are important, but different individuals or groups are responsible for efficiency of each operation. Producers are responsible for harvesting at the proper stage of maturity and handling to prevent excessive bruising. Shed managers must pack peaches as quickly and economically as possible, using containers that prevent excessive damage in transit. In addition, shed managers are responsible for finding suitable market outlets for the packed peaches. Responsibility for transporting and retailing lies neither with producers nor with packing shed managers.

### **PEACH MARKETING PROBLEMS DEFINED AND PACKING COSTS STUDIED**

Although Alabama peach production has increased considerably in recent years, keen competition from other areas has magnified marketing problems. With recent transportation advances, fresh peaches from as far away as California and Michigan can be placed on markets in Birmingham, Montgomery, and Mobile. Modern refrigerated rail cars and motor trucks permit long distance transportation of fresh peaches. Thus, peaches grown in Alabama must have comparable quality and be equally or better packed than those grown in other areas.

For continued development of the peach industry in Chilton County, market outlets for fresh peaches must be found. In many instances, peaches must be moved great distances to reach suitable market outlets. For transporting from Chilton County to retail outlets as far away as Detroit calls for use of suitable

<sup>3</sup> SMITH, MELVIN W., AND DANNER, M. J. Alabama's Changing Peach Industry. Auburn Univ. Agricultural Experiment Station Cir. 124. April 1958. p. 17.

containers and refrigeration to protect fruit quality. Open field boxes cannot be used without serious deterioration.

Because of the importance of the peach packing operation, a study of this phase of marketing was done by Auburn University Agricultural Experiment Station. The primary objective was to determine cost of packing fresh peaches in Chilton County. No previous economic research on peach packing had been done in Alabama, and information on costs and variables involved in the operation were needed to provide a basis for comparisons among packing sheds. Cost comparisons can point the way to increased efficiency in peach packing and handling.

In the original sampling plan, five sheds were randomly allotted in 5-day periods to allow each shed to be sampled on all days of the week during a 6-week period. However, the day of the week restriction was discarded after the second week of sampling because only two sheds continued to operate with any degree of regularity. It was impossible to follow a definite pattern for selecting the day of the week that a shed was to be sampled. Thus, judgment and shed operating schedule provided the basis for sampling.

At all sheds, each grower's peaches were separated from those delivered by all other growers. If a grower delivered peaches of two or more varieties, the varieties were separated also. Sample lots used by the enumerator were determined by these separations.

Time to handle a given lot of peaches was recorded as the number of minutes that elapsed between dumping the first and last field boxes of the lot. Total man-minutes were determined by multiplying the number of minutes required by the number of workers involved.

While the shed was in operation, the number of persons working at each job was recorded. Workers were paid only while the grading belt was in operation. If a breakdown occurred that did not involve the grading belt, it was usually stopped anyway and the workers were given a short rest period.

A day's sample consisted of all lots of peaches that were handled in the shed on a particular day. By using an entire packing day as a sampling unit, operations were observed at the beginning of the day's run when workers were fresh and toward the end of the day's run when they had become tired and less alert.

## PACKING COSTS DETERMINED

During the 1962 season about 85,000 bushels of No. 1 peaches were packed in Chilton County sheds.<sup>4</sup> This volume represented a little more than three-fifths of all peaches handled in the County, and was approximately one-tenth of the estimated total peach crop in Alabama.

Unusual conditions existed in Chilton County in 1962, and this affected the data that were available. The quantity of peaches produced in the County was the smallest in several years, Appendix Table 1, and quality was extremely poor. Prices paid for No. 1 peaches were so low at one time during the season that growers found it more profitable to sell at the orchard rather than deliver peaches to packing sheds.

Average costs were computed on the basis of No. 1 peaches packed. This basis was used because data concerning total volume of peaches handled were not available for each shed. Also, this base stresses the importance of a high percentage of No. 1 grade. The higher the percentage of No. 1 peaches in a given lot, the lower were average costs per unit. Total returns also showed a direct relationship to the percentage of No. 1 peaches in a given lot.

### Fixed Costs

Fixed costs accounted for about 16 per cent of total expenses during the 1962 season. A small volume of peaches handled by the sheds accounted for the relatively high level of overhead costs per unit.

Items included in overhead costs were insurance, property tax, depreciation, and interest on investment.

Depreciation was computed by the straight-line method, based on the estimated replacement cost of buildings and equipment. Buildings were depreciated over a 20-year period, and machinery and equipment over a 10-year period. A 6 per cent interest rate was charged on capital invested.

Overhead costs per container varied from 8.6¢ for 1/2-bushel crates and 1/2-bushel baskets to 19.0¢ for 1 1/9-bushel crates.

---

<sup>4</sup> Computed from data supplied by three of the five sheds operating in Chilton County that year.



Overhead costs for each type and size of container are shown below:

<i>Container</i>	<i>Overhead costs per container</i>
1 1/9-bushel crate.....	19.03¢
1-bushel crate.....	17.30¢
3/4-bushel crate.....	12.98¢
1/2-bushel crate.....	8.65¢
1-bushel basket.....	17.30¢
1/2-bushel basket.....	8.65¢

### Variable Costs

Total variable costs were assumed to have been comprised entirely of operating costs. Individual items included in operating costs were ice, electricity, telephone, water, minor repairs, social security, workmen's compensation, supplies (other than containers), and inspection fees. Both magnitude and the relationships among unit variable costs for various containers were similar to those that existed among unit overhead costs.

Operating costs per container of No. 1 peaches packed in each type and size of container are shown below:

<i>Container</i>	<i>Operating cost per container</i>
1 1/9-bushel crate.....	18.32¢
1-bushel crate.....	16.65¢
3/4-bushel crate.....	12.49¢
1/2-bushel crate.....	8.32¢
1-bushel basket.....	16.65¢
1/2-bushel basket.....	8.32¢

**CONTAINER COST.** Cost of containers was the largest expense item at all sheds during the 1962 season. In most instances this accounted for more than half of total costs.

Some shed managers were able to obtain quantity discounts when purchasing containers. Thus, all managers did not report the same price for the same type and size of container.

Average prices paid for various sizes and types of containers were:

<i>Container</i>	<i>Average unit cost of containers</i>
1 1/9-bushel crate.....	46.37¢
1-bushel crate.....	42.00¢
3/4-bushel crate.....	40.40¢
1/2-bushel crate.....	32.00¢
1-bushel basket.....	44.00¢
1/2-bushel basket.....	35.00¢

LABOR COSTS. Labor costs were affected by both type and size of container packed. Labor required to perform four jobs accounted for more than 60 per cent of total labor when crates were packed, Table 1. Labor requirements per container for 1 1/9-bushel, bushel, and 3/4-bushel crates were 14.3, 19.5, and 10.4 man-minutes, respectively. Grading was the highest labor consuming job, accounting for more than 40 per cent of the total. Handling culls was second, taking 7 to 10 per cent of the total.

Time required to pack a bushel basket was 0.6 man-minute more than for packing a 1/2-bushel basket, Table 2.

When baskets were packed, grading required a larger proportion of total labor than any other job, as was true with crates. This amounted to about 20 per cent of total labor. Facing was the second highest labor consuming job, accounting for slightly more than 11 per cent of the total for bushel baskets and almost 15 per cent for 1/2-bushel baskets.

Packing shed workers, except supervisors and clerks, were paid an hourly wage. Supervisors and clerks were paid a salary. To

TABLE 1. AVERAGE LABOR REQUIREMENTS AND PERCENTAGE OF TOTAL LABOR REQUIREMENTS PER CRATE, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Job category	1 1/9-bushel crate	Proportion of total	1-bushel crate	Proportion of total	3/4- bushel crate	Proportion of total
	<i>Man-minutes</i>	<i>Per cent</i>	<i>Man-minutes</i>	<i>Per cent</i>	<i>Man-minutes</i>	<i>Per cent</i>
Grading.....	5.67	39.5	8.16	41.9	4.08	39.4
Filling.....	.40	2.8	.71	3.6	.89	8.6
Container assembly.....	.93	6.5	1.07	5.5	.72	7.0
Handling culls.....	1.22	8.5	2.13	10.9	.75	7.2
All other jobs.....	6.12	42.7	7.44	38.1	3.91	37.8
TOTAL.....	14.34	100.0	19.51	100.0	10.35	100.0

TABLE 2. AVERAGE LABOR REQUIREMENTS AND PERCENTAGE OF TOTAL LABOR REQUIREMENTS PER BASKET, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Job category	1-bushel basket	Proportion of total	1/2-bushel basket	Proportion of total
	<i>Man-minutes</i>	<i>Per cent</i>	<i>Man-minutes</i>	<i>Per cent</i>
Grading.....	3.61	20.7	3.30	19.6
Facing.....	2.02	11.6	2.40	14.3
Filling.....	1.91	11.0	1.50	8.9
Handling culls.....	1.64	9.4	1.50	8.9
All other jobs.....	8.22	47.3	8.10	48.3
TOTAL.....	17.40	100.0	16.80	100.0

TABLE 3. AVERAGE LABOR COSTS AND PERCENTAGE OF TOTAL LABOR COSTS PER CRATE, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Job category	1 1/9-	Propor-	1-bushel	Propor-	3/4-	Propor-
	bushel crate	tion of total	crate	tion of total	bushel crate	tion of total
	<i>Cents</i>	<i>Pct.</i>	<i>Cents</i>	<i>Pct.</i>	<i>Cents</i>	<i>Pct.</i>
Grading.....	6.54	35.0	10.21	39.9	4.52	32.9
Filling.....	1.09	5.8	.89	3.5	1.19	8.7
Container assembly.....	1.14	6.1	1.33	5.2	.89	6.5
Handling culls.....	1.51	8.1	2.66	10.4	.93	6.8
All other jobs.....	8.42	45.0	10.48	41.0	6.19	45.1
TOTAL.....	18.70	100.0	25.56	100.0	13.72	100.0

TABLE 4. AVERAGE LABOR COSTS AND PERCENTAGE OF TOTAL LABOR COSTS PER BASKET, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Job category	1-bushel	Proportion	1/2-bushel	Proportion
	basket	of total	basket	of total
	<i>Cents</i>	<i>Per cent</i>	<i>Cents</i>	<i>Per cent</i>
Grading.....	3.11	15.0	3.30	17.6
Facing.....	1.75	8.4	2.40	12.8
Filling.....	2.34	11.3	1.62	8.6
Handling culls.....	1.98	9.5	1.50	8.0
All other jobs.....	11.58	55.8	9.95	53.0
TOTAL.....	20.76	100.0	18.77	100.0

compute labor costs per container it was necessary to adjust salaries to an hourly rate.

At all sheds, labor costs accounted for approximately 20 per cent of total costs. Labor cost per container was an indication of how efficiently labor was utilized.

Labor costs per container varied from 13.7¢ for 3/4-bushel crates to 25.6¢ for bushel crates, Table 3. Labor costs per container generally increased as capacity increased, regardless of container type.

Grading, the highest cost job for both sizes of containers, accounted for 15.0 per cent of total labor costs when bushel baskets were packed and 17.6 per cent with 1/2-bushel baskets, Table 4.

### Total Costs

Total costs per container varied from 69.5¢ when 1/2-bushel crates were packed to 102.4¢ for packing 1 1/9-bushel crates, Table 5.

Total cost served as a basis for evaluating overall efficiency of any one shed when compared with all other sheds. These comparisons had certain limitations, such as variations in wage rates

TABLE 5. AVERAGE TOTAL COSTS PER CONTAINER, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Item	1-bushel basket	½- bushel basket	1 1/9- bushel crate	1-bushel crate	¾- bushel crate	½- bushel crate
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Container <sup>1</sup> .....	44.00	35.00	46.37	42.00	40.40	32.00
Operating.....	16.65	8.32	18.32	16.65	12.49	8.32
Overhead.....	17.30	8.65	19.03	17.30	12.98	8.65
Labor.....	20.76	18.77 <sup>2</sup>	18.70	25.26	13.72	20.53 <sup>3</sup>
TOTAL.....	98.71	70.74	102.42	101.51	79.59	69.50

<sup>1</sup> Simple average of prices paid for containers, including quantity discounts.

<sup>2</sup> From observations at one shed.

<sup>3</sup> No observations made while this container was being used; labor costs estimated.

and prices paid for containers, that tended to limit their usefulness.

Three containers with essentially the same capacity — bushel baskets, 1 1/9-bushel crates, and bushel crates — exhibited little variation in total costs. Also, there was little difference in total costs between ½-bushel baskets and ½-bushel crates.

Costs of packing a given number of bushels of No. 1 peaches were less when 1 1/9-bushel crates were packed. Per bushel costs were higher for the small containers and decreased as capacity of containers increased. Container size appeared to have more effect on total costs than did container type.

Total costs of packing a 100-bushel lot of No. 1 peaches in various sizes and types of containers are shown below:

<i>Container</i>	<i>Total costs</i>
1 1/9-bushel crate.....	\$93.20
1-bushel crate.....	101.51
¾-bushel crate.....	106.65
½-bushel crate.....	139.00
1-bushel basket.....	98.71
½-bushel basket.....	141.48

### COMPUTER ANALYSIS OF LABOR COST DATA

Data gathered from Chilton County sheds during 1962 were analyzed by an electronic computer to estimate total labor costs at various percentages of No. 1 peaches. This analysis was limited to three sizes of containers, 1 1/9-bushel crates, ¾-bushel crates, and bushel baskets.

The computer program selected the most effective variable, then the second and third most effective variables in conjunction with the first, in attempting to explain variations in labor costs.

TABLE 6. ESTIMATED TOTAL LABOR COSTS FOR A 100-BUSHEL LOT, WITH VARIOUS PROPORTIONS OF NO. 1 PEACHES, BY TYPE AND SIZE OF CONTAINER, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Proportion of No. 1 peaches <sup>1</sup>	Labor costs, by container type and size		
	1 1/9-bushel crate	3/4-bushel crate	1-bushel basket
<i>Per cent</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
10	2.79	11.44	8.60
20	5.04	18.63	13.80
30	6.75	21.60	15.90
40	7.92	21.73	16.00
50	8.55	21.44	14.00
60	8.80	20.00	11.40
70	8.32	19.53	7.70

<sup>1</sup>Labor costs were not computed for proportions above 70 per cent. Sample lots with more than 70 per cent No. 1's were rare.

Independent variables were: (1) percentage of No. 1 peaches, (2) volume of lot, and (3) length of time from beginning of days operation.

In all instances, percentage of No. 1 peaches was the most effective variable in explaining fluctuations in labor costs, Table 6. Effect of this variable was highly significant for each of the three containers, and explained 64.8 per cent of total variation in labor cost for 1 1/9-bushel crates, 24.5 per cent for 3/4-bushel crates, and 64.0 per cent for bushel baskets, Appendix Table 8.

### Returns

For the three types and sizes of containers analyzed, total returns increased as percentage of No. 1 peaches increased, Table 7.

Total returns were based on the excess of sales receipts above

TABLE 7. ESTIMATED RETURNS FROM A 100-BUSHEL LOT, WITH VARIOUS PROPORTIONS OF NO. 1 PEACHES, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962<sup>1</sup>

Proportion of No. 1 peaches	Returns, by container type and size		
	1 1/9-bushel crate	3/4-bushel crate	1-bushel basket
<i>Per cent</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
10	1.29	-8.72	-4.58
20	13.00	-2.34	4.13
30	25.26	7.30	15.95
40	38.06	19.95	29.76
50	51.40	33.64	45.67
60	66.66	47.69	62.18
70	80.30	60.77	79.79

<sup>1</sup>Excludes production, harvesting, transportation, and sales costs, and assumes a selling price of \$2.00 per bushel.

This is a summary table. For more detail see Appendix Tables 5, 6, and 7.

packing costs. Transportation and sales charges were excluded from the computations.<sup>5</sup> Production and harvesting costs were also excluded.

Determination and analysis of production, harvesting, transportation, and sales costs were beyond the scope of this study.

### CONCLUSIONS AND IMPLICATIONS

Analysis of data from Chilton County sheds indicated that these four factors were among those that contributed to high packing costs: (1) inadequate coordination of work crews, (2) relatively high proportion of culls, (3) low seasonal packout, and (4) small daily packout.

Loose coordination in activities of shed crews contributed to delays and low output per man-hour. Time requirements and labor costs could have been reduced through synchronized efforts of work crews. Need for more supervision was indicated for essentially all job categories.

In the absence of adequate supervision, low output per man-hour could be partially alleviated by a training program for shed workers prior to the beginning of the season.

Analysis indicated that some differentiation in packing charges was justified between lots with relatively high percentages of culls and lots with relatively low percentages of culls.

Differences among lots in labor costs for packing were primarily the result of variations in the proportion of culls and No. 1 peaches.

Through improved growing and harvesting procedures, growers could lower the proportion of culls in lots delivered to sheds and thereby reduce labor costs in packing.

Low seasonal packout also contributed to high packing costs during the 1962 season.

Volumes of peaches delivered to sheds daily was an important factor in determining costs. A quantity equal to that needed for a full day's operation was the goal of shed operators. To the extent that operators and growers have not coordinated their efforts, steps taken to schedule deliveries to sheds could contribute to efficiency and lower costs.

<sup>5</sup> Data concerning transportation and sales charges were not gathered during 1962. Data from one shed during 1961 indicated that transportation charges amounted to approximately 50¢ per container, and sales charges varied from 10 to 15¢, depending on container size.

**APPENDIX**

APPENDIX TABLE 1. PEACH PRODUCTION IN ALABAMA, 1952-62

Year	Total production <i>Bushels</i>
1952.....	700,000
1953.....	850,000
1954.....	900,000
1955.....	1
1956.....	600,000
1957.....	425,000
1958.....	1,000,000
1959.....	1,050,000
1960.....	1,250,000
1961.....	1,400,000
1962.....	900,000
AVERAGE.....	825,000

<sup>1</sup> Crop lost from late freeze. Less than 500 bushels produced in the State.

APPENDIX TABLE 2. BUSHELS OF PEACHES PACKED AND PERCENTAGE OF TOTAL PACKOUT, BY TYPE AND SIZE OF CONTAINER, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Container	Total packout <i>Bushels</i>	Percentage of total packout <i>Per cent</i>
<b>Crate</b>		
1 1/9-bushel.....	9,556	11.5
1-bushel.....	4,000	4.8
3/4-bushel.....	52,178	63.0
1/2-bushel.....	442	.5
<b>Basket</b>		
1-bushel.....	2,064	2.5
1/2-bushel.....	14,692	17.7
TOTAL.....	82,932	100.0

APPENDIX TABLE 3. AVERAGE LABOR REQUIREMENTS PER CONTAINER, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Job category	Labor requirements, by type and size container				
	Crates			Baskets	
	1 1/9-bushel	1-bushel	3/4-bushel	1-bushel	1/2-bushel
	Man-minutes	Man-minutes	Man-minutes	Man-minutes	Man-minutes
Unloading and serving.....	.49	.71	.38	.66	.60
Dumping.....	.40	.71	.21	.33	.30
Stacking empty boxes.....	.57	1.07	.25	.38	.60
Grading.....	5.67	8.16	4.08	3.61	3.30
Facing.....	---	---	---	2.02	2.40
Filling.....	.40	.71	.89	1.91	1.50
Rings removed.....	---	---	---	.60	.30
Basket on liner.....	---	---	---	.33	.30
Turning basket.....	---	---	---	.33	.30
Hydrocooling.....	.39	---	.41	1.06	1.50
Handling culls.....	1.22	2.13	.75	1.64	1.50
Lidding.....	.74	1.07	.53	.38	.60
Labeling.....	.34	---	.28	.66	.60
Stacking.....	.50	.71	.39	.71	.90
Container assembly.....	.93	1.07	.72	.38	.60
Counter.....	.34	.35	.27	.33	.30
Stamper.....	.25	.35	.17	.60	.30
General.....	.25	.35	.17	.57	.60
Other.....	1.35	1.42	.51	1.02	---
Supervisory.....	.25	.35	.17	.33	.30
Clerical.....	.25	.35	.17	.33	.30
TOTAL.....	14.34	19.51	10.35	17.40	16.80



**APPENDIX TABLE 4. AVERAGE LABOR COSTS PER CONTAINER, BY JOB CATEGORY, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962**

Job category	Labor costs, by type and size container				
	Crates			Baskets	
	1 1/9-bushel	1-bushel	3/4-bushel	1-bushel	1/2-bushel
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Unloading and serving.....	.62	.89	.50	.79	.60
Dumping.....	.50	.89	.30	.53	.38
Stacking empty boxes.....	.70	1.33	.32	.45	.60
Grading.....	6.54	10.20	4.52	3.11	3.30
Facing.....	---	---	---	1.75	2.40
Filling.....	1.09	.89	1.19	2.34	1.62
Rings removed.....	---	---	---	.74	.30
Basket on liner.....	---	---	---	.40	.30
Turning basket.....	---	---	---	.40	.30
Hydrocooling.....	.48	---	.52	1.66	1.58
Handling culls.....	1.51	2.66	.93	1.98	1.50
Lidding.....	.92	1.33	.65	.45	.60
Labeling.....	.42	.89	.33	.56	.60
Stacking.....	.64	---	.51	.89	1.12
Container assembly.....	1.14	1.33	.89	.45	.60
Counter.....	.42	.44	.44	.28	.30
Stamper.....	.31	.44	.23	.51	.30
General.....	.31	.44	.31	.57	.60
Other.....	1.66	1.77	.64	1.27	---
Supervisory.....	1.03	1.47	1.05	1.10	1.26
Clerical.....	.41	.59	.38	.53	.51
<b>TOTAL.....</b>	<b>18.70</b>	<b>25.56</b>	<b>13.72</b>	<b>20.76</b>	<b>18.77</b>

APPENDIX TABLE 5. ESTIMATED COSTS AND RETURNS FOR A 100-BUSHEL LOT BY PERCENTAGE OF NO. 1 PEACHES PACKED IN 1 1/9-BUSHEL CRATES, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

No. 1 peaches	Con-tainers	Over-head costs	Operat-ing costs	Con-tainer costs	Labor costs	Total costs	Value <sup>1</sup> of sales	Returns <sup>2</sup>
<i>Pct.</i>	<i>No.</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
10	9	9.89	1.66	4.17	2.79	18.51	19.80	1.29
20	18	9.89	3.32	8.35	5.04	26.60	39.60	13.00
30	27	9.89	4.98	12.52	6.75	34.14	59.40	25.26
40	36	9.89	6.64	16.69	7.92	41.14	79.20	38.06
50	45	9.89	8.30	20.87	8.55	47.60	99.00	51.40
60	55	9.89	10.15	25.50	8.80	54.34	121.00	66.66
70	64	9.89	11.81	29.68	8.32	59.70	140.00	80.30
80	73	9.89	13.47	33.85	9.02	66.23	160.60	94.37
90	82	9.89	15.13	38.02	6.56	69.60	180.40	110.80
100	91	9.89	16.79	42.20	5.46	74.34	200.00	125.66

<sup>1</sup> Assuming a selling price of \$2.00 per bushel.

<sup>2</sup> Excludes transportation and selling charges.

APPENDIX TABLE 6. ESTIMATED COSTS AND RETURNS FOR A 100-BUSHEL LOT BY PERCENTAGE OF NO. 1 PEACHES PACKED IN 3/4-BUSHEL CRATES, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

No. 1 peaches	Con-tainers	Over-head costs	Operat-ing costs	Con-tainer costs	Labor costs	Total costs	Value <sup>1</sup> of sales	Returns <sup>2</sup>
<i>Pct.</i>	<i>No.</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
10	13	9.89	1.64	5.25	11.44	28.22	19.50	-8.72
20	27	9.89	3.41	10.91	18.63	42.84	40.50	-2.34
30	40	9.89	5.05	16.16	21.60	52.70	60.00	7.30
40	53	9.89	6.69	21.41	21.73	59.55	79.50	19.95
50	67	9.89	8.46	27.07	21.44	66.86	100.50	33.64
60	80	9.89	10.10	32.32	20.00	72.31	120.00	47.69
70	93	9.89	11.74	37.57	19.53	78.73	139.50	60.77
80	107	9.89	13.50	42.25	22.47	88.11	160.50	72.39
90	120	9.89	15.14	48.48	27.60	101.11	180.00	78.89
100	133	9.89	16.78	53.73	37.24	117.64	200.00	82.36

<sup>1</sup> Assuming a selling price of \$2.00 per bushel.

<sup>2</sup> Excludes transportation and selling charges.

APPENDIX TABLE 7. ESTIMATED COSTS AND RETURNS FOR A 100-BUSHEL LOT BY PERCENTAGE OF NO. 1 PEACHES PACKED IN BUSHEL BASKETS, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

No. 1 peaches	Con- tainers	Over- head costs	Operat- ing costs	Con- tainer costs	Labor costs	Total costs	Value <sup>1</sup> of sales	Returns <sup>2</sup>
<i>Pct.</i>	<i>No.</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
10	10	9.89	1.69	4.40	8.60	24.58	20.00	-4.58
20	20	9.89	3.38	8.80	13.80	35.87	40.00	4.13
30	30	9.89	5.06	13.20	15.90	44.05	60.00	15.95
40	40	9.89	6.75	17.60	16.00	50.24	80.00	29.76
50	50	9.89	8.44	22.00	14.00	54.33	100.00	45.67
60	60	9.89	10.13	26.40	11.40	57.82	120.00	62.18
70	70	9.89	11.82	30.80	7.70	60.21	140.00	79.79
80	80	9.89	13.50	35.20	4.80	63.39	160.00	96.61
90	90	9.89	15.19	39.60	1.80	66.48	180.00	113.52
100	100	9.89	16.88	44.00	1.00	71.77	200.00	128.23

<sup>1</sup> Assuming a selling price of \$2.00 per bushel.<sup>2</sup> Excludes transportation and selling charges.

APPENDIX TABLE 8. VARIATIONS IN LABOR COSTS EXPLAINED BY VARIATION IN THE PERCENTAGE OF NO. 1 PEACHES, BY SIZE AND TYPE OF CONTAINER, ALL SHEDS, CHILTON COUNTY, ALABAMA, 1962

Container	Proportion of total variation	Significance level
	<i>Per cent</i>	
1 1/9-bushel crate.....	64.8	.001
3/4-bushel crate.....	24.5	.001
1-bushel basket.....	64.0	.001

