BULLETIN 365 FEBRUARY 1966

The Alabama Slaughter Cattle Industry

AGRICULTURAL EXPERIMENT STATION
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Auburn, Alabama

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FIRST PRINTING 3M, FEBRUARY 1966

The Alabama Slaughter Cattle Industry*

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INTRODUCTION

CHANGES in food processing during recent years have been dynamic. Among the more spectacular have been those in meat processing.

The most important change perhaps has been the trend toward geographic decentralization of plants. There is no longer a concentration of slaughter plants near large cities. Relocation has been near production areas. Many plants are small and have tended to specialize in slaughter of particular species of livestock. Most of the new plants employ less than 20 workers and are non-federally inspected slaughter plants.

Competitive relationships within the meat packing industry have been greatly influenced by purchasing activities of retail food chains. Buyers for chain food stores purchase 40 per cent of the meat sold. These buyers are usually more knowledgeable about the market situation and have greater bargaining power than do buyers representing smaller retail stores. Large corporate chains will continue to expand. Independent food stores, by affiliating with central wholesale and cooperative buying organizations, can achieve many of the bargaining advantages that retail food chain systems possess.

Improved technology, transportation, and refrigeration have had a marked effect on the structure of the meat packing industry.

* This study was supported by funds provided by the Research and Marketing Act of 1946 and by State Research funds. Conducted as Alabama Research Project 587, it is a contributing study to the Southern Regional Livestock Marketing Research Project SM-23.

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Today, refrigerated truck and rail facilities make possible economical and fast interstate and coastal shipment of both fresh and cured meat. Also, relative rail freight rate changes for livestock and meat favor the shipment of meat *(3)*.

The beef cattle industry has developed from a small beginning to an important segment of Alabama's economy. Commercial slaughter has increased and farm slaughter has decreased. Commercial slaughter of cattle in Alabama increased from 195,000 head in 1944 to 296,000 head in 1964, an increase of 52 per cent. During the same time period, the national commercial slaughter increased 18 per cent *(2)*. Gross cash receipts from the sale of beef cattle accounted for about one-seventh of the total cash farm income in 1963. Cattle production, however, has been principally directed toward nonslaughter kinds, primarily feeder calves *(4)*. Consequently, Alabama slaughter plants have found it necessary to purchase outside Alabama mature, good quality cattle suitable for sale as block beef.

Objectives of Study

Information is needed on the available supply of cattle and the potential for developing a local supply source for slaughter cattle. This study was designed to estimate movements of cattle and calves both within and into Alabama. It was expected that these movement patterns would indicate the relative efficiency with which live cattle and calves moved from marketing areas to slaughter areas. More specifically, the study was initiated:

(1) To estimate marketing and slaughter of cattle by homogenous areas within Alabama;

(2) To give a description of slaughter plant operations in Alabama;

(3) To estimate actual movements of cattle and calves, by class, purchased by Alabama meat packers; and

(4) To determine the origin of cattle and calves, by class, purchased by Alabama slaughter plants.

Method of Study

Alabama was divided into three areas relative to estimating production, slaughter, and consumption of cattle and calves. The substate areas were established to help determine current volume and seasonal variations in the cattle and calf movements within Alabama.

SOURCE OF DATA. Slaughter estimates were derived from slaughter plant reports collected by the Alabama Crop and Livestock Reporting Service, Statistical Reporting Service, United States Department of Agriculture. Cattle marketing estimates were obtained from United States Department of Agriculture periodical publications.

Beef and veal consumption data were derived from national and regional per capita consumption estimates; they were analyzed for regional differences in per capita consumption and relative importance of place of residence in the area.

Data concerning shipments of live cattle and calves were obtained from records of slaughter plants in each slaughter area within Alabama.

SAMPLING PROCEDURE. A random sample of packing plants was selected and classified according to volume of slaughter. Plants slaughtering livestock under inspection conducted by the Meat Inspection Branch of the United States Department of Agriculture were classified as federally inspected plants. Only federally inspected plants may legally ship meat across state lines. Large, nonfederally inspected plants were those whose annual slaughter was more than 2 million pounds liveweight. Those plants whose annual slaughter was less than 2 million, but more than 300,000 pounds liveweight were classified as medium nonfederally inspected plants. Slaughter plants with less than 300,000 pounds annual slaughter were not included in the sample because meat processed in these plants was generally for local consumption.

All federally inspected slaughter plants in Alabama were included in the sample. Fifty per cent of the large nonfederally inspected plants were selected, with a minimum of two plants in each slaughter area. In addition, a 20 per cent random sample of medium nonfederally inspected packer plants was drawn with a minimum of two plants within each of the three slaughter areas.

Information was gathered on cattle numbers, weights, prices, and origins. Additional data were obtained on class, sex, and type of seller. These data were obtained for the following six weekly periods in 1962: February 4-10, April 15-21, June 10-16, August 19-25, October 7-13, and November 25-December 1.

ESTIMATES OF SLAUGHTER AND CONSUMPTION OF BEEF AND VEAL, ALABAMA AND THE UNITED STATES

The period since World War II has been one of rapid development in the cattle industry. More high quality, grain-fed cattle have been slaughtered. Consumers with rising incomes have increased per capita consumption of beef. Pork consumption has decreased in the South but per capita consumption is still above the United States average.

Consumption-Slaughter Relationships

Total consumption exceeded total slaughter of beef and veal in all areas of Alabama in 1958, Figure 1. Nearly 340 million pounds liveweight equivalent of beef and veal were consumed, but only 216 million pounds were slaughtered in Alabama during 1958. Consumption exceeded slaughter by 47.9 and 46.6 million pounds liveweight equivalent in the northern and southern areas of Alabama, respectively. Output from commercial cattle and calf slaughtering plants in central Alabama was equivalent to about 80 per cent of the beef and veal consumed within the area. Furthermore, the central area accounted for approximately 54 per cent of the total beef consumption in the State.

Slaughter-Marketing Relationships

Annual marketings of cattle and calves in the United States usually exceed slaughter by about 20 per cent. Many of the cattle are purchased for additional feeding. The cattle cycle will cause deviations from this percentage. Marketings in excess of slaughter do not necessarily indicate surplus in an area since market data do not usually distinguish between slaughter and nonslaughter animals.

Total cattle marketings exceeded total slaughter in all areas in Alabama. In 1958, marketings were approximately five times as great as slaughter in northern Alabama, about three times as great as slaughter in southern Alabama, and about twice as great as slaughter in central Alabama *(7)*.

Most cattle and calves sold through auction markets in Alabama are nonslaughter cattle. Most of these animals are sold for further feeding. In 1962 approximately 10 per cent of all cattle sold were slaughter steers and heifers weighing more than 500 pounds *(4)*. Meat packers buy fed cattle direct from farmers, but

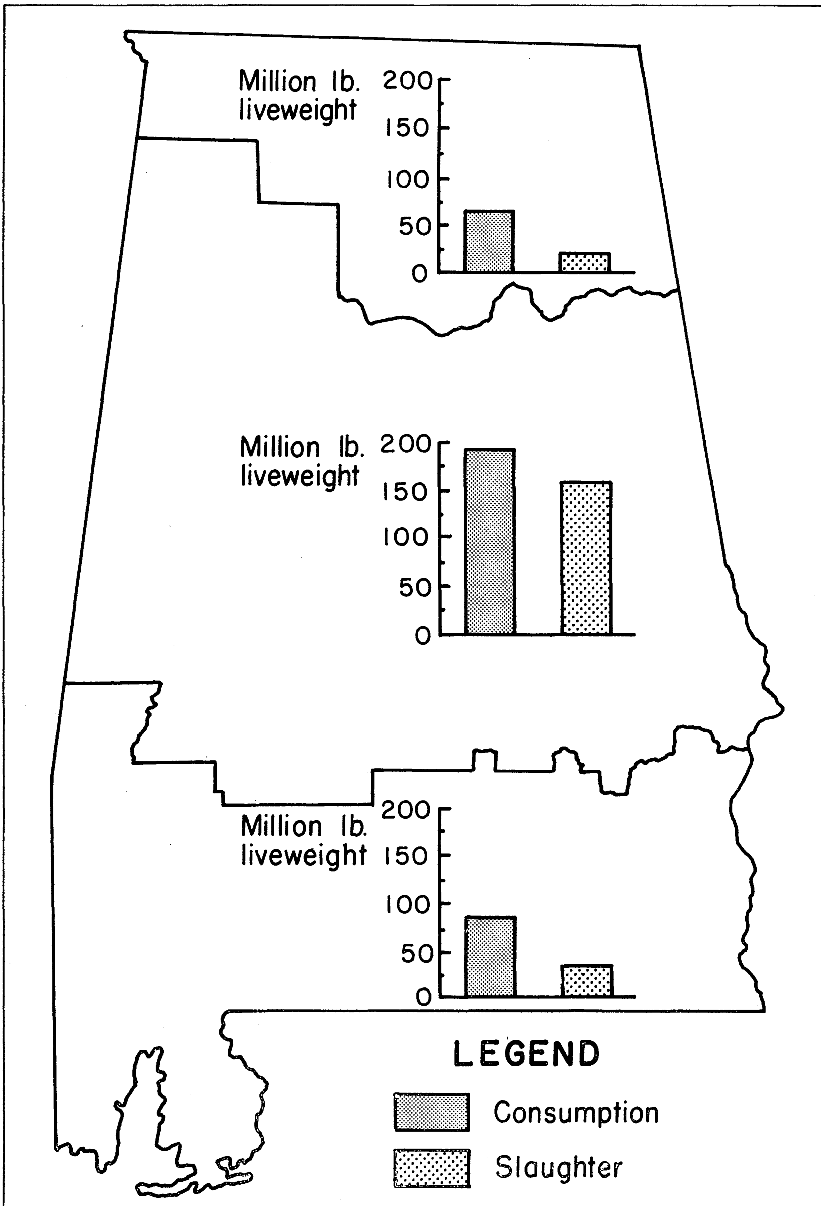

FIG. 1. Estimates of beef and veal consumption and commercial slaughter, by area, Alabama, 1958. (Source: Roy G. Stout, J. C. Purcell, and W. L. Fishel, Marketing, Slaughter and Consumption of Livestock and Meats in the South, Southern Cooperative Bulletin No. 66, August 1961, p. 44.

the supply of mature steers and heifers from sources in Alabama was extremely limited in 1962.

Consumption of Beef and Veal

The two most comprehensive reports on food consumption by regions of the United States are the 1948 and 1955 food consumption surveys made by the United States Department of Agriculture. The 1948 survey included only urban consumers in each major region of the country. The 1955 survey included urban, rural nonfarm, and rural farm consumers in each region. Additional data on meat consumption were also available from a consumer panel in Atlanta,[1] from a study by Moser *(5)* and from a study by Stout *(7)*. Per capita consumption of beef and veal was associated with three factors: (1) region; (2) place of residence; and (3) race. Income differences were also associated with the above named factors and influenced per capita consumption.

REGIONAL DIFFERENCES. Per capita consumption of beef and veal varied by regions, Table 1. The 1955 survey indicated that per capita consumption of beef in the West was 37 per cent greater than the United States average, whereas per capita consumption in the South was 40 per cent less than the United States average. Per capita consumption of beef in the West for 1 week was 1.62 pounds as compared with 0.85 pounds in the South.

In 1958, per capita consumption of beef in Alabama was about two-thirds that of the United States, or about 30 pounds less. The United States per capita consumption of veal was about twice the

TABLE 1. PER CAPITA BEEF AND VEAL CONSUMPTION, BY REGION AND PERCENTAGE OF THE UNITED STATES AVERAGE, ONE WEEK, SPRING, 1955

Region	Beef		Veal	
	Weekly consumption	Percentage of United States	Weekly consumption	Percentage of United States
	Lb.	*Pct.*	*Lb.*	*Pct.*
United States	1.25	100	0.08	100
Northeast	1.29	103	.12	150
North Central	1.51	121	.07	88
South	0.85	68	.04	50
West	1.62	130	.07	88

Source: Harold F. Breimyer and Charlotte A. Kause, *Consumption Patterns for Meat,* United States Department of Agriculture, Agricultural Marketing Service 249, May 1958, p. 11.

[1] The panel consisted of approximately 300 households reporting weekly food purchases. The study was made by the Georgia Agricultural Experiment Station.

Alabama per capita consumption, Table 2. The differences between areas in Alabama were small, but southern Alabama had a slightly larger per capita consumption of both beef and veal.

An increase in per capita consumption of beef in Alabama to the United States level would result in a 50 per cent increase. Any increase would favorably affect the amount of commercial cattle slaughter in the State. The overall contribution to the total food processing economy would depend on how much the total slaughter of all meat animals is increased.

RESIDENCE DIFFERENCES. The per capita consumption of beef and veal was greatly affected by the place of residence. The urban population's per capita consumption of beef was 41 per cent greater than the farm population's per capita consumption of beef. An even greater difference in per capita consumption of veal by the two types of residents was noted. The farm resident's per capita consumption of veal for one week was 0.01 pounds while the urban resident's per capita consumption of veal for one week was 0.06 pounds, Table 3.

RACIAL DIFFERENCES. Per capita consumption of beef and veal by the white population was 33 per cent greater than for the nonwhite.[2] Per capita consumption of beef and veal for the nonwhite farm population was 25 per cent less than for the white farm population.

INCOME DIFFERENCES. Consumption of beef is positively correlated with level of income, Table 4. A 10 per cent increase in

TABLE 2. ESTIMATED ANNUAL PER CAPITA CONSUMPTION OF BEEF AND VEAL BY AREAS WITHIN ALABAMA, AND THE UNITED STATES, 1958

Area	Beef	Veal
	Lb.	*Lb.*
Northern Alabama	53.9	3.0
Central Alabama	53.8	3.3
Southern Alabama	54.7	3.4
United States	80.5	6.8

Source: Roy G. Stout, J. C. Purcell and W. L. Fishel, *Marketing Slaughter, and Consumption of Livestock in the South,* Southern Cooperative Bulletin No. 66, August 1961, pp. 22-23 and Livestock and Meat Statistics, United States Department of Agriculture, Statistical Bulletin No. 30, July 1958.

[2] Based on consumption estimates derived from the Atlanta Consumer Panel of Georgia Agricultural Experiment Station.

TABLE 3. PER CAPITA BEEF AND VEAL CONSUMPTION BY TYPE OF RESIDENCE, AND PERCENTAGE OF REGIONAL AVERAGE, ONE WEEK, SOUTHERN REGION, SPRING 1955

Region and type of residence	Beef		Veal	
	Weekly consumption	Per cent of average	Weekly consumption	Per cent of average
	Lb.	*Pct.*	*Lb.*	*Pct.*
South				
All residents	0.85	100	0.04	100
Urban	1.09	128	.06	150
Rural nonfarm	.64	75	.03	75
Farm	.68	80	.01	25

Source: Harold F. Breimyer and Charlotte A. Kause, *Consumption Patterns for Meat,* United States Department of Agriculture, Agricultural Marketing Service 249, May 1958, p. 11.

TABLE 4. URBAN HOUSEHOLDS: PERCENTAGE DIFFERENCE IN QUANTITY, PRICE, AND VALUE OF MEAT CONSUMED PER PERSON FOR EACH 10 PER CENT DIFFERENCE IN INCOME, ONE WEEK, SPRING 1955

Region	All meat	Beef	Veal
	Pct.	*Pct.*	*Pct.*
Quantity per person			
United States	1.0	2.1	2.7
Northeast	0.7	1.2	2.0
North Central	.4	1.0	2.0
South	1.1	3.8	3.0
West	2.1	2.1	5.8
Price per pound			
United States	1.6	1.6	0.3
Northeast	1.3	1.6	.6
North Central	1.4	1.5	.2
South	1.6	1.2	1.4
West	1.3	1.9	—0.2
Value per person			
United States	2.6	2.8	2.8
Northeast	1.9	2.7	2.7
North Central	1.7	2.5	2.3
South	2.6	4.9	3.2
West	3.6	4.0	6.0

Source: Harold F. Breimyer, *Demand and Prices for Meat—Factors Influencing Their Historical Development,* United States Department of Agriculture, Economic Research Service, Technical Bulletin No. 1253, p. 91.

income per family was associated with increases in beef consumption of from 1.0 to 3.8 per cent.

The South had the highest relationship of beef consumption with income of any area within the United States and the North Central had the lowest. Beef and veal consumption were both closely associated with income. Pork consumption was less associated with income than beef consumption. Only in the West, where pork supplies were scarce, was consumption of pork positively associated with income.

Alabama and the Southeast have traditionally produced and consumed more pork than beef. Per capita incomes in the Southeast are below the national average. The Southeast also has a higher percentage of its population in rural areas and a higher proportion of nonwhite residents.

As these conditions become more nearly equated with the average for the United States, per capita consumption of beef in Alabama and the Southeast will increase.

CHARACTERISTICS OF ALABAMA'S SLAUGHTER INDUSTRY

Pork processing is the major activity of meat packing plants in Alabama. Cattle slaughter primarily serves to complement the processing of pork. Local, independent plants are dominant. Of the meat packers which have national distribution, only Swift and Company presently has beef cattle slaughter facilities in Alabama.

Entry of the newer, independent local plants has created marketing and production problems and needs different from those of national packers. Local plants do not have access to market news as direct as do the national packers with wider areas of distribution. Local plants tend to specialize more in the slaughter of specific types of animals and in the processing of meat products than do national packers. Smaller plants tend to process the type of animals that are produced in the local area. Because of limited areas of distribution, the purchase of livestock by local packers is confined to a smaller supply area than larger slaughter plants.

Characteristics of Alabama's Slaughter Plants

The number of packing plants in Alabama with an annual cattle and calf slaughter above 300,000 pounds liveweight increased from 35 to 46 during the 1954-1958 period, Table 5. Only five of these plants were federally inspected and thus were legally permitted to ship meat across state lines. Most had annual slaughter less than 2 million pounds liveweight and employed fewer than

TABLE 5. MEAT PRODUCTS: GENERAL STATISTICS FOR MEAT PACKING AND PREPARED MEATS, UNITED STATES AND ALABAMA, 1954 AND 1958

Industry, area, year	Establishments		All employees		Production workers			Value added by manufacture ($1,000)	Value of shipments ($1,000)
	Total	With 20 or more employees	Total	Payroll ($1,000)	Total	Man hours (1,000)	Wages ($1,000)		
	No.	*No.*	*No.*	*Dol.*	*No.*	*Hr.*	*Dol.*	*Dol.*	*Dol.*
Meat packing:									
United States									
1958	2,801	977	200,783	1,067,896	150,786	308,991	768,096	1,746,603	11,962,273
1954	2,367	933	220,193	942,970	167,815	354,779	687,878	1,397,175	10,265,319
Alabama									
1958	46	17	1,813	7,902	1,364	2,943	5,406	16,787	92,265
1954	35	19	1,744	5,657	1,305	2,821	3,774	10,125	63,478
Prepared meats:									
United States									
1958	1,494	496	48,586	236,915	36,460	74,096	161,807	442,058	2,066,257
1954	1,316	435	44,997	186,939	33,767	70,034	124,327	333,751	1,541,072
Alabama									
1958	14	3	362	1,401	241	477	807	2,965	17,598
1954	7	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

Source: *United States Census of Manufacturers: 1954 and 1958,* United States Bureau of the Census, Alabama Area Report MC58(3)-1, 1962.

20 workers per plant. The overall expansion in meat packing employment during this period was 69 workers *(1)*.

In 1958, calculations of value added[3] per manufacturing employee for meat packing in the State was 6 per cent above the comparable growth rate for the nation. Alabama's meat packing concerns increased the value of livestock products in the State by more than $16 million in 1958. This was an increase of about 50 per cent from 1954 to 1958.

Increase in employment in meat products industries in Alabama was more than twice as great as that of any other food sector in the State, and over 10 times as great as the national expansion in meat products employment during the 1947-1958 period. National employment in meat packing relative to employment in other food industries declined during the same period. When prepared meats and poultry products employment are combined, a slight increase relative to other food industries in the United States occurred. But, Alabama's increase was five-fold during this period *(1)*.

COMPOSITION OF SLAUGHTER. The commercial slaughter of cattle in Alabama was relatively stable during the 1960-62 period, Table 6. However, there were fewer calves slaughtered during the same period.

The major portion of the cattle and calves commercially slaughtered in Alabama during 1962 was sold as block beef, Figure 2. However, noticeable differences existed in the type of processing done by the different size slaughter plants. Federally inspected plants, for example, processed 51 per cent of their slaughter as block beef while major emphasis in nonfederally inspected plants was for boned beef.

TABLE 6. NUMBER OF COMMERCIAL CATTLE AND CALVES SLAUGHTERED, BY CLASS, ALABAMA, 1960-62

Class	1960	1961	1962
	Head	*Head*	*Head*
Cattle	215,100	241,400	222,400
Calves	44,900	36,300	31,700
Total	260,000	277,700	254,100

Source: *Livestock and Meat Statistics, 1962,* United States Department of Agriculture, Agricultural Marketing Service, Statistical Bulletin No. 333. July 1963.

[3] Value added is a measurement of the approximate value created in the process of manufacture.

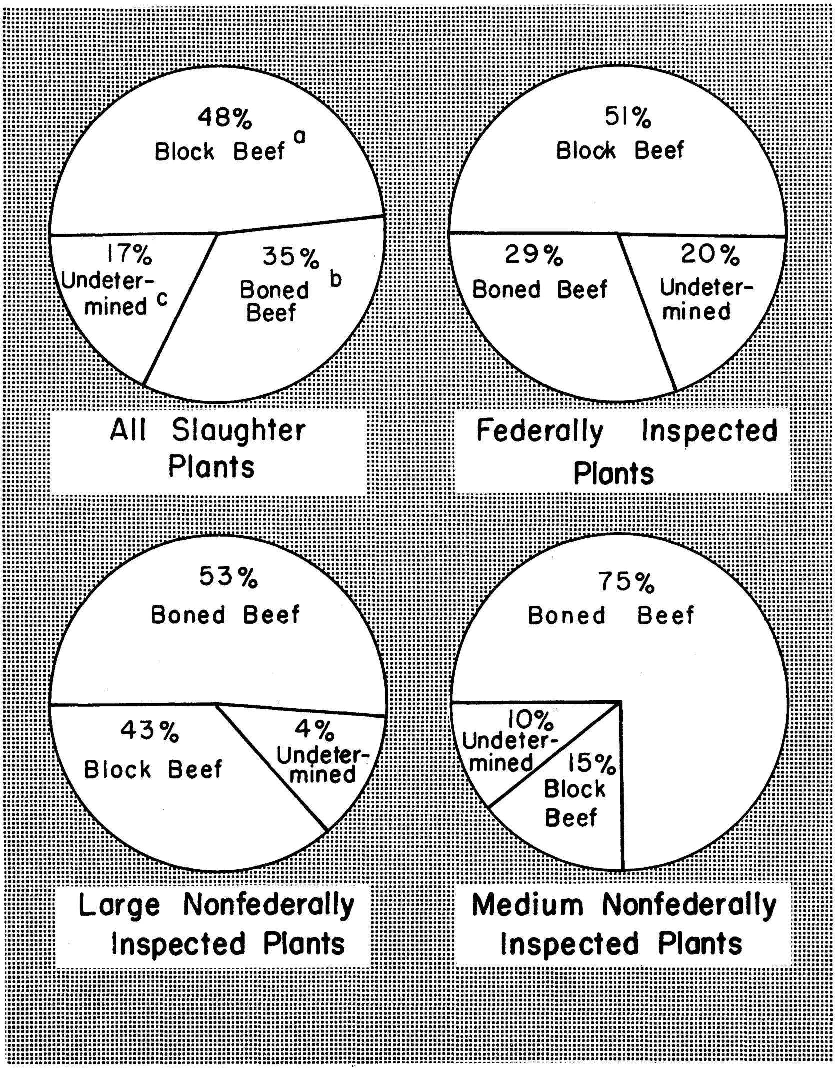

FIG. 2. Composition of beef processed in Alabama slaughter plants, by plant size, 1962. (a) Block beef is usually from the higher grade animals and sold at wholesale either as whole, half, or quarter carcasses. (b) Boned beef is usually from lower grade animals and sold in smaller retail cuts and in processed meats. (c) Undetermined beef is beef for which it was not possible to determine its carcass breakdown from observed data.

The kind and degree of carcass breakdown is generally determined by demand from the market being served and the kind and grade of cattle and calves slaughtered. Usually the higher grades of cattle and calves are sold either as whole, half, or quarter carcasses. Lower grade animals are usually sold as boned beef for prepared meat products.

Implications for Slaughter Plants in Alabama

There should be a continued growth in the amount of meat processed by packing plants in Alabama. The transportation cost advantage held by local plants in supplying local demand should continue to help packers maintain a sufficient price margin. Also, lower labor costs and newer, more efficient plants in the Southeast are major contributors to a lower average cost in this region than in other areas. Slaughter cost for fresh pork in the Southeast has been estimated at $1.75 per hundred pounds compared with $2.50 per hundred pounds of fresh pork for non-Southeast areas *(6)*. These costs included kill and cut labor, packaging, order filling, and shipping room expenses. Beef slaughter in the various areas should have comparable cost relationships with pork slaughter.

A continued movement of Alabama people from rural to urban residence and an increase in personal incomes should cause per capita consumption of beef to increase. The prospect for increased commercial slaughter, thus, appears promising. However, growth of commercial slaughter of cattle within the State will likely be limited unless the emphasis on production of fed cattle is greatly redirected. There should be a growing demand for food and food products as a result of a larger population, growing urban centers, and an expanding national economy.

MOVEMENT PATTERNS OF CATTLE AND CALVES PURCHASED BY ALABAMA MEAT PACKERS

The more important factors that influence the purchasing pattern of cattle by meat packers are: (1) market class and weight of animals locally available; (2) quality of animals; (3) availability of slaughter relative to nonslaughter animals; and (4) procurement costs. Sufficient numbers of cattle may be produced but their weight and quality may make them unsuitable for slaughter. Packers must have a steady supply and must ship cattle into Alabama to supplement this year-round need. Costs are thus increased by the amount of this transportation charge.

Composition of Slaughter[4]

Steers and heifers accounted for 49.0 per cent of the total cattle and calves purchased by Alabama meat packers in 1962, Table 7. Cows, slaughter and veal calves, and bulls and stags made up 26.9, 20.9 and 3.2 per cent, respectively. Federally inspected plants slaughtered about four-fifths of all cattle and calves processed in 1962.

COMPOSITION OF SLAUGHTER BY PLANT SIZE. Grade and class of cattle slaughtered varied with plant size. Steers and heifers accounted for 50.6 per cent of the slaughter of federally inspected plants while medium nonfederally inspected plants slaughtered 32.7 per cent steers and heifers, Table 7. Cows were the principal class slaughtered by medium nonfederally inspected packing plants and calves and veal were least important. The federally inspected plants had a much larger percentage of their slaughter composed of calves and veal than was true of the large and medium nonfederally inspected plants. The percentage of cows and bulls slaughtered decreased as plant size increased, indicating more emphasis on processing boned beef and less emphasis on block beef in the smaller plants.

TABLE 7. PERCENTAGE DISTRIBUTION OF CATTLE AND CALVES PURCHASED, BY PLANT SIZE AND MARKET CLASS, ALABAMA, 1962

Class	Federally inspected plants	Large nonfederally inspected plants	Medium nonfederally inspected plants	All plants
	Pct.	*Pct.*	*Pct.*	*Pct.*
Steers and heifers	50.6	44.0	32.7	49.0
Calves and veal	24.2	7.0	8.3	20.9
Cows	23.8	39.3	44.5	26.9
Bulls and stags	1.4	9.7	14.5	3.2
Total	100.0	100.0	100.0	100.0

[4] Based on previously reported estimates, slaughter plants included in this study accounted for approximately 83 per cent of the total slaughter in 1962. Because of the rate at which medium-sized local plants were sampled, the bulk of the slaughter not accounted for was probably handled by these plants. In any case, it is felt that the estimates reported are reasonably representative of cattle slaughter in Alabama.

Almost 85 per cent of the steers and heifers purchased for slaughter during 1962 graded Good and above, Table 8. Of the slaughter and veal calves purchased, Choice and above, Good and Standard, and grades Utility and below made up 11.9, 64.0, and 24.1 per cent, respectively. The principal variation from this distribution was in the medium nonfederally inspected plants where mostly lower grades of both cattle and calves were slaughtered. These plants accounted for only 7 per cent of total slaughter.

Steers and heifers purchased from sources outside Alabama and bordering states generally averaged in excess of 200 pounds heavier than locally purchased steers and heifers, Table 9. The average weight of steers and heifers from local sources was 770 pounds, while the average weight of steers and heifers obtained

TABLE 8. PERCENTAGE DISTRIBUTION OF PURCHASES OF SLAUGHTER STEERS, HEIFERS, AND CALVES, BY PLANT SIZE, BY GRADE, ALABAMA, 1962

Class and grade	Federally inspected plants	Large nonfederally inspected plants	Medium nonfederally inspected plants	All plants
	Pct.	*Pct.*	*Pct.*	*Pct.*
Steers and heifers				
Good and above	86.9	78.3	34.5	84.5
Standard and below	13.1	21.7	65.5	15.5
Total	100.0	100.0	100.0	100.0
Calves and veal				
Choice and above	11.9	14.1	2.2	11.9
Good and Standard	64.1	69.2	24.4	64.0
Utility and below	24.0	16.7	73.4	24.1
Total	100.0	100.0	100.0	100.0

TABLE 9. AVERAGE WEIGHT OF SLAUGHTER STEERS AND HEIFERS PURCHASED BY ALABAMA SLAUGHTER PLANTS, BY ORIGIN AND PLANT SIZE, ALABAMA, 1962

Plant size	Area of origin					
	Alabama	Border states	Other southern states	Mid-western states	Western states	All sources
	Lb.	*Lb.*	*Lb.*	*Lb.*	*Lb.*	*Lb.*
Federally inspected plants	776	742	988	989	962	835
Large nonfederally inspected plants	770	1,000	[1]	918	[1]	844
Medium nonfederally inspected plants	680	726	[1]	[1]	[1]	681
All plants	770	798	988	976	962	833

[1] None purchased.

from the Midwest, for example, was 976 pounds. The average weight of steers and heifers bought by smaller plants was considerably lighter when compared with larger plants but there were only slight weight differences in steers and heifers bought by federally inspected and large nonfederally inspected plants.

Source of Cattle

About 75 per cent of all cattle were bought within the State. More than 50 per cent of the steers and heifers were bought in Alabama, Table 10. Slaughter calves as well as cows were largely purchased within the State. Steers and heifers constituted the largest portion of purchases obtained from out-of-state sources. About 20 per cent of the steers and heifers were bought in Midwestern States and 10.4 per cent were bought in Western States. About one-seventh of the steers and heifers were from states bordering Alabama and less than 1 per cent came from other Southern States.

Alabama packers obtained more than half of the steers and heifers that graded Good and above from Alabama sources, Table 11. Midwestern and Western States accounted for about 30 per

TABLE 10. SOURCES OF CATTLE AND CALVES PURCHASED BY OPERATORS OF SLAUGHTER PLANTS, BY AREA OF ORIGIN AND MARKET CLASS, ALABAMA, 1962

Market class	Area of origin					
	Alabama	Border states	Other southern states	Mid-western states	Western states	Total
	Pct.	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*
Steers and heifers	55.2	13.7	0.2	20.5	10.4	100.0
Calves and veal	92.2	7.7	.1	0	0	100.0
Cows	92.9	7.1	0	0	0	100.0
Bulls and stags	78.2	21.8	0	0	0	100.0
All cattle	74.0	10.9	.1	10.0	5.0	100.0

TABLE 11. PERCENTAGE DISTRIBUTION OF PURCHASES OF SLAUGHTER STEERS AND HEIFERS, INCLUDING CALVES, BY GRADE AND ORIGIN, ALABAMA, 1962

Grade	Area of origin					
	Alabama	Border states	Other southern states	Mid-western states	Western states	Total
	Pct.	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*
Good and above	54.6	15.5	.3	20.2	9.4	100.0
Standard and below	88.4	11.6	0	0	0	100.0

cent. An additional 16 per cent came from states bordering Alabama or from other Southern States.

SOURCE OF CATTLE AND CALVES BY PLANT SIZE. Size of the packing plant was associated with procurement operations of packers in Alabama. Less than 4 per cent of the cattle and calves purchased by medium size packers were obtained from sources outside Alabama. Operators of federally inspected plants purchased 26.6 per cent and operators of large nonfederally inspected plants purchased 27.5 per cent of their cattle and calves from out-of-state sources. Apparently, locally produced cattle were more suitable for medium nonfederally inspected plants' boned meat processing than for the other slaughter plants' processing operation.

Agencies Selling Cattle and Calves to Alabama Slaughter Plants

The auction market was the major source of slaughter cattle in 1962, Table 12. More than 6 out of 10 cattle and calves were bought at auction markets. About one-fifth of the cattle and calves came from farmers and commercial feedlots. Livestock dealers supplied 10.3 per cent of the cattle and calf supply. Other sources were packers' feedlots and terminal markets.

The percentage of cattle obtained direct from producers without an intervening transaction between the producer and the slaughter plant amounted to 22.0 per cent of total animals purchased during 1962. Steers and heifers were the principal kinds of cattle bought direct. The percentages of slaughter cattle and calves purchased direct are shown below:

Market class	*Percentage purchased direct*
Steers and heifers	28.6
Calves and veal	3.2
Cows	8.4
Bulls and stags	11.1
All cattle	22.0

TABLE 12. TYPE OF AGENCIES FROM WHICH SLAUGHTER PLANT OPERATORS OBTAINED CATTLE AND CALVES, ALABAMA, 1962

Type of agency	Percentage of total
	Pct.
Auction market	66.5
Farmer and commercial feedlot	20.8
Dealer	10.3
Packer's feedlot	1.3
Terminal market	1.1
Total	100.0

Federally inspected plants had a higher proportion of direct purchases for heavier steers and heifers in the higher grades than did other plants. For example, 45 per cent of the Good and Choice animals weighing more than 500 pounds were bought direct by these plants.

During 1962, a major portion of the slaughter cattle and calves was purchased on a liveweight basis. Only 5 per cent of the animals were obtained where price was based on a carcass grade and yield arrangement.

ESTIMATES OF PRICES PAID FOR SLAUGHTER CATTLE AND CALVES

Cattle prices vary with the cyclical movements of cattle numbers. In addition, seasonal variations in prices are caused by production and marketing practices. The price of slaughter cattle is also affected by weight, grade, sex, and origin of the animal.

The cost of slaughter animals is one of the major expenses of slaughter plants. Adequate price information is needed for establishing buying and pricing policies since packers have relatively less control over cattle and fresh beef prices than they have over other costs.

Price Differences by Area of Origin[5]

Lower prices were usually paid for Alabama produced steers and heifers than for steers and heifers of similar grades purchased from areas outside the State, Table 13. During 1962, the highest price was paid for slaughter steers and heifers obtained in the Midwestern States. The price spread between cattle grading Good and above and cattle grading Standard and below was consistently from $4.00 to $5.00 per hundred pounds in all areas of the State.

Steers and heifers grading Good and above from states bordering Alabama ranked second in highest prices paid for similar grades of slaughter cattle. The average price paid for all slaughter steers and heifers grading Good and above was $24.90 per hundred pounds.

During 1962, prices ranged from a low of $23.23 in February to a high of $26.77 in December. Price relationships showed that it

[5] Grade was determined from packers' estimates and from grade-price relationships as reported by the Federal-State Livestock Market News Service for the particular sales dates observed.

TABLE 13. PRICES[1] PAID FOR SLAUGHTER STEERS AND HEIFERS AT ALABAMA SLAUGHTER PLANTS DURING SELECTED WEEKS, BY GRADE AND AREA OF ORIGIN, 1962

Week and grade	Alabama	Border states	Other southern states	Mid-western states	Western states	All areas
Good and above						
			Dollars per hundredweight			
Feb. 4-10	$23.93	$22.40	$25.00	$24.00	$24.57	$23.23
April 15-21	23.68	25.02	----[2]	25.18	23.54	24.05
June 10-16	24.29	25.48	----	24.16	22.81	24.22
Aug. 19-25	24.71	26.14	----	26.03	25.48	25.63
Oct. 7-13	24.09	26.64	----	26.93	22.04	25.51
Nov. 25-Dec. 1	26.61	26.20	----	28.14	26.39	26.77
All weeks	24.37	25.43	25.00	25.57	24.36	24.90
Standard and below						
			Dollars per hundredweight			
Feb. 4-10	$19.55	$21.49	----[2]	----[2]	----[2]	$20.28
April 15-21	20.06	17.26	----	----	----	19.85
June 10-16	20.29	19.24	----	----	----	20.21
Aug. 19-25	20.41	19.72	----	----	----	20.38
Oct. 7-13	17.97	15.50	----	----	----	17.93
Nov. 25-Dec. 1	20.98	22.11	----	----	----	21.14
All weeks	19.76	20.80	----	----	----	19.89

[1] Prices used were weighted by the weight and price of animals purchased in each category.
[2] No purchases were made during these periods from these areas.

would have been beneficial for cattle producers to market better grade steers and heifers during the last half of the year.

Slaughter steers and heifers grading Standard and below were purchased within Alabama and bordering states only. Highest prices were paid for those cattle purchased from outside Alabama.

Prices for steers and heifers that graded Standard and below varied from $17.93 in October to $21.14 in December. The average for all areas was $19.89 per hundred pounds. Prices for steers and heifers grading Good and above were apparently less unfavorably affected by large marketings in the fall relative to lower grade steers and heifers. Prices of these latter cattle weakened considerably as market receipts sharply increased.

Price Differences by Weight Groups and Sex

STEERS. Slaughter steers that graded Good and above and weighing over 900 pounds brought higher prices than lighter weight steers of comparable grades during 1962, Table 14. The average prices ranged from $23.33 for steers that weighed between 500-699 pounds to $25.92 for steers that weighed 1,100 pounds and over.

TABLE 14. PRICES[1] PAID FOR SLAUGHTER STEERS AT ALABAMA SLAUGHTER PLANTS DURING SELECTED WEEKS, BY WEIGHT GROUPS AND GRADE, 1962

Week	Prices per hundredweight, by weight groups				
	500-699 pounds	700-899 pounds	900-1,099 pounds	1,100 pounds and above	All weight groups
Good and above					
Feb. 4-10	$22.67	$22.89	$24.23	$25.50	$23.93
April 15-21	23.61	22.32	24.54	25.52	24.25
June 10-16	23.17	24.91	24.51	24.49	24.44
Aug. 19-25	22.55	23.97	25.49	26.75	24.41
Oct. 7-13	23.70	26.06	26.81	25.03	26.12
Nov. 25-Dec. 1	25.30	26.76	26.78	28.22	26.48
All weeks	23.33	24.49	25.39	25.92	24.94
Standard and below					
Feb. 4-10	$19.87	$20.00	$18.73	$20.17	$19.82
April 15-21	20.55	19.78	18.34	20.26	19.91
June 10-16	17.87	20.01	21.66	19.16	19.34
Aug. 19-25	18.36	20.43	21.00	----	19.73
Oct. 7-13	19.11	15.18	18.85	21.70	17.29
Nov. 25-Dec. 1	20.30	17.08	20.30	20.37	19.26
All weeks	19.34	18.75	19.81	20.33	19.23

[1] Prices used were weighted by the weight and price of animals purchased in each category.

During 1962, the highest price for all weight groups was $26.48 for Good and above steers bought in November. The lowest price for steers of the same grade was in February.

Less price variation by weight groups existed among steers that graded Standard and below than for steers of higher grades. A price range of $2.59 occurred for steers grading Good and above while the price range for steers grading Standard and below was $1.58.

The highest average price paid for steers grading Standard and below was $20.33 for steers weighing 1,100 pounds and above. The lowest average price was for the 700-899 pounds weight group.

Different seasonal prices existed for steers in the lower grades than for those grading Good and above. During 1962, the low price for the lower grades of steers was $17.29 in October and the seasonal high was $19.91 in April 1962.

HEIFERS. Less variation was found in prices between weight groups for heifers than steers during 1962, Table 15. Seasonal prices were different for each sex and for different grades within a sex. Steers grading Good and above usually sold higher than heifers of the same grades by about a dollar per hundredweight.

TABLE 15. PRICES[1] PAID FOR SLAUGHTER HEIFERS AT ALABAMA SLAUGHTER PLANTS DURING SELECTED WEEKS, BY WEIGHT GROUPS AND GRADE, 1962

Week	Prices per hundredweight, by weight groups				
	500-699 pounds	700-899 pounds	900-1,099 pounds	1,100 pounds and above[2]	All weight groups
Good and above					
Feb. 4-10	$22.81	$22.65	$23.19	----	$22.90
April 15-21	23.87	23.49	24.03	----	23.76
June 10-16	24.83	23.64	20.30	----	23.08
Aug. 19-25	23.93	24.57	25.56	----	24.22
Oct. 7-13	23.86	24.54	26.41	----	24.51
Nov. 25-Dec. 1	24.90	24.92	25.76	----	25.04
All weeks	24.03	23.97	24.21	----	23.92
Standard and below					
Feb. 4-10	$20.10	$18.89	$18.68	----	$19.35
April 15-21	21.07	18.39	18.84	----	20.06
June 10-16	18.65	17.09		----	18.04
Aug. 19-25	17.56	15.64	19.50	----	17.21
Oct. 7-13	17.04	17.24	17.90	----	17.22
Nov. 25-Dec. 1	20.45	18.00	17.60	----	19.87
All weeks	19.15	17.54	18.50		18.63

[1] Prices used were weighted by the weight and price of animals purchased in each category.
[2] There were no heifers purchased in this weight group.

The difference however, between steers and heifers of lower grades was considerably less.

CALVES. Prices paid by Alabama slaughter plants for slaughter calves varied $5.03 between periods of highest and lowest prices, Table 16. The highest price was paid during April reflecting the demand by farmers for lightweight cattle to graze summer grass. The low price of $19.52 per hundredweight was in August.

COWS, BULLS, AND STAGS. Higher prices were paid for bulls than for slaughter cows during 1962, Table 17. Moreover, less seasonal

TABLE 16. PRICES[1] PAID FOR SLAUGHTER CALVES AT ALABAMA SLAUGHTER PLANTS DURING SELECTED WEEKS, 1962

Week	Dollars per hundredweight
February 4-10	$21.91
April 15-21	24.55
June 10-16	24.37
August 19-25	19.52
October 7-13	22.25
November 25-December 1	23.20
All weeks	22.11

[1] Prices used were weighted by the weight and price of animals purchased in each category.

TABLE 17. PRICES[1] PAID PER HUNDREDWEIGHT FOR SLAUGHTER COWS, BULLS, AND STAGS AT ALABAMA SLAUGHTER PLANTS DURING SELECTED WEEKS, 1962

Week	Cows	Bulls and stags
	Dol.	*Dol.*
February 4-10	$15.82	$17.72
April 15-21	18.29	16.75
June 10-16	15.90	17.78
August 19-25	16.10	17.01
October 7-13	15.27	16.70
November 25-December 1	14.89	17.17
All weeks	15.84	17.13

[1] Prices used were weighted by the weight and price of animals purchased in each category.

variation was found in prices paid for bulls than in prices paid for cows. Prices varied only $1.08 for bulls and $3.40 for slaughter cows. However, the highest price paid for cows was 51 cents above the highest price paid for slaughter bulls. The average prices paid for slaughter cows and for slaughter bulls were $15.84 and $17.13 per hundred pounds, respectively.

Price Differences Within Alabama

During 1962, meat packers located in the southern slaughter area of the State generally paid higher average prices for slaughter cattle than packers located in other areas of Alabama. Lowest average prices were paid by packers located in the northern area of the State.

SUMMARY AND CONCLUSIONS

There has been an increase in per capita consumption of beef and veal in the United States since World War II. Per capita consumption also increased in Alabama. Total consumption exceeded total slaughter of beef and veal in Alabama by almost 120 million pounds in 1958. A per capita consumption of beef in Alabama comparable to the United States average would result in a 50 per cent increase. Increased per capita consumption of beef in Alabama could greatly affect the meat packing industry in Alabama and the entire beef cattle industry.

During 1962, total marketings of cattle exceeded total slaughter in all areas in Alabama. However, almost 70 per cent of the cattle and calves sold through auction markets in Alabama during 1962 were nonslaughter cattle. Less than 10 per cent of the cattle marketed through auctions were slaughter steers and heifers weighing more than 500 pounds. While meat packers depended on sources other than auctions for fed cattle, it was evident that there was a severe deficit of mature animals suitable for slaughter sold in Alabama. Packers necessarily obtained additional slaughter animals from other areas.

About one-half the cattle slaughter of Alabama meat packers in 1962 was steers and heifers. Cows and bulls composed about 30 per cent and slaughter calves accounted for about 20 per cent of slaughter.

More than 50 per cent of the steers and heifers were bought within the State. About 30 per cent of the steers and heifers that weighed more than 500 pounds and graded Good and above were purchased from Western and Midwestern States. Most other slaughter animals were obtained in Alabama. Twenty-five per cent of all cattle were purchased from out-of-state.

Grade and class of cattle slaughtered varied with plant size. Federally inspected plants slaughtered a higher percentage of steers and heifers than the other slaughter plants. The percentage of bulls and cows slaughtered decreased as plant size increased. Hence, there was more emphasis placed on processing boned beef and less on block beef in the smaller plants.

Plant size was also associated with procurement practices of packers. Operators of both federally inspected and large nonfederally inspected plants obtained about one-fourth of the cattle slaughtered from outside Alabama. Operators of medium nonfederally inspected plants purchased less than 4 per cent of their supplies from out-of-state.

Operators of Alabama slaughter plants obtained 22 per cent of the animals purchased direct without an intervening transaction between the producer and the packer. Two-thirds of the cattle were obtained through auction markets. Direct purchases by operators of federally inspected, large nonfederally inspected, and medium nonfederally inspected plants were 24.5, 11.4, and 15.0 per cent, respectively.

Higher average prices were paid for cattle purchased out-of-state than for cattle obtained within the State. Moreover, transport costs add to this price difference. The highest average price paid was for cattle from Midwestern States.

Variations in average prices paid for steers and heifers were associated with weight and grade. Slaughter steers weighing

1,100 pounds and more brought the highest average price of $25.92 for steers grading Good and above, and steers weighing 500-699 pounds brought the lowest average price of $23.33. Steers grading Standard and below and weighing 700-899 pounds had the lowest average price of the lower quality slaughter steers. Differences in prices paid for heifers of comparable grades in the varying weight groups were slight. Meat packers in the southern part of the State usually paid highest average prices for slaughter cattle in 1962.

Beef consumption is increasing in Alabama and probably will continue to increase. Mature, good-quality slaughter cattle will undoubtedly continue to be shipped into Alabama until adequate supplies of steers and heifers are produced within the State. An increase in commercial slaughter of cattle within the State is possible. But changes in the present system of producing cattle would need to be made.

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