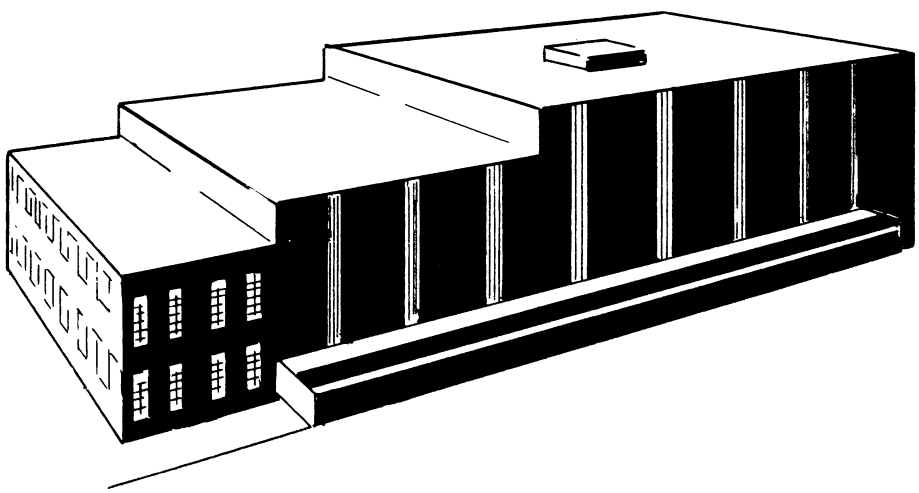
CAPACITY OF REFRIGERATED WAREHOUSES

in the United States October 1, 1959



TED STATES DEPARTMENT OF AGRICULTURE • WASHINGTON, D.C.
CROP REPORTING BOARD
AGRICULTURAL MARKETING SERVICE
OCTOBER 1960

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A preliminary mimeographed report (CoSt - 2 Prelim 60) was released July 12, 1960, immediately following completion of this survey.

CAPACITY OF REFRIGERATED WAREHOUSES IN THE UNITED STATES OCTOBER 1, 1959

INTRODUCTION

Knowledge of the capacity of refrigerated warehouses in the United States has been of interest to industry members and the U. S. Department of Agriculture ever since 1921 when a survey was made to gather statistics about facility location, capacity, and type of service offered. Beginning with that initial effort, successive surveys were made on October 1 of each alternate year.1/

To insure reliable capacity coverage for each survey, every effort is made to include all known public, private and semiprivate refrigerated storage facilities, including one-product houses that handle such products as fish, fruits, meats, and dairy. These surveys also account for the capacity of frozen food processing plants having artificially cooled space for the storage of their products.

These biennial surveys are concerned only with facilities having refrigerated space cooled to temperatures of 50° or below in which food stocks are held for 30 days or more. Space in wholesaler, jobber, retailer, or other types of business used for holding products less than 30 days was not included in the surveys. Excluded by definition, too, is space maintained by locker plants, hotels, and the Armed Services.

Because of the program whereby food inventories are reported monthly to the Department of Agriculture for the Cold Storage Reports, it is possible to maintain an up-to-date list of existing storage plants. It is believed, therefore, that sufficient knowledge is obtained from these sources to provide complete coverage of the industry. However, to be certain of the adequacy of this mailing list, checks are made of trade associations, trade journals, and other trade media for names and addresses of new plants.

Each capacity questionnaire when received is carefully checked for possible omissions or errors. It is also compared with previous reports to insure the accuracy of the reported data. When doubtful entries are found, confirmation or correction is obtained from the reporter.

Primary objectives of these space surveys are:

1. To provide a service to the warehousing industry whereby the statistical results will help industry members in planning an

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1/ The 1941 survey was made on June 1.

Prepared by M. R. Banks and K. D. Ackers, under the general supervision of I. E. Wissinger, Chief Dairy Statistics Branch, Agricultural Estimates Division, Agricultural Marketing Service.

efficient and orderly expansion program in areas needing additional storage space and identifying areas where sufficient space already exists.

2. To determine the size of the national refrigerated capacity in order to obtain knowledge of trends, area changes, distribution of space, and other factors important to both industry and Government.

3. To provide a benchmark for checking the adequacy of storage occupancy data reported by the warehousing industry each month for the Cold Storage Report.

4. To have a record of plant sites which may be used for locating refrigerated space for the preservation of perishable foods.

DEFINITIONS

The terms used in this report are defined as follows:

Public cold storage--Any artificially cooled warehouse where the operator is engaged in storing food commodities requiring refrigeration, for others for pay.

Private cold storage--Any artificially cooled warehouse where the operator conducts a warehousing business to facilitate his main function as a producer, processor, or distributor, but does not store commodities for others for pay.

Semiprivate cold storage--Any artificially cooled warehouse where the operator uses part of the space to care for the storage of his own commodities and, in addition, stores in his plant various food commodities for others for pay.

Meat-packing establishment--Any plant engaged in processing dressed animal products for food. For this report and survey, only that space used for the storage of products is included. Refrigerated working space, chill rooms, coolers used exclusively for handling dressed carcasses prior to shipping, and smoking and curing rooms are excluded.

Apple house--Any warehouse--public, private, or semiprivate--where the operator is engaged mainly or exclusively in the storage of apples or pears.

Gross space--The space inside refrigerated rooms, measured from wall to wall and floor to ceiling, excluding elevators, stairs, vestibules, and like enclosures.

Usable piling space--Space for the storage of commodities, that is, space inside rooms measured wall to wall and floor to ceiling, minus the space provided for ventilation (outside of pile); space occupied by coils, aisles, posts, sprinklers, and the like.

Number of plants--Represents the number of individual plant locations. Included under this are individual plants of different addresses, company

plants of different address, and plants having different intra-company designations.

Cities--As used in this report, cities are standard metropolitan areas. Generally, these are major urban centers of 50,000 population or more and include all of the closely linked surrounding areas.

Geographic regions--The regions and States covered in the survey are as follows;

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

Middle Atlantic: New York, New Jersey, and Pennsylvania.

East North Central: Ohio, Indiana, Illinois, Michigan, and Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

South Atlantic: Deleware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.

East South Central: Kentucky, Tennessee, Alabama, and Mississippi.

West South Central: Arkansas, Louisiana, Oklahoma, and Texas.

Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.

Pacific: Washington, Oregon, and California.

SUMMARY

According to the October 1, 1959 refrigerated warehouse survey made by the Crop Reporting Board of the Agricultural Marketing Service, the national capacity, excluding Alaska and Hawaii, totaled 942 million gross cubic feet. This was 41 million cubic feet more than the capacity on October 1, 1957. Except for meat-packers, all of the other types of refrigerated facilities reported capacity gains. The major increase, however, was in public general warehouse capacity--up 25 million to 528 million gross cubic feet. The reduction in meat-packing capacity reflects a trend that has prevailed for several years. With technological advances in meat curing, less refrigerated space is needed for storing these products and, in addition, the meat-packing industry has razed old packing plants without replacement.

Refrigerated facilities may be found in each State but, as may be expected, the distribution pattern follows certain economic requirements. In regions of high density population or highly specialized agricultural activity, a concentration of refrigerated space exists to provide a service of storing food for urban consumption or for processing fresh food for use in the post-harvest season. This may explain the high capacity availability

Table 1. --Warehouses, all types: Refrigerated storage capacity, United States, October 1, 1959

Type of refrigerated warehouse 1/	Plants	Gross space 1/			Usable piling space 1/		
		Zero° F. or below	Above Zero° F. to 50° F.	Total	Zero° F. or below	Above Zero° F. to 50° F.	Total
	Number	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Public general.....	792	350,068	178,180	528,248	254,599	132,694	387,293
Private and semi-private general.....	586	89,069	66,536	155,605	66,236	47,680	113,916
Meat-packing plant.....	147	16,644	34,228	50,872	11,501	23,327	34,828
Apple houses:							
Public.....	104	1,458	37,545	39,003	1,254	30,845	32,099
Private and semi-private.....	1,323	3,114	165,425	168,539	2,759	133,437	136,196
Total.....	2,952	460,353	481,914	942,267	336,349	367,983	704,332

1/ For definitions of terms used, see page 4.

Table 2. --Warehouses, all types: Gross refrigerated storage capacity, United States, 1941-1959

Type of refrigerated storage	1941	1943	1945	1947	1949	1951	1953	1955	1957	1959
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Public 1/.....	371,771	389,991	403,832	408,232	413,256	425,114	466,470	498,599	545,061	567,251
Private 1/.....	43,973	49,544	62,291	83,781	85,417	94,929	118,201	153,079	210,705	239,832
Semiprivate 1/.....	48,407	42,081	45,254	52,035	85,781	92,744	84,290	92,771	83,469	84,312
Meat packing plants 2/..	302,232	169,650	134,814	130,993	116,324	98,229	79,089	68,568	62,162	50,872
Total.....	766,383	651,266	646,191	675,041	700,778	711,016	748,050	813,017	901,397	942,267

1/ Includes apple house refrigerated storage space.
2/ Prior to 1943 refrigerated working space in meat packing plants was included.

in the Middle Atlantic, East North Central, and Pacific Regions. Collectively they made up 64 percent of the national gross storage area. With the South Atlantic included, three-fourths of the total is accounted for.

Just prior to World War II, the national refrigerated capacity was primarily cooler (above 0° to 50° F.) space with a ratio of 6 cubic feet for each cubic foot of freezer space (0° F. and below). This ratio now is almost 1 to 1. Cooler capacity totaled 482 million cubic feet and freezer, 460 million cubic feet on October 1.

Public general facilities held under roof 56 percent of the national refrigerated storage space. Seventeen percent of the total gross area was classified as private and semiprivate general. Apple storage facilities accounted for 22 percent of the refrigerated capacity and meat packing warehouses made up the remaining 5 percent. Cooler space made up a little more than half of the refrigerated area available in the United States and was located primarily in the New England, Middle Atlantic, East North Central, West North Central, South Atlantic, and Pacific Regions.

Certain of our metropolitan areas have great refrigerated capacities for feeding their populations. Traditionally, these urban areas were the locations of the larger refrigerated facilities. With the advent of improved freezing methods, there began a tendency for plants to locate close to points of production. However, a major portion of the refrigerated capacity still is located in major metropolitan areas. New York, Chicago, Los Angeles, Kansas City, and Philadelphia, in the order named, were the five leading storage centers.

GROSS REFRIGERATED CAPACITY

Gross refrigerated warehouse space in the United States reported by 2,952 warehouses totaled 942 million cubic feet on October 1, 1959 (table 1).[2/] Slightly more than one-half (51 percent) of the total gross space could hold temperatures above 0° F. to 50° F. and the remainder, 49 percent, could hold temperatures of 0° F. and below (fig. 1). This is in contrast to a decade earlier when 24 percent of the gross space could hold temperatures of 0° F. and below.

Public facilities made up a major portion (56 percent) of the total gross space while apple houses (all types) ranked next in importance with a little more than one-fifth of the total. Private and semiprivate warehousemen operated 17 percent of the national refrigerated area and meat packers, 5 percent.

Since the 1957 survey, gross space increased 41 million cubic feet (table 2). However, the average increase of the biennial surveys during 1949-57 was 50 million cubic feet. The largest increase in gross space, 25 million cubic feet, occurred in public warehouses. Apple house space in-

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2/ These figures exclude 10 warehouses reporting 2.1 million cubic feet in Alaska and 3 warehouses reporting 1.0 million in Hawaii.

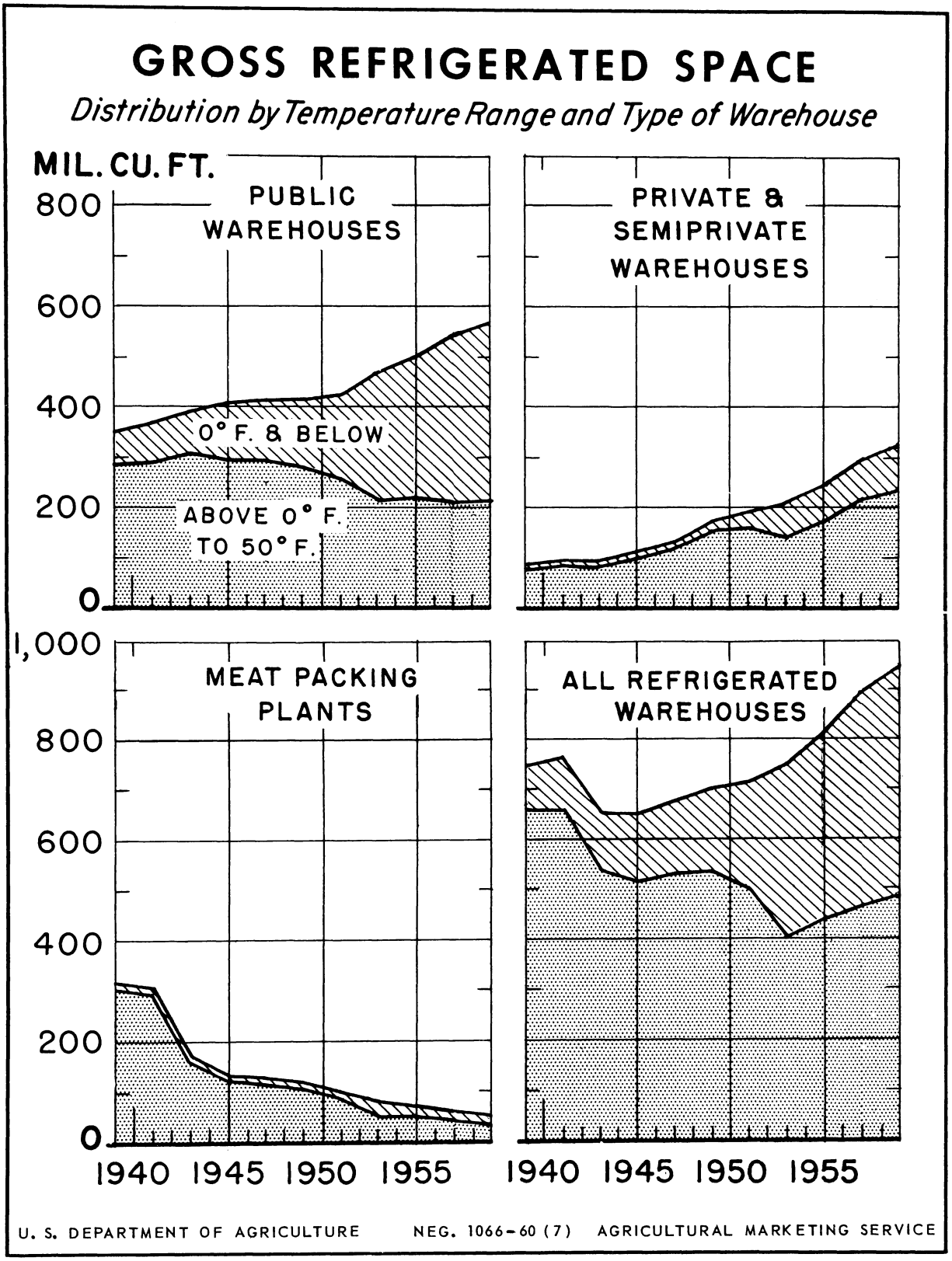
GROSS REFRIGERATED SPACE
Distribution by Temperature Range and Type of Warehouse
MIL. CU. FT.
PUBLIC WAREHOUSES
PRIVATE & SEMIPRIVATE WAREHOUSES
MEAT PACKING PLANTS
ALL REFRIGERATED WAREHOUSES
0° F. & BELOW
ABOVE 0° F. TO 50° F.
800
600
400
200
0
1,000
1940 1945 1950 1955
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Figure 1

creased by 15 million. Private and semiprivate space increased 12 million. These gains were partially offset by a reduction of 11 million cubic feet in meat packing space.

Traditionally, the growth of the refrigerated warehousing industry has been directly related to the growth and expansion of cities into large metropolitan areas. As a result, a large portion of our country's refrigerated storage capacity is located within these heavily populated areas. Metropolitan areas with at least 3 million cubic feet (gross capacity) and with at least 3 warehouses accounted for 41 percent of the total space reported in the United States.3/ Also, within their limits were 23 percent of the total number of warehouses in the Nation. Temperature-holding characteristics of facilities within these city-areas differed from the United States average. In metropolitan area warehouses, 62 percent of the space could hold temperatures below 0° F. compared with the national average of only 49 percent at zero or under. New York, Chicago, Los Angeles, and Kansas City, in that order led all others in amount of freezer space.

Pacific Coast States (table 4) exceeded all other regions in the Nation in amount of gross refrigerated space. This is the sixth consecutive survey year they have held this position. Nearly 268 million cubic feet were reported in Washington, Oregon, and California. Combined, their capacities represented more than one-fourth of the country's total. Middle Atlantic States with 18 percent and East North Central with 17 percent of the gross space, were next in prominence. Since the 1955 survey the relative position of these three regions to the national total has remained stable.

All States had some refrigerated warehouse space on October 1, 1959. However, seven States (fig. 2) each had less than 1 million cubic feet. Ten States each had over 35 million cubic feet. Washington, with 121 million cubic feet represented 13 percent of the United States total and ranked first in the Nation. Most of this space, 96 million cubic feet, could only hold temperatures above 0° F. to 50° F., and was used primarily for apple, pear, or other fresh fruit storage. California's 109 million cubic feet and New York's 98 million ranked second and third. Thus, three States accounted for 35 percent of the total warehouse space.

Compared with the 1957 survey, losses in refrigerated warehouse space were shown in 11 States. Most significant were: 6 million in Missouri, 4 million in Illinois, and 3 million in Oklahoma. However, 11 other States (fig. 3) each had increases of 2 million or more cubic feet. California's gain of 7.3 million cubic feet was foremost. It was followed by Oregon's 6.8 million, Michigan's 5.2, New Jersey's 3.9, Wisconsin's 3.5 and Florida's 2.8.

Gross storage space of the leading ten States on October 1, 1959 was larger than a decade earlier. In Florida, gross capacity was nearly eight times that of 1949. Slower rates of gain occured in the other leading states

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3/ Warehouse capacity in each of the cities shown in tables 11 and 12 includes all refrigerated facilities within the city named and in closely linked surrounding areas.

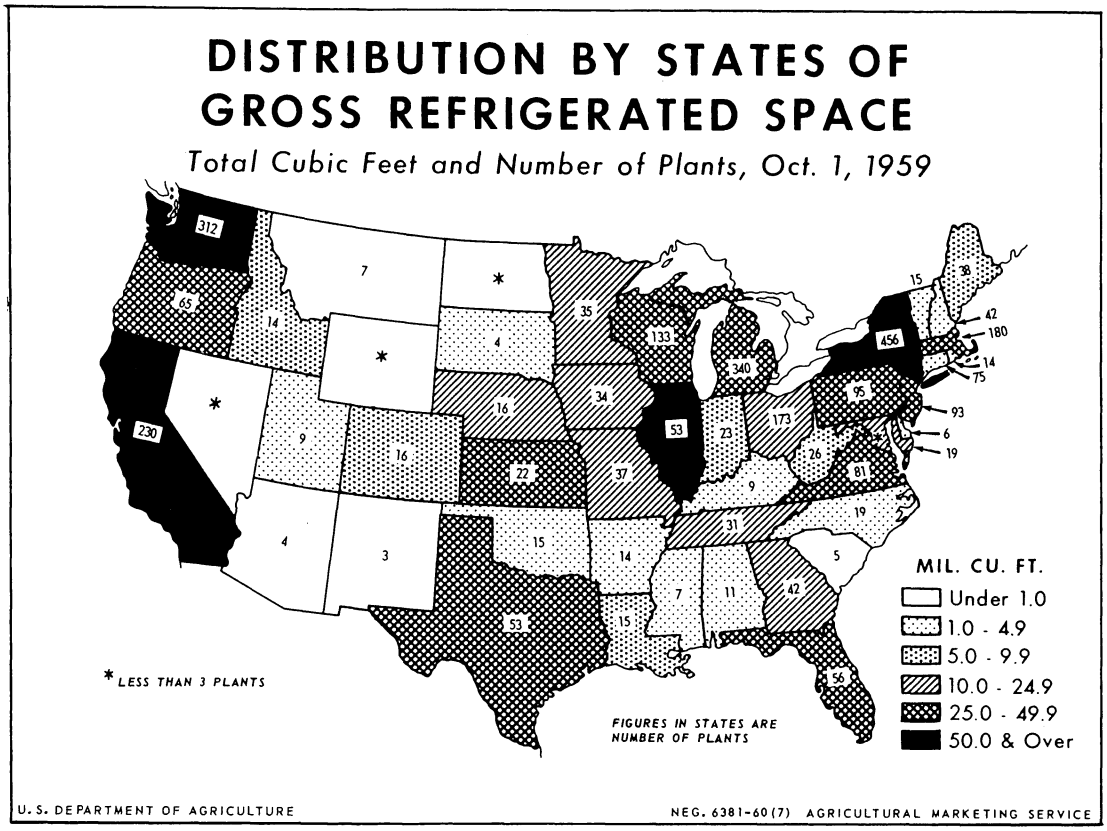


Figure 2

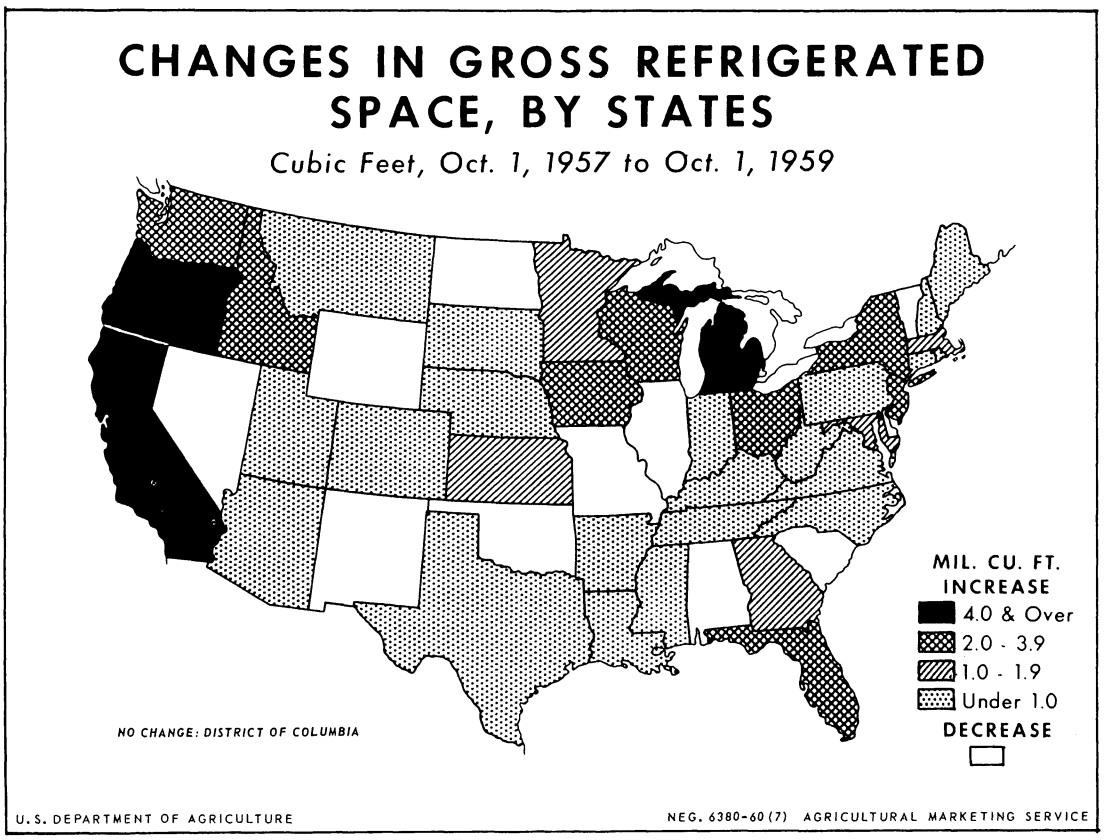


Figure 3

with the exception of Illinois which had an appreciable reduction during this 10-year period.

FREEZER SPACE

An increase of 28 million cubic feet brought the national gross freezer (0° F. and under) capacity to 460 million on October 1, 1959 (table 6). The average freezer space gain was 66 million cubic feet per survey period during 1949-57.

Operators of public refrigerated warehouses provided three-fourths of the national total freezer space (fig. 4). This capacity of 350 million cubic feet compares with 134 million reported in 1949. Private and semi-private warehousemen operated 89 million cubic feet compared with 21 million a decade earlier. The freezer space operated as public was much larger than that classified as private and semiprivate but the rate of increase of the latter from 1949 to 1959 was double that of public. This sharp increase in private and semiprivate warehouse space was brought about primarily by increased construction of warehouses in areas where production of frozen fruits, juices, and vegetables made greatest strides.

Meat packers maintained 17 million cubic feet of freezer space. While this was 5 million cubic feet above that reported in 1949, it was well below the 29 million cubic feet reported in 1953.

Nearly one-fourth of the national freezer space was located in the Pacific Coast States. Middle Atlantic States ranked second in amount of freezer space, followed by the East North Central, South Atlantic, and West North Central. Five States had two-fifths of the total freezer space. California led with 14 percent followed by New York's 8 percent, Florida's 8 percent, Illinois' 6 percent, and Washington's 5 percent. In the three Pacific Coast States, the 110 million cubic feet of space reported was an increase of 12 million over the previous survey. The 1949-57 average increase of the biennial surveys in this region was 18 million cubic feet. Freezer capacity increased since October 1, 1957, in all regions except the East North Central where it decreased slightly. Regionally, the most rapid growth in freezer space during the last decade occurred in the South Atlantic States. The 8 million cubic feet reported there in 1949 had risen to 64 million in 1959. Much of this growth paralleled the citrus industry's expansion in frozen juices.

COOLER SPACE

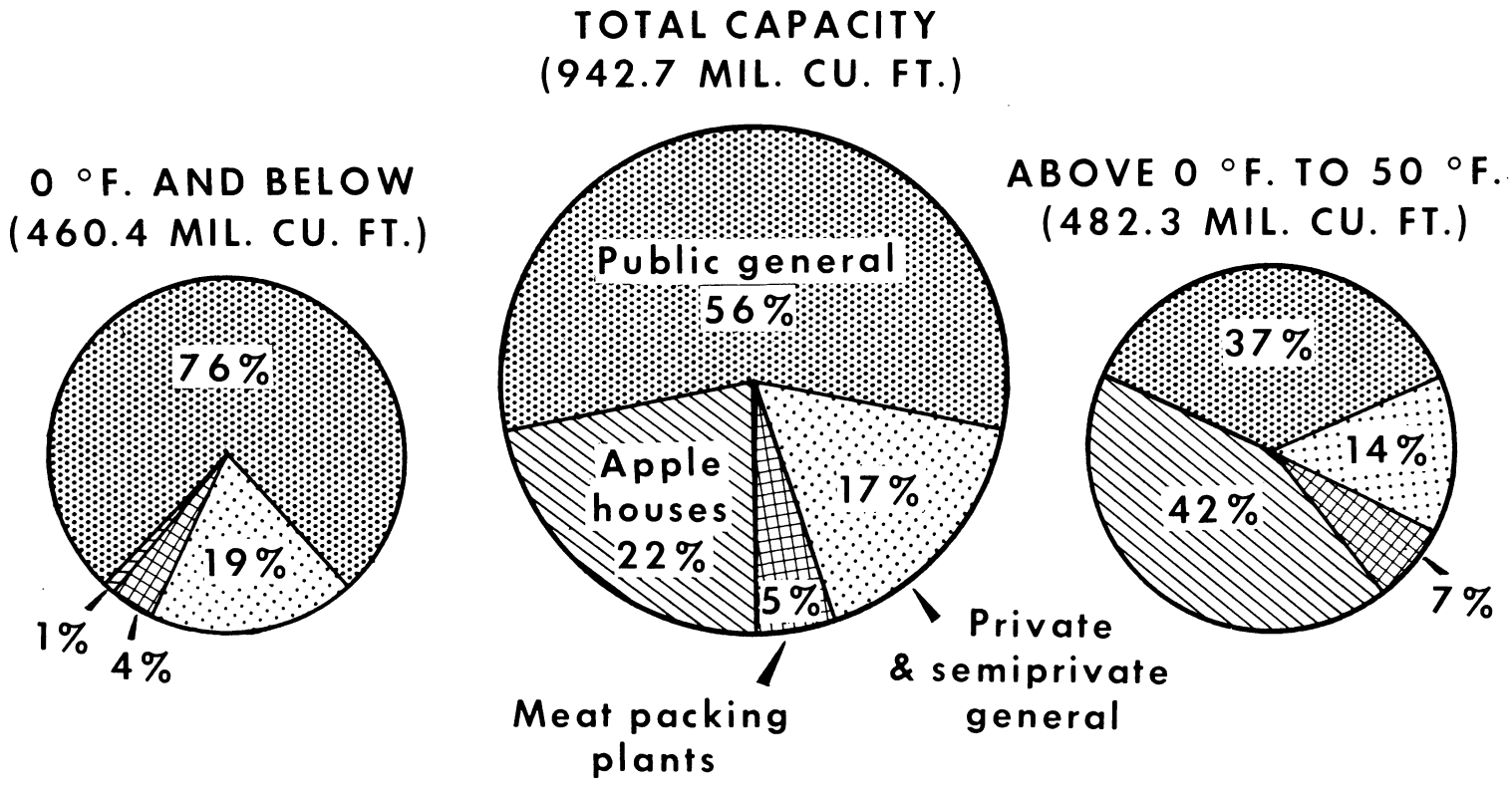
On October 1, 1959, refrigerated warehouses had 482 million cubic feet of gross space that could only hold temperatures above 0° F. to 50° F. (table 8). This was a gain of 13 million cubic feet since 1957. However, compared with a decade earlier, it represented a reduction of 51 million cubic feet.

Increases in cooler space since the last survey were confined to public general and apple warehouses. No change was reported in private and semi-private capacity. However, in the meat packing warehouses, gross cooler space decreased, a continuation of a trend that started in the late 1930's. During

Figure 4

GROSS REFRIGERATED SPACE

Distribution by Type of Warehouse, Oct. 1, 1959



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the same period, apple house capacity increased by 63 million cubic feet, but these gains were more than offset by a 51 million cubic foot reduction in public cooler space and 70 million in meat packing warehouses.

For the country as a whole, apple houses accounted for 42 percent of the cooler space on October 1, 1959, public general warehousemen operated 37 percent; private and semiprivate, 14 percent; and meat packers 7 percent.

Pacific Coast States had more cooler space than any other area. About one-third of the country's total cooler capacity was located in these three States. Middle Atlantic and East North Central regions each accounted for 19 percent. Since the survey in 1957, modest cooler space gains were indicated for all regions except the West North Central and West South Central where losses occurred. Only two regions, South Atlantic and Pacific, had more cooler space than in 1949. Apparently, the production of fruits and vegetables for fresh market or processor use was a factor for increasing this type of space in these areas.

PUBLIC GENERAL REFRIGERATED CAPACITY

Public general gross capacity increased 25 million cubic feet since the previous survey to 528 million cubic feet. This was reported by 792 plants. Public warehousemen operated twice as much freezer space as cooler. Their 350 million cubic feet of freezer space was 76 percent of the country's total freezer capacity.

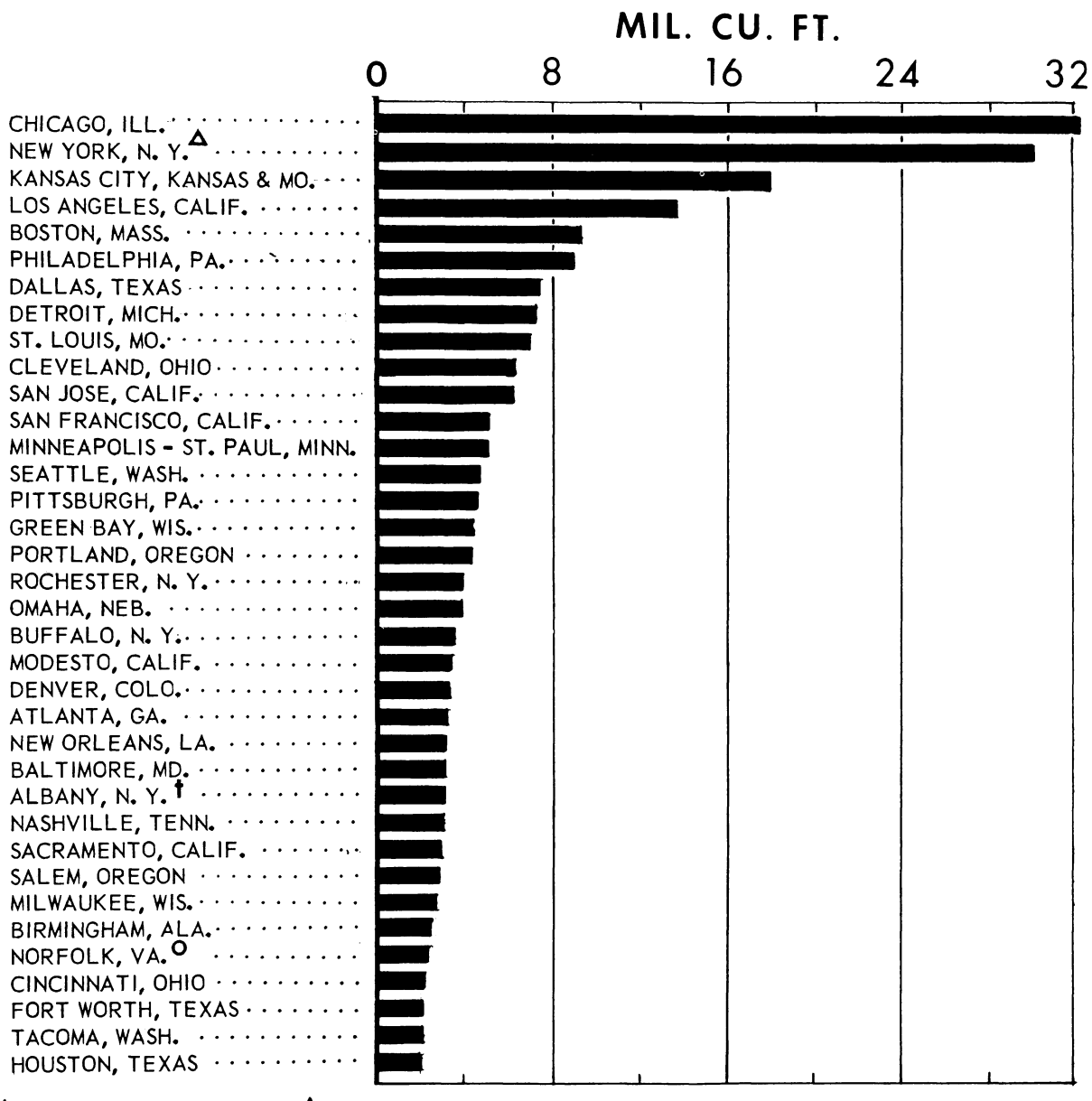
Public space in 36 metropolitan areas (table 12) accounted for more than one-third of all the gross refrigerated capacity in the United States. Moreover, public warehousing in these areas represented 61 percent of the total space available for general public use. In the Chicago area, the amount of public warehouse space, 48 million cubic feet, has increased 9 million since 1957. Nearly all of this increase resulted from a reclassification of non-public space to public. The New York and northeastern New Jersey area ranked second. The 42 million cubic feet reported was 1 million below that of 1957. Chicago and New York areas made up 17 percent of the country's public warehouse space, Kansas City was third with 23 million cubic feet; and Los Angeles was fourth with 19 million. Boston, Philadelphia, and Dallas were the only other areas with 10 million or more cubic feet of public refrigerated warehouse space. Figure 5 shows graphically the capacities in each of the metropolitan areas.

For the first time on record, the East North Central States led all other regions in amount of public warehouse space. It exceeded the previous leader, Middle Atlantic, by 1 million cubic feet. In each successive survey since 1949, the difference between these two regions had narrowed. During this period, public space in the Middle Atlantic States showed only a 3 million increase whereas in the East North Central States the gain was 32 million.

Of the 13 million cubic foot increase in public warehouse capacity in the East North Central States since 1957, about 8 million was due to reclassification. This area contained nearly 21 percent of the Nation's space operated for public use. In second position was the Middle Atlantic

CITIES* WITH 2 MILLION OR MORE CUBIC FEET USABLE PILING SPACE

Each Having 3 or More Public General Refrigerated Warehouses



*METROPOLITAN AREAS △INCLUDES NORTHEASTERN NEW JERSEY

†INCLUDES SCHENECTADY AND TROY ○INCLUDES PORTSMOUTH, NEWPORT NEWS AND HAMPTON

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Figure 5

with 20 percent. The Pacific region was third with 18 percent of the total.

South Atlantic States showed the greatest rate of growth since 1949, up 113 percent. Mountain States increased 84 percent and West North Central 74 percent. The smallest rate of growth since 1949 was in Middle Atlantic States, up only 3 percent. In the New England area, public warehouse space decreased.

For many years New York State was the recognized leader in the amount of public warhouse space. However, for the second consecutive survey, California led all other States, having 60.9 million cubic feet in 1959 compared with 60.8 million for New York. In 1957, California warehouses reported 61.7 million cubic feet and New York warehouses 58.7 million.

Illinois with 52.3 million cubic feet ranked third, a position she has maintained for many years. Warehousemen in the first three ranked States control about one-third of the Nation's public warehouse space. In contrast to the heavy concentration of public space in these three States, the District of Columbia and 9 States each had less than three plants doing public business.

New York had more plants operated for public use than any other State. Its 103 plants compare with 91 in California. Losses in public space were reported in 17 States. The largest declines occurred in Missouri and Florida. Public warehouse space increased by more than 1 million cubic feet in 11 States. Of these, Illinois showed the largest gain.

In the 10 States with the most public capacity, the amount of change in the past decade varied from a reduction of 5 percent in Pennsylvania to an increase of 286 percent in Kansas. Washington had an increase of 72 percent; California 69 percent; Michigan 51 percent; Texas 43 percent; Illinois 42 percent; Massachusetts 25 percent; New York 7 percent; and New Jersey 3 percent.

PRIVATE AND SEMIPRIVATE CAPACITY

Only one out of each six cubic feet of refrigerated space was operated as a private or semiprivate general warehouse, according to the 1959 survey. This class of warehousing had 156 million cubic feet, a gain of 12 million over the previous survey year. The Pacific Coast Region, with 35 percent of the country's private and semiprivate warehouse space, was far ahead of other regions.

More than one-fifth, 22 percent, was operated by warehousemen in South Atlantic States. Middle Atlantic States, with 16 percent, ranked third followed by East North Central's 12 percent. Private and semiprivate space did not increase in all regions. The East North Central's capacity declined 9 million cubic feet because of a reclassification of space to public use. In the East South Central and West South Central regions, capacity declines were small. However, in the Pacific region, an 8 million cubic foot addition was made to private and semiprivate capacity. Other increases were as follows: South Atlantic, 6 million; West North Central, 3 million; Middle Atlantic and Mountain, each 2 million; and New England, 67,000 cubic feet.

More than one-half of the states increased their capacity of private and semiprivate space since the 1957 survey. California reported the largest increase, 4.8 million cubic feet. It was followed by 3.9 million in Florida; 3.4 in Oregon; 2.9 in New Jersey; 2.1 in Idaho; and 2.0 in Minnesota. Twenty-two percent of the country's private and semiprivate space was under roof in California, while Florida accounted for 14 percent. More than 98 percent of the private and semiprivate space in Florida could hold temperatures below 0° F. in contrast to only 41 percent in California.

Among the leading 10 States with private and semiprivate capacity, Florida and Virginia showed the most rapid growth rate since 1949. Florida's increase was 777 percent and Virginia's 584 percent. New Jersey s capacity was up 285 percent; Oregon, 214 percent; and California, 207 percent. Other important gains were: Michigan, 132 percent; Washington, 103 percent; Pennsylvania, 96 percent; Wisconsin, 89 percent; and New York, 80 percent.

MEAT PACKING WAREHOUSE CAPACITY

The number and capacity of meat packing warehouses continued to decline. From 171 warehouses with 62 million cubic feet in 1957, this industry now has 147 warehouses and 51 million gross cubic feet. Nearly 80 percent of the total meat packing space reported in the Nation was confined to three regions--West North Central States, 48 percent; East North Central, 21 percent; and Middle Atlantic, 9 percent.

West North Central and West South Central regions each had losses of 4 million cubic feet since 1957. Meat packers for many years have consistantly reduced the amount of refrigerated space used for their own warehousing. Moreover, since 1949 space has been reduced 63 percent in the East North Central and 52 percent in the West North Central States.

Traditionally, meat packing space was centered in the North Central States and still is. These States accounted for 70 percent of the total. Iowa led with 13 percent. Nebraska, with nearly 9 percent, ranked second. The 1959 survey showed that more States reported reductions than increases. Reductions of more than 1 million cubic feet were reported by six States: Missouri, 3.2 million cubic feet; Oklahoma, 3.1 million; Illinois, 2.3 million; California, 1.4 million; Texas, 1.1 million; and Ohio, 1.0 million. Wisconsin, however, had a gain of over a million cubic feet.

In the last decade, space classified as meat packing has been lowered substantially in the 10 leading States. However, Wisconsin's space showed the least change with only a 14 percent reduction in the past 10 years. Illinois had the largest reduction, 76 percent, followed by Kansas, down 75 percent and Nebraska off 61 percent.

APPLE HOUSE CAPACITY

Gross storage capacity in apple houses increased 15 million cubic feet from October 1957 to October 1959. Nearly 208 million cubic feet were reported by 1,427 plants on October 1, 1959. Thus, almost half of the total number of refrigerated plants in the country were providing space for fresh fruit storage.

GROSS REFRIGERATED SPACE

% Distribution of Type of Warehouse Space, by Regions, Oct. 1, 1959

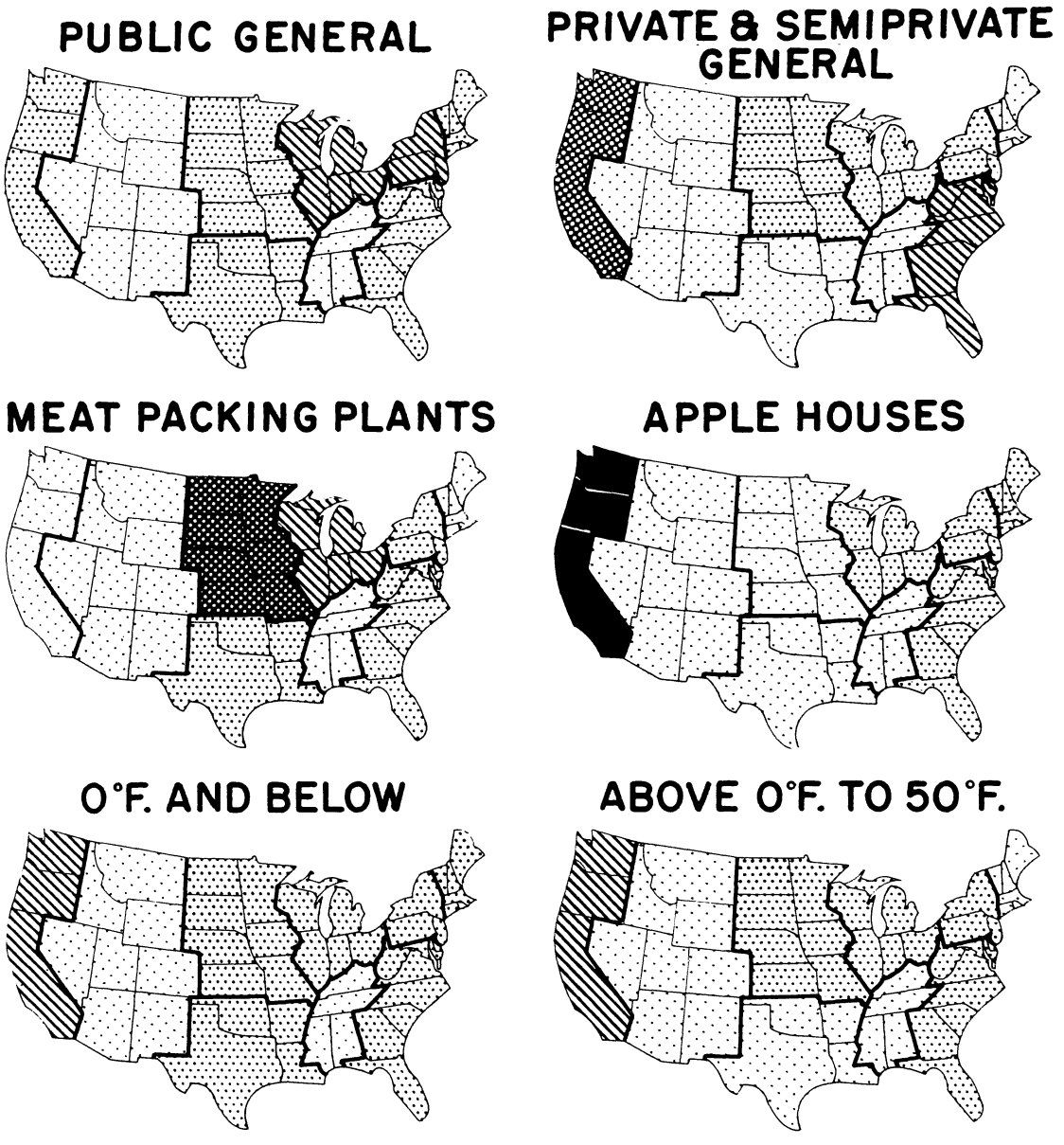

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Figure 6

With 56 percent of the total, Pacific Coast States topped all others in amount of apple house space (fig. 6). This was more than the combined total of the next four leading areas whose share of the total was as follows: Middle Atlantic, 16 percent; South Atlantic, 11 percent; East North Central, 10 percent; and New England, 7 percent.

More than 8 million cubic feet of space was added between 1957 and 1959 in the Pacific Coast States, followed by 6 million in the East North Central and 2 million in New England. Partially offsetting these increases was a reduction of 1 million cubic feet in South Atlantic States.

Of the total apple house space, 81 percent was classified as private and semiprivate. The remainder was for public use, located primarily in the Pacific, South Atlantic and Middle Atlantic regions.

Twenty-five States reported apple house space with nine having losses since the previous survey. Generally, these losses were minor. Virginia's space declined 1.8 million cubic feet due to reclassification to public general use. The most significant gains since 1957 were in California, Michigan, Washington, Ohio, and Massachusetts. More than 80 percent of the apple space was operated within six States. Washington, with 44 percent, was far ahead of the others. It was followed by New York's 10 percent, Virginia's 8 percent, Michigan's 7 percent, California's 7 percent, and Oregon's 6 percent. Michigan had the most apple houses with 288. Washington with 237 was second followed by New York with 212, Massachusetts with 141, and Ohio also with 141.

Of the 1,427 apple houses reporting, 104 plants were operated as public space. The 39 million cubic feet of these public plants was 19 percent of the total apple warehouse space. Public apple house capacity was reduced 3 million cubic feet since October 1, 1957. Washington, Virginia, and New York controlled 75 percent of the public apple space. Twenty-four States reported private and semiprivate apple warehouse space and only 5 of these showed losses. Michigan, Ohio, California, Washington, New York, and Virginia each increased more than 2 million cubic feet. Four of the 10 leading States with the largest amount of apple house space in 1959, showed a rapid rate of growth since 1949. In Michigan, capacity increased by 405 percent; Ohio, 200 percent; California, 152 percent; and Massachusetts 127 percent. Although Washington's apple warehouse space increased only 40 percent in the last decade, capacity-wise it exceeded the growth shown by other States. During the 1949-59 decade, 26 million cubic feet of space was added to Washington's capacity compared with Michigan's 12 million, the second largest apple storage capacity increase.

Table 3. --Number of refrigerated warehouses, United States, October 1, 1959

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	Number	Number	Number	Number	Number	Number
Maine	38	5	1/	-	1/	26
New Hampshire	42	1/	1/	-	-	40
Vermont	15	1/	1/	-	-	12
Massachusetts	180	24	14	1/	1/	140
Rhode Island	14	1/	1/	-	-	10
Connecticut	75	5	-	-	1/	69
New England	364	39	24	1/	1/	297
New York	456	103	116	25	25	187
New Jersey	93	22	7	-	4	60
Pennsylvania	95	34	14	10	4	33
Middle Atlantic	644	159	137	35	33	280
Ohio	173	17	10	1/	1/	136
Indiana	23	6	6	9	1/	1/
Illinois	53	32	4	8	1/	1/
Michigan	340	26	25	1/	1/	282
Wisconsin	133	48	76	1/	-	1/
East North Central	722	129	121	30	17	425
Minnesota	35	13	16	6	-	-
Iowa	34	18	7	9	-	-
Missouri	37	24	1/	6	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	16	9	1/	1/	-	-
Kansas	22	15	1/	4	-	1/
West North Central	149	82	33	31	1/	1/
Delaware	6	1/	1/	1/	-	-
Maryland & D. C.	20	11	4	1/	-	1/
Virginia	81	21	4	3	11	42
West Virginia	26	4	3	1/	1/	16
North Carolina	19	13	4	-	1/	1/
South Carolina	5	1/	1/	1/	-	-
Georgia	42	25	13	4	-	-
Florida	56	27	29	-	-	-
South Atlantic	255	105	61	12	14	63
Kentucky	9	6	1/	1/	-	-
Tennessee	31	20	6	1/	-	1/
Alabama	11	7	1/	1/	-	-
Mississippi	7	4	3	-	-	-
East South Central	58	37	13	7	-	1/
Arkansas	14	11	1/	-	1/	-
Louisiana	15	11	4	-	-	-
Oklahoma	15	6	1/	1/	-	-
Texas	53	33	1/	1/	-	-
West South Central	97	61	25	10	1/	-
Montana	7	4	1/	1/	-	-
Idaho & Wyoming	15	6	1/	1/	-	-
Colorado	16	10	1/	1/	-	-
New Mexico	3	1/	1/	-	-	-
Arizona	4	1/	-	1/	-	-
Utah & Nevada	11	7	1/	1/	-	-
Mountain	56	32	15	1/	-	-
Washington	312	35	34	6	25	212
Oregon	65	22	27	1/	1/	13
California	230	91	96	1/	1/	30
Pacific	607	148	157	12	35	255
United States	2,952	792	586	147	104	1,323

1/ Not shown to avoid disclosure of individual plant reports.

Table 4. --Total gross refrigerated space, by type of warehouse, United States, October 1, 1959

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	5,181	2,641	1/	-	1/	1,569
New Hampshire	1,699	1/	1/	-	-	1,609
Vermont	1,202	1/	1/	-	-	915
Massachusetts	27,494	19,167	1,655	1/	1/	6,162
Rhode Island	1,978	1/	1/	-	-	231
Connecticut	4,822	1,873	-	-	1/	2,921
New England	42,376	25,634	2,641	1/	1/	13,407
New York	97,687	60,829	12,149	2,998	7,106	14,605
New Jersey	35,623	24,554	7,384	-	643	3,042
Pennsylvania	38,271	22,910	5,633	1,531	1,864	6,333
Middle Atlantic	171,581	108,293	25,166	4,529	9,613	23,980
Ohio	22,677	17,327	405	1/	1/	3,576
Indiana	7,260	3,907	1,149	2,019	1/	1/
Illinois	58,112	52,274	435	3,219	1/	1/
Michigan	43,087	19,449	8,802	1/	1/	14,263
Wisconsin	29,056	16,308	8,510	1/	-	1/
East North Central	160,192	109,265	19,301	10,783	2,245	18,598
Minnesota	19,417	10,467	5,364	3,586	-	-
Iowa	16,517	8,463	1,339	6,715	-	-
Missouri	24,052	18,281	1/	-	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	12,509	7,397	1/	1/	-	-
Kansas	27,746	23,426	1/	3,064	-	1/
West North Central	105,011	68,586	11,134	24,626	1/	1/
Delaware	1,808	1/	1/	1/	-	-
Maryland & D. C.	11,299	8,135	1,171	1/	-	1/
Virginia	36,045	11,775	7,430	345	10,037	6,458
West Virginia	7,036	1,593	1,313	1/	1/	3,219
North Carolina	3,109	2,372	241	-	1/	1/
South Carolina	777	1/	1/	1/	-	-
Georgia	13,717	11,401	1,305	1,011	-	-
Florida	39,611	17,792	21,819	-	-	-
South Atlantic	113,402	54,346	34,247	2,622	10,942	11,245
Kentucky	3,850	2,986	1/	1/	-	-
Tennessee	12,818	10,765	822	1/	-	1/
Alabama	4,797	4,418	1/	1/	-	-
Mississippi	1,192	707	485	-	-	-
East South Central	22,657	18,876	1,682	1,795	-	1/
Arkansas	3,930	3,677	1/	-	1/	-
Louisiana	6,413	5,882	531	-	-	-
Oklahoma	3,921	2,657	1/	1/	-	-
Texas	27,028	23,683	1/	1/	-	-
West South Central	41,292	35,899	2,367	2,927	1/	-
Montana	546	330	1/	1/	-	-
Idaho & Wyoming	6,756	3,057	1/	1/	-	-
Colorado	5,761	4,940	1/	1/	-	-
New Mexico	335	1/	1/	-	-	-
Arizona	915	1/	-	1/	-	-
Utah & Nevada	3,701	3,228	1/	1/	-	-
Mountain	18,014	12,479	3,919	1/	-	-
Washington	120,951	19,207	10,054	798	12,092	78,800
Oregon	37,876	14,716	11,388	1/	1/	11,312
California	108,915	60,947	33,706	1/	1/	10,568
Pacific	267,742	94,870	55,148	1,574	15,470	100,680
United States	942,267	528,248	155,605	50,872	39,003	168,539

1/ Not shown to avoid disclosure of individual plant reports.

Table 5. --Total usable refrigerated space, by type of warehouse, United States, October 1, 1959

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	4,012	1,911	1/	-	1/	1,259
New Hampshire	1,429	1/	1/	-	-	1,350
Vermont	967	1/	1/	-	-	739
Massachusetts	19,380	12,855	1,246	1/	1/	4,829
Rhode Island	1,398	1/	1/	-	-	183
Connecticut	3,747	1,349	-	-	1/	2,375
New England	30,933	17,497	2,101	1/	1/	10,735
New York	75,007	46,632	7,832	2,574	5,758	12,211
New Jersey	24,417	16,628	4,808	-	566	2,415
Pennsylvania	27,937	16,314	4,088	963	1,610	4,962
Middle Atlantic	127,361	79,574	16,728	3,537	7,934	19,588
Ohio	17,428	13,074	284	1/	1/	2,919
Indiana	5,011	2,923	837	1,078	1/	1/
Illinois	39,183	35,395	260	1,812	1/	1/
Michigan	33,215	14,471	6,671	1/	1/	11,641
Wisconsin	22,817	13,070	6,638	1/	-	1/
East North Central	117,654	78,933	14,690	7,086	1,721	15,224
Minnesota	12,838	6,924	3,705	2,209	-	-
Iowa	12,037	6,483	932	4,622	-	-
Missouri	16,070	12,646	1/	1,737	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	8,545	4,945	1/	1/	-	-
Kansas	21,427	18,710	1/	2,073	-	1/
West North Central	73,927	50,099	6,741	16,548	1/	1/
Delaware	1,207	1/	1/	1/	-	-
Maryland & D. C.	8,373	5,880	948	1/	-	1/
Virginia	30,049	9,341	6,434	213	8,523	5,538
West Virginia	5,574	1,284	916	1/	1/	2,682
North Carolina	2,585	1,990	207	-	1/	1/
South Carolina	651	1/	1/	1/	-	-
Georgia	8,975	7,180	1,022	773	-	-
Florida	30,777	14,396	16,381	-	-	-
South Atlantic	88,191	41,042	26,517	2,105	9,209	9,318
Kentucky	2,865	2,554	1/	1/	-	-
Tennessee	9,585	8,000	639	1/	-	1/
Alabama	3,915	3,635	1/	1/	-	-
Mississippi	882	503	379	-	-	-
East South Central	17,247	14,692	1,295	960	-	1/
Arkansas	2,853	2,638	1/	-	1/	-
Louisiana	4,642	4,162	480	-	-	-
Oklahoma	2,698	1,817	1/	1/	-	-
Texas	19,558	17,041	1/	1/	-	-
West South Central	29,751	25,658	1,877	2,139	1/	-
Montana	459	281	1/	1/	-	-
Idaho & Wyoming	5,112	2,309	1/	1/	-	-
Colorado	4,494	3,944	1/	1/	-	-
New Mexico	290	1/	1/	-	-	-
Arizona	602	1/	-	1/	-	-
Utah & Nevada	2,609	2,275	1/	1/	-	-
Mountain	13,566	9,465	3,055	1/	-	-
Washington	95,874	14,312	7,244	542	9,791	63,985
Oregon	28,390	11,503	8,629	1/	1/	7,977
California	81,438	44,518	25,039	1/	1/	8,802
Pacific	205,702	70,333	40,912	1,057	12,636	80,764
United States	704,332	387,293	113,916	34,828	32,099	136,196

1/ Not shown to avoid disclosure of individual plant reports.

Table 6. --Gross refrigerated space, by type of warehouse, United States, October 1, 1959

ZERO° F. AND BELOW

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	3,106	2,291	1/	-	1/	-
New Hampshire	66	1/	1/	-	-	-
Vermont	300	1/	1/	-	-	13
Massachusetts	16,626	14,944	1,479	1/	1/	3
Rhode Island	1,290	1/	1/	-	-	3
Connecticut	1,328	1,324	-	-	-	4
New England	22,716	20,049	2,444	1/	1/	23
New York	37,810	33,416	3,109	854	195	236
New Jersey	19,304	15,979	3,205	-	2	118
Pennsylvania	20,559	16,773	2,950	335	96	405
Middle Atlantic	77,673	66,168	9,264	1,189	293	759
Ohio	11,127	10,796	115	1/	1/	1/
Indiana	4,012	2,970	541	501	-	-
Illinois	28,724	27,545	262	904	1/	1/
Michigan	18,753	12,619	5,878	1/	1/	31
Wisconsin	6,718	4,565	504	1/	-	1/
East North Central	69,334	58,495	7,300	3,475	18	46
Minnesota	15,078	8,912	3,821	2,345	-	-
Iowa	11,091	7,323	1,145	2,623	-	-
Missouri	13,808	11,890	1/	892	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	7,694	6,162	1/	1/	-	-
Kansas	12,917	11,398	1/	554	-	1/
West North Central	61,496	46,191	7,539	7,762	1/	1/
Delaware	1,452	1/	1/	1/	-	-
Maryland & D. C.	8,021	6,796	1,101	1/	-	1/
Virginia	6,412	4,025	1,750	20	1/	-
West Virginia	1,741	643	870	1/	1/	1/
North Carolina	1,727	1,603	124	-	-	-
South Carolina	547	1/	1/	1/	-	-
Georgia	6,582	5,373	819	390	-	-
Florida	37,321	15,925	21,396	-	-	-
South Atlantic	63,803	35,390	26,906	681	617	209
Kentucky	1,792	1,772	1/	1/	-	-
Tennessee	8,893	8,077	729	1/	-	1/
Alabama	2,830	2,633	1/	1/	-	-
Mississippi	519	200	319	-	-	-
East South Central	14,034	12,682	1,233	119	-	1/
Arkansas	3,222	3,222	-	-	-	-
Louisiana	4,426	3,959	467	-	-	-
Oklahoma	2,409	1,695	1/	1/	-	-
Texas	18,641	16,784	1/	1/	-	-
West South Central	28,698	25,660	1,148	1,890	-	-
Montana	244	178	1/	1/	-	-
Idaho & Wyoming	4,843	2,695	1/	1/	-	-
Colorado	3,877	3,406	1/	1/	-	-
New Mexico	209	1/	1/	-	-	-
Arizona	687	1/	-	1/	-	-
Utah & Nevada	2,948	2,772	1/	1/	-	-
Mountain	12,808	9,803	2,513	1/	-	-
Washington	24,599	15,829	6,767	484	488	1,031
Oregon	22,630	12,157	10,300	1/	1/	-
California	62,562	47,644	13,655	1/	1/	1,042
Pacific	109,791	75,630	30,722	836	530	2,073
United States	460,353	350,068	89,069	16,644	1,458	3,114

1/ Not shown to avoid disclosure of individual plant reports.

Table 7. --Usable refrigerated space, by type of warehouse, United States, October 1, 1959

ZERO° F. AND BELOW

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	2,389	1,674	1/	-	1/	-
New Hampshire	61	1/	1/	-	-	-
Vermont	233	1/	1/	-	-	5
Massachusetts	11,021	9,743	1,100	1/	1/	3
Rhode Island	887	1/	1/	-	-	2
Connecticut	1,016	1,013	-	-	-	3
New England	15,607	13,483	1,936	1/	1/	13
New York	28,845	25,430	2,338	718	160	199
New Jersey	13,021	10,870	2,063	-	1	87
Pennsylvania	14,917	11,913	2,319	251	83	351
Middle Atlantic	56,783	48,213	6,720	969	244	637
Ohio	8,546	8,294	83	1/	1/	1/
Indiana	3,221	2,238	650	333	-	-
Illinois	18,111	17,424	159	516	1/	1/
Michigan	13,733	8,964	4,585	1/	1/	26
Wisconsin	5,345	3,726	397	1/	-	1/
East North Central	48,956	40,646	5,874	2,383	17	36
Minnesota	10,139	5,985	2,761	1,393	-	-
Iowa	8,327	5,751	643	1,933	-	-
Missouri	9,414	8,284	1/	630	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	5,053	4,074	1/	1/	-	-
Kansas	9,856	9,103	1/	302	-	1/
West North Central	43,393	33,550	4,588	5,253	1/	1/
Delaware	945	1/	1/	1/	-	-
Maryland & D. C.	6,006	4,995	893	1/	-	1/
Virginia	5,079	3,131	1,365	20	1/	-
West Virginia	1,343	551	578	1/	1/	1/
North Carolina	1,470	1,370	100	-	-	-
South Carolina	473	1/	1/	1/	-	-
Georgia	4,449	3,551	654	244	-	-
Florida	29,244	13,176	16,068	-	-	-
South Atlantic	49,009	27,551	20,186	512	563	197
Kentucky	1,514	1,499	1/	1/	-	-
Tennessee	6,638	6,003	571	1/	-	-
Alabama	2,366	2,223	1/	1/	-	-
Mississippi	400	160	240	-	-	-
East South Central	10,918	9,885	945	88	-	-
Arkansas	2,312	2,312	-	-	-	-
Louisiana	3,246	2,823	423	-	-	-
Oklahoma	1,596	1,126	1/	1/	-	-
Texas	13,366	11,936	1/	1/	-	-
West South Central	20,520	18,197	1,028	1,295	-	-
Montana	208	153	1/	1/	-	-
Idaho & Wyoming	3,697	2,021	1/	1/	-	-
Colorado	3,045	2,730	1/	1/	-	-
New Mexico	192	1/	1/	-	-	-
Arizona	444	1/	-	1/	-	-
Utah & Nevada	2,099	1,957	1/	1/	-	-
Mountain	9,685	7,390	1,985	1/	-	-
Washington	18,324	11,734	4,945	332	389	924
Oregon	17,212	9,318	7,808	1/	1/	-
California	45,942	34,632	10,221	1/	1/	950
Pacific	81,478	55,684	22,974	516	430	1,874
United States	336,349	254,599	66,236	11,501	1,254	2,759

1/ Not shown to avoid disclosure of individual plant reports.

Table 8. --Gross refrigerated space, by type of warehouse, United States, October 1, 1959

ABOVE ZERO° F. TO 50° F.

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	2,075	350	1/	-	1/	1,569
New Hampshire	1,633	1/	1/	-	-	1,609
Vermont	902	-	-	-	-	902
Massachusetts	10,868	4,223	176	1/	1/	6,159
Rhode Island	688	1/	1/	-	-	228
Connecticut	3,494	549	-	-	1/	2,917
New England	19,660	5,585	197	1/	1/	13,384
New York	59,877	27,413	9,040	2,144	6,911	14,369
New Jersey	16,319	8,575	4,179	-	641	2,924
Pennsylvania	17,712	6,137	2,683	1,196	1,768	5,928
Middle Atlantic	93,908	42,125	15,902	3,340	9,320	23,221
Ohio	11,550	6,531	290	1/	1/	3,561
Indiana	3,248	937	608	1,518	1/	1/
Illinois	29,388	24,729	173	2,315	1/	1/
Michigan	24,334	6,830	2,924	1/	1/	14,232
Wisconsin	22,338	11,743	8,006	1/	-	1/
East North Central	90,858	50,770	12,001	7,308	2,227	18,552
Minnesota	4,339	1,555	1,543	1,241	-	-
Iowa	5,426	1,140	194	4,092	-	-
Missouri	10,244	6,391	1/	1,799	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	4,815	1,235	1/	1/	-	-
Kansas	14,829	12,028	1/	2,510	-	1/
West North Central	43,515	22,395	3,595	16,864	1/	1/
Delaware	356	1/	1/	1/	-	-
Maryland & D. C.	3,278	1,339	70	1/	-	1/
Virginia	29,633	7,750	5,680	325	9,420	6,458
West Virginia	5,295	950	443	1/	1/	3,010
North Carolina	1,382	769	117	-	1/	1/
South Carolina	230	1/	1/	1/	-	-
Georgia	7,135	6,028	486	621	-	-
Florida	2,290	1,867	423	-	-	-
South Atlantic	49,599	18,956	7,341	1,941	10,325	11,036
Kentucky	2,058	1,214	1/	1/	-	-
Tennessee	3,925	2,688	93	1/	-	1/
Alabama	1,967	1,785	1/	1/	-	-
Mississippi	673	507	166	-	-	-
East South Central	8,623	6,194	449	1,676	-	1/
Arkansas	708	455	1/	-	1/	-
Louisiana	1,987	1,923	64	-	-	-
Oklahoma	1,512	962	1/	1/	-	-
Texas	8,387	6,899	1/	1/	-	-
West South Central	12,594	10,239	1,219	1,037	1/	-
Montana	302	152	1/	1/	-	-
Idaho & Wyoming	1,913	362	1/	1/	-	-
Colorado	1,884	1,534	1/	1/	-	-
New Mexico	126	1/	1/	-	-	-
Arizona	228	1/	-	1/	-	-
Utah & Nevada	753	456	1/	1/	-	-
Mountain	5,206	2,676	1,406	1/	-	-
Washington	96,352	3,378	3,287	314	11,604	77,769
Oregon	15,246	2,559	1,088	1/	1/	11,312
California	46,353	13,303	20,051	1/	1/	9,526
Pacific	157,951	19,240	24,426	738	14,940	98,607
United States	481,914	178,180	66,536	34,228	37,545	165,425

1/ Not shown to avoid disclosure of individual plant reports.

Table 9. --Usable refrigerated space, by type of warehouse, United States, October 1, 1959

ABOVE ZERO° F. TO 50° F.

State and region	Total	Public	Private and semiprivate	Meat packers	Apple-houses	
					Public	Private and semiprivate
	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Maine	1,623	237	1/	-	1/	1,259
New Hampshire	1,368	1/	1/	-	-	1,350
Vermont	734	-	-	-	-	734
Massachusetts	8,359	3,112	146	1/	1/	4,826
Rhode Island	511	1/	1/	-	-	181
Connecticut	2,731	336	-	-	1/	2,372
New England	15,326	4,014	165	1/	1/	10,722
New York	46,162	21,202	5,494	1,856	5,598	12,012
New Jersey	11,396	5,758	2,745	-	565	2,328
Pennsylvania	13,020	4,401	1,769	712	1,527	4,611
Middle Atlantic	70,578	31,361	10,008	2,568	7,690	18,951
Ohio	8,882	4,780	201	1/	1/	2,909
Indiana	1,790	685	187	745	1/	1/
Illinois	21,072	17,971	101	1,296	1/	1/
Michigan	19,482	5,507	2,086	1/	1/	11,615
Wisconsin	17,472	9,344	6,241	1/	-	1/
East North Central	68,698	38,287	8,816	4,703	1,704	15,188
Minnesota	2,699	939	944	816	-	-
Iowa	3,710	732	289	2,689	-	-
Missouri	6,656	4,362	1/	1,107	1/	1/
North Dakota	1/	1/	-	-	-	-
South Dakota	1/	1/	-	1/	-	-
Nebraska	3,492	871	1/	1/	-	-
Kansas	11,571	9,607	1/	1,771	-	1/
West North Central	30,534	16,549	2,153	11,295	1/	1/
Delaware	262	1/	1/	1/	-	-
Maryland & D. C.	2,367	885	55	1/	-	1/
Virginia	24,970	6,210	5,069	193	7,960	5,538
West Virginia	4,231	733	338	1/	1/	2,485
North Carolina	1,115	620	107	-	1/	1/
South Carolina	178	1/	1/	1/	-	-
Georgia	4,526	3,629	368	529	-	-
Florida	1,533	1,220	313	-	-	-
South Atlantic	39,182	13,491	6,331	1,593	8,646	9,121
Kentucky	1,351	1,055	1/	1/	-	-
Tennessee	2,947	1,997	68	1/	-	1/
Alabama	1,549	1,412	1/	1/	-	-
Mississippi	482	343	139	-	-	-
East South Central	6,329	4,807	350	872	-	1/
Arkansas	541	326	1/	-	1/	-
Louisiana	1,396	1,339	57	-	-	-
Oklahoma	1,102	691	1/	1/	-	-
Texas	6,192	5,105	1/	1/	-	-
West South Central	9,231	7,461	849	844	1/	-
Montana	251	128	1/	1/	-	-
Idaho & Wyoming	1,415	288	1/	1/	-	-
Colorado	1,449	1,214	1/	1/	-	-
New Mexico	98	1/	1/	-	-	-
Arizona	158	1/	-	1/	-	-
Utah & Nevada	510	318	1/	1/	-	-
Mountain	3,881	2,075	1,070	1/	-	-
Washington	77,550	2,578	2,299	210	9,402	63,061
Oregon	11,178	2,185	821	1/	1/	7,977
California	35,496	9,886	14,818	1/	1/	7,852
Pacific	124,224	14,649	17,938	541	12,206	78,890
United States	367,983	132,694	47,680	23,327	30,845	133,437

1/ Not shown to avoid disclosure of individual plant reports.

Table 10. --Warehouses, all types: Refrigerated storage capacity, in cities having 3 or more plants and at least 3 million cubic feet of usable piling space, October 1, 1959

City and State 1/	Plants	Gross space			Usable piling space		
		Zero° F. or below	Above 0° F. to 50° F.	Total	Zero° F. or below	Above 0° F. to 50° F.	Total
	Number	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Boston, Mass.....	26	11,758	3,607	15,365	7,596	2,715	10,311
New York, N. Y. & Northeastern, N. J...	103	28,630	22,754	51,384	20,629	15,943	36,572
Albany, Schenectady & Troy, N. Y.....	8	2,705	1,797	4,502	2,134	1,325	3,459
Buffalo, N. Y.....	41	3,101	5,316	8,417	2,273	4,232	6,505
Rochester, N. Y.....	11	2,907	4,210	7,117	2,128	3,406	5,534
Philadelphia, Pa.....	40	11,611	5,202	16,813	7,679	4,063	11,742
Pittsburgh, Pa.....	8	4,953	2,519	7,472	3,721	1,660	5,381
Cincinnati, Ohio.....	6	2,780	1,162	3,942	2,131	1,020	3,151
Cleveland, Ohio.....	14	4,881	4,156	9,037	3,628	2,974	6,602
Chicago, Ill.....	27	27,410	23,657	51,067	17,325	16,440	33,765
Detroit, Mich.....	48	5,554	5,719	11,273	3,770	4,514	8,284
Grand Rapids, Mich.....	80	290	4,093	4,383	213	3,323	3,536
Green Bay, Wis.....	19	1,586	5,204	6,790	1,302	4,211	5,513
Milwaukee, Wis.....	8	2,899	2,798	5,697	2,291	2,050	4,341
Minn.-St. Paul, Minn...	8	7,994	1,747	9,741	5,342	1,142	6,484
Kansas City, Kans.& Mo.	10	12,240	12,546	24,786	9,094	9,755	18,849
St. Louis, Mo.....	14	6,216	5,852	12,068	4,534	4,377	8,911
Omaha, Nebr.....	8	6,486	4,255	10,741	4,228	3,079	7,307
Wichita, Kans.....	3	2,438	2,203	4,641	1,773	1,653	3,426
Baltimore, Md.....	8	4,137	1,255	5,392	2,969	995	3,964
Atlanta, Ga.....	8	3,411	2,744	6,155	1,994	1,610	3,604
Orlando, Florida.....	5	5,696	15	5,711	4,476	14	4,490
Nashville, Tenn.....	7	3,187	1,462	4,649	2,326	1,100	3,426
New Orleans, La.....	7	2,952	1,693	4,645	2,014	1,144	3,158
Dallas, Texas.....	7	8,234	2,675	10,909	5,876	2,068	7,944
Denver, Colo.....	12	3,344	1,505	4,849	2,635	1,126	3,761
Seattle, Wash.....	20	6,836	2,639	9,475	4,840	1,919	6,759
Portland, Ore.....	18	7,707	885	8,592	5,876	647	6,523
Salem, Ore.....	5	3,975	303	4,278	3,068	270	3,338
Fresno, Calif.....	16	1,037	2,622	3,659	780	2,264	3,044
Los Angeles, Calif.....	41	19,015	6,297	25,312	13,657	4,651	18,308
Sacramento, Calif.....	6	4,002	1,371	5,373	3,206	1,066	4,272
San Francisco-Oakland Calif.....	17	5,992	2,302	8,294	4,068	1,590	5,658
San Jose, Calif.....	15	9,109	2,805	11,914	6,981	2,261	9,242
Modesto, Calif.....	4	5,056	105	5,161	4,169	80	4,249
Total.....	678	240,129	149,475	389,604	170,726	110,687	281,413

1/ Standard metropolitan areas.

Table 11. --Public general warehouses: Refrigerated storage capacity in cities having 3 or more plants and at least 2 million cubic feet of usable piling space, October 1, 1959

City and State 1/	Plants	Gross space			Usable piling space		
		Zero° F. or below	Above 0° F. to 50° F.	Total	Zero° F. or below	Above 0° F. to 50° F.	Total
	Number	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.	1,000 cu. ft.
Boston, Mass.....	13	11,478	2,739	14,217	7,348	1,981	9,329
New York, N. Y. & Northeastern N. J...	31	27,048	14,582	41,630	19,627	10,441	30,068
Albany, Schenectady & Troy, N. Y.....	3	2,347	1,673	4,020	1,855	1,236	3,091
Buffalo, N. Y.....	10	2,746	1,886	4,632	2,030	1,500	3,530
Rochester, N. Y.....	7	2,613	2,711	5,324	1,874	2,065	3,939
Philadelphia, Pa.....	15	11,173	2,252	13,425	7,332	1,635	8,967
Pittsburgh, Pa.....	5	4,288	1,944	6,232	3,225	1,333	4,558
Cincinnati, Ohio.....	3	2,428	391	2,819	1,882	312	2,194
Cleveland, Ohio.....	4	4,771	3,898	8,669	3,561	2,788	6,349
Chicago, Ill.....	22	27,049	21,424	48,473	17,168	15,231	32,399
Detroit, Mich.....	8	5,554	4,372	9,926	3,770	3,496	7,266
Green Bay, Wisc.....	9	1,266	4,197	5,463	1,056	3,432	4,488
Milwaukee, Wisc.....	5	2,339	1,108	3,447	1,955	850	2,805
Minn.-St. Paul, Minn..	6	6,680	964	7,644	4,531	577	5,108
St. Louis, Mo.....	6	5,020	4,104	9,124	3,688	3,246	6,934
Kansas City, Kans.&Mo.	6	10,826	11,916	22,742	8,434	9,411	17,845
Omaha, Nebraska.....	3	5,063	724	5,787	3,319	485	3,804
Baltimore, Md.....	5	3,954	462	4,416	2,819	283	3,102
Norfolk, Va.....	5	1,686	1,418	3,104	1,305	1,086	2,391
Atlanta, Ga.....	6	3,089	2,681	5,770	1,739	1,561	3,300
Nashville, Tenn.....	4	2,866	1,233	4,099	2,125	895	3,020
Birmingham, Ala.....	3	1,760	1,135	2,895	1,488	925	2,413
New Orleans, La.....	6	2,885	1,694	4,579	1,961	1,144	3,105
Dallas, Texas.....	4	8,000	2,125	10,125	5,685	1,735	7,420
Fort Worth, Texas.....	3	2,200	1,139	3,339	1,362	795	2,157
Houston, Texas.....	3	2,494	413	2,907	1,792	227	2,019
Denver, Colo.....	7	3,050	1,154	4,204	2,461	890	3,351
Seattle, Wash.....	8	4,363	1,912	6,275	3,236	1,427	4,663
Tacoma, Wash.....	7	3,069	193	3,262	1,964	128	2,092
Portland, Ore.....	8	5,526	499	6,025	4,142	344	4,486
Salem, Ore.....	4	3,453	303	3,756	2,598	271	2,869
Los Angeles, Calif....	27	15,568	3,504	19,072	11,072	2,682	13,754
Modesto, Calif.....	3	3,915	99	4,014	3,350	74	3,424
Sacramento, Calif.....	4	3,381	231	3,612	2,740	174	2,914
San Francisco, Calif..	11	5,654	1,812	7,466	3,866	1,242	5,108
San Jose, Calif.....	7	6,661	1,646	8,307	4,885	1,445	6,330
Total.....	281	216,263	104,538	320,801	153,245	77,347	230,592

1/ Standard metropolitan areas.