1955 SURVEY

Frozen Food Locker Plants

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JOSEPH G. KNAPP, ADMINISTRATOR

The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, financing, merchandising, product quality, costs, efficiency, and membership.

The Service publishes the results of the studies; confers and advises with officials of farmer cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

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Summary

About 10,550 frozen food locker plants were operating in the United States in January 1955. These plants were located in every State, with heaviest concentration in the North Central and Pacific Regions. They were serving an estimated 5 million families and in 1954 handled about 1.6 billion pounds of food.

The industry is changing the nature and scope of its operations. Since 1950, and to some degree since the close of World War II, it has been adjusting its operations to take advantage of opportunities arising from the increasing use of home freezers. Also it has been expanding its activities to include processing locally produced food for sale, both at wholesale and at retail, in the local trade areas.

Industry Highlights, 1955	
Number of plants	10,553
Gross refrigerated space	150 million cu. ft.
Patrons:	
Locker	3.2 million
Home freezer	1.8 million
Locker facilities:	
Capacity	5.2 million lockers
Rented	3.6 million lockers
Processing services:	
Chill, cut, wrap and freeze	9,400 plants
Cure and smoke	5,600 plants
Slaughter livestock	3,400 plants
Dress poultry	2,100 plants
Volume:	
Total food processed	1.6 billion lbs.
Pork cured	129.0 million lbs.
Livestock slaughtered	2.8 million head
Poultry dressed	8.8 million head
Food and supplies sold	$275 million

The more important changes in this industry since 1950 are:

1. An increase of 600,000 patrons served, bringing the number of locker and home freezer patrons to 5 million. From 1950 to 1955 about 700,000 fewer patrons rented lockers but the number of home freezer patrons increased by 1.3 million, accounting for the net increase of 600,000 since 1950.

2. An increase of 200 million pounds of food custom processed, bringing the total custom processing volume for the industry to 1.4 billion. An additional 250 million pounds of meat processed for sale brought the industry total for all processing to 1.6 billion pounds.

3. A 10 percent increase in the number of plants operating slaughter facilities and a one-third increase in the volume of livestock slaughtered. Total slaughter volume in 1954 was 2.8 million head.

4. A growth in the volume of sales and number of plants merchandising. Total sales in 1954 were $275 million.

5. An increase in the number and variety of activities performed by locker plants, particularly those activities relating to processing food for sale.

6. A decline of 900 plants since 1950. Number of installed lockers in the United States declined by 700,000 with only 78 percent of the remaining lockers rented in January 1955.

Indications are that future expansion in this industry will be in processing and merchandising. Further growth in volume will result largely from increased selling in bulk quantities at retail to locker and home freezer patrons and by wholesaling to restaurants, institutions, and similar organizations. Opportunities appear best for locker plants that can slaughter and process livestock for sale. Renting lockers will continue as an important phase of the business but revenue from this service will probably continue to decline in relative importance as processing and merchandising activities increase.

The frozen food locker industry enjoys some basic advantages in performing specialized services desired by many people. Many plants in this

industry can process locally grown foods and merchandise them in wholesale quantities in localized areas. Economies in transportation, processing and distribution can result in reduced marketing costs and thus benefit both producers and consumers. The facilities of the industry, the wide distribution of plants and the skills of those that work in this industry make it well suited to provide the products and services needed by home freezer owners for efficient use of these freezers.

Other points favorable to the growth of this industry include a rapidly increasing population, rising consumer income, and the trend among consumers with home freezers to purchase and store frozen perishable foods in wholesale quantities.

The ability of the frozen food locker industry to capitalize on its opportunities will depend upon the ability of management to attract the required capital, reduce and control production costs, and develop the processing and marketing potential of the industry.

1955 Survey- Frozen Food Locker Plants

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Growth of the frozen food locker industry in the past 2 decades is one of the more significant developments in the improvement of perishable food preservation in rural areas and better eating for rural people. Also, locker plants are valuable in processing, storing and merchandising local food. An estimated one out of every eight families in the United States gets part of its basic food needs through frozen food locker plants. The 10,553 frozen food locker plants operating in early 1955 were serving an estimated 5 million families and processed, in 1954, about 1.6 billion pounds of food.

The information on which this report is based was assembled from locker operators in January 1955. The report shows the number and types of plants and patrons, number of lockers, and rates charged on January 1, 1955, while business volume figures for the plants cover the year 1954. The survey was the eighth in a series of surveys of this industry made by the United States Department of Agriculture since 1940. Mail questionnaires were sent to all frozen food locker plants and usable replies received from 6,390 or 61 percent of the operators of these locker plants.

Development of the Industry

Plants equipped to store food for individual families have been in operation more than 40 years. The first locker plant was opened in Chico, Calif., in 1908. Other early locker plants were built in Crete, Nebr., in 1910 and Centralia, Wash., in 1917. Most of the early locker plants offered locker storage service only. Patrons of these plants processed and packaged the food at home and placed the product directly into crudely made lockers for freezing and storage. Farmers have always been the major group patronizing locker plants and thus many of the early plants were established as cooperative enterprises.

In the 1930's the modern locker plant with its processing and freezing facilities was developed. It was also in this period that the industry began rapid growth in the Midwest. During World War II construction of new locker plants slowed down but in the late 1940's the industry grew rapidly. Nearly half the plants operating in 1955 were built between 1945 and 1951.

In 1951 about 11,600 plants were operating. Since then some 1,000 plants have discontinued operations. At the time of this survey some 10,553 plants were operating (figure 1). The decline in number of plants was probably a normal readjustment for an industry that grew so rapidly during a period when the demand for its type of service was abnormal.

A study of reports received from several hundred firms that have discontinued locker operations indicate some

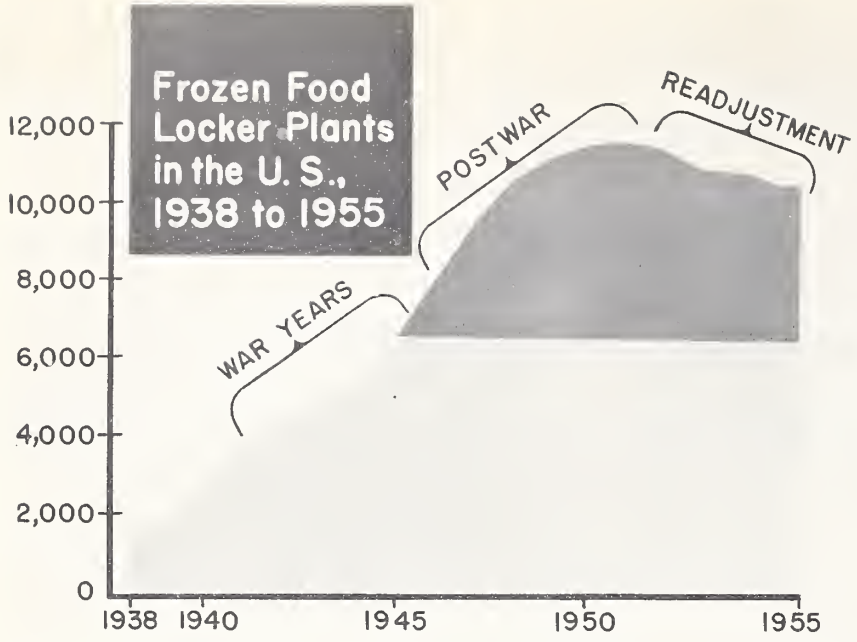


Figure 1

of the reasons for the discontinuance. Nearly half the plants reporting information on discontinuance were small, with capacity for less than 300 lockers. Also, plants with capacity for over 1,000 lockers or more had a high discontinuance rate. These frequently were limited service plants affiliated with some other business activity such as ice and cold storage operations.

This modern locker plant is located in Winston Salem, N.C. Although families have been storing food in locker plants for more than 40 years, most of the growth in the industry has occurred since 1940.

In general, limited service plants had a higher discontinuance rate than plants with complete processing services. Also, an above average discontinuance rate was found among plants in towns of 25,000 or more population. On the other hand, plants with capacity for 600 to 800 lockers showed the lowest discontinuance rate as well as plants located in towns with population of 1,000 or less.

It appears, therefore, that the more successful locker plants are those above average size, located in smaller towns, and offering complete processing service.

Location of Plants

Frozen food locker plants are located in every State, with heaviest concentration in the central part of the country and in the far West (figure 2 and table 1). Of the 10,550 plants operating in January 1955, 5,640 were

TABLE 1. - *Estimated number of frozen locker plants, number reporting, average locker capacity, lockers installed, lockers rented, and percentage rented, by States and regions, January 1955*

State and region	Estimated number of plants	Number of plants reporting	Lockers			Percent of lockers rented of	
			Average plant capacity	Average installed	Average rented	Locker capacity	Lockers installed
Maine	19	14	635	439	371	58	85
New Hampshire	20	17	523	390	295	56	76
Vermont	45	27	445	376	295	66	78
Massachusetts	27	21	705	422	302	43	72
Rhode Island	5	3	255	178	138	54	77
Connecticut	55	31	430	276	177	41	64
New York	246	149	564	451	331	59	73
New Jersey	55	40	725	523	334	46	64
Pennsylvania	276	184	710	572	470	66	82
North Atlantic	748	486	616	479	367	59	77
Ohio	391	237	604	532	402	67	76
Indiana	324	198	550	503	392	71	78
Michigan	317	239	500	420	320	64	76
Wisconsin	630	390	388	345	282	73	82
Illinois	518	320	544	484	365	67	75
Minnesota	647	385	370	338	281	76	83
Iowa	824	410	422	389	320	76	82
Missouri	438	302	481	440	370	77	84
North Dakota	225	144	356	316	256	72	81
South Dakota	294	152	356	330	280	79	85
Nebraska	509	286	382	346	275	72	79
Kansas	523	246	498	452	354	71	78
North Central	5,640	3,309	450	405	324	72	80
Maryland	42	24	678	610	522	77	86
Delaware	9	6	550	508	437	79	86
Virginia	69	53	684	524	464	68	88
West Virginia	19	16	595	523	466	78	89
North Carolina	98	75	689	589	504	73	85
South Carolina	51	50	577	467	338	59	72
Georgia	103	63	490	412	347	71	84
Florida	69	25	430	295	230	54	78
South Atlantic	460	312	585	480	402	69	84
Kentucky	90	67	522	473	395	76	83
Tennessee	106	62	434	386	327	75	85
Alabama	66	35	513	435	356	69	82
Mississippi	66	37	428	370	314	73	85
Arkansas	93	57	501	446	365	73	82
Louisiana	39	26	562	406	311	55	77
Oklahoma	228	141	568	505	394	69	78
Texas	473	232	513	461	359	70	78
South Central	1,161	657	513	454	362	71	80
Montana	207	134	356	330	275	77	83
Idaho	165	89	459	415	330	72	80
Wyoming	89	55	523	439	366	70	83
Colorado	208	134	543	505	400	74	79
Utah	130	88	727	564	450	62	80
Nevada	17	12	322	273	233	72	85
New Mexico	50	25	387	322	236	61	73
Arizona	47	21	416	346	231	56	67
Mountain	913	558	490	428	342	70	80
Washington	683	489	482	451	348	72	77
Oregon	487	313	506	458	351	69	77
California	461	266	722	564	345	48	61
Pacific	1,631	1,068	557	485	348	62	72
United States	10,553	6,390	495	433	340	69	78

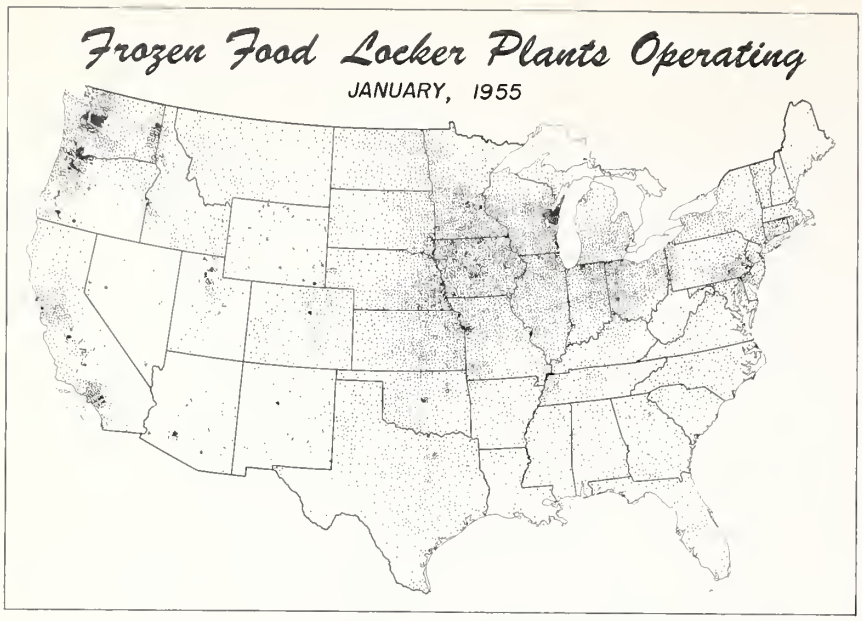


Figure 2

in the North Central Region, 1,161 in the South Central and 1,631 in the Pacific Region. Thus well over half the plants were in the North Central Region alone.

Iowa led the States with 824 plants. Washington, Minnesota and Wisconsin were next in number with over 600 plants each. Locker plants in these 4 States account for about one-fourth of all locker plants in the country.

Locker plants built their business largely by serving farmers. Thus, as would be expected, most of the plants were located in rural areas and small towns. Over half the plants were located in towns of 2,000 or less population and more than two-thirds in towns of 5,000 or less. Only about a tenth of the plants were in cities of 25,000 and over (table 2).

In the North Central Region particularly and also in the Mountain and Pacific Regions, locker plants were found in greatest number in towns of 1,000 or less population. It was also in these regions that locker plants were first built. In the remaining sections of the country the greatest concentration of plants was in towns from 2,000 to 5,000 population.

TABLE 2. - *Frozen food locker plants in towns of specified population, by regions, January 1955*

Region	Population of town						
	1,000 or under	1,001-2,000	2,001-5,000	5,001-10,000	10,001-25,000	Over 25,000	Total
	Percentage of plants						
North Atlantic	17	15	23	17	15	12	100
North Central	51	17	13	7	6	6	100
South Atlantic	16	15	21	20	13	15	100
South Central	19	18	27	14	10	12	100
Mountain	35	14	17	11	8	14	100
Pacific	30	12	16	10	11	21	100
United States	39	16	16	10	8	11	100

Locker Facilities and Use

Storing food at zero degrees is one of the primary functions and an important source of revenue for most frozen food locker plants. In recent years, however, this service has been declining in importance as growth in numbers of home freezers reduces demand for custom storage space and as the processing and merchandising activities of locker plants increase.

Over 3 million families stored frozen food in lockers in 1954.

Refrigerated Space

Information was secured from locker operators on the amount of gross refrigerated space in locker plants. Estimates based on these reports indicate that the frozen food locker industry had about 150 million cubic feet of gross refrigerated space in 1955. Seventy percent of this space was in zero degree storage rooms, 26 percent in 32° to 50° rooms and 4 percent in rooms especially designed for freezing. Fifty-four percent of the space was located in the North Central Region, 18 percent in the Pacific Region, 13 percent in the Mountain Region, and 8 to 9 percent in each of the remaining regions.

Analysis of refrigerated space in locker plants by population of town shows that 24 percent of the space was in towns of less than 1,000 population, 33 percent in towns between 1,000 and 5,000 population, 26 percent in towns between 5,000 and 25,000 population, and 17 percent in towns with population of 25,000 or more.

An estimated 85 to 90 percent of the zero degree storage space was filled with lockers in 1955 with the remaining space devoted to bulk storage operations. The 32° to 50° space was used primarily as chilling and aging rooms, curing rooms, cured pork storage rooms and hide and offal storage rooms.

Locker Capacity of Plants

Total capacity of the 10,553 locker plants operating in January 1955 was 5.2 million lockers compared with 5.6 million in 1950 and 4.0 million in 1946 (figure 3).

The average size frozen food locker plant in the United States in January 1955 in terms of number of lockers that could be installed in zero degree rooms was 495 lockers (table 2). On the average the largest plants were in the North Atlantic Region (616 lockers) and the smallest in the North Central Region (450 lockers). Five States - Massachusetts, New Jersey, Pennsylvania, Utah, and California - reported average plant size larger than 700 lockers. Smallest average size plants were in Rhode Island, Nevada, North Dakota, South Dakota, and Montana.

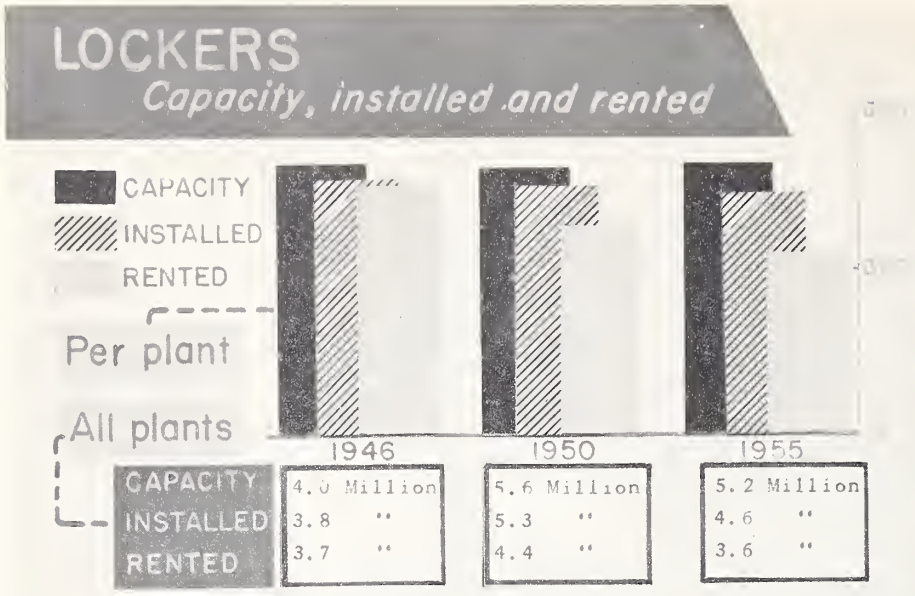


Figure 3

Lockers Installed

Lockers installed averaged 433 lockers per plant or 87 percent of the average capacity of the plants reporting. This compares with an average of 459 lockers installed in 1950 and 470 installed in 1946. The decline in the amount of space devoted to lockers resulted from reduced demand for lockers and the need for more bulk storage space in locker plants. The declining demand for lockers is attributed primarily to increased use of home freezers (figure 4). Rather than rent lockers, many patrons stored their food at home. In general, these people relied more on the locker plant for its processing and merchandising service.

Lockers Rented

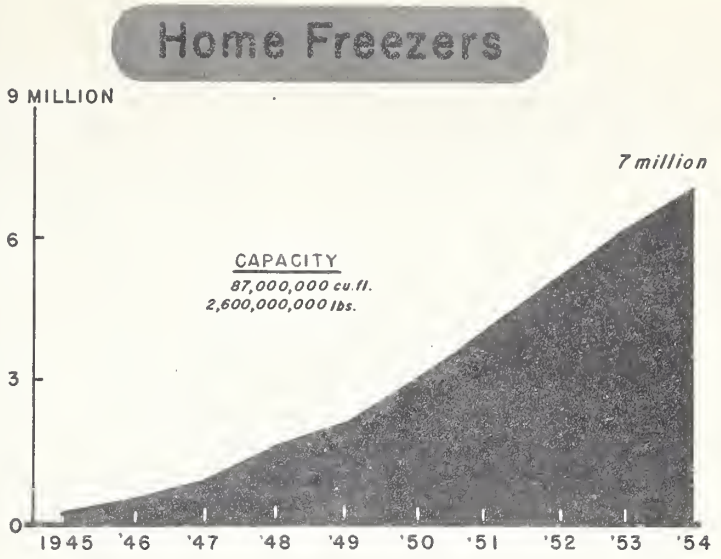
Lockers rented in January 1955 averaged 340 per plant or about 3.6 million for all plants in the country. This was 78 percent of lockers installed and 69 percent of locker capacity. The highest percentage of locker capacity rented to locker patrons was found in the North Central, South Central and Mountain Regions while the North Atlantic and Pacific Regions reported the lowest percentage.

Total number of lockers rented has declined about 800,000 since 1950. Plants suffering the greatest decline were located in the North Atlantic, Mountain and Pacific Regions while plants in the South Atlantic and South Central Regions reported the smallest decline. Also, the average plant located in smaller towns had more lockers rented percentage wise than plants in larger towns and the rate of decline since 1950 has been less in the smaller towns.

Specified Locker Capacity

As indicated previously the average capacity of frozen food locker plants reporting was 495 lockers. Table 3 shows the percentage of plants in various size categories by regions. One-half the plants had less than 400 locker capacity. About one-fourth had between 400 and 600 locker capacity and the

Figure 4



remaining one-fourth had capacity for 600 lockers or more. There were a significant number of plants in both the small and large categories. Sixteen percent reported less than 200 locker capacity and 9 percent reported capacity for 1,000 lockers or more.

The proportion of small plants (under 400 lockers) was greatest in the North Central and Mountain Regions and the larger plants (over 1,000) in the North Atlantic and Pacific Regions.

Table 4 shows the percentage of different size locker plants in relation to population of towns. Three-fourths of the plants in towns of 1,000 population or less had capacity for less than 400 lockers with about half the plants in the 200-399 group. In towns from 1,000 to 5,000 population the plants averaged somewhat larger with more plants reporting capacity for 400 to 799 lockers. In towns of over 5,000 population the larger plant began to assume some significance. Two out of five plants in towns over 10,000 population reported capacities of 800 lockers or more while one out of five plants in towns over 25,000 population had capacity for 1,200 lockers or more.

TABLE 3. - *Frozen food locker plants with specified locker capacity, by regions, January 1955*

Region	Plant locker capacity of:							
	Under 200	200-399	400-599	600-799	800-999	1,000-1,199	1,200 and over	All plants
	Percentage of plants							
North Atlantic	13	26	20	15	9	7	10	100
North Central	15	39	24	11	5	3	3	100
South Atlantic	9	21	32	17	9	5	7	100
South Central	10	34	30	11	7	3	5	100
Mountain	23	32	19	10	5	4	7	100
Pacific	21	26	18	12	7	6	10	100
United States	16	34	23	12	6	4	5	100

TABLE 4. - *Frozen food locker plants with specified locker capacity, by size of town, January 1955*

Population of town	Plant locker capacity of:							
	Under 200	200-399	400-599	600-799	800-999	1,000-1,199	1,200 and over	All plants
	Percentage of plants							
1,000 or under	26	49	19	4	1	1	(1)	100
1,001 - 2,000	11	38	30	14	4	2	1	100
2,001 - 5,000	11	26	29	19	6	5	4	100
5,001 - 10,000	6	19	27	23	10	6	9	100
10,001 - 25,000	7	16	21	15	14	10	17	100
Over 25,000	8	17	18	15	12	9	21	100
United States	16	34	23	12	6	4	5	100

[1]Less than 0.5 percent.

Size of Individual Lockers

The discussion of locker plant capacity assumes that locker capacity defines the size of the plant in terms of number of lockers that can be installed in existing zero degree rooms. The most commonly used locker was one ranging from about 5-1/2 to slightly over 6 cubic feet. Larger size boxes, however, were used frequently and in some of the Western States most of the locker plants had lockers ranging from 7 to 10 or more cubic feet.

Sixty-eight percent of all plants reporting had lockers of about 6 cubic feet, 12 percent had 7 cubic foot lockers, 11 percent had 8 cubic foot lockers, and 9 percent, 9 cubic foot or larger lockers (table 5). In all regions except the Mountain and Pacific three-fourths or more of the plants reported the 6 cubic foot lockers as the size used. In the two western regions and particularly in the States of Washington, Oregon and Idaho, larger lockers were more popular. In these 3 States the most usual size locker was 8 cubic feet or larger and in Oregon and Washington over one-third of the plants had lockers 10 cubic feet or larger.

TABLE 5. - *Frozen food locker plants having specified size of locker as most numerous, by regions, January 1955*

Region	Locker size by cubic feet:			
	5-6	7	8	9 and over
	Percentage of plants			
North Atlantic	80	13	4	3
North Central	74	12	8	6
South Atlantic	84	11	3	2
South Central	76	11	7	6
Mountain	56	15	18	11
Pacific	32	10	27	31
United States	68	12	11	9

In many of the areas favoring larger lockers, the lockers were custom built, usually of wood, as contrasted to the manufactured metal lockers used in other areas. Many of these plants with wooden lockers were built early in the development of the industry and rental charges on a cubic foot basis were generally well below the national average rental charges.

Ownership and Affiliation

Most frozen food locker plants in the United States were individually owned. Replies from locker operators indicate that individuals owned 58 percent of all of these plants; partnerships, 22 percent; general business corporations, 14 percent; and cooperatives, 6 percent (table 6).

TABLE 6. - *Frozen food locker plants by type of ownership and by regions, January 1955*

Region	Type of ownership			
	Individual	Partnership	General business corporation	Cooperative
	Percentage of plants			
North Atlantic	45	16	34	5
North Central	60	21	10	9
South Atlantic	38	13	43	6
South Central	55	26	15	4
Mountain	60	26	12	2
Pacific	64	23	11	2
United States	58	22	14	6

Type of ownership varied considerably among regions. Individually owned plants were most common in the Pacific Region (64 percent), while partnerships were most frequently found in the South Central and Mountain Regions (26 percent). The general business corporation was by far the most important form of ownership in the South Atlantic Region (43 percent). Most of the cooperatives were found in the North Central Region, although they accounted for only 9 percent of the plants there.

The survey showed that 54 percent of the plants were affiliated with some other business enterprise. Thirty-seven percent of the plants were affiliated with meat markets or grocery stores, 6 percent with ice and cold storage plants, 5 percent with dairy plants, and 6 percent with miscellaneous business (table 7).

The 46 percent of the plants not affiliated with other businesses were found most frequently in the South Atlantic and North Atlantic and least often in the Mountain and Pacific Regions.

Trends in affiliation for the past 15 years are shown in table 8. Four surveys of the industry during this period showed a decline in percentage of plants affiliated with ice and cold storage

TABLE 7. - *Frozen food locker plants' affiliation with other business enterprises, by regions, January 1955*

Affiliation	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
Meat market or grocery	22	38	12	33	46	45	37
Ice and cold storage	13	4	15	10	5	5	6
Dairy plant	3	6	(1)	2	5	4	5
Miscellaneous	10	6	5	6	5	8	6
Nonaffiliated	52	46	68	49	39	38	46

[1] Less than 0.5 percent.

plants and dairy plants. Some of this decline was due to organizations going out of the locker plant business. By far the most important reason, however, was the slowing down of locker plant construction by ice, cold storage, dairy and other types of business firms at the time large numbers of locker plants were being built in connection with grocery stores or as nonaffiliated locker plants.

One of the more important developments was the increase in proportion of nonaffiliated plants. In 1941 only 15 percent of the plants were nonaffiliated while in 1955 46 percent of the locker plants were not affiliated with any other business enterprise.

TABLE 8. - *Frozen food locker plants affiliated with other business enterprises in specified years*

Affiliation	Year			
	1941	1946	1950	1955
	Percentage of plants			
Meat market or grocery	38	35	40	37
Ice and cold storage	21	16	9	6
Dairy plant	19	10	6	5
Miscellaneous	7	10	9	6
Not affiliated	15	29	36	46

Plant Patrons

About 5 million patrons were using frozen food locker plants in January 1955, or about 600,000 more than the industry served in 1950. About two out of three users were locker renters and the other third were home freezer owners who did not rent lockers but used the plants' processing and merchandising services. Of the 5 million patrons, 3.2 million were locker patrons and 1.8 million, home freezer users (table 9).

Increase in the use of locker plants since 1940 has been substantial. Starting with about 600,000 patrons in that year, locker plants served 3.3 million in 1946. Practically all the patrons during this period were locker renters.

Immediately after World War II freezers began to go into homes rapidly. Freezer owners began to use the custom processing and merchandising services of locker plants and accounted

TABLE 9. - *Estimated numbers of frozen food locker plants, patrons renting lockers and home freezer owners not renting lockers but using other plant facilities, by regions, 1954*

Region	Number of plants	Type and number of patrons		
		Locker patrons[1]	Home freezer owners not renting lockers	Total patrons
North Atlantic	748	240,700	173,200	413,900
North Central	5,640	1,613,600	834,000	2,447,600
South Atlantic	460	166,900	181,900	348,800
South Central	1,161	387,000	300,500	687,500
Mountain	913	289,300	117,100	406,400
Pacific	1,631	522,600	220,100	742,700
United States	10,553	3,220,100	1,826,800	5,046,900

[1]Number of locker patrons estimated as of January 1955.

for 40 percent of the more than 1 million increase in number of patrons from 1946 to 1950. From 1950 to 1955 about 700,000 fewer patrons rented lockers but the number of home freezer patrons increased by 1.3 million, accounting for the net increase of 600,000 since 1950 (figure 5).

The average locker plant, at the beginning of 1955, was serving more patrons than in previous years. In 1941 the average number of patrons per plant was 414, in 1950 the average was 382, and in 1955 it was 478. The increase between 1950 and 1955 was 96 patrons per plant or about a one-fourth increase.

The survey showed that of the 478 patrons per plant, 64 percent or 305 were locker renters and the remainder were home freezer patrons. Various regions showed considerable difference in the comparative importance of the two types of users. Generally locker plants in the Eastern and Southern Regions had more freezer patrons than in other regions (table 10).

Size of town in which plants were located was also a factor. Plants in towns of 2,000 population or less reported about one-third of these patrons were home freezer owners, while in towns of over 25,000 nearly half the patrons were home freezer owners (table 11).

Information secured on farm patronage in locker plants was limited to locker renters only. Patrons living on farms accounted for 64 percent of the 305 locker renters per plant compared with 66 percent of locker renters in 1950 and 73 percent in 1946. The survey indicated, however, that farmers were having locker plants process their fresh meat to an increasing extent. Thus, the increasing use of home freezers on farms may account for the decline in percentage of farm patrons renting lockers.

Farm patronage was highest in the North Central and South Atlantic Regions with 70 percent or more of locker patrons living on farms. In the Mountain and Pacific Regions farm patrons accounted for less than half of the locker renters (table 12).

As would be expected differences existed among plants in various size

Estimated Number of Locker Patrons and Freezer Owners Using Locker Plants

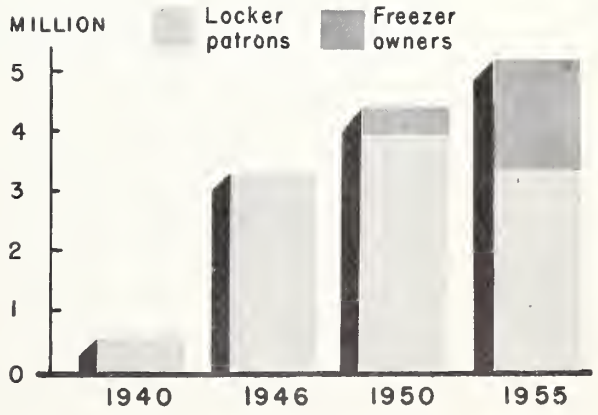


Figure 5

TABLE 10. - *Average locker and home freezer patrons per plant, by regions, January 1955*

Region	Locker patrons		Home freezer patrons[1]		Total
	Number	*Percent*	*Number*	*Percent*	*Number*
North Atlantic	322	58	231	42	553
North Central	286	66	148	34	434
South Atlantic	363	48	395	52	758
South Central	333	56	259	44	592
Mountain	317	71	128	29	445
Pacific	320	70	135	30	455
United States	305	64	173	36	478

[1]Home freezer owners not renting lockers but using other locker plant services.

TABLE 11. - *Average locker and home freezer patrons per plant, by size of town, January 1955*

Size of town	Locker patrons		Home freezer patrons[1]		Total number of patrons
	Number	Percent	Number	Percent	
1,000 or under	199	69	90	31	289
1,001 - 2,000	291	67	144	33	435
2,001 - 5,000	337	64	188	36	525
5,000 - 10,000	402	62	246	38	648
10,001 - 25,000	459	64	257	36	716
Over 25,000	461	53	401	47	862
United States	305	64	173	36	478

[1]Home freezer owners not renting lockers but using other locker plant services.

TABLE 12. - *Average locker patrons per plant and percentage living on farms, by region and size of town, January 1955*

Population of town	Region												United States	
	North Atlantic		North Central		South Atlantic		South Central		Mountain		Pacific			
	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons	Number patrons per plant	Percentage farm patrons
1,000 or under	230	72	202	81	287	76	204	78	164	68	180	66	199	78
1,001 - 2,000	278	67	310	77	316	77	244	76	243	64	284	62	291	73
2,001 - 5,000	297	58	350	71	353	73	331	72	335	55	330	52	337	66
5,001 - 10,000	380	56	406	67	390	76	391	68	418	44	417	50	402	61
10,001 - 25,000	355	51	464	59	505	73	484	62	515	42	469	39	459	54
Over 25,000	438	36	441	38	434	54	510	34	601	20	425	20	461	31
Average	322	56	286	71	363	70	333	64	317	47	320	45	305	63

towns. On the average, farm patrons accounted for 78 percent of all locker patrons in plants located in towns of 1,000 population or under while in towns of over 25,000 population farm patrons accounted for only 31 percent. Only in the South Atlantic Region was the percentage of farm patrons high in the larger towns.

Processing Services

Contrasted to the simple low temperature storage service provided by early locker plants, the survey indicated that, in general, these plants have been expanding and diversifying their services.

Most plants custom processed food owned by locker renters and home freezer patrons—that is they offered custom chilling, aging, cutting, grinding, wrapping and freezing services (figure 6). Many also provided additional services of livestock and poultry slaughtering, curing, smoking, lard rendering, and fruit and vegetable processing.

Chill, Cut, Wrap and Freeze

Chilling, cutting, wrapping and freezing service was provided by 89 percent of the plants reporting. In 1950 the same percentage of plants provided this service compared with 87 percent in 1946 and 83 percent in 1943.

All regions except the North Atlantic and Pacific Regions reported 90 percent or more of the plants providing the service. In the North Atlantic only 82 percent of the plants offered this basic processing service and in the Pacific Region only 75 percent (table 13). Generally, locker plants not offering the service were either branch locker plants served by another locker plant with processing facilities or locker plants affiliated with some other business such as a dairy or cold storage plant where the operation of the locker plant is a minor activity of the enterprise.

While the service of chilling, cutting, wrapping, and freezing was performed

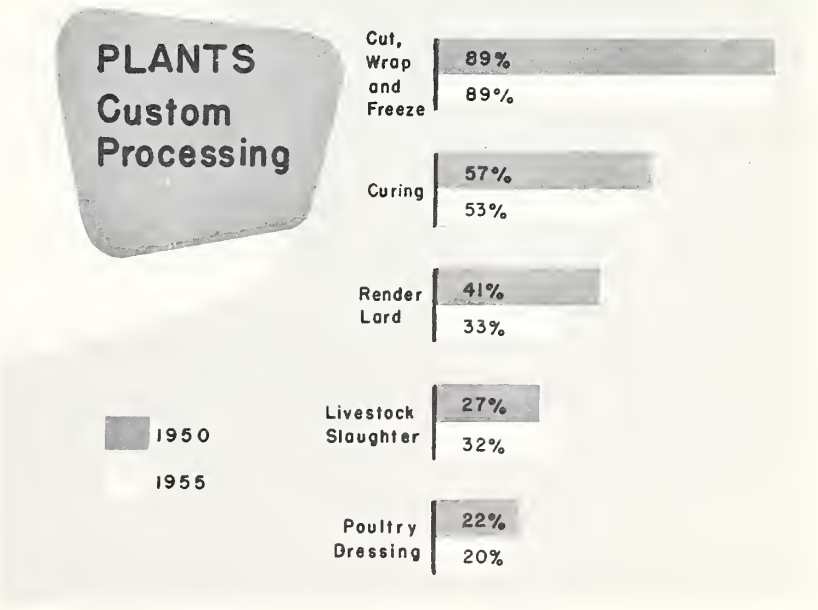


Figure 6

In 1954 almost 9,400 plants custom processed food for patrons.

by plants of all sizes, fewer plants under 200 locker capacity and particularly those under 100 locker capacity provided the service (table 14). A great many of these smaller plants are branch plants served by other locker plants with processing facilities. More than 90 percent of the plants with over 300 locker capacity provided the service.

With the exception of plants located in towns with populations of 25,000 or more, there was little difference in the percentage of plants performing the

TABLE 13. - *Frozen food locker plants reporting and percentage that provide indicated processing services, by regions, January 1955*

Region	Plants reporting	Processing services				
		Chill, cut wrap and freeze	Cure and smoke	Render lard	Process, package and freeze fruits and vegetables	Only freeze fruits and vegetables
		Percentage of plants				
North Atlantic	486	82	45	15	9	74
North Central	3,309	92	58	40	25	84
South Atlantic	312	96	79	58	27	83
South Central	657	97	67	48	23	81
Mountain	558	90	39	23	11	68
Pacific	1,068	75	28	7	2	37
United States	6,390	89	53	33	19	74

TABLE 14. - *Frozen food locker plants reporting and percentage with specified capacity that provide indicated processing services, January 1955*

Plant capacity in lockers	Number of plants reporting	Processing services				
		Chill, cut wrap and freeze	Cure and smoke	Render lard	Process, package and freeze fruits and vegetables	Only freeze fruits and vegetables
		Percentage of plants				
Under 100	233	60	15	7	4	45
100 - 199	784	75	25	10	15	57
200 - 299	1,031	88	40	21	17	72
300 - 399	1,114	93	52	31	20	79
400 - 499	790	93	62	41	21	76
500 - 599	702	95	71	50	22	83
600 - 699	475	93	64	45	20	80
700 - 799	291	97	73	50	23	83
800 - 899	213	92	71	52	24	82
900 - 999	149	94	68	46	24	81
1,000 - 1,099	170	98	68	45	17	82
1,100 - 1,199	74	90	64	48	16	78
1,200 and over	364	93	65	40	16	77
Total and average	6,390	89	53	33	19	74

service (table 15). About 90 percent of the plants located in towns under 25,000 population furnished the service while plants in the largest population category reported only 83 percent providing the service. Many locker plants in larger towns were affiliated with ice and cold storage plants and offered no service except locker storage.

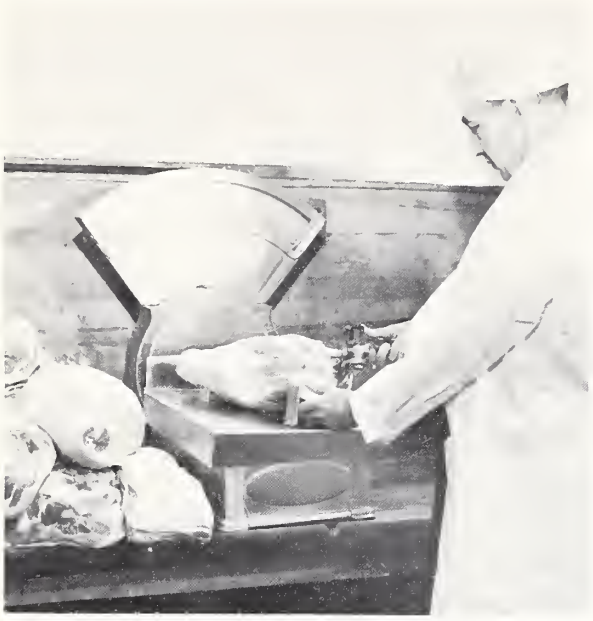
Cure and Smoke

Curing and smoking service was provided by 53 percent of the plants reporting. In the South Atlantic Region 79 percent of the plants provided this service and in the South Central Region, 67 percent. Demand for this service was not so great in the western

TABLE 15. - *Frozen food locker plants reporting and percentage that provide indicated processing services by size of town, January 1955*

Size of town	Plants reporting	Processing services				
		Chill, cut wrap and freeze	Cure and smoke	Render lard	Process, package and freeze fruits and vegetables	Only freeze fruits and vegetables
		Percentage of plants				
Under 1,000	2,452	89	45	27	20	75
1,000 - 1,999	1,005	93	58	40	21	79
2,000 - 4,999	1,065	91	60	40	20	75
5,000 - 9,999	635	91	66	44	19	75
10,000 - 24,999	535	88	56	35	15	72
25,000 and over	698	83	45	26	11	64
United States	6,390	89	53	33	19	74

regions as indicated by the 39 percent of the plants providing the service in the Mountain Region and only 28 percent in the Pacific Region.



About 5,600 locker plants cured 129 million pounds of pork in 1954.

As is the case with all processing services, fewer of the smaller plants provided curing and smoking service than the larger plants. Only 25 percent of the plants in the 100 to 199 locker capacity size and 15 percent in the less than 100 locker size provided the service compared with better than 60 percent of the plants with capacity for over 400 lockers.

Size of town was also a factor. Only 45 percent of the plants cured and smoked if they were in towns of under 1,000 or over 25,000 population. On the other hand, more than 60 percent of those plants in towns from 2,000 to 10,000 population provided the service.

Render Lard

Only one-third of the reporting locker plants provided the service of lard rendering. Considerable variation, however, existed among regions. In the South Atlantic 58 percent of the plants provided the service and in the South Central, 48 percent. In the North Atlantic Region, however, only 15 percent reported lard rendering and in the Pacific Region, only 7 percent.

Again size of plant was a factor in the service. Only 7 percent of the plants under 100 locker capacity provided the service while the greatest percentage offering the service was in the 500 to 900 locker capacity size.

Lard rendering was frequently offered along with curing and smoking. Thus, as with curing and smoking, fewer of the plants in the very small and the very large towns rendered lard than plants in the intermediate size towns.

Process Fruits and Vegetables

About one-fifth of the plants processed, packaged and froze fruits and vegetables. The service was most popular in the North Central, South Central, and South Atlantic Regions with about one-fourth of the plants reporting the service while in the Pacific Region only 2 percent of the reporting plants furnished the service.

About 3 out of 4 plants froze fruits and vegetables after the patron processed and packaged them. This service was performed rather uniformly in all regions except in the Pacific Region where only 37 percent of the plants reported the service.

Slaughter Livestock

Thirty-two percent of the locker plants reporting operated livestock slaughter facilities (table 16). In the North Central Region 44 percent of the plants had slaughter facilities and in the South Central Region, 40 percent. Few locker plants in the North Atlantic

TABLE 16. - *Frozen food locker plants reporting and percentage that provide livestock and poultry slaughtering services, by regions, January 1955*

Region	Plants reporting	Slaughtering services		
		Slaughter livestock at plant	Slaughter livestock on farms[1]	Dress poultry
		Percentage of plants		
North Atlantic	486	9	2	14
North Central	3,309	44	4	23
South Atlantic	312	28	2	43
South Central	657	40	2	28
Mountain	558	22	2	12
Pacific	1,068	4	3	4
United States	6,390	32	3	20

[1]Locker plant provides personnel and equipment for slaughtering.

and Pacific Regions, however, provided this service. For the North Atlantic it was 9 percent and the Pacific Region, 4 percent.

Based on reports received in this survey it was estimated that about 3,400 locker plants operated slaughter facilities. About three-fourths of these plants were located in the North Central Region and one out of eight in the South Central Region. Heavy concentration of locker plants in the North Central Region and the large livestock population account for the widespread availability of the service in the region.

Livestock slaughtering service performed at the plant has grown faster than other processing services. In 1946 nearly 1,800 or 22 percent of the plants operated livestock slaughtering facilities. Demand for the service increased and by 1950 27 percent, or 3,100 plants had slaughter facilities. As previously stated, at the beginning of 1955 32 percent or 3,400 of the plants slaughtered livestock.

From 1,800 plants slaughtering livestock in 1946, the total had increased to 3,400 plants at the beginning of 1955.

In addition to those plants operating slaughter facilities, 3 percent of the plants slaughtered livestock on the farm using plant personnel and equipment. This type of slaughtering operation has declined from 9 percent of all plants in 1946. It is estimated that about 300 plants were engaged in this type of slaughtering and it appears that this number will decline as more locker plants construct slaughter facilities.

Dress Poultry

One out of five frozen food locker plants operated poultry dressing facilities. The service was most popular in the South Atlantic Region as shown by the 43 percent of the plants with such facilities. In the North Central and South Central Regions about one-fourth of the plants dressed poultry while in the Pacific Region only 4 percent performed this activity (table 16).

Ninety-seven percent of the plants with poultry dressing facilities offered a custom dressing service to patrons. The 3 percent that did not custom dress poultry presumably used these facilities to dress poultry for their own account for resale (table 17). Most of the plants, however, both custom dressed poultry and dressed poultry for sale.

TABLE 17. - *Estimated number of frozen food locker plants operating poultry dressing facilities and percentage that custom dress poultry and dress poultry for sale, by regions, January 1955*

Region	Estimated number plants with poultry dressing facilities	Type of poultry dressing	
		Custom dress poultry	Dress poultry for sale
		Percentage of plants	
North Atlantic	105	89	71
North Central	1,294	98	70
South Atlantic	198	99	51
South Central	320	96	54
Mountain	109	99	64
Pacific	65	92	47
United States	2,091	97	65

Commercial Operations

In addition to custom service activities performed largely for locker and home freezer patrons, an increasing number of locker plants have expanded their operations to include a variety of commercial activities (figures 7 and 8). Growing ownership of home freezers by non-farmers, the need for more processing volume to efficiently utilize labor and facilities, and the opportunity to serve local institutional trade have all contributed to this upward trend.

Commercial activities of locker plants can be classified into two general categories: First, activities involving substantial processing of products before they are sold, and second, merchandising food on which the locker plant performs little or no processing.

In the first category are such activities as buying livestock and poultry for slaughter and resale and producing cured meats for sale. In most

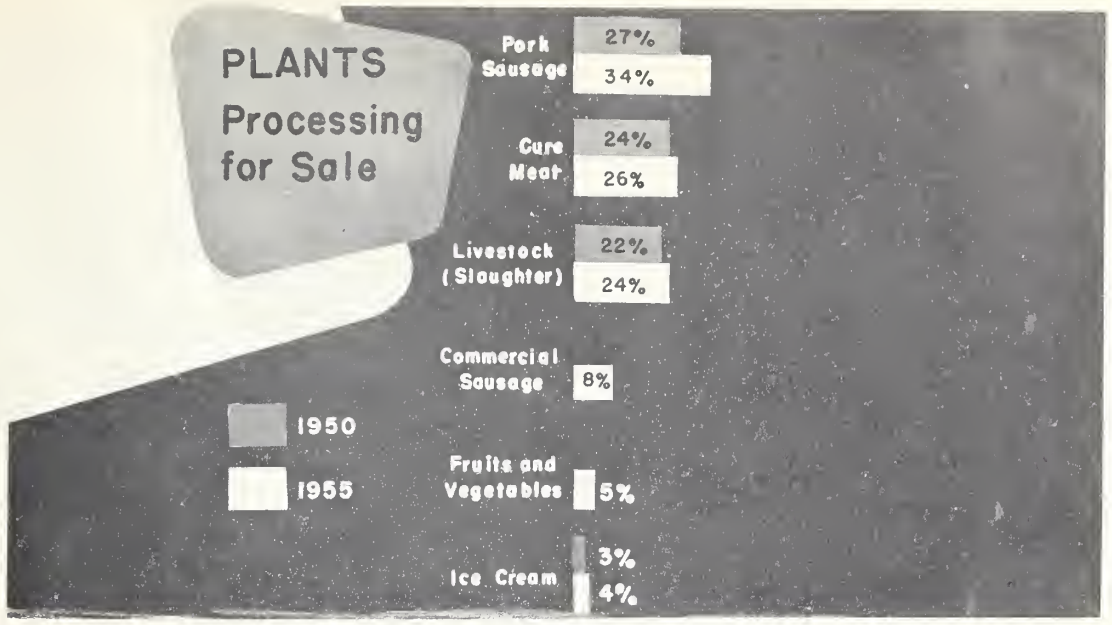


Figure 7

instances, locker plants in these activities were purchasing locally grown products and thus provided an additional local market outlet for producers. Livestock slaughtering for resale was most usually found among plants of the South Central and North Central Regions. Poultry dressing for resale occurred more often in plants in the North Atlantic and North Central Regions.

In the second category are activities such as selling packer meat in wholesale cuts and selling commercial frozen foods. These products require little or no processing before sale and the function of the locker plant is largely that of retailing. This type of activity was most usually found among plants in the North Atlantic and Mountain Regions.

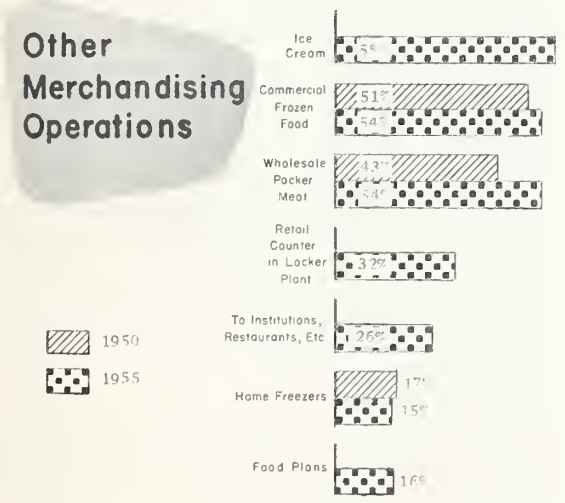


Figure 8

Processing for Sale

Table 18 shows the percentage of plants doing selected commercial activities in which considerable processing is necessary before the products are sold. One of the developments in this area has been the growth in the purchase of livestock by locker plants for slaughter and resale. In most cases the livestock was slaughtered in the locker plants slaughter facility. The activity, however, was not confined to just locker plants with slaughter facilities. Some operators purchased and slaughtered it on farms using plant employees while others had the slaughtering done by local slaughter plants.

TABLE 18. — *Frozen food locker plants engaged in select commercial operations, by regions, January 1955*

Region	Commercial operation						
	Buy livestock for slaughter and resale	Produce cured meats for sale	Manufacture pork sausage for sale	Manufacture commercial sausage for sale[1]	Manufacture ice cream	Render inedible offal	Freeze fruits and vegetables for sale
	Percentage of plants						
North Atlantic	10	26	37	5	7	1	6
North Central	28	30	33	12	5	2	6
South Atlantic	30	38	48	4	2	2	7
South Central	37	31	48	4	2	3	4
Mountain	22	17	34	5	6	2	3
Pacific	5	11	26	1	3	1	2
United States	24	26	34	8	4	2	5

[1]Bologna, frankfurters, meat loaves, and related products.

The survey shows almost three out of four plants with slaughter facilities were purchasing livestock for slaughter and resale. In the North Central Region many locker plants were using their slaughter facilities for custom slaughtering only.

More and more locker plants are buying local livestock for slaughter and resale. This salesman delivers locker processed meats to retail outlets.

Nearly two-thirds of the plants with poultry dressing facilities purchased poultry for dressing and resale (table 17). The majority of such plants were located in the North Atlantic and North Central Regions.

Another important activity of locker plants is producing cured meats for sale. Twenty-six percent of all plants were engaged in this activity with the greatest percentage of the plants located in the South Atlantic, South Central, and North Central Regions.

Of the plants with curing facilities, about half were producing cured meats for sale. This activity was especially important to locker plants in the South. These plants generally produced country-style cured hams and in some instances have constructed special ham houses with capacity for storing thousands of hams. In other areas a mild-cured commercial-type ham was generally produced.

Pork sausage was manufactured for sale by about one out of three locker plants. In the South Atlantic and South Central Regions, however, about half

Curing and selling country-style hams is an important activity of locker plants in the South.

the plants were engaged in this activity. Frozen food locker plants manufacture pork sausage for sale in large numbers because most plants can do this with their present processing equipment.

In addition to the four manufacturing and processing activities just discussed, many locker plants engaged in other commercial activities. About 8 percent of the plants manufactured for sale commercial sausage such as bologna, frankfurters, meat loaves and related products. This activity was performed by 12 percent of the plants in the North Central Region and only 1 percent of the plants in the Pacific Region.

Ice cream was manufactured by 4 percent of the plants and was most important among plants of the North Atlantic Region (7 percent) and Mountain Region (6 percent). Only 2 percent of the plants in the South Atlantic and South Central Regions were engaged in this activity.

Inedible offal rendering was performed by only 2 percent of the plants. Low prices received for inedible offal and legal prohibition against feeding uncooked offal to hogs have encouraged operators to install equipment for processing inedible byproducts. Most of these installations have been made in recent years and further increase in this activity will probably occur.

Five percent of the locker plants froze fruits and vegetables. The activity was usually performed on a limited scale by these plants, being confined to the processing of one or two items. The function was most important in Maine, Georgia, Florida, Indiana, and Illinois.

It does not appear that there will be any substantial growth in the number of plants doing this because most locker plants cannot compete successfully with large scale fruit and vegetable processors and freezers. Some increase might be expected in certain areas, however, where a local product might be processed and merchandised successfully. Increase in the activity will also depend in part on development of small, efficient fruit and vegetable processing equipment.

Other Merchandising

Table 19 shows the percentage of plants engaged in selected commercial activities in which little or no processing is done. Fifty-four percent of all plants sold packer meat in wholesale cuts. The activity was most important in the North Atlantic Region (60 percent) and least important in the Pacific Region (43 percent). With the exception of the Pacific Region, those regions with the higher percentage of plants selling packer meat in wholesale cuts had the smaller percentage of plants purchasing livestock for slaughter and resale.

Commercial frozen food was sold by 54 percent of the plants reporting, with the North Atlantic Region again showing the highest percentage of plants engaged in this activity (68 percent) and the Pacific Region the lowest (43 percent).

Ice cream was sold by 58 percent of the plants and was of considerable more importance among plants of the North Atlantic, North Central and Mountain Regions than elsewhere.

Fifteen percent of the plants reporting sold home freezers. This activity was most important in the North Atlantic and least important in the North Central Region.

Food plans were operated by 16 percent of all plants reporting. Nearly one-fourth of the plants in the North Atlantic Region reported food plan operations while only 13 percent of the North Central Region plants were engaged in this activity.

TABLE 19. - *Frozen food locker plants engaged in selected merchandising activities, by regions, January 1955*

Region	Merchandising activity				
	Sell packer meat in wholesale cuts	Sell commercial frozen food	Sell ice cream	Sell home freezers	Operate a food plan[1]
	Percentage of plants				
North Atlantic	60	68	70	22	24
North Central	57	56	60	13	13
South Atlantic	57	52	45	17	16
South Central	47	47	47	16	18
Mountain	55	57	61	18	20
Pacific	43	43	50	14	18
United States	54	54	58	15	16

[1] Finance or arrange financing for more than 60 days for bulk food purchases by patrons.

The type of food plans operated by locker plants varied widely. Some plants operated relatively small sales programs, financing bulk food sales when necessary but generally operating on a cash basis. Others have well developed sales organizations with a staff of trained salesmen and a program for selling freezers and bulk quantities of food. Freezers were frequently financed for 1 to 2 years and food for 3 to 5 months. Some organizations provided a delivery service. Others employed home economists to instruct food plan patrons in efficient use of their freezers.

Whatever the nature of the food plan or the methods used in promotion, one characteristic was common of all such plans. The locker plant usually financed or arranged the financing of bulk food purchases by patrons for periods of 60 days or more.

Rates and Charges

Custom processing and storage service was the major function of most frozen food locker plants and provided most of the revenue for this industry.

Rental rates for lockers were usually on an annual basis while custom processing rates were on a pound basis for fresh meat processing, pork curing, and lard rendering, and on a head basis for livestock slaughtering and poultry dressing. Exact rates were not available for lard rendering, livestock slaughtering, poultry dressing, and fruit and vegetable processing in these plants.

Locker Rental Rates

The average annual rental rate reported in January 1955 was $13.28 per locker, up 2 percent from the 1950 average, 17 percent from 1946, and 36 percent from 1941 (table 20). Average rental rates varied considerably among States and regions.

TABLE 20. - *Average locker rental rate on selected dates, 1941 - 1955*

January	Average annual locker rental rate
1941	$9.76
1946	11.38
1950	12.97
1955	13.28

The Pacific Region with an average rate of $12 was the lowest and the South Atlantic Region with an average rate of $16.28 was highest (table 21).

As a general rule, plants located in those regions where locker plants were first built, such as the Pacific and North Central Regions, have considerably lower locker rental rates than plants in such regions as the North and South Atlantic where the growth of this industry was largely a post-war development.

Cut, Wrap, and Freeze Rates

The average rate reported in January 1955 for cutting, wrapping, and freezing beef was $3.65 per 100 pounds and for

TABLE 21. - *Average locker rental and processing rates by States and regions, January 1955*

Stage and region	Average locker rental rate	Rate per 100 pounds for		
		Cut, wrap, and freeze beef	Cut, wrap, freeze and grind beef	Cure and smoke
Maine	$15.68	$6.17	$5.45	$7.28
New Hampshire	15.17	4.73	5.67	7.97
Vermont	12.65	3.47	4.14	6.69
Massachusetts	16.78	6.14	6.38	8.22
Rhode Island	17.47	--	7.00	--
Connecticut	18.07	4.94	6.23	7.46
New York	15.16	4.77	5.40	7.37
New Jersey	16.89	5.14	5.86	7.90
Pennsylvania	14.57	4.65	5.06	7.02
North Atlantic	15.22	4.73	5.32	7.33
Ohio	14.62	4.01	4.57	6.26
Indiana	14.72	4.36	4.70	5.92
Michigan	14.56	3.89	4.39	6.15
Wisconsin	11.40	2.99	3.38	6.22
Illinois	14.02	3.87	4.31	5.85
Minnesota	11.95	2.87	3.22	6.43
Iowa	12.41	3.18	3.40	6.21
Missouri	13.96	3.46	3.65	5.70
North Dakota	12.07	2.79	2.92	7.17
South Dakota	12.49	3.05	3.16	6.62
Nebraska	12.06	3.18	3.49	6.18
Kansas	12.25	3.54	3.91	5.52
North Central	12.86	3.30	3.82	6.16
Maryland	16.08	5.20	5.64	7.57
Delaware	15.17	5.00	5.50	6.90
Virginia	16.44	4.56	5.46	7.19
West Virginia	16.43	4.75	5.10	6.74
North Carolina	15.64	4.43	5.12	6.84
South Carolina	16.06	5.12	5.32	7.11
Georgia	14.70	4.03	4.80	5.72
Florida	19.76	5.75	5.45	6.23
South Atlantic	16.28	4.62	5.23	6.63
Kentucky	14.71	3.66	4.23	6.71
Tennessee	14.03	3.90	4.32	6.23
Alabama	15.06	4.18	4.54	4.93
Mississippi	14.42	4.50	4.62	5.27
Arkansas	14.76	4.47	4.67	5.65
Louisiana	16.71	5.50	5.06	6.69
Oklahoma	13.04	3.66	4.23	5.34
Texas	14.98	4.03	4.69	5.80
South Central	14.50	4.05	4.53	5.73
Montana	12.38	3.82	4.01	6.29
Idaho	11.51	3.69	3.90	5.91
Wyoming	14.94	4.28	4.22	6.36
Colorado	13.58	3.98	4.52	6.25
Utah	12.05	3.66	4.09	6.32
Nevada	18.95	--	5.33	8.23
New Mexico	16.95	3.70	4.46	5.50
Arizona	20.67	4.00	5.22	7.20
Mountain	13.50	3.88	4.27	6.31
Washington	9.99	3.93	4.25	7.03
Oregon	11.36	4.12	4.37	6.88
California	15.64	5.09	5.74	7.76
Pacific	12.00	4.32	4.83	7.38
United States	13.28	3.65	4.28	6.32

cutting, wrapping, and freezing, including grinding, $4.28 (table 21).

On the average the lowest cut, wrap and freeze rates were found among plants of the North Atlantic and South Atlantic Regions. Average rates in 1955 were about 30 percent above 1950, 80 percent above 1946, and 180 percent above 1941 (table 22). Since 1946 increases in average charges for these services have been about the same as the increase in hourly wage rates for employees in the food trade (figure 9).

The percentage of plants that charged specified rates for processing is shown in table 23. Nearly one-third of the plants charged 3 cents per pound for cutting, wrapping, and freezing beef and 27 percent charged 4 cents per pound. Forty-five percent of the plants reported a rate of 3 cents per pound or less for this service with 59 percent of the North Central Region plants reporting a rate of 3 cents or less.

The majority of plants included grinding along with cutting, wrapping, and freezing in making a charge for fresh meat processing. Thirty-one percent of the plants charged 4 cents per pound

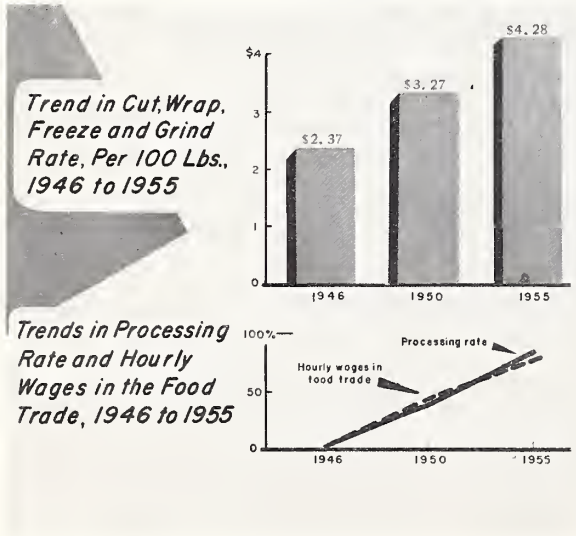


Figure 9

TABLE 22. - *Average processing rates on selected dates, 1941 - 1955*

January	Cut, wrap, and freeze	Cut, wrap, freeze and grind	Cure and smoke
1941	$1.30	--	$3.98
1946	2.01	$2.37	5.48
1950	2.87	3.27	5.86
1955	3.65	4.28	6.32

for this service and 24 percent charged 5 cents. In the North Central Region 77 percent of the plants charged 4 cents or less and 35 percent charged 3 cents or less. In contrast, 97 percent of the South Atlantic plants charged 4 cents or more with nearly 4 out of 5 plants charging 5 cents or more. Other regions with a significant percentage of plants in the highest rate categories were the North Atlantic and Pacific Regions.

Cure and Smoke Rates

The average rate for curing and smoking pork for all plants reporting in January 1955 was $6.32 per 100 pounds. This average rate was 8 percent above 1950, 15 percent above 1946 and 59 percent above 1941 (table 22). Average rates ranged from $5.73 per 100 pounds in the South Central Region to $7.38 in the Pacific Region (table 21).

Thirty-one percent of the reporting plants charged 6 cents per pound for curing. This was also the most usual rate charged in the North Central, South Atlantic, and Mountain Regions. In the North Atlantic and Pacific Regions the most usual rate was 7 cents per pound and in the South Central Region 5 cents per pound.

Plants with rates of 4 cents or less per pound were most frequently found in the South Central Region and plants with rates of 10 cents or more were most frequently found in the North Atlantic and Pacific Regions.

TABLE 23. - *Frozen food locker plants charging specified rates for processing services, by regions, January 1955*

Service and rate (cents per pound)	Regions						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
Cut, wrap, and freeze beef:							
Under 3.0	4	18	5	6	7	5	13
3.0	11	41	9	17	20	13	32
3.5	1	11	2	2	7	8	9
4.0	24	22	27	42	43	33	27
4.5	4	2	2	7	4	4	3
5.0	33	5	35	20	16	27	12
5.5	1	(1)	4	2	0	1	(1)
6.0	12	1	12	3	2	4	2
6.5	1	0	1	1	0	0	(1)
7.0 and over	9	(1)	3	0	1	5	2
Cut, wrap, freeze and grind beef:							
Under 3.0	1	6	0	(1)	(1)	(1)	3
3.0	4	29	2	6	12	7	18
3.5	1	11	1	4	7	5	8
4.0	15	31	15	38	45	30	31
4.5	4	4	3	4	4	4	4
5.0	36	16	39	38	23	30	24
5.5	2	(1)	5	2	3	1	1
6.0	22	2	31	6	5	14	8
6.5	(1)	(1)	0	(1)	0	(1)	(1)
7.0 and over	15	1	4	2	1	9	3
Cure and smoke:							
Under 4.0	0	1	3	2	2	(1)	1
4.0	0	3	3	10	1	1	4
4.5	0	(1)	(1)	1	1	0	(1)
5.0	11	23	11	36	21	6	23
5.5	0	1	5	2	1	(1)	1
6.0	19	37	25	26	36	13	31
6.5	0	1	4	1	2	1	1
7.0	28	23	21	12	20	36	22
7.5	0	1	2	1	1	1	1
8.0	24	8	14	6	9	25	10
8.5	1	(1)	(1)	(1)	0	1	(1)
9.0	3	1	6	(1)	2	3	2
9.5	1	0	(1)	0	0	0	(1)
10.0 and over	13	1	6	3	4	13	4

[1]Less than 0.5 percent.

Processing and Storage Rate Trends

Changes in the custom storage and processing rates during the past 15 years reflected many of the economic forces affecting the frozen food locker industry. Between 1941 and 1950 the heavy demand for lockers and the rising cost of constructing frozen food locker plants were important factors in the one-third increase in average locker rental rates. In the early 1950's the growing use of home freezers began to have a depressing effect on demand for

lockers with the result that total rented lockers decreased between 1950 and 1955. During this latter period locker rental rates increased only 2 percent.

Fresh meat processing--the service of chilling, cutting, grinding, wrapping, and freezing—increased about 180 percent in the 15-year period. Labor was a major cost item in processing. Rising labor rates and supply costs coupled with no significant increase in labor productivity necessitated substantial increases in these processing rates.

The growing use of home freezers will continue to have a depressing effect on the demand for lockers and thus will probably tend to discourage any substantial increase in locker rental rates. On the other hand, further increase in average fresh meat processing rates can be expected as the several thousand plants with processing rates of 3 cents or less per pound make upward adjustments in their processing rates.

Processing and Sales Volume

The survey furnished figures on the volume of products handled by frozen food locker plants. During 1954, locker plants processed about 1.6 billion pounds of food - that is, they slaughtered livestock; they chilled, cut, ground, wrapped, froze or cured the meat and they froze fruits and vegetables. They also dressed, eviscerated, wrapped, and froze poultry. The major portion of this volume was custom processed for locker and home freezer patrons. The remainder was processed for sale by the locker plant through a retail meat counter or to wholesale accounts such as hotels, restaurants, meat markets, and institutions (figure 10).

Data were collected on each major activity but not on the comparatively minor services of lard rendering, sausage making, fruit and vegetable processing and ice cream manufacturing.

Slaughter Livestock

Plants offering livestock slaughtering service increased between 1950 and

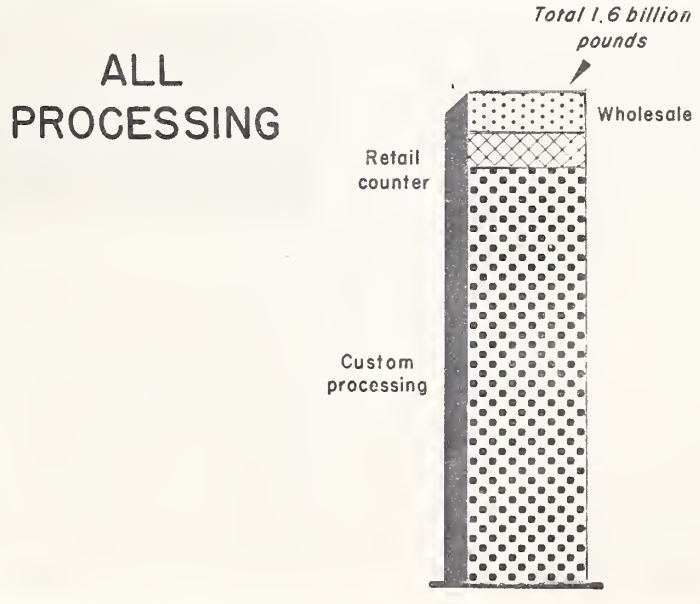


Figure 10

1955—from an estimated 3,100 plants to 3,400 plants. Increase in this service was greatest in the North Central Region but all areas except the Pacific showed some increase.

As previously discussed, livestock slaughtered by frozen food locker plants falls into two categories—that custom slaughtered for patrons and that purchased, slaughtered, and sold by the plant.

During 1954 the 3,400 plants slaughtered in total an estimated 2.8 million head of livestock compared with 2.1 million head in 1949 (figure 11). This 700,000 head increase was a one-third gain over the 1949 volume, with cattle and calf slaughter accounting for almost all the increase. Large supply and lower prices for beef cattle coupled with a short hog supply accounted for the substantially greater cattle and calf slaughter volume in 1954.

On the average these plants slaughtered 825 head in 1954 compared with 683 head in 1949. The South Atlantic and South Central Regions were highest, averaging nearly 1,500 head of livestock per plant compared with less than 700 head per plant for the North Atlantic and North Central Regions. Cattle and calf slaughter averaged highest in the South Central Region and hog slaughter highest in the South Atlantic Region (table 24).

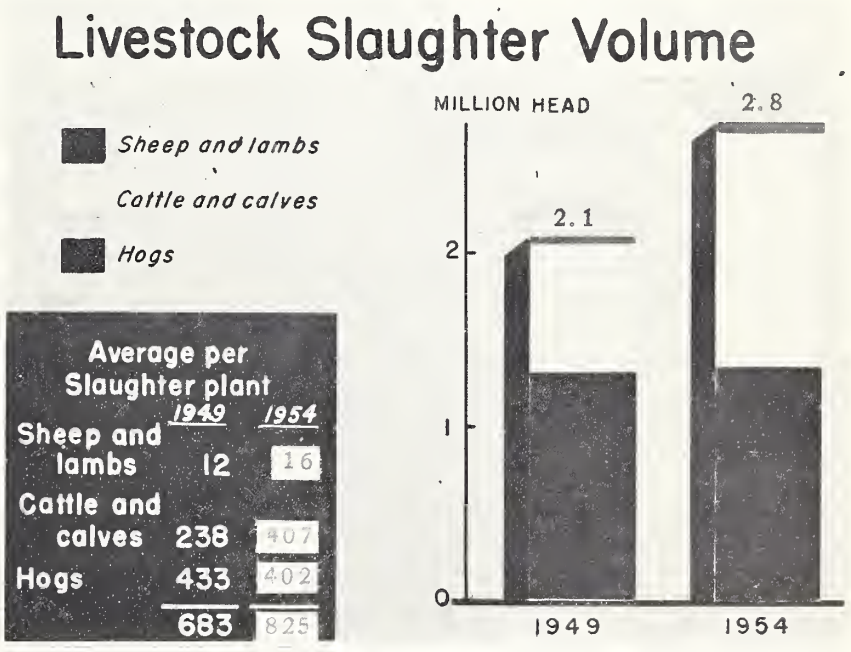


Figure 11

Table 25 shows the percentage of reporting plants that slaughtered specified volumes of cattle and calves by regions in 1954. Average cattle and calf slaughter volume in 1954 was 407 head compared with 238 head in 1949 (figure 11). The trend in cattle and calf slaughter per plant from 1949 to 1954 showed a sharp decline in the percentage of plants with annual volume under 200 head and a substantial increase in the percentage of plants with volume of over 700 head. This trend occurred in all regions but was most pronounced in the South Central.

The percentage of plants with specified hog slaughter volume is shown by regions in table 26. The average hog slaughter volume in 1954 was 402 head compared with an average of 433 head

TABLE 24. - *Frozen food locker plants reporting livestock slaughter volume and average number of head slaughtered per plant, by species and regions, 1954*

Region	Plants reporting	Number of livestock slaughtered			
		Cattle and calves	Hogs	Sheep and lambs	Total
North Atlantic	36	277	364	20	661
North Central	1,223	292	364	8	664
South Atlantic	77	556	911	30	1,497
South Central	219	963	494	30	1,487
Mountain	96	436	376	45	857
Pacific	33	588	291	64	943
United States	1,684	407	402	16	825

TABLE 25. - *Frozen food locker plants with livestock slaughter facilities that reported specified slaughter volume of cattle and calves, by regions, 1954*

Specified slaughter volume (head)	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
None[1]	0	(2)	0	1	1	0	(2)
Under 200	59	42	16	7	31	21	36
200 - 399	27	37	28	17	33	25	33
400 - 599	8	12	19	22	13	24	13
600 - 799	0	5	12	14	7	15	7
800 - 999	0	2	8	8	3	3	3
1,000 - 1,199	0	1	8	9	3	3	3
1,200 and over	6	1	9	22	9	9	5

[1]Plants slaughtering hogs but no cattle.
[2]Less than 0.5 percent.

TABLE 26. - *Frozen food locker plants with livestock slaughter facilities that reported specified slaughter volume of hogs, by regions, 1954*

Specified slaughter volume (head)	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
None[1]	6	1	2	2	5	15	1
Under 200	44	35	13	39	51	52	36
200 - 399	30	34	20	28	21	18	32
400 - 599	11	17	20	10	5	0	14
600 - 799	0	7	7	7	5	6	7
800 - 999	3	2	7	4	4	3	3
1,000 - 1,499	0	2	9	4	4	3	3
1,500 - 1,999	0	1	12	2	1	0	2
2,000 and over	6	1	10	4	4	3	2

[1]Plants slaughtered cattle but no hogs.

in 1949 (figure 11). The majority of plants had an annual volume in 1954 of less than 400 head. In the South Atlantic Region plants with hog slaughter volume in excess of 1,000 head were relatively important, accounting for about 1 out of 3 plants in the area. In contrast 15 percent of the plants in the Pacific Region slaughtered no hogs, using their slaughter facilities exclusively for cattle and calf slaughter.

About one-fourth (24 percent) of all livestock slaughtered by locker plants was purchased by the plant and slaughtered for resale (table 27). In the North Central and South Atlantic Regions, 19 percent of the livestock was slaughtered for resale while in the North Atlantic, Mountain and Pacific Regions more than 40 percent was slaughtered for resale.

TABLE 27. - *Percentage of total slaughter volume slaughtered for resale, by species and regions, 1954*

Region	Livestock slaughtered			
	Cattle and calves	Hogs	Sheep and lambs	Average
	Percentage of slaughter volume			
North Atlantic	46	39	41	42
North Central	22	17	6	19
South Atlantic	17	20	7	19
South Central	29	38	14	31
Mountain	39	48	36	43
Pacific	46	45	13	44
United States	26	23	15	24

Plants in the South Central Region were highest in average number of head of livestock slaughtered for resale, followed closely by plants in the Pacific Region.

The reason for the lower slaughter volume in the North Central Region was that most locker plants there have lagged behind recent trends in the frozen food locker industry towards greater merchandising activity. Some of this was due to the smaller size of locker plants in the region, lack of adequate processing facilities, and possibly lack of capital in many locker plants to develop merchandising programs. Equally important, however, was what appeared to be the belief of many operators that the role of the locker plants in local food preservation should be limited largely to processing and storing food produced by patrons.

Dress Poultry

About 2,100 frozen food locker plants or 20 percent of the industry dressed poultry in 1954. On the average these plants dressed 4,200 head. This totalled about 8.8 million head for all plants in 1954.

As with livestock slaughtering, poultry dressing in locker plants consisted of dressing poultry on a custom basis for patrons and dressing plant owned poultry for sale. Fifty-seven percent of the total volume dressed in the average plant was custom dressed for patrons, and 43 percent was dressed for sale. The South Atlantic and South Central Regions had the highest volume of poultry custom dressed and the North Atlantic and South Atlantic Regions reported the largest average volume of poultry dressed for sale (table 28).

TABLE 28. - *Average number of head of poultry custom dressed and dressed for sale in plants operating poultry dressing facilities, by regions, 1954*[1]

Region	Average number of poultry dressed		
	Custom dressed	Dressed for sale	Total
North Atlantic	2,200	5,400	7,600
North Central	1,900	1,000	2,900
South Atlantic	5,700	4,500	10,200
South Central	3,000	1,500	4,500
Mountain	1,500	3,800	5,300
Pacific	1,000	900	1,900
United States	2,400	1,800	4,200

[1]Based on reports received from 1,050 plants.

Considerable range in volume existed among plants. One out of three plants dressed under 1,000 head. These plants generally custom dressed poultry and purchased little or no poultry for dressing and resale. About 8 percent of the plants dressed 10,000 head or more in 1954 and 4 percent dressed over 20,000 head (table 29). On a regional basis the South Atlantic and South Central led with the highest percentage of plants with large poultry volume while most of the Mountain and Pacific plants reported volume in the smallest category.

TABLE 29. - *Plants with poultry dressing facilities that dressed a specified volume of poultry, by regions, 1954*[1]

Head of poultry dressed	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
Under 1,000	34	37	9	22	54	55	33
1,000 - 1,999	25	23	12	17	15	22	21
2,000 - 4,999	11	26	31	28	11	14	25
5,000 - 9,999	16	10	23	22	14	3	13
10,000 - 19,999	10	2	13	6	4	3	4
20,000 - 29,999	0	1	4	4	0	3	2
30,000 - 39,999	0	(2)	2	1	0	0	1
40,000 and over	4	1	6	0	2	0	1

[1]Based on reports received from 1,050 plants.
[2]Less than 0.5 percent.

Cure Pork

About 5,560 frozen food locker plants cured 129 million pounds of pork in 1954. This was 15 percent below the volume of 151 million pounds cured by approximately 6,520 plants in 1949 (figure 12). In this period some plants discontinued locker plant operations entirely while in 1954 other plants discontinued curing operations because of reduced supply of pork available for curing and the relatively high price for pork.

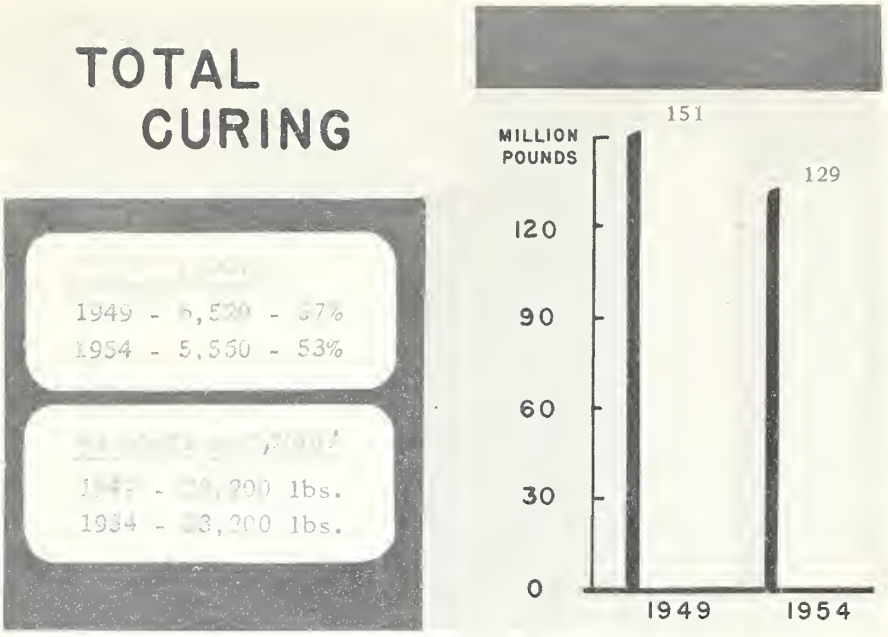
Average volume of pork cured per plant, however, was about the same at 23,200 pounds in both 1949 and 1954. Considerable difference existed among regions in the average curing volume per plant (table 30). Plants in the South Atlantic Region averaged 68,700 pounds per plant and in the South Central Region 31,500 pounds. The North Atlantic, North Central, and Mountain Regions averaged from 18,000 to 21,000 pounds while plants in the Pacific Region, where relatively few hogs are produced, averaged only 13,000 pounds.

Most pork cured by locker plants is custom cured for locker and home freezer patrons. An increasing percentage of the volume, however, is produced by the locker plant for sale. In 1954, 18 percent of all pork cured was for sale. This ranged from 33 percent in the Mountain Region to 7 percent in the South Atlantic Region. In view of the trend towards processing for sale by locker plants, it would be reasonable to expect that curing meat for sale will expand faster than custom curing.

Custom Process

In 1954, the frozen food locker industry custom processed 1.4 billion pounds

Figure 12



of food compared with 1.2 billion in 1949 and 1.1 billion in 1945 (figure 13). In 1949, red meats, poultry, and game accounted for 94 percent of the volume and fruits and vegetables the remainder. In 1954, red meats, poultry and game accounted for 98 percent of custom processing volume and fruits and vegetables 2 percent. The estimated volume of food custom processed in 1954 is shown by regions in table 31.

The average plant custom processed 145,000 pounds of all food....27 percent more than the 1949 average plant volume of 114,000 pounds (figure 14). In 1954 the survey showed 47 percent of the plants processed less than 100,000 pounds and 24 percent processed more than 200,000 pounds (table 32). Approximately 2 percent of the plants reported custom processing volume in excess of half a million pounds. Sixty percent or more of the

TABLE 30. - *Estimated number of frozen food locker plants curing, total pounds cured, average pounds cured per plant and percentage custom cured and cured for sale, by regions, 1954*

Region	Estimated number of plants curing	Total pounds cured (Million)	Average per plant		
			Thousand pounds cured	Percentage custom cured	Percentage cured for sale
North Atlantic	340	7.0	20.6	82	18
North Central	3,260	59.3	18.2	80	20
South Atlantic	360	24.8	68.7	93	7
South Central	770	24.2	31.5	81	19
Mountain	360	7.0	19.7	67	33
Pacific	470	6.4	13.6	75	25
United States	5,560	128.7	23.2	82	18

Note: Poundage estimates based on reports received from 2,432 plants.

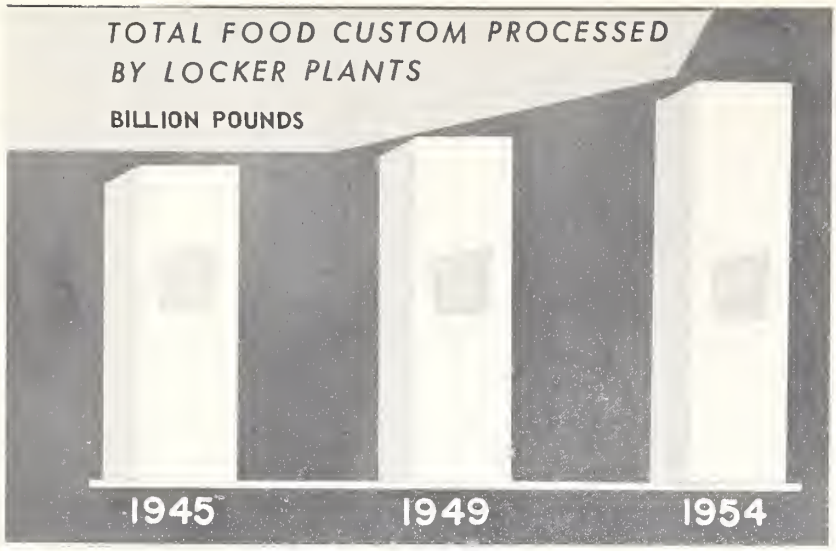


Figure 13

plants in the Mountain and Pacific Regions processed less than 100,000 pounds per plant, while 51 percent of the South Atlantic plants processed 200,000 pounds or more and one out of three processed 300,000 pounds or more. The South Atlantic and South Central Regions had a smaller proportion of the plants in the low volume categories and more in the very high categories than other regions of the country.

Table 33 shows the average volume of food custom processed per plant in 1954 by States and regions. The average volume ranged from 64,000 pounds per plant in Oregon to 358,000 pounds in North Carolina. The South Atlantic Region averaged 231,000 pounds per plant, 37 percent more than the South Central, the second highest region. The Pacific Region was lowest with an average volume of 108,000 pounds per plant.

Much of the high average volume in the South and Southeast can be attributed to the large amount of pork custom cured by plants in these regions. Low custom processing volume in the Mountain and Pacific Regions was due largely to the policy of locker plants in these regions to provide only limited processing services and the custom of patrons to process at home for locker storage.

TABLE 31. - *Estimated number of frozen food locker plants processing or having access to meat processing facilities and estimated pounds of products custom chilled, cut, wrapped, or frozen, by regions, 1954*

Region	Number of plants	Million pounds custom processed				
		Beef, veal, pork and lamb	Poultry	Game	Fruits and vegetables	Total
North Atlantic	612	71.5	4.8	2.5	3.2	82.0
North Central	5,218	707.9	27.8	8.3	19.0	763.0
South Atlantic	439	93.3	4.6	.4	3.3	101.6
South Central	1,112	174.0	6.3	2.8	3.4	186.5
Mountain	809	73.9	1.7	17.9	1.2	94.7
Pacific	1,232	120.2	1.5	9.3	2.1	133.1
United States	9,422	1,240.8	46.7	41.2	32.2	1,360.9

TABLE 32. - *Frozen food locker plants that custom processed specified volume of meat, poultry, and game, by regions, 1954*

Thousands of pounds per plant	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
	Percentage of plants						
Under 25	13	7	4	7	16	25	11
25 - 49	11	11	7	10	19	16	12
50 - 74	15	13	5	13	18	15	14
75 - 99	13	11	5	9	7	6	10
Under 100	52	42	21	39	60	62	47
100 - 199	30	33	28	30	21	21	29
200 - 299	10	15	16	15	10	9	13
300 - 399	4	6	17	8	5	5	7
400 and over	4	4	18	8	4	3	4
Total	100	100	100	100	100	100	100

All regions reported increases over 1949 volume. Table 34 shows these comparisons for all foods excluding fruits and vegetables—with increases ranging from 42 percent for the North Atlantic Region to 17 percent for the Pacific Region.

Average custom processing volume increased 28 percent over 1949 (table 35). Plants in towns of under 1,000 population increased their average volume by 32 percent and plants in cities of 25,000 population and over increased volume by 30 percent. The smallest average increase (20 percent) was found in plants located in towns of 10,000 to 25,000 population. There are some indications that acceptance and use of home freezers developed faster in rural areas and in the larger cities than in medium size towns. This may account for the greater gains in processing volume among plants in these small towns and large cities.

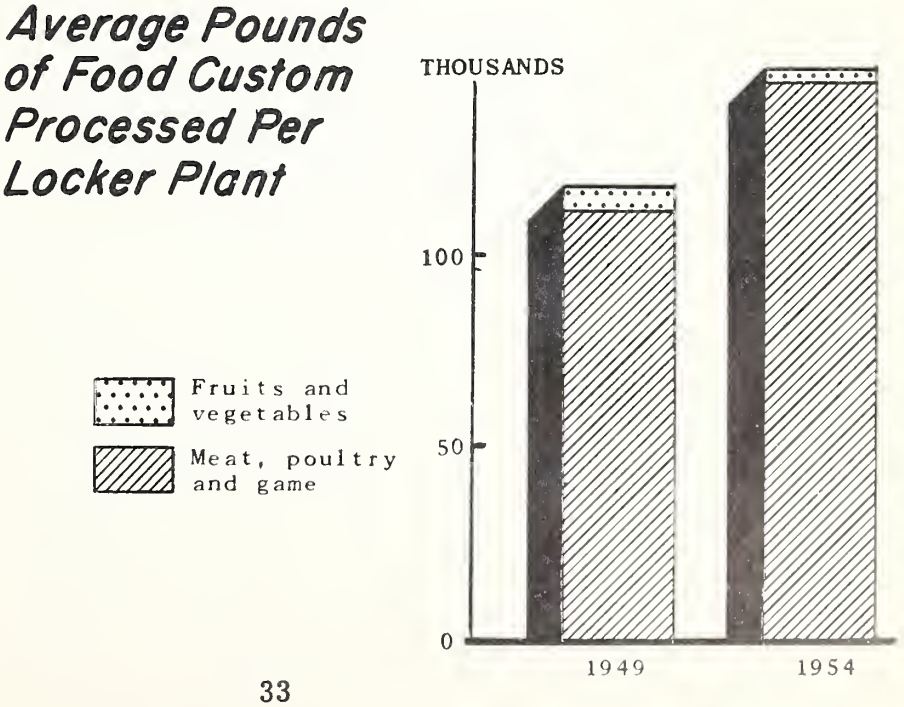


Figure 14

TABLE 33. - *Average pounds custom chilled, cut, wrapped, or frozen per plant for plants processing or having access to processing facilities, by States and regions, 1954*

State and region	Custom chill, cut, wrap and freeze				
	Beef, veal, pork and lamb	Poultry	Game	Fruits and vegetables	Total
	Thousand pounds	*Hundred pounds*	*Hundred pounds*	*Hundred pounds*	*Thousand pounds*
Maine	104	36	121	25	122
New Hampshire	92	61	75	14	107
Vermont	82	20	30	24	89
Massachusetts	111	91	114	53	137
Rhode Island	(1)	(1)	(1)	(1)	(1)
Connecticut	95	40	26	13	103
New York	102	59	36	39	115
New Jersey	147	94	35	41	164
Pennsylvania	139	112	35	80	162
North Atlantic	117	79	42	52	134
Ohio	164	72	9	75	180
Indiana	148	70	6	64	162
Michigan	114	33	48	70	129
Wisconsin	142	48	16	23	151
Illinois	171	68	7	63	185
Minnesota	134	57	27	24	145
Iowa	164	42	7	32	172
Missouri	112	73	12	28	123
North Dakota	97	16	21	5	101
South Dakota	123	63	52	16	136
Nebraska	102	55	10	25	111
Kansas	111	36	7	20	117
North Central	136	53	16	36	146
Maryland	170	203	29	45	198
Delaware	213	0	4	0	213
Virginia	190	200	8	59	217
West Virginia	175	187	30	140	211
North Carolina	339	84	7	102	358
South Carolina	247	74	3	52	260
Georgia	181	68	2	123	200
Florida	106	46	6	3	111
South Atlantic	212	105	8	75	231
Kentucky	148	65	2	79	163
Tennessee	99	64	5	30	109
Alabama	261	92	11	30	274
Mississippi	212	61	7	68	226
Arkansas	130	38	16	52	141
Louisiana	248	56	10	28	257
Oklahoma	136	71	20	25	148
Texas	156	43	45	14	166
South Central	157	56	25	30	168
Montana	62	17	157	7	80
Idaho	81	15	141	13	98
Wyoming	71	11	630	4	135
Colorado	137	34	211	27	164
Utah	78	15	207	25	103
Nevada	96	24	635	2	162
New Mexico	96	30	66	10	107
Arizona	102	20	148	8	120
Mountain	91	21	221	15	117
Washington	74	2	63	10	82
Oregon	55	9	74	5	64
California	156	23	90	34	171
Pacific	98	12	76	17	108
United States	132	49	44	34	145

[1]Insufficient data.

TABLE 34. - *Average pounds of meat custom processed per plant in frozen food locker plants processing or having access to processing facilities, by regions, 1949 and 1954*

Region	Average pounds per plant		Percent increase
	1949	1954	
North Atlantic	90,700	128,800	42
North Central	109,600	142,600	30
South Atlantic	167,700	223,900	34
South Central	129,000	164,700	28
Mountain	96,200	115,500	20
Pacific	90,500	106,300	17
United States	110,500	141,000	28

TABLE 35. - *Average pounds of meat custom processed per plant in frozen food plants processing or having access to processing facilities, by size of town, 1949 and 1954*

Size of town	Average pounds per plant		Percent increase
	1949	1954	
Under 1,000	76,600	101,300	32
1,000 - 1,999	104,500	132,200	26
2,000 - 4,999	127,500	157,300	23
5,000 - 9,999	159,400	194,900	22
10,000 - 24,999	156,400	188,400	20
25,000 and over	146,500	189,800	30
United States	110,500	141,000	28

Commercial Sales

Sales of food, packaging materials, and other products amounted to an estimated $275 million in 1954. On an average, this was gross sales of $26,300 per plant.

About 17 percent of the plants, however, had no such commercial sales. The rest of the plants reported sales from as low as several hundred dollars a year where only packaging materials were handled, to plants with sales in excess of half a million dollars where large merchandising programs or food plans were offered. Figure 15 shows the estimated number of plants in various sales volume categories.

Another study of sales margins in relation to gross income in a group of Midwest locker plants indicated the growing importance of merchandising in locker plants. In these plants sales margins in 1944 accounted for only 1 percent of their gross income

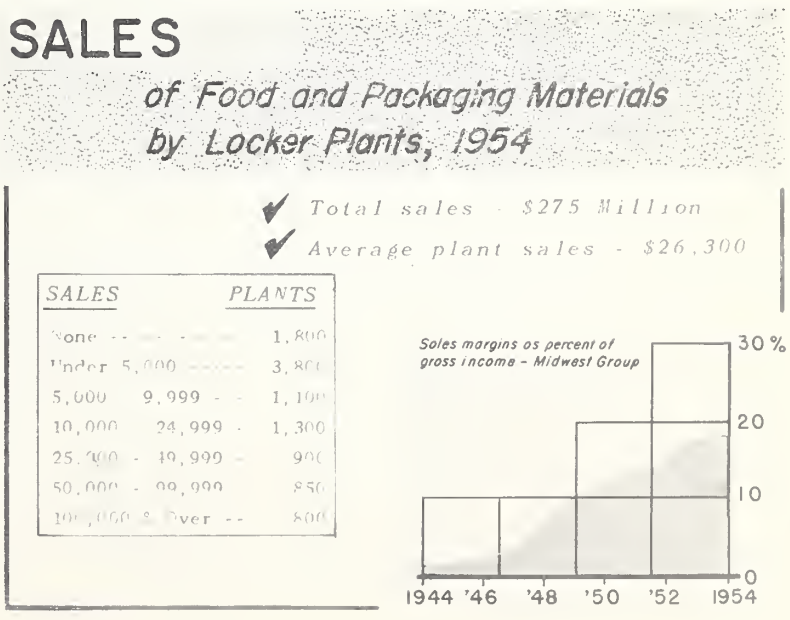


Figure 15

but increased in relative importance until in 1954 they accounted for 18 percent of gross income. The major portion of the plants' income, however, still came from custom processing and storage.

On a regional basis, the North Atlantic, South Atlantic and South Central plants had larger sales volumes than elsewhere (table 36). In these regions about 20 percent of the plants exceeded $50,000 in sales and about 10 percent exceeded $100,000.

The majority of locker plants located in towns of less than 2,000 population reported no sales or sales of less than $5,000 in 1954 (table 37). Such sales as these plants had were mostly packaging supplies. In the larger size towns - 10,000 population or more - a significant percentage of the plants still had very small sales volume but an important number reported sales volume of $100,000 or more.

Locker plants sell food both at wholesale and at retail. In 1954 about 250 million pounds of meat was sold, about half at wholesale and half through a retail meat counter in the locker plant. Twenty-six percent of the plants reported that they were engaged in

TABLE 36. - *Frozen food locker plants reporting indicated sales volume by regions, 1954*

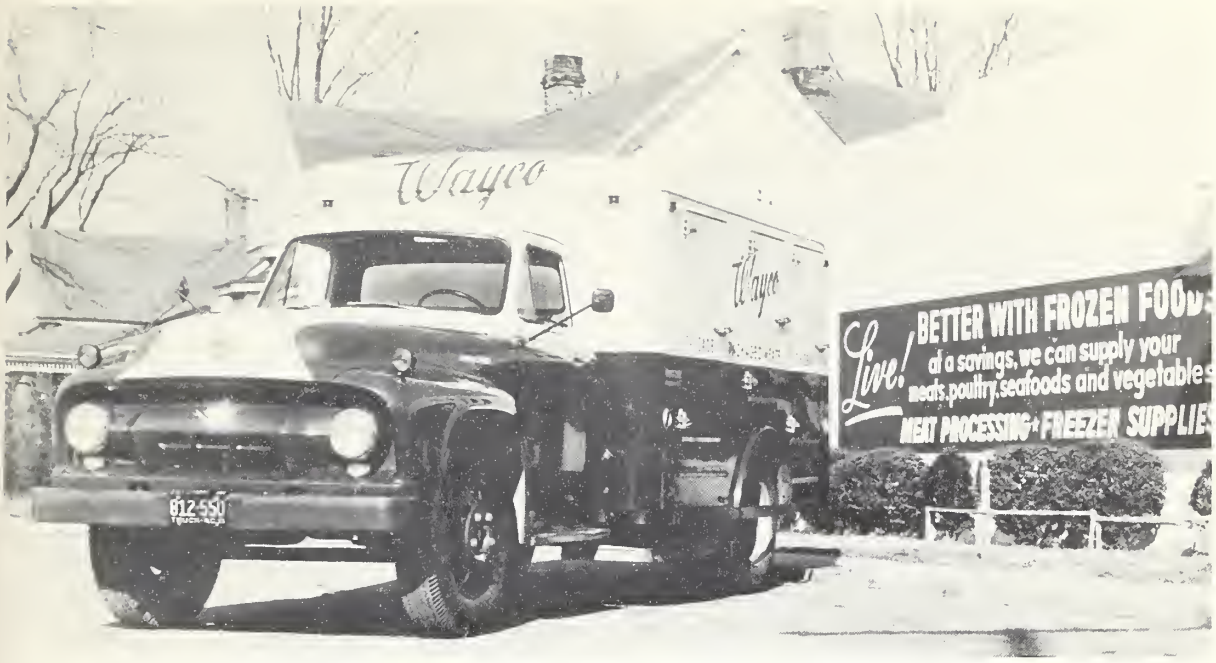
Region	Sales volume								
	None[1]	Under $5,000	$5,000-$9,999	$10,000-$24,999	$25,000-$49,999	$50,000-$99,999	$100,000-$149,999	$150,000-$199,999	$200,000 and over
	Percentage of plants								
North Atlantic	13	34	10	13	9	11	4	1	5
North Central	16	38	11	14	9	7	2	1	2
South Atlantic	10	35	11	12	9	9	7	2	5
South Central	16	36	10	12	7	9	4	2	4
Mountain	17	38	10	10	8	10	3	1	3
Pacific	29	30	6	10	8	9	4	2	2
United States	17	36	10	13	9	8	3	1	3

[1]Some plants combined sales arising from locker plant operation with sales of an affiliated business thus showing no sales by the locker plant.

TABLE 37. - *Frozen food locker plants reporting indicated sales volume by size of town, 1954*

Size of town	Sales volume								
	None	Under $5,000	$5,000-$9,999	$10,000-$24,999	$25,000-$49,999	$50,000-$99,999	$100,000-$149,999	$150,000-$199,999	$200,000 and over
	Percentage of plants								
Under 1,000	23	44	10	10	6	5	1	1	(1)
1,000 - 1,999	13	38	13	15	9	7	2	1	2
2,000 - 4,999	15	35	10	14	9	9	4	2	2
5,000 - 9,999	15	28	11	15	12	10	4	2	3
10,000 - 24,999	11	26	8	15	13	13	5	3	6
25,000 and over	15	21	7	11	12	14	7	4	9
Average	17	36	10	12	9	8	3	2	3

[1]Less than 0.5 percent.



Sales by locker plants in 1954 totaled about $275 million. Some plants operate wholesale routes while others deliver frozen food orders to home freezer customers.

wholesaling activities and 32 percent reported operation of retail meat counters. Meat sold in quantity lots to locker renters and home freezer owners was not included in these figures.

The average volume of meat sold at wholesale by plants engaged in this activity was 46,200 pounds (table 38). Plants in the South Central Region averaged 104,200 pounds and in the North Atlantic, 68,900 pounds. The smallest average volume was reported by North Central Region plants (25,300 pounds) and was less than half the volume reported by any other region.

Analysis of plants by wholesale sales volume showed that most locker plants engaged in this activity still had very small volume (table 39). Fifty-nine percent of these plants sold less than 10,000 pounds of meat in 1954. Only 9 percent of the plants reported volume

TABLE 38. - *Plants reporting and average pounds of meat processed and sold to restaurants, institutions and similar organizations by frozen food locker plants engaged in wholesaling activities, by regions, 1954*

Region	Plants reporting	Plants wholesaling	
		Percent	Average pounds per plant
North Atlantic	418	20	68,900
North Central	2,598	29	25,300
South Atlantic	242	32	91,500
South Central	538	26	104,200
Mountain	434	28	52,200
Pacific	909	16	50,800
United States	5,139	26	46,200

TABLE 39. - *Percentage of 1,321 frozen food locker plants reporting volume of meat and poultry sold to institutions, restaurants and similar organizations by indicated sales volume, 1954*

Pounds of meat and poultry (Thousands)	Percentage of plants
Under 10	59
10 - 24	18
25 - 49	8
50 - 99	6
100 - 199	4
200 - 299	2
300 and over	3

in excess of 100,000 pounds. Wholesaling of meat by locker plants has developed largely since 1950. Principal wholesale customers were restaurants, institutions and small retail stores.

Average volume of meat sold through a retail counter in 1954 by plants engaged in this activity was 37,400 pounds (table 40). Plants in the South Central Region had the highest average volume (53,100 pounds) and lowest in the South Atlantic Region (30,100 pounds). Thirty-nine percent of the plants sold less than 10,000 pounds per plant in 1954 and 9 percent sold over 100,000 pounds (table 41).

TABLE 40. - *Plants reporting and average pounds of meat and poultry processed and sold through a retail meat counter in frozen food locker plants operating retail meat counters, by regions, 1954*

Region	Plants reporting	Plants with retail meat counters	
		Percent	Average pounds per plant
North Atlantic	416	34	33,300
North Central	2,646	34	35,500
South Atlantic	249	31	30,100
South Central	552	29	53,100
Mountain	443	30	34,800
Pacific	921	26	38,400
United States	5,227	32	37,400

TABLE 41. - *Percentage of 1,653 frozen food locker plants reporting volume of meat and poultry sold through a retail meat counter by indicated volume of sales, 1954*

Pounds of meat and poultry (Thousands)	Percent
Under 10	39
10 - 24	25
25 - 49	15
50 - 99	12
100 - 199	5
200 - 299	2
300 and over	2

It appears that further growth in sales volume will result largely from selling locally produced meat and poultry in bulk quantities to locker patrons and home freezer owners; and wholesaling to restaurants, institutions and similar organizations. Substantial growth in the volume sold through retail meat counters in locker plants appears doubtful because of strong competition from retail food stores.

Trends and Possibilities

Information presented in this report shows the status of the frozen food locker industry at the beginning of 1955. The downward trend in number of plants, which began in 1951, will continue. Small plants and limited service plants will probably constitute the majority of plants discontinuing operations.

Further growth of the industry will be in the fields of processing and merchandising, particularly selling in bulk quantities to locker and home freezer patrons and wholesaling to restaurants, institutions, and similar organizations. Plants that can purchase and slaughter livestock to supply these outlets appear to have excellent opportunities for growth.

They are of value to farmers by providing an additional local market outlet for farm products and are equipped to provide numerous processing, storage, and marketing activities for farmers. Most locker plants are located in small rural communities close to farm sources of livestock, poultry and other

products for processing. In these communities, labor costs and capital investment can be somewhat less than in large processing centers. Through savings in transportation and other costs, food can be marketed at less total cost, and benefit both producer and consumer.

Number of lockers rented has steadily declined during the post-war period, due primarily to the growing use of home freezers. This locker rental activity will continue as an important phase of the business but will probably decline in relative importance as more freezers are purchased by consumers and as processing and merchandising activities of locker plants increase.

The frozen food locker industry would be especially valuable in the event of a national emergency. Should large food processing and distribution centers be destroyed, locker plants could help alleviate distress by making facilities and storage space available for general use. The frozen food locker industry is widely disbursed. Locker plants are located largely in rural areas near sources of food production. They have facilities for processing and storing substantial quantities of such highly nutritious foods as beef, pork, and poultry. In evacuation areas of many critical target cities, locker plants have the largest stock of available food. Furthermore, many plants have access to standby power equipment which would enable them to continue in operation for prolonged periods even though central electrical power service was disrupted.

Thus, the frozen food locker industry has an important role to play, both in the improvement of the living standard of rural people, and in the defense of the country.

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