

COMPETITION IN THE MARKETING  
OF  
VIRGINIA COMMERCIAL TRUCK CROPS

By

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A Thesis Submitted to the Graduate Committee and  
the Department of Agricultural Economics

Virginia Polytechnic Institute

Blacksburg, Virginia

In Partial Fulfillment of the Requirements for the  
Degree  
of  
Master of Science

in

Agricultural Economics

Approved:

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Virginia Polytechnic Institute

May 1, 1934

### ACKNOWLEDGEMENTS

The writer wishes to express his sincere appreciation to Dr. H. N. Young who suggested and outlined this subject and directed the project.

Much credit is due

and their assistants, all of the United States Department of Agriculture, who were generous in providing necessary information and data.

The writer also wishes to thank Dr. F. L. Underwood and those other members of the Agriculture Department of the Virginia Polytechnic Institute for their assistance and cooperation, and Miss Nettie Spears for her kind and efficient clerical help.

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Foreword; scope

Changes in production of truck crops in principal producing areas, and changes in market demand for the consumption of these crops, have intensified the problem of successful marketing. Studies are being made to determine the cause of these changes as well as the effect of the results upon the producers. An attempt is made here to present the part of the picture which shows the extent of commercial truck crop supplies from states (or areas) competing with similar supplies from Virginia.



### Sources of Data

Data for this study were obtained from the "Weekly Summary of Car-lot Shipments", and "Car-lot Unloads of Certain Fruits and Vegetables at 66 Principal Cities", issued by the Bureau of Agricultural Economics of the Department of Agriculture, and car-lot unloads of fruits and vegetables issued by the market news service at the individual markets. Although boat shipments reduced to car-lot equivalents are included, no estimate was made to include express, less than car-lot, or motor truck movements.

### Period Covered

Truck crop production varies over a period of years to such an extent that no one particular year can adequately show the extent of Virginia's truck crop competition. Though it is difficult to determine a period suitable for every condition desired, it is believed that a recent five-year period is most valuable in determining present conditions, as well as the trends that may normally be expected in the future. The seasons from 1928-1929 to 1933-1934 were used to show the trend and the total periodic competition from all sources shipping at the same time with Virginia. The years 1928-1932 were used to show the unloads and the extent of competition at certain principal markets.

### Methods of Presentation

Charts presented show the total week to week shipments for the five seasons, from 1928 to 1934.<sup>1</sup> For six of the commodities studied, a division was made to indicate the total shipments to all outlets from the states which compete most directly with shipments from Virginia. These states were determined by the volume of unloads from states of origin at the principal markets supplied by Virginia products. Additional charts show the approximate shipping seasons for each state which compete most directly with Virginia.

The principal markets for each commodity are determined by tables which point out the market distribution of Virginia truck crop shipments. Competition at these markets indicate generally the states which compete most directly with Virginia at all markets. The extent and trends of the competition at these principal markets are shown in tabular form by yearly competing unloads, together with the average of the period from 1928-1933.

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<sup>1</sup> The data from which these charts were made are available for reference at the Department of Agricultural Economics, Virginia Polytechnic Institute.

### Historical Background

Virginia ranks among the oldest and most important commercial truck crop producing states. The convenience of transporting vegetable crops by boat and the accessibility to the large consuming areas of the northeast, originally afforded particular advantage to producers in the Norfolk area and Virginia producers on the peninsula east of the Chesapeake Bay. The development of railroad transportation with refrigeration facilities enabled other distant adaptable truck crop producing areas to supply the large markets and increase the interstate and the inter-area competition. With improved facilities for transcontinental shipments, it is not uncommon now for Virginia to compete with all the commercial truck crop producing states of the union. This coupled with the development of storage facilities, has changed the condition of the markets in such a manner as to necessitate efficiency in marketing operations. By thus increasing the market supply without a corresponding increase in the demand for the product, each producer is affected by the decrease in the price he receives for his product.

The geographical location between the early and the late producing areas of the Atlantic Coast enables the Virginia producers to avoid, in a measure, the peak supplies of fresh vegetables on the large markets. The storage stocks of some less perishable commodities, such as potatoes and cabbage, offset this advantage to some extent.

The purpose of this thesis, therefore, is to aid in the efficient marketing of truck crops by determining the most favorable time to market Virginia truck crops, the volume produced by competing areas, the trend of this competition, and the extent of supplies on the various markets, in order that the Virginia truck crop producers may operate to receive maximum returns.

## Economic Importance of Virginia

## Commercial Truck Crops

The following tables show the comparative acreage, production, yield per acre, total farm value, farm value per acre, and price per unit of production of the important truck crops grown in Virginia. In addition, statistics are included to show the relative importance of each crop compared with figures for the total United States. Compared with all truck crops grown for commercial purposes in Virginia, the White Potato Crop is the most important. An average of 9,605,000 bushels of potatoes were grown on 67,640 average acres during the seasons 1929-1933. (Tables No. 1 and No. 2). The production and

Table 1.- Acreage of the Twelve Leading Truck Crops in Virginia.\* (Seasons 1929-1933)

Crop	1929	1930	1931	1932	1933	Average (1929-1933)
Beans, snap	3,050	3,600	2,700	5,100	3,550	3,600
Beets	370	550	500	450	450	464
Cabbage	7,630	7,700	6,350	7,050	7,550	7,256
Cucumbers	1,000	1,000	750	700	500	790
Kale	1,800	1,800	2,400	1,800	1,800	1,920
Peas, green	2,600	2,320	1,600	1,490	1,380	1,878
Potatoes, Irish <sup>1</sup>	68,600	81,700	76,900	58,000	53,000	67,640
Spinach	7,320	7,900	6,500	4,300	6,150	6,434
Strawberries	8,980	7,900	5,520	6,350	7,440	7,238
Sweet Potatoes	36,000	37,000	38,000	38,000	35,000	36,800
Tomatoes	2,400	2,600	2,800	3,000	3,000	2,760
Watermelons	4,100	4,300	4,300	4,040	5,100	4,368

\* Data compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

<sup>1</sup> Irish potatoes of the Early Producing States only.

Table 2.- Production of the Leading Truck Crops in Virginia.\* (Seasons 1929-1933)

(000 omitted)

Crop	Unit	1929	1930	1931	1932	1933	Average
Beans, snap	Bu.	626	579	253	454	232	429
Beets	Bu.	148	135	140	122	90	127
Cabbage	Tons	56.4	28.1	32.1	19.4	28.8	32.96
Cucumbers	Bu.	150	75	75	56	42	80
Kale	Bu.	810	738	480	1080	900	802
Peas, green	Bu.	182	70	128	83	59	104
Potatoes, Irish <sup>1</sup>	Bu.	11,938	12,255	10,639	7,364	5,831	9,605
Spinach	Bu.	2,036	2,512	2,280	1,172	1,728	1,946
Strawberries	Crates	628	403	370	413	595	482
Sweet Potatoes	Bu.	5,076	2,960	5,750	3,610	3,885	4,056
Tomatoes	Bu.	276	312	420	480	315	361
Watermelons	Melons	1,476	1,376	1,505	1,495	2,040	1,578

\*Data compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

<sup>1</sup>Irish potatoes of the Early Producing States only.

acreage of the Virginia Potato Crop represents about one-fourth of the total from the early producing states. (Table No. 3). The importance of the Virginia potato crop is emphasized by the fact that practically the entire commercial supply reaches the market in June and July when unload receipts from competing states are usually light. (Charts No. 7 and No. 8).

Though Virginia produces only about six per cent of the sweet potatoes in the United States (Table No. 3), the bulk of the commercial market supply of the East originates in this state, especially during the fall months. The heavy sweet potato production of the South and the United States as a whole is not marketed commercially but is utilized locally for home consumption or as pulp for feed. With an average of

Table 3.- Average Acreage and Production of the Twelve Leading Truck Crops in Virginia Compared With the United States. \* (Average for 5 seasons, 1929-1933)

Crop	Acreage				Per cent Virginia of United States	Unit	Production		Per cent Virginia of United States
	Virginia		United States				Average		
	Average	Rank	Average	Rank		Virginia (1000)	United States (1000)		
Beans, snap	3,600	7	112,438	7	3	Bu.	429	10,191	4
Beets	464	12	10,110	11	5	Bu.	127	1,796	7
Cabbage	7,256	3	122,800	6	6	Tons	33	809	4
Cucumbers	790	11	46,622	10	2	Bu.	80	4,300	2
Kale	1,920	9	1,920	12	100	Bu.	802	802	100
Peas, green	1,878	10	90,398	8	2	Bu.	104	8,745	2
Potatoes, Irish <sup>1</sup>	67,650	1	294,222	2	23	Bu.	9,605	37,893	25
Spinach	6,434	5	51,650	9	12	Bu.	1,946	12,639	15
Strawberries	7,238	4	131,700	4	4	Crates	482	10,007	5
Sweet Potatoes	36,800	2	753,400	1	5	Bu.	4,056	64,936	6
Tomatoes	2,760	8	152,586	5	2	Bu.	361	16,684	2
Watermelons	4,368	6	221,976	3	2	Melons	1,578	67,698	2

\* Data compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

<sup>1</sup> Irish Potatoes of the Early Producing States only.



4,056,000 bushels produced on 36,800 acres during the seasons 1929-1933, the sweet potato industry in Virginia ranked second in importance to white potatoes. (Table No. 3).

From the standpoint of acreage cabbage ranked third in importance as a Virginia truck crop. During the period 1929-1933, an average annual area of 7,256 acres of this crop was harvested on Virginia farms. During this same period 7,238 acres of strawberries were grown, 6,434 acres of spinach, 4,368 acres of watermelons and 3,600 acres of snap beans.

It will be noted in tables numbers 1, 2 and 3 that tomatoes, green peas, cucumbers, kale and beets rank well below the above mentioned truck crops in Virginia. However, these minor crops are important to some Virginia producers and therefore should not be overlooked.

Tomatoes are produced primarily for canning purposes in Virginia. During the 1932 season only 3,000 acres were devoted to the commercial market crop compared with 12,900 acres for manufacture. The acreage and production of green peas and cucumbers seem to be decreasing, yet in 1933, 1380 acres of green peas were harvested and 500 acres of cucumbers. The average and production of these two crops in 1933 dropped considerably from the average for the seasons 1929-1933. (Tables numbers 1, 2 and 3).

Virginia produces practically the entire commercial market supply of kale. Although other areas near the Eastern markets raise small quantities, the reports of the Crop Reporting Board of the United States Department of Agriculture disregard all other areas but that of Virginia.

Beets are harvested in Virginia during favorable market conditions, yet this crop is produced on a very small scale. An average of only 127 bushels of this crop were produced on 464 average acres during the 1929-1933 seasons. (Table No. 3).

Yields per acre of the leading truck crops in Virginia are considerably better as a whole than the yields of similar crops grown throughout the United States. (Table No. 4). Snap beans and spinach with an average of 236 and 565 bushels respectively for the 1929-1933 seasons, each showed a yield of over 200 per cent of the yield per acre of the United States as a whole. All of the other important Virginia crops except green peas and sweet potatoes had yields as large as the United States average during the 1929-1933 seasons. (Table No. 4).

The average farm value for Irish potatoes in Virginia for the 1929-1933 seasons was \$8,565,000. This was 25 per cent of the total farm value of the entire early white potato crop of the United States. The farm value of sweet potatoes for the 1929-1933 seasons ranked second in Virginia with a value of \$2,904,000, and the strawberry crop was third with an average value of \$1,036,000. The average farm value of spinach was 17 per cent of the total farm value for the United States during the 5 year season. (Table no. 5).

The farm value per acre of sweet potatoes and spinach for the five years period 1929-1933 exceeded that for the United States by 41 per cent and 38 per cent respectively. Potatoes and snap beans are other Virginia crops that exceeded the United States farm value per acre. Similar values for the remaining important Virginia crops are considerably lower than for the United States as a whole. (Table No. 5).

Table 4.- Yield Per Acre of the Twelve Leading Truck Crops in Virginia Compared with the United States\* (Seasons 1929-1933)

Crop	Unit	1929		1930		1931		1932		1933		Average		Per cent Virginia of United States
		Va.	U. S.	Va.	U. S.	Va.	U. S.	Va.	U. S.	Va.	U. S.	Va.	U. S.	
Beans, snap	Bu.	415	95	285	94	183	85	175	93	120	89	236	91	259
Beets	Bu.	400	180	245	192	280	202	270	153	200	159	279	177	158
Cabbage	Tons	20.7	7.1	10.0	6.5	11.9	6.7	7.4	6.7	12.7	5.8	13	7	186
Cucumbers	Bu.	150	111	75	107	100	92	80	76	85	72	98	92	107
Kale	Bu.	450	450	410	410	200	200	600	600	500	500	432	432	100
Peas, green	Bu.	70	87	30	83	80	72	56	64	43	76	56	76	74
Potatoes, Irish <sup>1</sup>	Bu.	174	131	150	135	138	133	127	121	110	122	140	128	109
Spinach	Bu.	550	299	636	244	575	276	515	242	550	180	566	248	228
Strawberries	Crates	76	68	51	54	67	74	65	71	80	65	68	66	103
Sweet potatoes	Bu.	141	101	80	82	125	80	95	85	111	86	110	87	126
Tomatoes	Bu.	115	118	120	109	150	105	160	112	105	103	130	109	119
Watermelons	1000 Melons	450	323	410	350	200	316	600	260	500	269	432	304	142

\*Data Compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

<sup>1</sup> Irish potatoes of the Early Producing States only.

Table 5.- Average Total Farm Values and Farm Values Per Acre of the Twelve Leading Virginia Truck Crops Compared with Similar Averages for the United States\* (Seasons 1929-1933)

Crop	Total Farm Values				Per cent of United States	Farm Values Per Acre				Per cent Virginia of United States
	Virginia		United States			Virginia		United States		
	Average (\$1000)	Rank	Average (\$1000)	Rank		Average	Rank	Average	Rank	
Beans, snap	\$ 443	6	\$12,009	6	4	\$133.53	4	\$110.01	6	121
Beets	95	11	899	11	11	21.57	12	90.82	10	24
Cabbage	793	5	13,342	5	6	89.28	6	109.12	7	82
Cucumbers	113	10	4,137	10	3	47.78	9	90.29	11	53
Kale	270	7	270	12	100	143.33	2	143.33	3	100
Peas, green	90	12	8,815	7	1	44.30	10	102.42	9	43
Potatoes, Irish <sup>1</sup>	8,565	1	34,914	2	25	125.82	5	119.55	5	105
Spinach	930	4	5,338	9	17	145.62	1	105.87	8	138
Strawberries	1,036	3	32,803	3	3	141.92	3	184.12	1	77
Sweet Potatoes	2,904	2	42,572	1	7	79.51	8	56.51	12	141
Tomatoes	231	8	22,542	4	1	85.07	7	148.92	2	57
Watermelons	169	9	7,441	8	2	39.64	11	126.50	4	31

\* Data Compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

<sup>1</sup> Irish potatoes of the Early Producing States only.

Truck crop prices are so variable that conclusions as to the relative importance of any one crop at any given time are of little importance. The average December prices received by Virginia producers of the same crop throughout the United States are shown in table number six. Virginia cabbage, beet and spinach prices averaged 58, 36 and 13 per cent respectively above the average prices received by producers of these crops in the United States as a whole. Virginia prices for watermelons, kale, cucumbers and the potato crops compare favorably, while prices for tomatoes and green peas grown in Virginia averaged little over 50 per cent of the prices for these crops grown throughout the United States. (Table No. 6).

Table 6.- Average Price December 1 Per Unit of Production of the Twelve Leading Virginia Truck Crops Compared with Similar Average Prices for the United States\*

(Seasons 1929-1933)

Crop	Unit	Virginia	United States	Per cent Virginia of United States
Beans, snap	Bu.	\$ 1.01	\$ 1.22	83
Beets	Bu.	.72	.53	136
Cabbage	Tons	26.83	16.94	158
Cucumbers	Bu.	1.02	1.02	100
Kale	Bu.	.36	.36	100
Peas, green	Bu.	.72	1.35	53
Potatoes, Irish	Bu.	.89	.93	96
Spinach	Bu.	.51	.45	113
Strawberries	Crates	2.14	2.84	75
Sweet Potatoes	Bu.	.62	.67	93
Tomatoes	Bu.	.73	1.36	54
Watermelons - 1000 Melons		114.80	113.00	102

\* Data Compiled by the Crop Reporting Board, Bureau of Agricultural Economics, United States Department of Agriculture.

### Direct and Indirect Competition

All shipments from Virginia that reach market meet direct and indirect competition from other sources. Directly, other states compete at the same markets and at the same time. To determine the extent of this direct competition, each carload shipped from Virginia must be traced to every consuming market which receive supplies from other sources. The condition of the markets varies from season to season and to such a degree that any information regarding direct competition is of value only in estimating the importance of the supplies from states which usually compete with Virginia on certain important markets.

By supplying markets that do not receive vegetables from Virginia, other areas compete more or less indirectly. This indirect competition can only be estimated on the assumption of supplies available from other sources and at other markets during the Virginia season, and from all sources at all markets before Virginia shipments begin. Changes in indirect competition result in price fluctuations, the effects of which are felt when Virginia supplies reach market.

### Motor Truck Shipments

Little attempt has been made in this thesis to show the actual volume of truck crops moved by motor truck from competing areas. Complete data on motor truck shipments are not available and any information on the subject can be only an estimate. However, students of marketing have recently observed the increasing importance and effect of motor truck shipments in certain areas and at certain markets.

It is usually assumed that the volume furnished by long distance motor truck transportation is an additional quantity of fruits and vegetables which would be moved by rail or boat, were motor trucks not available. There are some observers who contend that railroads are used to supply the surplus requirements of the markets within the motor truck range. According to a study made by Messrs. Erice Edwards, and J. W. Park, of the Department of Agriculture, "The truck displacement of rail and boat shipping in areas adjacent to large consuming markets, depends principally upon the degree of perishability and the high shipping costs of the commodities shipped." The percentage of motor truck shipments to total shipments from the more important sections ranged from 96 per cent for spinach to 12 per cent for cabbage. The following percentages were determined for a few of the other commodities used in this thesis:

String beans, 89 per cent; tomatoes, 64 per cent; strawberries, 58 per cent; cucumbers, 25 per cent; potatoes, 25 per cent; and sweet potatoes, 19 per cent.

In general, trends and changes of competition on certain important markets considered in this thesis, are affected more by truck displacement than are trends and changes in competition of total quantities shipped to all points. The main outlets for Virginia truck crops are the large consuming and re-distributing markets of the Middle Atlantic and New England states. Near these areas, there is an increasing quantity of "home-grows", or market-garden products, which supply local demand through motor truck facilities. It has been impossible to obtain figures to show the extent of this supply, therefore, whereas unloads of rail and boat shipments on these markets may show a decrease over recent years, there is no reason to contend that there has been a corresponding decrease in total consumption, either at these principal markets or in smaller areas to which supplies are re-distributed. The importance of the motor truck method of transportation related to data in this study, depends chiefly upon the character of the particular commodity itself, and will, therefore, be discussed separately for each crop.



### Snap Beans

Shipments of snap beans from Virginia are most important in June and October. In June, Virginia competes mainly with heavy shipments from North and South Carolina and lighter shipments from Maryland and Tennessee. In October, Florida provides the principal competition, and in November, December, and January, that state practically dominates the market. (Chart No. 3).

Carlot shipments from all areas shipping snap beans during the Virginia seasons declined considerably during the years from 1931 to 1933 (Chart No. 2). In 1931, 5,788 cars were shipped from all areas between June and November, compared with 1,469 cars in 1933. Shipments from Virginia, on the other hand, decreased from 570 cars in 1931 to 334 in 1933. Compared with a 39 per cent decline of shipments from all areas during the Virginia season, Virginia decreased 59 per cent. It must be noted, however, that the total seasonal shipments from all sources of origin have been increasing since 1926. In that year, total car lot shipments were 4,707, whereas 10,799 cars were shipped in 1932. In 1929, Virginia shipped 1,025 cars, Florida 3,254, and the Carolinas 1,515, whereas in 1932, Florida increased to 6,941 cars, while the Virginia and Carolina shipments declined to 660, and 1,189 cars respectively.

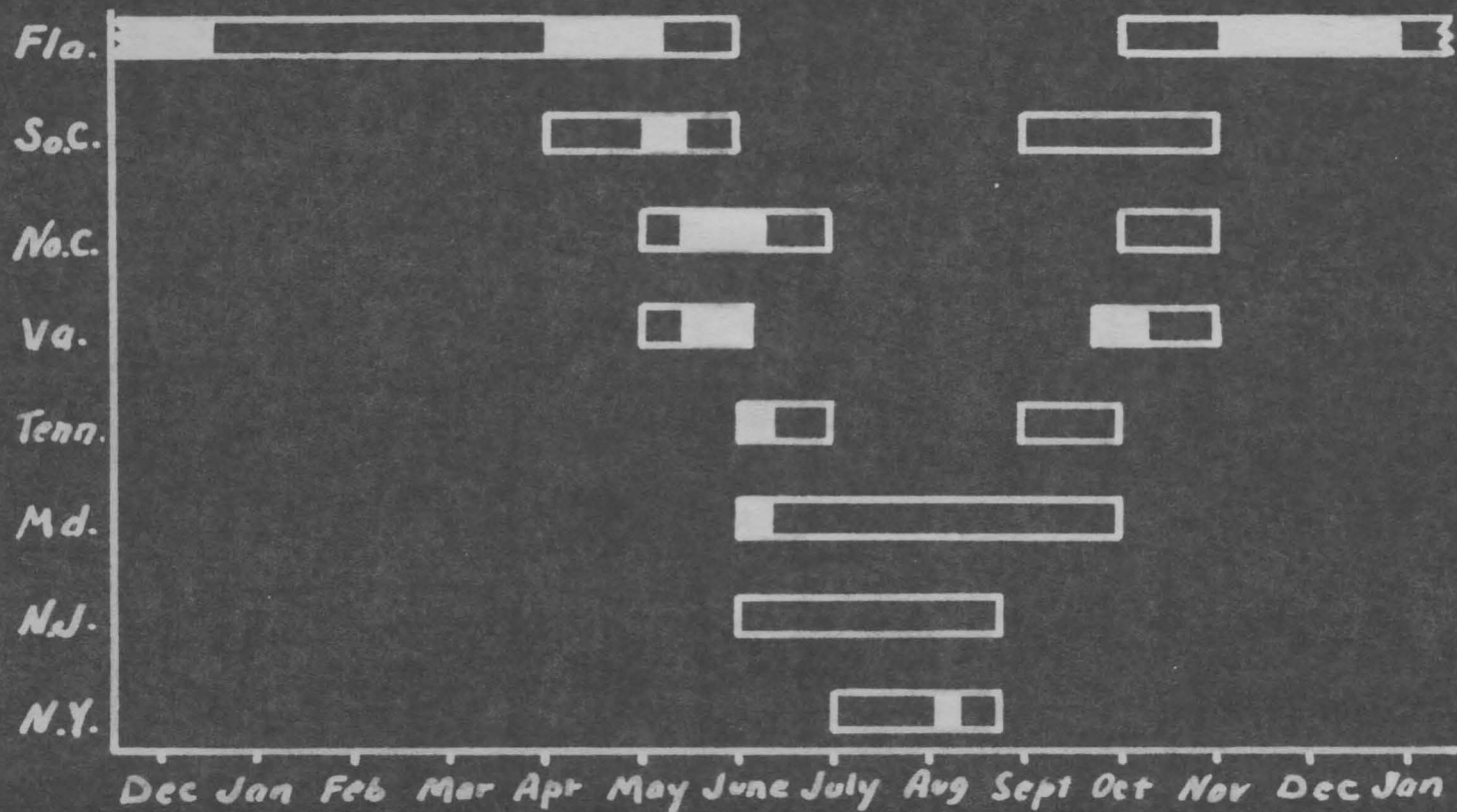
In car lot shipments of snap beans from states of origin, Virginia ranked second to Florida in 1932 and 1933, having exceeded Louisiana, Texas, and the Carolinas. However, figures in this thesis do not include movements by motor truck, and as this means of transportation is

Chart No.1. APPROXIMATE SHIPPING SEASONS

OF SNAP BEANS

FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)



Note; The crop-movement season for the United States is for the calendar year except Florida which begins in October of the previous year.

gaining importance in the shipment of snap beans,<sup>1</sup> it is doubtful that the figures for car lot shipments are representative of the total volume of competition met on the important markets. Snap beans are an important crop in the market garden areas near the large consuming markets, and as these producing areas are increasing in importance, they also afford considerable competition on the markets which receive Virginia supplies.

New York city and Philadelphia take about half of the shipments of snap beans from Virginia. Of the 657 cars shipped in 1928, 447, or 67 per cent were shipped to these two markets. The number of cars were lowered in 1932 to 344 cars, or 52 per cent of the 1928 number.

According to the annual report of unloads of fruits and vegetables at New York City for the years 1931 and 1932, snap beans from Florida, Georgia, Louisiana, North Carolina, and South Carolina compete most directly with Virginia on that market. Virginia shipments are greater in June and October. During these two months North Carolina shipped 202 cars, Florida 115, South Carolina 41, Georgia 12, and Louisiana 2, while Virginia producers were shipping 280 cars. Shipments from competing states are usually smaller in the fall months than in the early months of May and June.

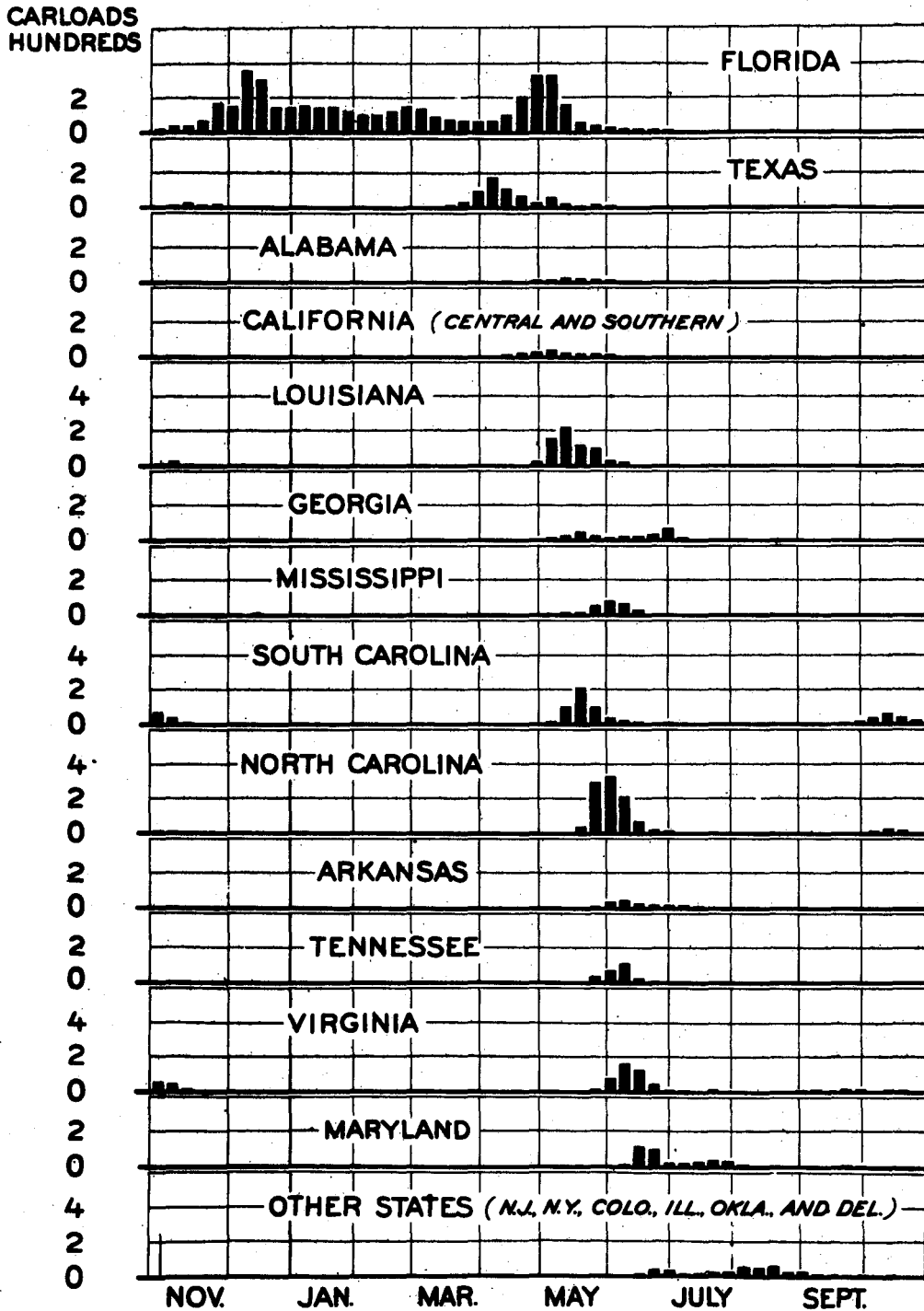
The same states that compete with Virginia shipments at New York City also compete at Philadelphia. Motor truck shipments from New Jersey and Maryland provide serious competition at the Philadelphia

<sup>1</sup> Estimated reported truck receipts at Philadelphia from Virginia increased from 24 cars in 1930 to 214 cars in 1932. Reported truck receipts from all sources at Philadelphia totaled 520 in 1930 and 1,203 in 1932. Virginia motor truck competition at Philadelphia is felt particularly from New Jersey, North Carolina, and Maryland, during the peak months of June and October.

market during the Virginia shipping season, and according to the reports at this market, the volume of snap beans received at Philadelphia by motor truck is increasing at the expense of rail shipments .

Chart No. 3

# Snap Beans: Weekly Car-lot Shipments, Nov. 1929-Oct. 1930



U. S. DEPARTMENT OF AGRICULTURE

NEG. 23082-B BUREAU OF AGRICULTURAL ECONOMICS

THE SHIPPING SEASON OF FLORIDA SNAP BEANS EXTENDS FROM NOVEMBER TO MAY. OTHER SOUTHERN STATES SUPPLY RELATIVELY SMALL QUANTITIES. CAR-LOAD SHIPMENTS ARE VERY SMALL IN THE FALL MONTHS OF THE YEAR



Chart No. 2. Carlot Shipments of Snapbeans  
From Virginia And Competing States  
by Weeks  
Seasons 1928 - 1933

Cars -  
800

Other States  
Virginia

700  
600  
500  
400  
300  
250  
200  
150  
100  
50  
0

M June July Aug Sept Oct Nov M June July Aug Sept Oct M June July Aug Sept Oct N M June July Aug Sept Oct Nov M June July Aug Sept Oct N

1928

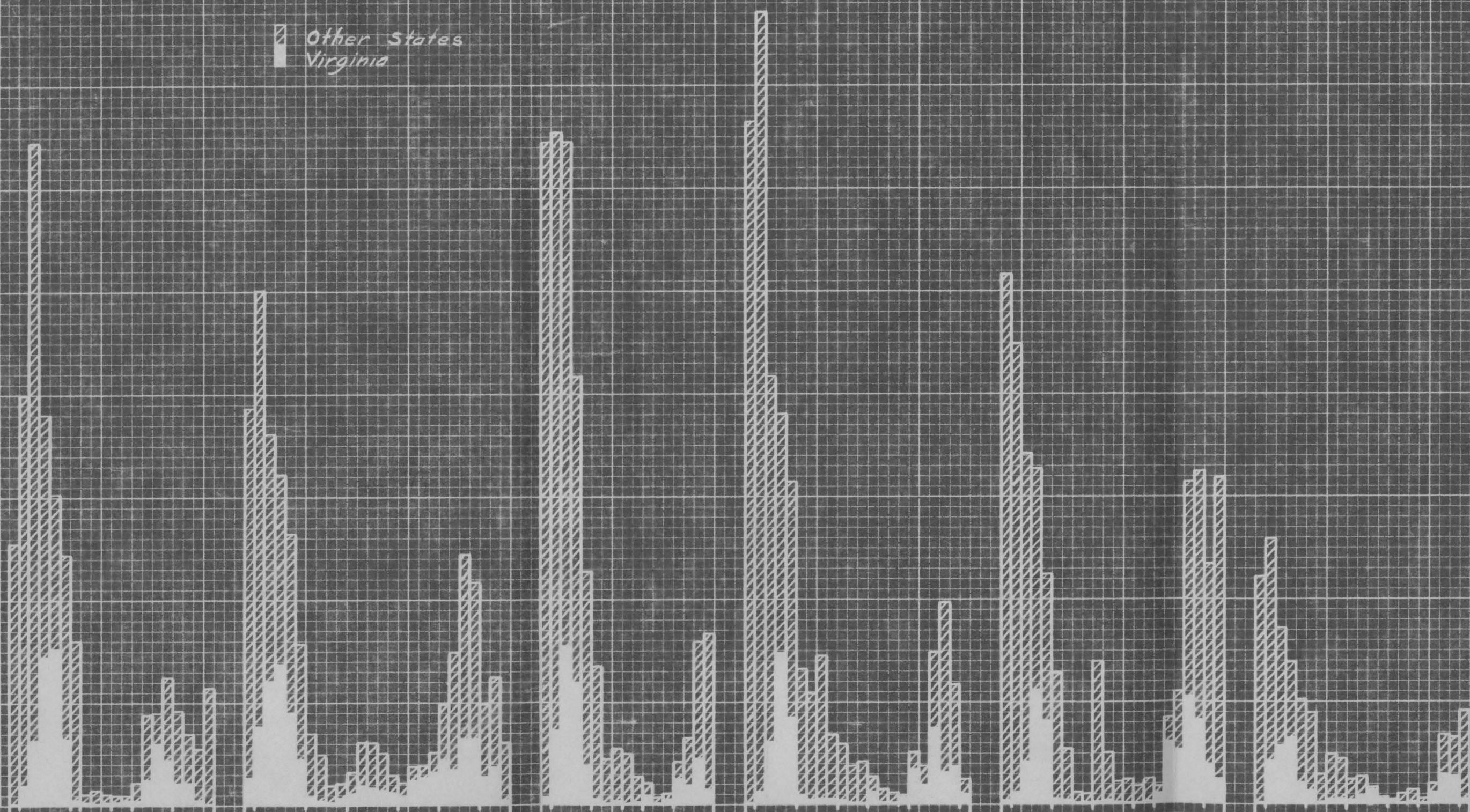
1929

1930

1931

1932

1933



## Cabbage

Shipments of cabbage from eastern Virginia begin near the first of May and rise to a high peak lasting only a few weeks through the end of May and the first of June. Shipments from the western part of the state follow in July, reaching a peak in August then decrease slowly until late fall. Cabbage from eastern Virginia, which is marketed principally in the North Eastern markets, meets competition from Florida, New York, South Carolina, and Texas. Seasonal movements from Florida, Texas, Mississippi, Alabama, and the Carolinas decrease rapidly throughout May, and the heavy shipments from New York do not appear until September. Ohio ships heavily through June and July and competes mainly on the Southern and Mid-Western markets with the beginning of the Western Virginia season. Shipments from the North and the West, together with the large stored crop from New York, occur during the fall and winter months at which time there are few shipments from Virginia. (Chart No. 6).

During the period studied, shipments of cabbage from Virginia reached a peak in 1929 with 3,998 car load lots, then declined to 1,740 cars in 1930, 1,819 cars in 1931, and 1,059 cars in 1932. Production followed this trend with a peak of 56,400 short tons in 1929, declining to 19,400 short tons in 1932. New York, Wisconsin, Texas, and Florida each exceed Virginia in acreage, production and shipments of cabbage. A comparatively small percentage of the production from these states, however, compete directly. South Carolina ranks closely with Virginia in car lot shipments. (Table No. 7.)

The principal market distribution of cabbage from Virginia covers the Atlantic coast from Tampa, Florida, to Providence, Rhode Island.

Table 7.- Yearly Acreage Production and Shipments  
of Cabbage for Virginia and Competing  
States. (1928-1933)

Cabbage	1928			:	1929			:	1930		
	Acre	Production			Acre	Production			Acre	Production	
short tons		Shipments	short tons	Shipments		short tons	Shipments				
Virginia	7,780	45,100	2,444	7,630	56,400	3,969	7,700	28,100	1,772		
Maryland	2,000	12,800	266	2,320	16,500	428	2,600	10,200	67		
New York <sup>1</sup>	21,220	230,400	8,636	32,640	285,700	10,609	35,600	275,200	11,917		
South Carolina	3,100	17,900	2,209	3,650	31,900	2,549	3,850	40,400	2,731		
Texas	22,000	138,600	7,242	25,000	155,000	7,905	21,200	103,900	5,347		
:											
	1931			:	1932			:	1933		
	Acre	Production			Acre	Production			Acre	Production	
Virginia	6,350	32,100	1,821	7,050	19,400	1,059	7,550	28,800	1,527		
Maryland	1,880	9,600	75	2,220	6,700	70	2,330	10,700	163		
New York <sup>1</sup>	34,480	292,500	12,014	33,950	327,000	9,352	27,300	200,000	7,630		
South Carolina	3,900	40,800	1,864	2,600	17,200	1,096	2,900	25,300	1,781		
Texas	30,900	188,500	8,916	22,900	114,500	5,928	18,100	67,000	2,786		

<sup>1</sup> Includes quantities used for sauerkraut.

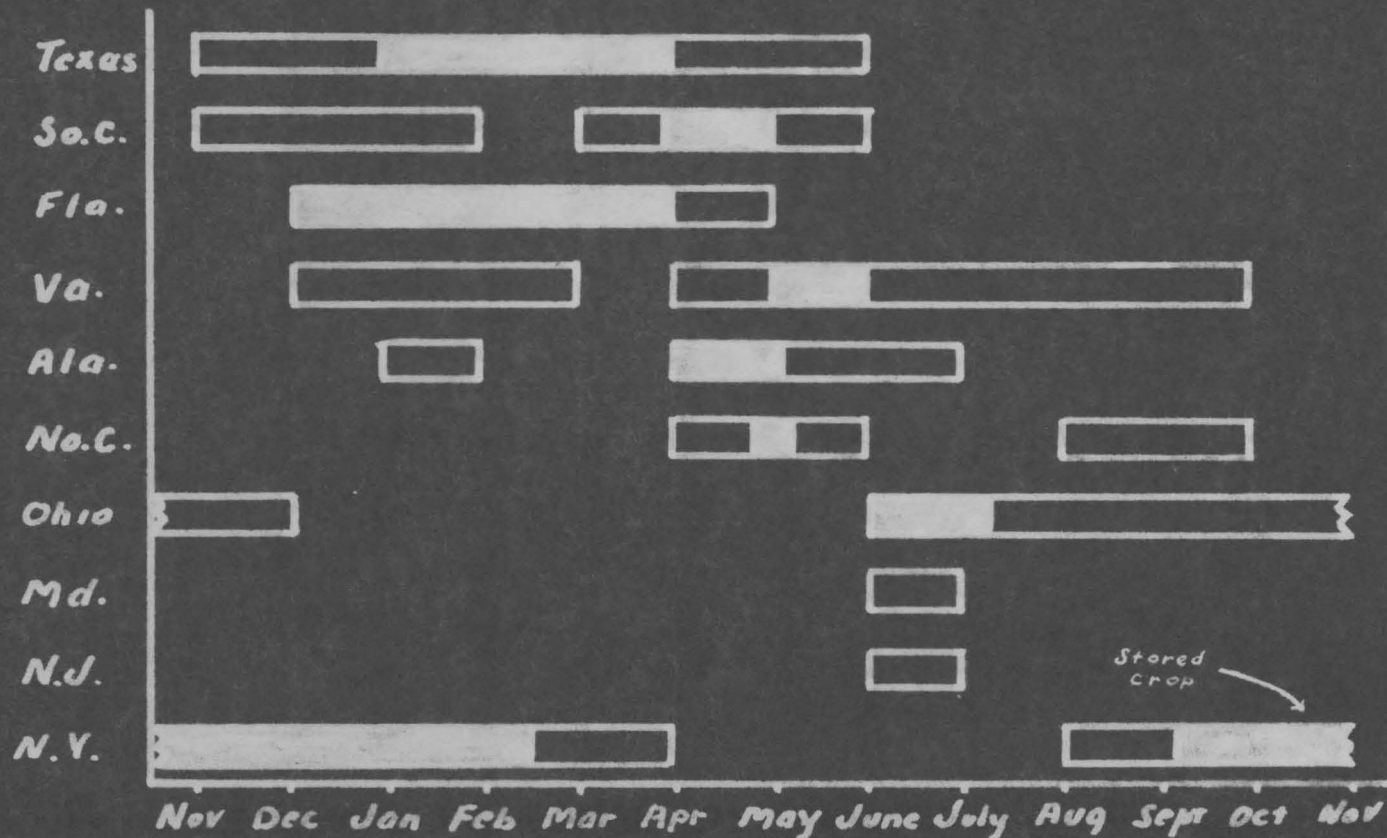


Chart No. 4. APPROXIMATE SHIPPING SEASONS

OF CABBAGE

FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)



Note: The crop-movement season for the United States covers 17 months, from December through the second following April.

Within this territory, New York, Boston, Philadelphia, and Baltimore, are the largest and most favorable markets for Virginia cabbage.

(Table. No. 8) At these markets, Virginia shipments usually exceed those from all other competing states in May. Average totals for the months when Virginia cabbage is unloaded at these markets shows Virginia leading all other states except New York. During the period 1928 to 1933, New York State shipped a yearly average of 176 cars to Baltimore, while Virginia was shipping 113 and South Carolina 65. At Boston, during the same period, there was an average of 176 cars unloaded from Virginia and with unloads from South Carolina, Texas,

Table 8.- Market Distribution of Cabbage by Carlot  
Shipments from Virginia (1924-1932)

Market	1924	1925	1926	1927	1928	1929	1930	1931	1932
Atlanta	105	46	26	87	47	76	19	26	5
Baltimore	217	190	143	188	176	216	117	54	34
Birmingham	128	34	64	116	68	93	32	75	20
Boston	150	171	110	170	154	294	175	174	85
Buffalo	23	43	29	34	15	38	7	20	5
Detroit	-	9	32	46	19	28	2	15	-
Jacksonville*				82	74	72	40	64	53
Newark	39	21	24	78	62	146	62	66	43
New York	645	529	484	766	556	1223	434	392	358
Norfolk*				22	66	53	69	74	35
Philadelphia	297	270	189	321	224	410	215	136	79
Pittsburgh	51	52	46	79	25	70	15	3	8
Providence	40	52	26	48	38	60	37	37	28
Richmond*				4	58	52	17	37	33
Tampa*				65	53	67	35	58	42
Washington	82	46	40	48	107	88	17	7	30
Hartford*				19	10	29	5	6	8
New Haven*				21	14	41	6	7	4
Rochester*				14	8	14	3	4	5
Springfield, Mass.*				27	14	29	19	10	1
Syracuse*				11	15	24	11	4	4

\* Cities not reporting for 1924, 1925, and 1926.

and Maryland averaging 68, 43, and 42 cars respectively. At the New York market, New York State led with an average of 659 cars, followed by Virginia with 593, South Carolina with 483, and Florida with 394. Virginia shipped an average of 212 cars to Philadelphia, 97 less than New York State, and 48 more than South Carolina, the nearest competitor. In nearly every case the averages for the 1928-1932 period were greater than the 1932 amounts. (Table No. 9).

In total shipments, Virginia was outranked by New York, Texas, and South Carolina. In 1932, shipments from these states were 9,352, 5,928, 1,096 cars respectively, while Virginia shipped a total of 1,059 cars. The 1933 totals show an increase for Virginia, South Carolina, and Maryland, and a decrease for New York and Texas. (Table No. 7). The heavy storage crop produced by New York and Ohio provided the principal competition. Production of the storage stock of these states is a determining factor in the economical marketing of Virginia cabbage.

Table 9.- Monthly Unloads of Cabbage from Virginia and  
Totals from All Sources at Four Principal  
Markets (1928-1932)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<u>Baltimore</u>													
1928													
Virginia					68	82		14	12				176
Total	111	129	144	108	167	102		22	157	249	168	101	1458
1929													
Virginia	2	2		1	173	26	3	9					216
Total	146	148	135	172	238	27	3	21	104	205	139	106	1444
1930													
Virginia					57	41	1	10	2				111
Total	116	100	106	137	150	42	1	114	201	267	174	165	1573
1931													
Virginia		1	1			23		5					30
Total	145	149	154	164	172	34		28	128	218	160	116	1468
1932													
Virginia					18	5	9				2		34
Total	117	119	108	115	42	8	17	56	142	210	142	103	1179
<u>Boston</u>													
1928													
Virginia	2				59	93							154
Total*	180	125	163	108	222	196	129	77	82	109	167	123	1681
1929													
Virginia	13	4			160	107	3	1				6	294
Total*	201	128	208	185	220	176	128	91	97	119	139	145	1837
1930													
Virginia	1				85	89							175
Total*	200	123	164	205	196	153	125	119	88	123	118	137	1750
1931													
Virginia	1				29	127	5	11				1	174
Total*	213	135	183	154	197	166	9	52	18	46	114	111	1398
1932													
Virginia				3	73	9							85
Total*	170	135	131	141	164	92		1			25	114	977

\* Includes quantities trucked in.

Table.9.- Monthly Unloads of Cabbage from Virginia and Totals from All Sources at Four Principal Markets (1928-1932) - Continued

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<u>New York</u>													
1928													
Virginia	32	6			81	341	2	78	11			8	559
Total	602	470	582	458	637	470	59	151	247	403	411	429	4999
1929													
Virginia	10	3	7	4	565	359	79	174	8		4	10	1223
Total	597	617	612	651	824	570	107	348	409	415	458	477	6086
1930													
Virginia	31			2	162	236	2		1				434
Total	615	565	912	1301	572	361	12	82	222	420	445	517	6024
1931													
Virginia					43	261	12	76					392
Total	625	585	713	630	629	373	39	272	342	518	462	566	5754
1932													
Virginia	6			9	215	122	1	2				5	358
Total	614	530	522	503	467	212	19	177	275	284	337	463	4423
<u>Philadelphia</u>													
1928													
Virginia					59	138		9	18				224
Total	244	225	236	179	270	170	13	19	147	274	213	207	2199
1929													
Virginia	12	1	3		243	88	11	28	6	4	2	12	410
Total	274	254	262	324	369	111	16	62	137	221	224	273	2527
1930													
Virginia	1	6			87	110		2	4	3			213
Total	305	236	242	304	268	122	1	66	166	308	130	302	2450
1931													
Virginia	1				23	64	3	32	13				136
Total	360	317	309	321	301	92	17	85	214	346	264	305	2921
1932													
Virginia	4			5	47	13	4	6					79
Total	310	284	251	243	166	52	19	48	146	227	205	264	2215

Table 10.- Yearly and Average Unloads of Cabbage from Virginia and Competing States During the Virginia Seasons, at Seven Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928 Cars	1929 Cars	1930 Cars	1931 Cars	1932 Cars	Average Cars
Baltimore	Sept. - May	1456	1444	1573	1468	1179	1424
Virginia	May - June	176	216	111	30	34	113
New York	Sept. - Feb.	187	154	295	145	130	176
N. Carolina	May - June	15	43	18	10	7	19
S. Carolina	May - June	93	161	61		10	65
Other		8	181	15	180	28	82
Total		449	755	500	365	209	455
Boston	May - June	1681	1837	1750	1398	977	1529
Virginia	May - June	154	294	175	174	85	176
Maryland	June	74	61	16	31	30	42
S. Carolina	April - May	94	48	67	94	38	68
Texas	Jan. - Apr.	3	56	6	12	136	43
Others		93	393	50	135	112	157
Total		418	852	314	446	401	486
New York	Jan. - June	4899	6085	6024	5754	4423	5437
Virginia	May - June	559	1223	434	392	358	593
Alabama	April - June	60	97	68	180	62	93
Florida	Dec. - May	257	1147	408	48	111	394
Maryland	June	50	186	12	17	22	57
New Jersey	June - July	60	49	51	22	-	36
New York	Sept. - Jan.	662	1730	333	196	172	659
S. Carolina	April - June	448	755	620	350	240	483
Texas	Jan. - April	124	186	67	33	213	125
Others		204	295	869	75	221	333
Total		2624	5670	2862	1313	1399	2773
Philadelphia	Oct. - June	2199	2527	2450	2921	2215	2462
Virginia	May - June	224	410	213	136	79	212
New York	Sept. - Feb.	150	1091	-	253	53	309
S. Carolina	April - May	197	176	132	207	108	164
Texas	Feb. - April	2	72	-	19	91	37
Others		33	454	61	84	301	187
Total		606	2203	406	699	632	909



Chart No. 5. Carlot Shipments of Cabbage  
 From Virginia And Competing States  
 by Weeks  
 Seasons 1928-29 - 1933

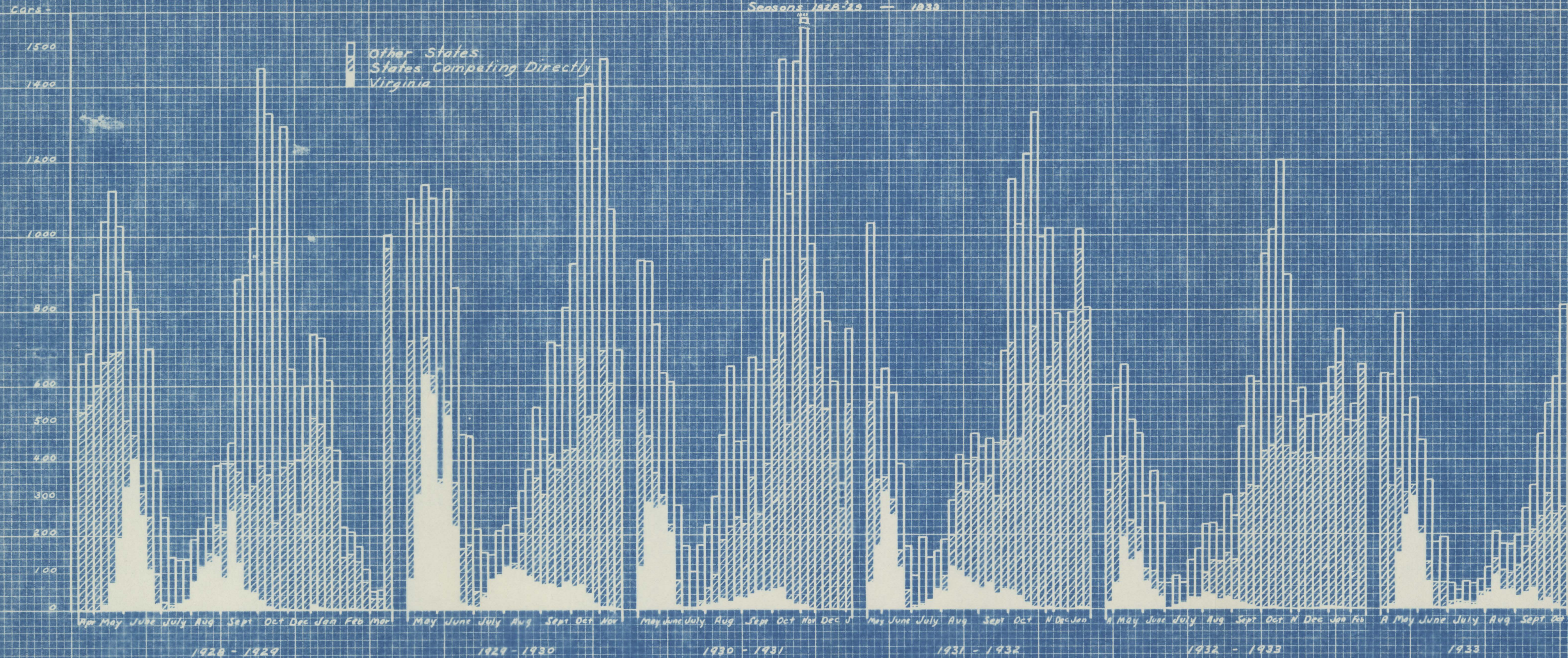
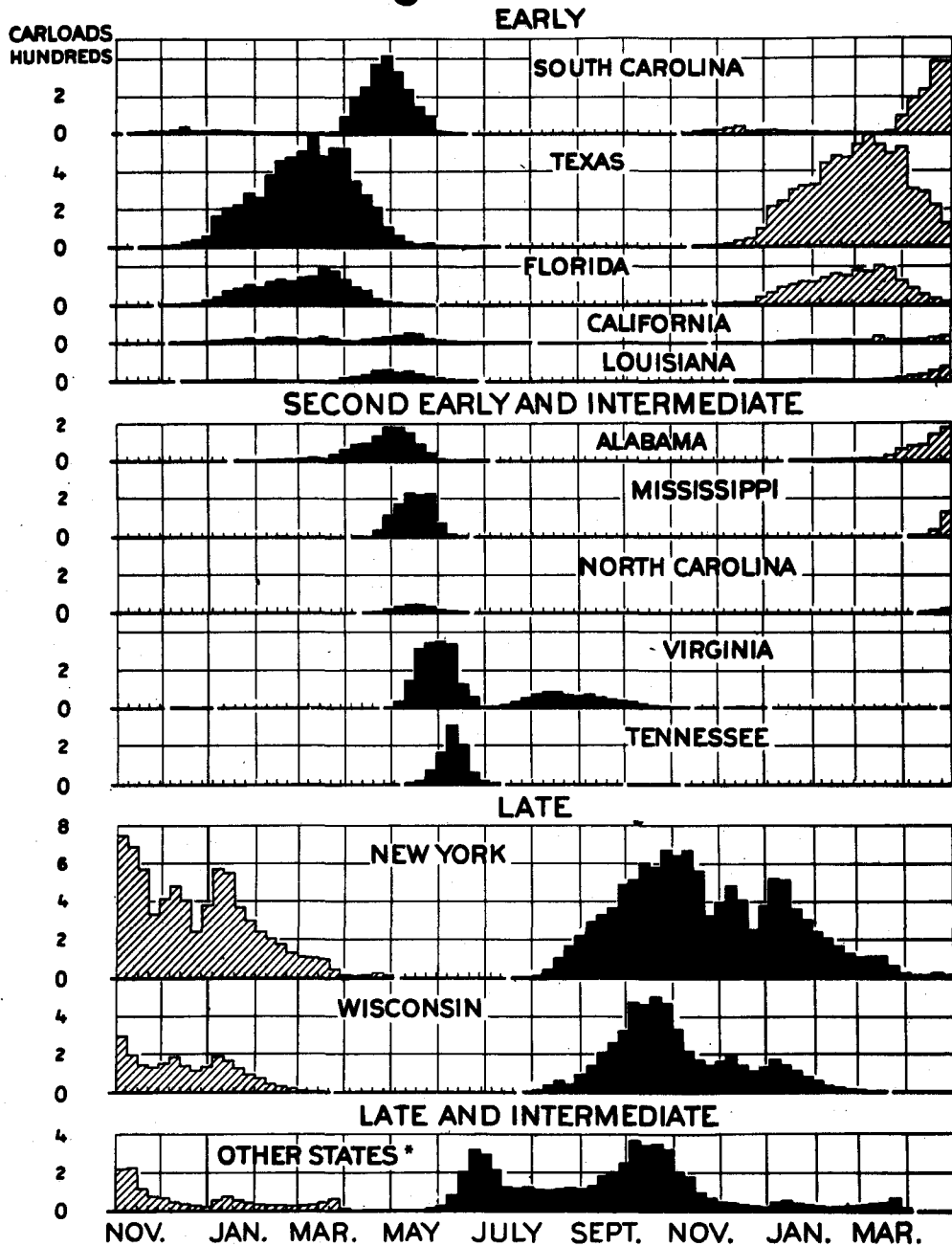




Chart No. 6

# Cabbage: Weekly Car-lot Shipments by States 5-Year Average, 1925-26 — 1929-31



\*ARK., N. MEX., WASH., OKLA., ILL., KANS., KY., MD., MO., N.J., COLO., OHIO, OREG., IOWA, PA., MINN., IND., UTAH, MICH., ME., MONT., ETC.

U.S. DEPARTMENT OF AGRICULTURE

NEG. 23601-B. BUREAU OF AGRICULTURAL ECONOMICS

THE NEW CABBAGE CROP SEASON BEGINS WITH SHIPMENTS IN NOVEMBER FROM SOUTH CAROLINA, TEXAS, AND NORFOLK SECTION OF VIRGINIA. THE WINTER AND SPRING CROPS ARE PRODUCED MOSTLY IN TEXAS, FLORIDA, SOUTH CAROLINA, ALABAMA, AND MISSISSIPPI. STORAGE STOCKS COMPETE WITH THE SOUTHERN EARLY CROPS OF THE NEXT SEASON



## Potatoes, Early White

Ordinarily the farm value of white potatoes in Virginia exceeds the combined farm value of all the other Virginia truck crops. For the five years 1929-1933, the average annual Irish potato crop was valued at \$8,565,000. This represented 25 per cent of the average farm value of the early commercial crop. In production, acreage, and carlot shipments, Virginia outranks all other early producing states. From 1919 to 1931 there was a general upward trend in the production of early potatoes. (Figure No. 2) From 1930 to 1934, production increased in Alabama, Florida, Louisiana, New Jersey, North Carolina and South Carolina, and declined decidedly in Virginia and Maryland. (Table No. 11).

During the 1930-1933 seasons, carlot shipments from Virginia declined from 21,731 in 1930, to 9,818 in 1933. For most of the competing early commercial states, shipments in 1933 were considerably greater than in 1932. (Table No. 11). In the latter year, North Carolina shipped 5,877 cars, New Jersey 3,183, South Carolina 1,666, and Maryland 1,602, while Virginia was shipping 12,787. In 1933 North Carolina carlot shipments increased to 7,044 cars, New Jersey to 5,543, and South Carolina to 2,009. Shipments from Florida and Louisiana also increased in 1933. These two states, however, complete the bulk of their shipments before Virginia potatoes appear, and therefore, they do not compete to any great extent.

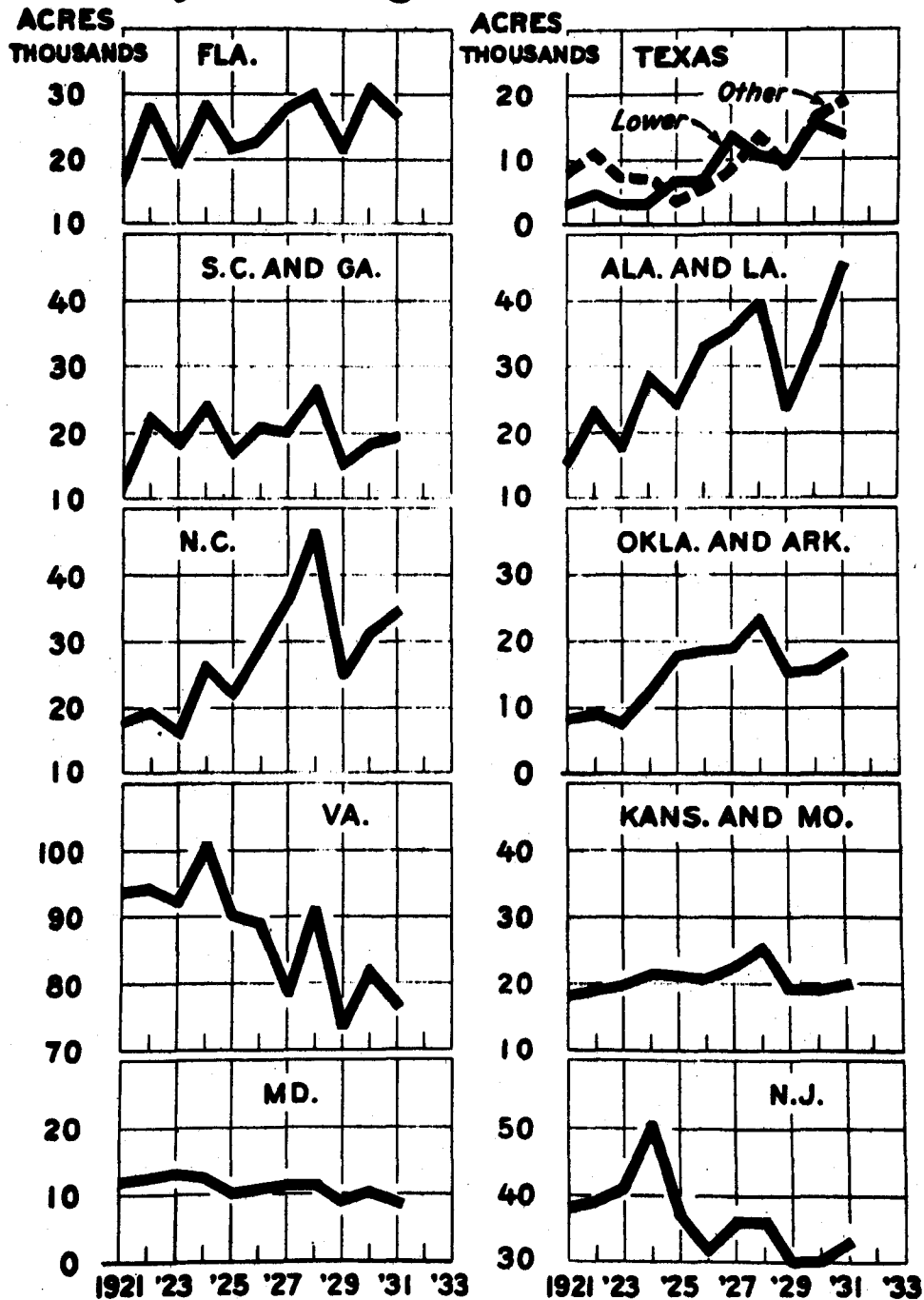
Table 11.- Yearly Acreage, Production, and Shipments of  
Irish Potatoes for Virginia and Competing  
States. (1928-1933)

Potatoes <sup>1</sup>	1928			1929		
	Acreage	Production 1,000 bushels	Shipments	Acreage	Production 1,000 bushels	Shipments
Virginia	85,700	15,483	27,679	68,600	11,938	21,177
Alabama	17,700	1,504	3,133	7,500	668	1,541
Florida	30,000	3,753	7,744	22,000	2,584	5,069
Kansas	18,800	3,621	4,848	15,800	1,965	2,440
Kentucky	5,300	922	718	4,300	722	1,211
Louisiana	19,800	1,544	1,727	15,000	945	1,102
Maryland	11,500	1,863	3,123	9,000	1,440	2,426
Missouri	6,400	1,280	2,362	4,800	552	984
New Jersey	35,000	5,670	5,367	29,000	3,915	3,811
No. Carolina	46,400	6,357	9,756	27,500	3,438	6,003
So. Carolina	24,000	3,096	4,706	15,000	2,175	3,809
		1930			1931	
Virginia	81,700	12,255	21,731	76,900	10,639	18,644
Alabama	11,800	1,180	2,728	14,600	2,044	4,712
Florida	31,000	2,489	4,802	27,000	3,567	6,892
Kansas	15,700	2,796	3,856	16,400	2,150	2,710
Kentucky	5,300	344	518	5,200	468	447
Louisiana	22,000	1,540	2,327	31,000	2,542	4,410
Maryland	10,400	1,290	2,240	9,000	1,125	1,752
Missouri	5,100	1,045	2,016	5,300	718	1,473
New Jersey	29,000	6,235	6,600	32,000	6,400	5,179
No. Carolina	31,500	4,347	7,355	33,500	5,192	8,661
So. Carolina	16,600	2,523	4,544	17,700	2,920	9,000
		1932			1933	
Virginia	58,000	7,364	12,787	53,000	5,831	9,818
Alabama	10,000	350	1,875	8,000	944	2,155
Florida	21,500	1,443	2,577	17,000	2,163	4,043
Kansas	15,800	2,394	3,129	13,800	1,286	1,623
Kentucky	5,000	525	501	4,500	359	334
Louisiana	19,000	1,235	1,657	20,000	1,360	2,097
Maryland	7,200	1,008	1,602	6,100	732	1,147
Missouri	5,800	1,180	2,365	6,600	792	1,598
New Jersey	36,000	5,940	3,183	34,000	5,780	5,543
No. Carolina	23,500	3,642	5,877	27,500	4,070	7,044
So. Carolina	9,000	963	1,666	7,000	1,155	2,009

<sup>1</sup> Early commercial crop only.

Fig. No. 1

## Commercial Acreage of Potatoes in Selected Early-Producing States; 1921 to Date



U.S. DEPARTMENT OF AGRICULTURE

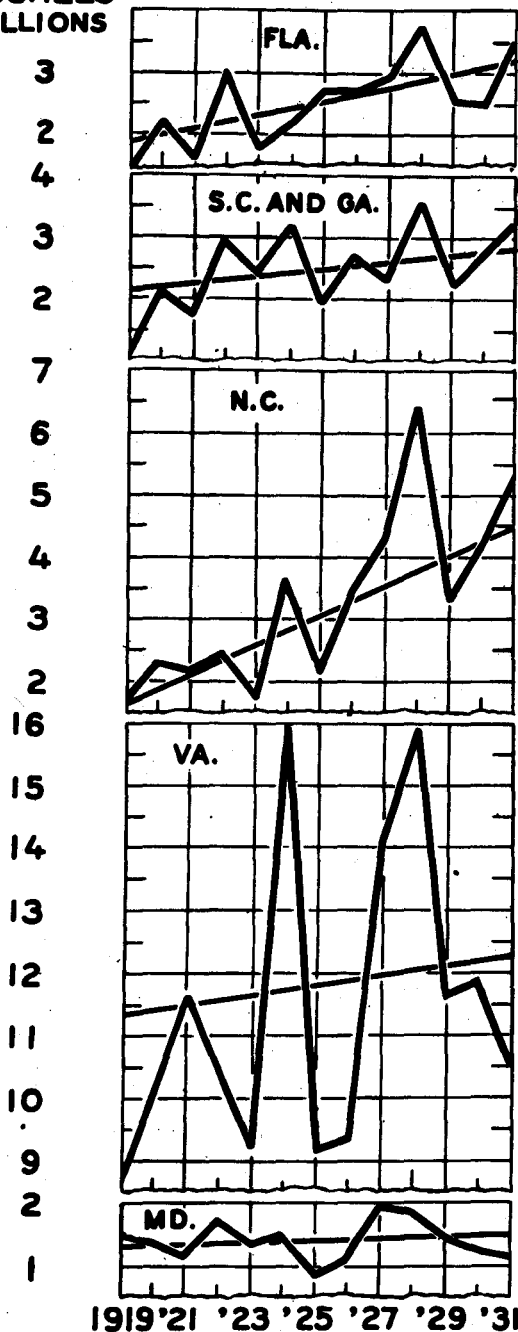
WEGA 22718 B BUREAU OF AGRICULTURAL ECONOMICS

EXCEPT IN THE NORTHERN SECTION OF THE EARLY PRODUCING STATES, VIRGINIA, MARYLAND AND NEW JERSEY, THERE HAS BEEN AN EXPANSION IN ACREAGE FROM 1921 TO DATE. THE SHARP INCREASE IN NORTH CAROLINA PRACTICALLY OFFSETS THE MARKED DECREASE IN VIRGINIA

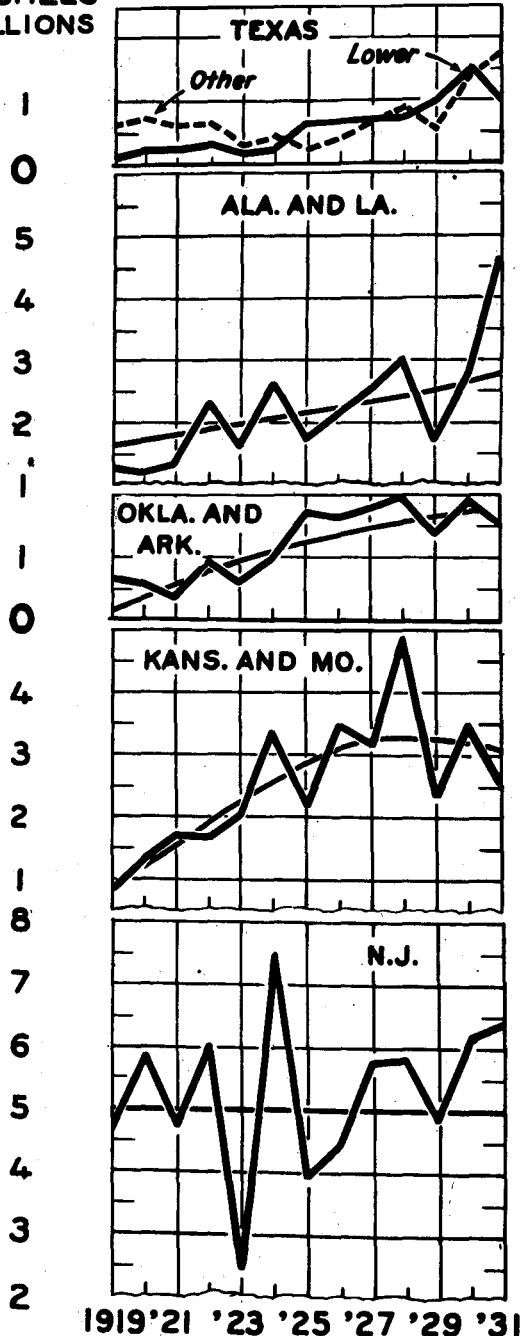
Fig. No. 2

## Commercial Production of Potatoes in Selected Early-Producing States, 1919 to Date

BUSHEL  
MILLIONS



BUSHEL  
MILLIONS



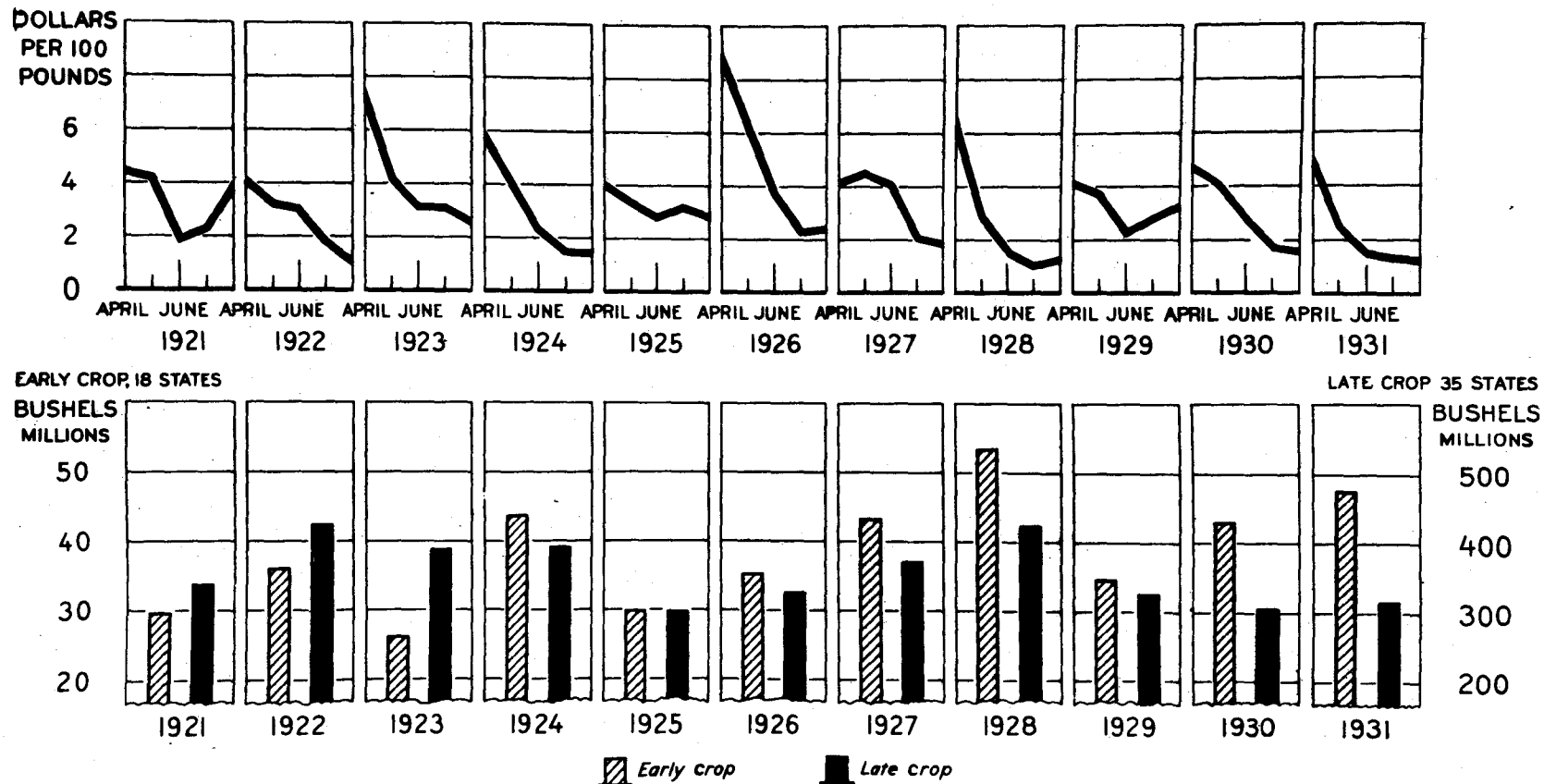
U.S. DEPARTMENT OF AGRICULTURE

NEG 33798-B BUREAU OF AGRICULTURAL ECONOMICS

SINCE 1919 THERE HAS BEEN AN UPWARD TREND IN THE PRODUCTION OF MOST OF THE EARLY PRODUCING STATES FROM FLORIDA TO VIRGINIA AND FROM TEXAS TO KANSAS AND MISSOURI. NEW JERSEY AND MARYLAND SHOW NO MARKED TREND IN PRODUCTION DURING THIS PERIOD

Fig. No. 3

**PRICES OF NEW-CROP POTATOES AT NEW YORK APRIL TO AUGUST AND PRODUCTION OF EARLY AND LATE-POTATO CROPS, 1921 - 1931**



U.S. DEPARTMENT OF AGRICULTURE

HEB. 20873 BUREAU OF AGRICULTURAL ECONOMICS

THE SEASONAL COURSE OF NEW CROP POTATO PRICES IS GENERALLY DOWNWARD FROM APRIL TO JULY EXCEPT IN YEARS OF VERY LIGHT CROPS IN THE SOUTH AND IN THE LATE PRODUCING STATES ( AS IN 1921 AND 1929 ). IN YEARS OF LARGE CROPS, PRICES DECLINE BELOW \$2.00 PER 100 POUNDS IN JULY AND AUGUST

Chart No. 7. APPROXIMATE SHIPPING SEASONS OF IRISH POTATOES FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)

The crop movement season for the United States as a whole covers nineteen months beginning in December and ending the second following June.



Virginia is geographically classed within the intermediate producing section, which is located between the early sections of the South and the late sections of the North. For this reason there are three seasonal divisions of potato production in Virginia; (1) the early, or truck crop, (2) the late crop, and (3) the fall crop. The first two only will be considered here.<sup>1</sup> The early crop is the largest, and from a market standpoint, the most important. The shipping season for the early crop extends from the last of May to the end of August, with the peak occurring usually the first week of July. During June, competition is felt especially from North Carolina shipments, and a considerable portion of the declining storage crops from Maine. In July, shipments from Maryland, New Jersey, Missouri, Kansas, Kentucky, and Tennessee appear, while the heavier new potato supply from the extreme South, and the storage crop of the North are diminishing. (Chart No. 9).

The late crop in the South is produced only in the northern or high altitude areas, where the climatic conditions are similar to the Northern states. The varieties grown in these late crop sections of the South are the same as those of the North and West, and, being adapted to storage, are grown primarily for winter consumption or speculative purposes. The severe competition of the Northern surplus storage supply located near the principal markets affords very little

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<sup>1</sup> The second late or fall crop of Virginia consists of varieties planted primarily for supplying seed stock for the preceding early crop. This crop for seed is gaining in importance at the expense of the late table crop.

opportunity for the successful marketing of the late crop of the South on the large Northeastern markets.

Storage supplies from the surplus producing states appear in August or September after the bulk of the new crop has reached market. Compared with the perishable varieties of the new crop, the stored crop is considered less desirable, but cheaper. (Figure No. 3). Thus when storage movements are especially heavy in proportion to demand, there will either be a decline in the consumption of new potatoes, or a necessary decline in the market price of the new crop to meet the competition of the stored supply. This effect of the storage potato supply on the price of new potatoes should not be overlooked in planning the early potato crop.

The second or late season for Virginia usually extends from the first of September to February, March or April. In 1927, 243 carlots were shipped during the season August 28 to the following April 14. The length of this late season for Virginia, as well as the number of cars shipped, have steadily decreased. In 1931, shipments of the late crop extended from September 27 to the following February 13. Within this period 36 cars only were shipped. The following season, 28 cars were shipped between September 11 and November 26.

The surplus states which provide the most serious competition for Virginia are Maine, Michigan, New York and Pennsylvania. Wisconsin competes mainly on the Western markets. Shipments from Maine continue throughout the calendar year, starting heavily in September, reaching a peak through the winter months, and declining throughout June. Shipments from that state increased from 40,945 cars in 1927, to a peak



of 61,404 cars in 1929, and declined to 49,014 in 1933.

The other surplus producing states which compete especially with Virginia have shown considerable decreases in rail car lot shipments during recent years. From 1928 to 1933, New York shipments decreased from 13,478 cars to 8,268; Pennsylvania from 5,829 to 442; and Michigan from 14,189 to 8,300.

In recent years a considerable quantity of potatoes from New York and Pennsylvania have reached the markets of the East by means of motor truck transportation. In 1929 an equivalent of 2,157 cars of potatoes were shipped by motor truck from Long Island, New York. This may be compared with 6,217 cars shipped by rail from this section. Western New York, which embraces twenty-one commercially important producing counties, moved an equivalent of 5,399 cars or fifty-six per cent of its 1928 potato market supply by means of motor truck transportation.<sup>1</sup> This quantity moved by motor truck is distributed throughout the populous cities and towns which lie adjacent to the western New York producing areas. Northern Pennsylvania also ships a considerable quantity of its late potato crop by means of motor truck and like western New York, distributes to markets near the producing areas. Shipments from New York begin heavily in August and continue throughout March of the following year. Pennsylvania

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<sup>1</sup> "The Marketing and Distribution of Fruits and Vegetables by Motor Truck", by Brice Edwards and J. W. Park, United States Department of Agriculture, page 43.

shipments reach a peak in October and November, and again between January and March. Heavy shipments from Michigan occur during October and continue throughout May. (Chart No. 10)

Virginia white potatoes are widely distributed throughout the East. (Table No. 12). During 1932, however, over thirty-five per cent of all the car lot shipments of white potatoes originating in Virginia were unloaded at seven principal markets. (Table No. 13). New York City received 1,721 cars, Boston 802, Philadelphia 687, Pittsburgh 468, Cleveland 454, Baltimore 363, and Chicago 285. (Table No. 14).

At New York City, white potatoes from Virginia were unloaded mainly during June and July. These unloads led those from all other areas and represented from one-third to one-fourth of the total supply. North Carolina affords the principal competition, followed in importance by New York State, Maine, Maryland, and New Jersey. For the 1928-1932 period during the Virginia shipping season, the stored crop from New York and Maine averaged 1,463 cars, while in the same period Virginia and North Carolina averaged 2,504 and 1,226 respectively. Unloads of new potatoes from North Carolina compete particularly in June, while the new crop from Maryland and New Jersey compete throughout July and August. (Table No. 14).

At Boston, Virginia meets competition of new crop supplies principally from New Jersey, North Carolina, Maryland, and South Carolina, and stored potatoes from Maine. About one-third of the white potatoes unloaded at Boston during July originate in Virginia. For the five year average (1928-1932), 1,158 cars were unloaded from Virginia, while 659 cars were received from Maine, 311 from New Jersey, and 283 from North Carolina. (Table No. 14).

Table 12.- Market Distribution of Irish Potatoes by Car Lot  
Shipment from Virginia. (1924-1933)

Market	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Acron*				175	231	171	192	139	147	
Albany*				109	266	206	188	146	136	
Atlanta	103	58	46	68	41	13	55	58	16	
Baltimore	769	565	597	750	644	632	747	452	363	
Boston	922	633	561	1204	1645	1202	1223	918	802	
Bridgeport*				102	125	124	83	80	80	
Buffalo	420	338	369	390	530	506	522	545	413	
Chicago	849	607	475	1487	923	980	584	963	285	
Cincinnati	66	59	37	110	46	7	51	24	13	
Cleveland	708	567	399	605	654	488	629	592	454	
Columbus	211	99	127	161	184	121	178	92	104	
Detroit	713	721	702	1021	967	1053	1076	769	579	
Grand Rapids*				138	128	130	196	184	91	
Hartford*				110	164	106	83	96	100	
Indianapolis	160	124	101	215	122	95	102	93	9	
Jacksonville*				75	162	54	19	4	8	
Milwaukee	336	153	160	435	212	276	169	334	29	
Newark	437	336	349	455	451	299	397	286	280	
New Haven*				124	143	139	138	106	74	
New York	3538	2880	2769	3481	2950	2840	2891	2118	1721	
Philadelphia	1031	1325	962	1208	1013	862	986	734	687	
Pittsburgh	557	524	312	541	492	692	553	335	468	
Providence	161	102	104	182	218	199	170	155	89	
Rochester*				295	265	243	295	231	207	
Springfield, Mass.*				198	302	233	301	157	89	
Syracuse*				162	130	161	176	179	144	
Toledo	293	166	154	273	204	192	356	183	105	
Washington	240	167	110	290	396	186	337	231	182	
Worcester*				81	129	64	81	86	71	
Youngstown*				173	261	169	175	184	189	
Total										
Total shipped										

\* - Cities not reporting for 1924, 1925 and 1926.

Table 13.- Monthly Unloads of Irish Potatoes from Virginia and Totals from All Sources at Seven Principal Markets. (1928-1932)

		<u>Baltimore</u>												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<b>1928</b>														
Virginia							246	229	126	25	7	5	6	644
Total		65	58	96	89	224	469	279	167	75	36	24	37	1619
<b>1929</b>														
Virginia		2		1	1	13	262	232	99	29	1	2		642
Total		70	59	112	145	206	401	281	143	87	164	111	142	1951
<b>1930</b>														
Virginia							278	235	139	73	19	3		747
Total		158	180	237	266	383	523	274	269	165	229	229	232	3150
<b>1931</b>														
Virginia							176	218	40	16	2			452
Total		246	293	352	256	374	512	290	75	55	165	201	238	3057
<b>1932</b>														
Virginia							132	191	27	9	3	1		363
Total		241	274	322	369	249	431	304	126	82	136	247	148	2929
		<u>Boston</u>												
<b>1928</b>														
Virginia							352	825	385	83				1645
Total		819	941	1258	789	1114	1268	1013	773	796	1215	689	717	11392
<b>1929</b>														
Virginia							2	431	704	65				1202
Total		767	738	640	717	891	1091	1017	814	969	931	600	714	9889
<b>1930</b>														
Virginia							269	923	31					1223
Total		837	656	610	799	409	870	1106	653	815	836	479	653	8725
<b>1931</b>														
Virginia							261	618	39					918
Total		708	490	565	507	612	1042	690	548	621	984	664	467	7898
<b>1932</b>														
Virginia							160	613	29					802
Total		417	507	689	665	756	898	1003	552	667	834	478	558	8024

Table 13.- Monthly Unloads of Irish Potatoes from Virginia  
and Totals from All Sources at Seven  
Principal Markets. (1928-1932)  
Continued

	Jan.	Feb.	Mar.	Apr.	May	Chicago			Sept.	Oct.	Nov.	Dec.	Total
						June	July	Aug.					
<b>1928</b>													
Virginia						52	528	312	31				923
Total	986	1156	1271	1090	1345	1538	1335	1451	1457	1989	1683	1010	16311
<b>1929</b>													
Virginia						129	692	58	1				880
Total	1098	1113	1215	1176	1562	1337	1314	1354	1505	1694	1419	1036	15823
<b>1930</b>													
Virginia						33	446	105					584
Total	1073	1172	1198	1408	1526	1230	1415	1280	1550	1865	1574	987	26298
<b>1931</b>													
Virginia						13	848	102					963
Total	1072	1108	1201	1304	1491	1579	1404	1421	1395	1795	1358	1280	16408
<b>1932</b>													
Virginia						7	208	70					285
Total	944	955	1021	1295	1259	1557	1592	1424	1376	1457	1052	847	14779
<u>Cleveland</u>													
<b>1928</b>													
Virginia						64	333	204	52				653
Total	184	179	247	321	311	504	394	312	318	419	361	149	3699
<b>1929</b>													
Virginia						126	303	50	9				488
Total	144	215	221	260	320	401	410	445	277	315	219	166	3393
<b>1930</b>													
Virginia						54	465	107	3				629
Total	220	243	252	319	435	452	562	371	310	385	220	152	3921
<b>1931</b>													
Virginia						27	491	69	5				592
Total	234	217	320	314	459	545	535	369	399	243	148	117	3900
<b>1932</b>													
Virginia						31	376	47					454
Total	139	132	217	189	287	534	498	268	109	118	78	62	2631

Table 13.- Monthly Unloads of Irish Potatoes from Virginia and Totals from All Sources at Seven Principal Markets. Continued (1928-1932)

		<u>New York</u>												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<b>1928</b>														
Virginia				1	1	3	693	1671	509	67	4	1		2950
Total		1307	1622	1602	1631	2716	3365	2256	1289	1603	1901	1330	1435	22057
<b>1929</b>														
Virginia			1		1	14	1040	1617	148	17	1	1		2840
Total		1732	1573	1774	2259	2484	2875	2220	1344	1980	2366	1842	1958	24407
<b>1930</b>														
Virginia		1	2				958	1888	42					2891
Total		1931	1722	1823	2245	2606	2950	2225	1175	1486	1683	1536	1727	23117
<b>1931</b>														
Virginia			1				386	1681	48	1		1		2118
Total		1877	1724	2140	2067	2415	3038	1908	601	887	1155	1217	1338	20367
<b>1932</b>														
Virginia							272	1442	7					1721
Total		1343	1533	1892	2034	2057	2570	1881	443	446	721	1020	1355	17295
		<u>Philadelphia</u>												
<b>1928</b>														
Virginia		1	2	1	2		300	566	135	1	3	2		1013
Total		401	423	459	519	970	1223	694	290	355	474	561	319	6688
<b>1929</b>														
Virginia		1		2		1	370	457	18	4	7	2		862
Total		413	351	510	627	1044	1132	631	345	637	737	619	484	7530
<b>1930</b>														
Virginia		1			1		351	609	20	3		1		986
Total		568	556	710	1017	1247	1358	722	327	433	626	648	627	8869
<b>1931</b>														
Virginia							190	540	4					734
Total		652	688	537	1035	1250	1255	613	156	180	339	373	347	7425
<b>1932</b>														
Virginia							202	476	9					687
Total		429	281	762	1044	726	1221	570	54	10	113	449	419	6078

Table 13.- Monthly Balances of Irish Potatoes from Virginia  
and Totals from All Sources at Seven Principal  
Markets. Concluded. (1928-1932)

	Jan.	Feb.	Mar.	Apr.	May	Pittsburgh			Sept.	Oct.	Nov.	Dec.	Total
						June	July	Aug.					
<b>1928</b>													
Virginia						61	218	173	34	6			492
Total	172	163	186	343	485	514	267	329	303	365	298	140	3565
<b>1929</b>													
Virginia						156	388	130	14	4			692
Total	181	210	287	395	522	574	445	470	353	360	320	227	4344
<b>1930</b>													
Virginia						64	400	83	4	2			553
Total	237	270	306	380	532	481	466	459	411	454	279	235	4610
<b>1931</b>													
Virginia						21	291	23					335
Total	253	242	301	363	524	535	366	370	344	376	156	169	3999
<b>1932</b>													
Virginia						44	359	65					468
Total	192	221	216	262	308	510	470	402	243	204	91	92	3211

Table 14.- Yearly and Average Unloads of Irish Potatoes from Virginia and Competing States During the Virginia Seasons, at Seven Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928 Cars	1929 Cars	1930 Cars	1931 Cars	1932 Cars	Average Cars
<b>Baltimore</b>	April - June	1619	1951	3150	3057	2929	2541
Virginia	June - July	644	642	747	452	363	570
Maine	Sept. - May	19	325	421	209	399	275
Maryland	July - Aug.	80	88	102	76	132	96
New York	Oct. - Feb.	4	156	91	28	117	79
N. Carolina	June	90	87	105	145	135	112
Pennsylvania	Sept. - Feb.	99	115	32	4	3	51
S. Carolina	June	63	96	77	30	39	81
Other		88	211	119	53	141	122
<b>Total</b>		<b>1087</b>	<b>1720</b>	<b>1694</b>	<b>1097</b>	<b>1327</b>	<b>1386</b>
<b>Boston</b>	June - July	11392	9889	8725	7895	8024	9186
Virginia	July	1645	1202	1223	918	802	1158
Maine	Sept. - June	947	714	659	301	676	659
Maryland	July - Aug.	236	167	165	107	162	171
New Jersey	August	335	403	219	211	389	311
N. Carolina	June	330	168	165	385	367	283
S. Carolina	May - June	262	56	92	293	28	146
Other		95	192	106	65	29	97
<b>Total</b>		<b>3850</b>	<b>2922</b>	<b>2629</b>	<b>2280</b>	<b>2453</b>	<b>2825</b>
<b>Chicago</b>	May - Nov.	16311	15823	16298	16408	14779	15924
Virginia	July	923	880	584	963	558	727
Alabama		220	76	54	276	109	147
Arkansas		52	79	90	220	173	123
Colorado		145	128	77	23	17	78
Idaho		351	299	158	530	570	382
Kansas		350	352	185	64	542	299
Louisiana		144	48	148	619	288	249
Minnesota		346	796	171	15	169	299
Missouri		769	262	933	487	940	678
Nebraska		285	220	47	17	52	124
N. Carolina		495	390	328	214	49	295
Oklahoma		228	221	259	143	341	238
Texas		244	93	231	178	296	208
Wisconsin		776	1186	368	259	299	578
Others		451	480	292	396	431	410
<b>Total</b>		<b>5779</b>	<b>6510</b>	<b>3925</b>	<b>4404</b>	<b>4561</b>	<b>4835</b>



Table 14.- Yearly and Average Unloads of Irish Potatoes from Virginia and Competing States During the Virginia Seasons, at Seven Principal Markets. Continued. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928 Cars	1929 Cars	1930 Cars	1931 Cars	1932 Cars	Average Cars
<b>Cleveland</b>	<b>May - Aug.</b>	<b>3699</b>	<b>3398</b>	<b>3921</b>	<b>3900</b>	<b>2631</b>	<b>3609</b>
Virginia	July	653	488	629	592	454	563
Kentucky	August	26	148	-	-	42	43
Maine	Sept.- May	63	49	63	7	108	58
Maryland	July - Aug.	53	46	79	66	110	71
Michigan	May	52	55	6	2	12	25
New Jersey	Aug. - Sept.	79	46	150	219	91	117
N. Carolina	June	277	190	274	360	251	270
W. Virginia	August	41	80	-	7	-	26
Wisconsin	Apr. - May	73	250	2	6	-	66
Others		194	181	182	190	232	196
<b>Total</b>		<b>1511</b>	<b>1533</b>	<b>1385</b>	<b>1449</b>	<b>1500</b>	<b>1435</b>
<b>New York</b>	<b>May - June</b>	<b>22057</b>	<b>24407</b>	<b>23117</b>	<b>20367</b>	<b>17295</b>	<b>21449</b>
Virginia	June - July	2950	2840	2891	2118	1721	2504
Maine	Sept.- June	774	763	456	190	931	623
Maryland	July - Aug.	382	401	225	81	181	254
New Jersey	Aug. - Sept.	423	207	88	19	9	149
New York	Aug. - Feb.	1314	839	1075	559	415	840
N. Carolina	June	1338	970	960	1569	1291	1226
Others		1332	419	1290	1011	346	880
<b>Total</b>		<b>8613</b>	<b>6439</b>	<b>6985</b>	<b>5547</b>	<b>4894</b>	<b>6476</b>
<b>Pittsburgh</b>	<b>May - June</b>	<b>3565</b>	<b>4344</b>	<b>4610</b>	<b>3999</b>	<b>3211</b>	<b>3946</b>
Virginia	July - Aug.	492	692	553	335	468	508
Maine	Oct. - June	70	227	104	40	191	126
Maryland	August	79	72	90	103	91	87
Michigan	Mar. - May	4	132	-	-	6	28
New Jersey	Aug. - Sept.	203	140	292	220	198	211
N. Carolina	June	177	134	243	234	194	196
S. Carolina	June	156	100	141	103	50	110
Others		232	345	83	236	184	216
<b>Total</b>		<b>1413</b>	<b>1842</b>	<b>1506</b>	<b>1271</b>	<b>1382</b>	<b>1482</b>
<b>Philadelphia</b>	<b>May - June</b>	<b>6688</b>	<b>7530</b>	<b>8869</b>	<b>7425</b>	<b>6078</b>	<b>7318</b>
Virginia	June - July	1013	862	986	734	637	856
Maine	Nov. - May	27	130	128	40	167	98
Maryland	July	125	125	91	60	21	84
New Jersey	August	100	311	307	148	38	181
N. Carolina	June	301	329	533	380	538	416
S. Carolina	May - June	460	304	354	604	231	391
Others		181	47	108	52	34	84
<b>Total</b>		<b>2207</b>	<b>2108</b>	<b>2507</b>	<b>2018</b>	<b>1716</b>	<b>2110</b>

Competition at the Philadelphia market is similar to that at Boston, with the exception that at Philadelphia more cars are unloaded from South Carolina, and the stored crop moving in from Maine is smaller. Virginia supplies slightly more than one-third of the crop moving to the Philadelphia market during June and July.

The stored crop from Maine and New York offers severe competition at Baltimore during June and part of July. In 1932, 399 cars were unloaded from Maine, compared with 363 from Virginia. For the five year period (1928-1932), however, Virginia shipments averaged 570 cars, while Maine shipped but 275. Unloads from the new crop sections of Maryland, North Carolina, and South Carolina, compete considerably during the Virginia shipping season. (Table No. 14).

An important portion of the Virginia potato crop was marketed in the West. Unloads at Chicago, Cleveland, and Pittsburgh show the western competition met at these markets. At Chicago during July 1932, the Virginia unloads of 285 cars were exceeded by quantities of stored potatoes from Idaho and Wisconsin, and new crop from Kansas, Louisiana, Missouri, Oklahoma, and Texas. However, the averages for the five year period 1928-1932, during the Virginia shipping season, shows Virginia outranking all other states with 727 cars, Missouri was second with 678, and the stored crop of Wisconsin third with 578. (Table No. 14).

At Cleveland, Virginia meets competition mainly from Maine, North Carolina, Maryland, and New Jersey. During the period of 1928-1932, an average of 1,435 cars were unloaded at this market

during the Virginia shipping season. Five hundred and sixty-three cars originated in Virginia, 270 in North Carolina, 117 in New Jersey, 71 in Maryland, 66 in Wisconsin, 58 in Maine, 43 in Kentucky, 28 in West Virginia, and 25 in Michigan. Unloads from West Virginia and Wisconsin during the Virginia shipping season have practically discontinued at this market since 1929. (Table No. 14).

At Pittsburgh, during July and August, Virginia provides about one-third of the total potato unloads. The new crop for North Carolina and South Carolina, and the stored crop from Maine compete during the first of the Virginia season, while Maryland and New Jersey compete at the end of the season. (Table No. 14).



Chart No. 8. Carlot Shipments of Irish Potatoes  
From Virginia And Competing States  
by Weeks  
Seasons 1928-29 - 1933

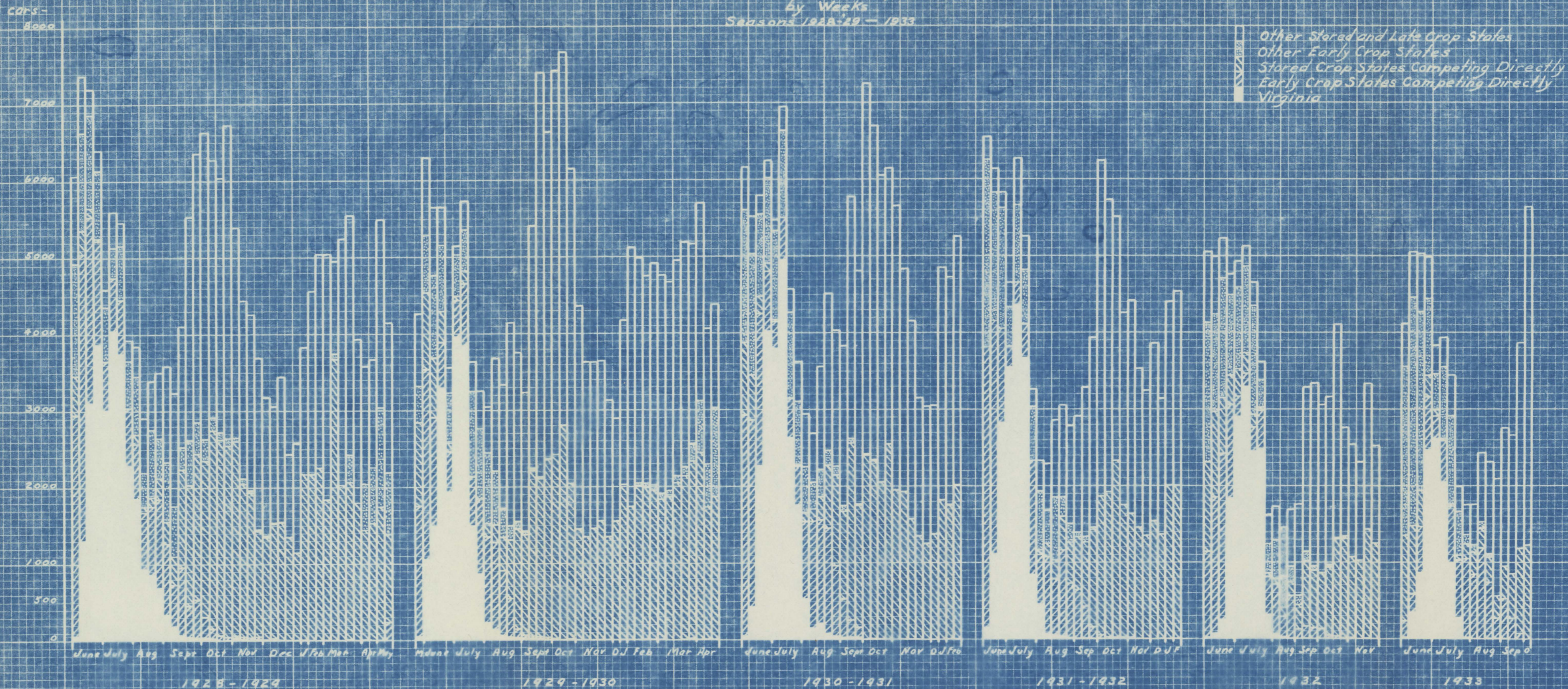
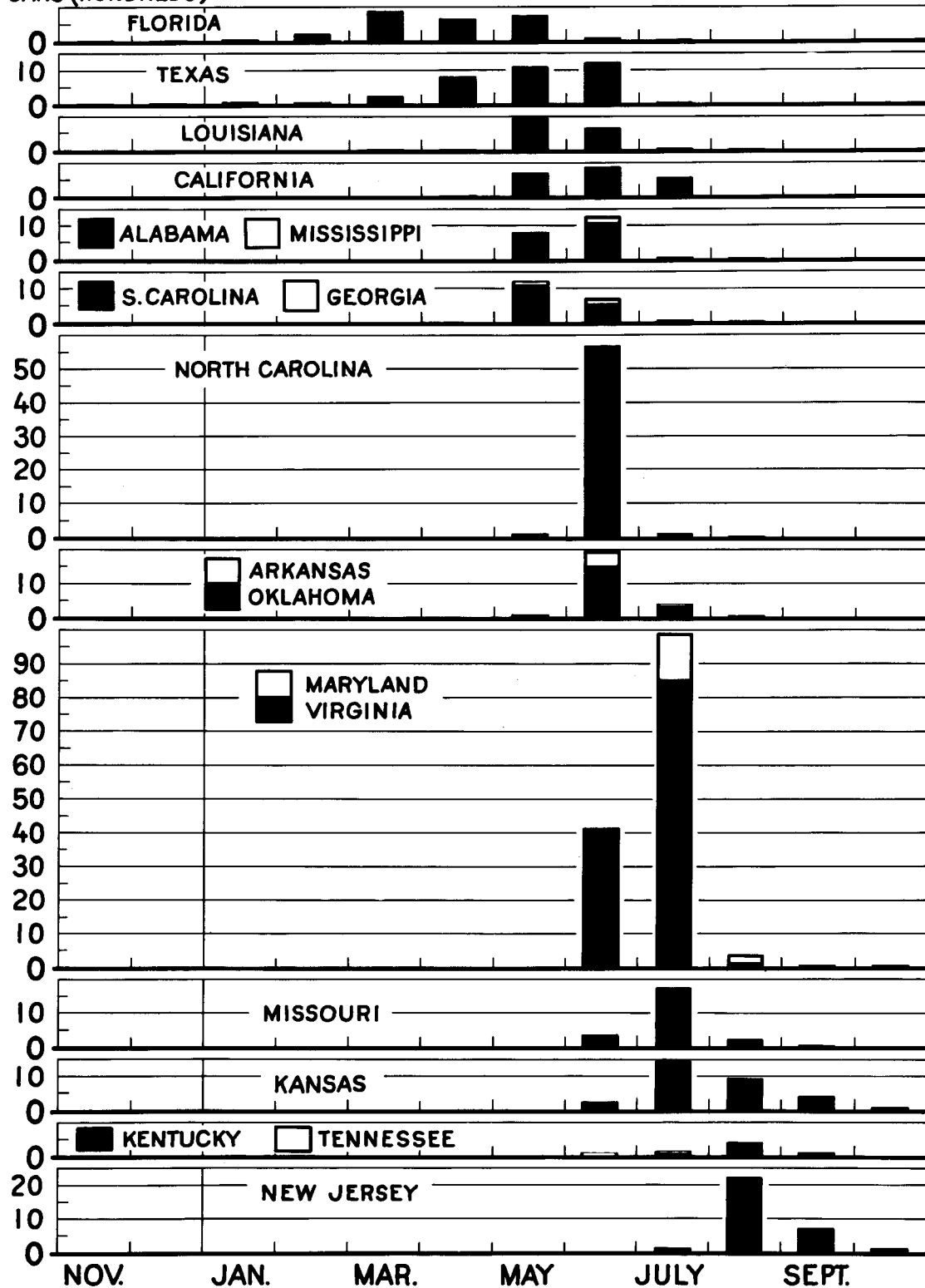




Chart No. 9

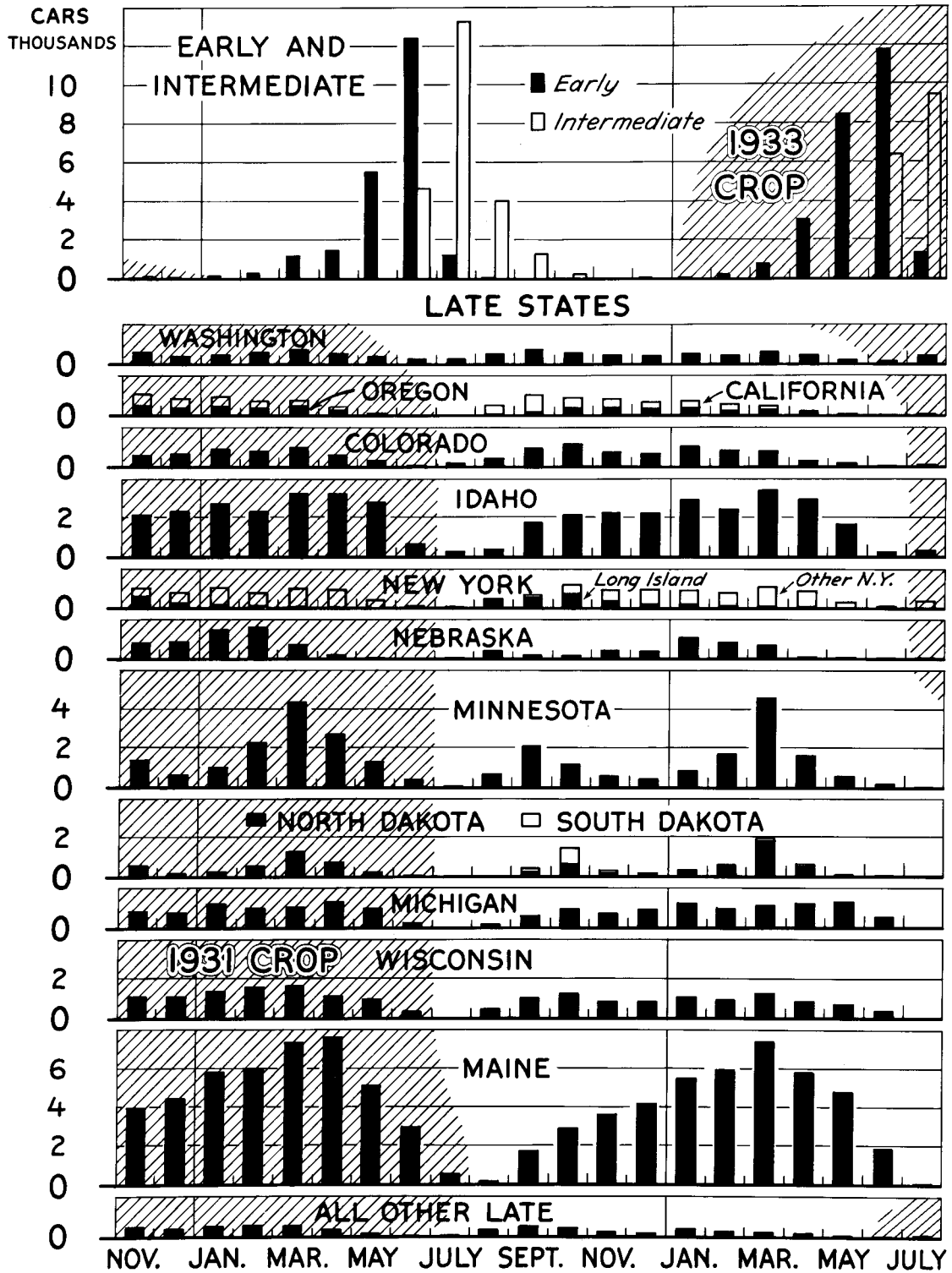
# Potatoes: Monthly Car-lot Shipments, Early and Intermediate States, Nov. 1931 - Oct. 1932

CARS (HUNDREDS)



# Chart No. 10

## Total Potatoes: Monthly Car-lot Shipments, 1932 Season



## Spinach

Virginia ranks second to Texas in acreage, production, and car lot shipments of spinach. For the five years, 1928 to 1934, Virginia produced an average of 15 per cent of the total United States crop. (Table No. 3). On the large markets, Virginia shipments compete especially with Texas, New Jersey, Maryland, and South Carolina, and with an indefinite quantity which moves by truck from local market garden areas. (Table No. 15).

During the period 1928 to 1934, Texas shipped an average of 2,419 cars to the four principal markets, while Virginia was shipping 1,906 cars. The importance of this competition may be seen in the fact that of the average total of 4,697 cars received at these four markets during the Virginia shipping period, 4,325 were from these two states, or 51 per cent from Texas and 40 per cent from Virginia. (Table No. 16). Texas usually begins shipping heavily in November. Shipments from that state decrease toward the end of December and throughout January, and increase again in March. Virginia car lot movements follow Texas shipments except during the second season, when shipments begin later in March and extend later throughout April and part of May. Competing car lot movements from all sections decrease rapidly throughout April and May when Virginia shipments are still quite heavy. March is the peak month for unloads at Baltimore, New York, and Philadelphia, while at Boston, the peak month is April.

44.

Of the four markets studied, New York City received the largest number of cars from Virginia with an annual average of 1,270 for the five year period, Boston received a yearly average of 356, Philadelphia 163, and Baltimore 50 cars. Both the 1931 and the 1932 shipments were considerably below the average with the exception of one car more than the average at Baltimore during 1931. With the exception of Texas, a similar condition exists for the principal competing states. (Table No. 17).

Spinach is particularly adaptable to motor truck transportation especially because of its light, leafy character and low minimum car lot weight. As there has been a decrease in car lot shipments from the competing areas, without any corresponding decrease in production, (Table No. 15), it is reasonable that motor truck movements have displaced the rail and boat shipments at an increasing rate. The importance of this motor truck movement from competing areas located near the principal eastern markets should not be overlooked.



Table 15.- Yearly Acreage, Production, and Shipments of Spinach for Virginia and Competing States (1928-1933)

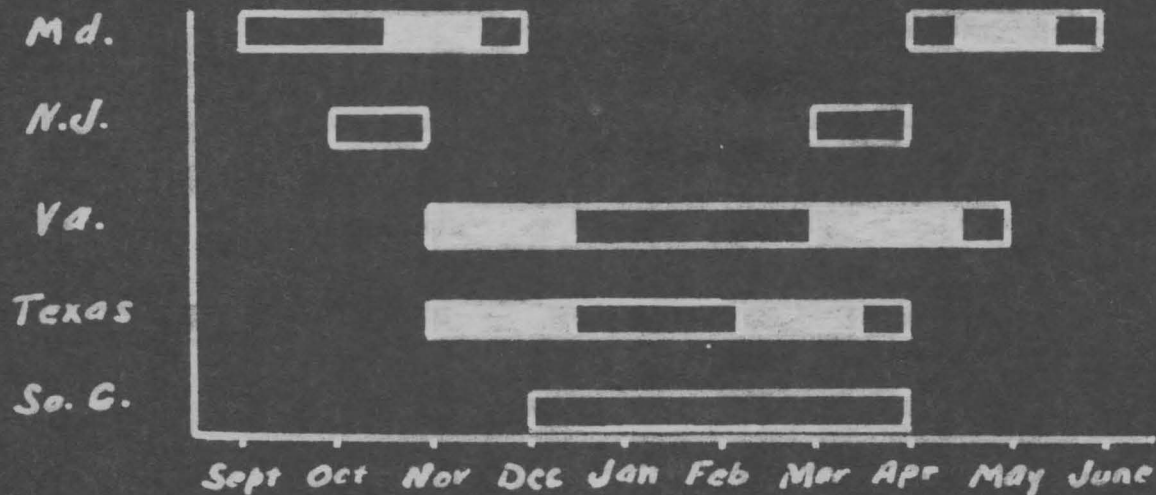
Spinach	1928			:	1929		
	Acreage	Production			Acreage	Production	
		1,000 bushels	Shipments			1,000 bushels	Shipments
Virginia	7,700	2,598	3,066	:	7,320	2,036	2,974
Texas	25,600	5,120	5,528	:	23,650	8,595	5,559
Maryland	1,500	512	749	:	2,100	615	628
New Jersey	3,000	975	43	:	3,400	949	9
So. Carolina	600	180	282	:	400	72	128
				:			
	1930			:	1931		
Virginia	7,900	2,512	2,586	:	6,500	2,280	1,332
Texas	25,060	5,463	6,085	:	27,850	7,074	7,302
Maryland	620	176	172	:	1,700	515	441
New Jersey	2,900	880	9	:	2,900	1,003	13
So. Carolina	250	88	75	:	400	80	82
				:			
	1932			:	1933		
Virginia	4,300	1,172	1,127	:	6,150	1,728	1,751
Texas	30,800	6,468	6,669	:	44,000	5,720	5,684
Maryland	1,640	430	102	:	1,240	230	56
New Jersey	3,000	1,200	9	:	3,100	1,140	35
So. Carolina	200	30	35	:	100	20	11

Chart No. 11. APPROXIMATE SHIPPING SEASONS

OF SPINACH

FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)



Note: The crop-movement season for the United States extends from October of one year through December of the next year. Maryland and New Jersey extends shipments through January succeeding the regular crop movement.

Table 16.- Monthly Unloads of Spinach from Virginia and Totals from All Sources at Four Principal Markets. (1928-1933)

	Baltimore												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1928													
Virginia	3		16	21							2	15	57
Total	18	47	62	29							2	15	193
1929													
Virginia	25	3	12	10								20	70
Total	39	52	47	16								30	184
1930													
Virginia	20	6	10								1	16	53
Total	42	43	49	13							1	37	185
1931													
Virginia	5	4	34	7								1	51
Total	47	38	72	18					2			2	179
1932													
Virginia	6	1		1							2	10	20
Total	24	35	41	19				1	2	1	2	21	146
Boston													
1928													
Virginia	6		21	236	135						39	116	552
Total <sup>1</sup>	65	143	252	263	205	162	46	53	64	160	141	132	1686
1929													
Virginia	40		53	246	36						54	71	500
Total <sup>1</sup>	162	159	230	262	177	123	57	56	82	191	195	126	1620
1930													
Virginia	31	11	16	134	50						8	6	264
Total <sup>1</sup>	92	133	218	217	276	149	99	89	128	198	162	139	1899
1931													
Virginia			13	160	59						1	15	248
Total	160	174	171	236	133	7					2	95	978
1932													
Virginia	24	2		72	52						48	20	218
Total	158	153	191	145	91						75	98	911

<sup>1</sup> Includes quantities trucked in.

Table 16.- Monthly Unloads of Spinach from Virginia and Totals from All Sources at Four Principal Markets. (1928-1933) Continued

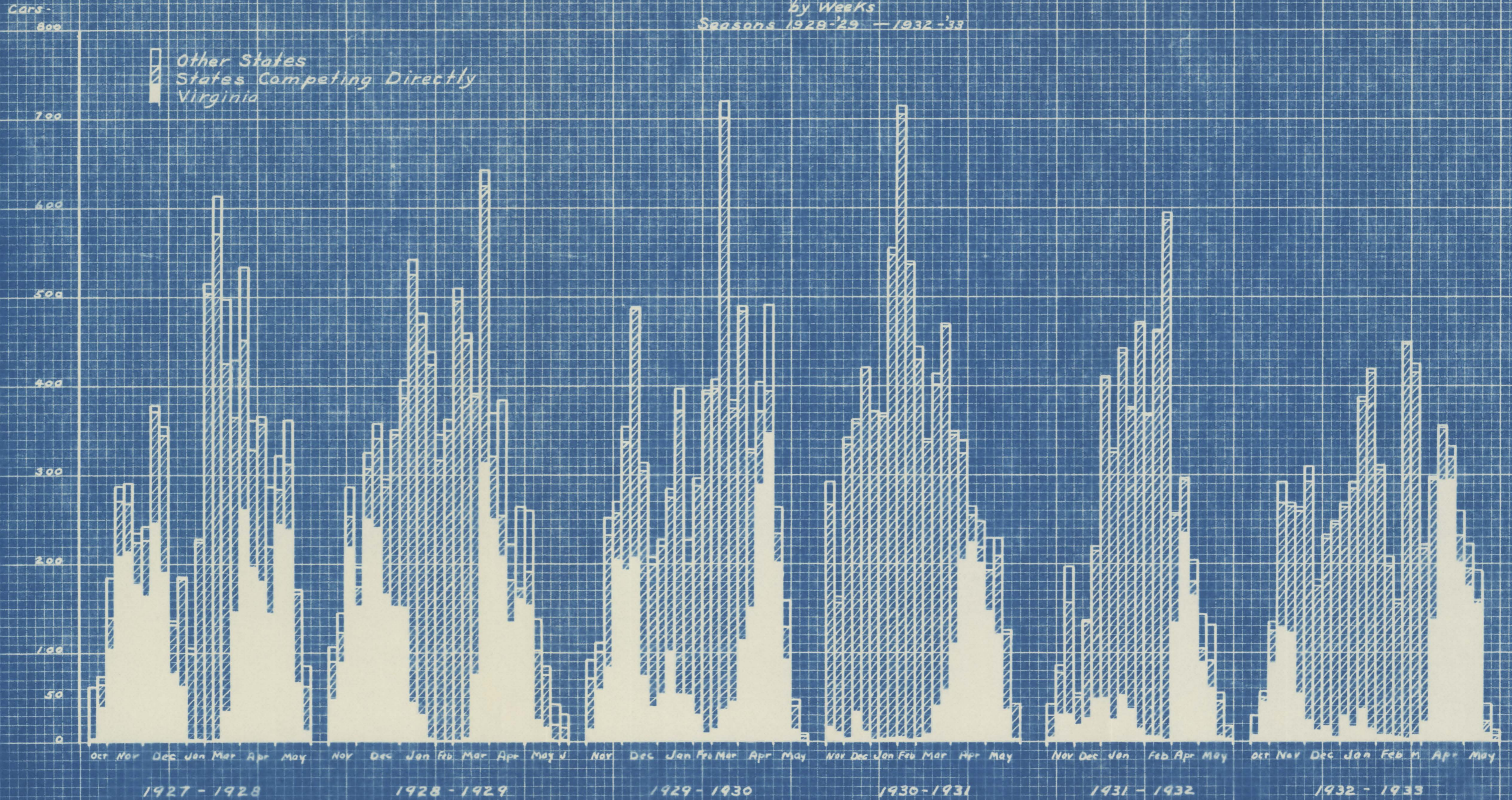
	Jan.	Feb.	Mar.	Apr.	May	June	<u>New York</u>			Sept.	Oct.	Nov.	Dec.	Total
							July	Aug.						
<b>1928</b>														
Virginia	36		89	536	376						1	402	606	2045
Total	323	394	692	687	400	3	1	3	7	87	428	617	3642	
<b>1929</b>														
Virginia	179	1	164	522	155	1						189	429	1639
Total	652	514	661	586	183	5	2	4	2	47	223	588	3489	
<b>1930</b>														
Virginia	212	13	43	488	227							19	60	1062
Total	510	458	587	711	234	1	14	5	4	7	66	472	3069	
<b>1931</b>														
Virginia	2	1	40	449	158							65	101	816
Total	497	470	564	591	222	4	3	2	5	2	89	393	2842	
<b>1932</b>														
Virginia	73	33		231	149						5	240	58	789
Total	460	483	506	495	171	1	3	3	21	10	294	377	2824	
<u>Philadelphia</u>														
<b>1928</b>														
Virginia	11		8	103	23							9	73	227
Total	83	134	194	131	24				1	6	10	77	660	
<b>1929</b>														
Virginia	34		38	62	17								99	250
Total	135	126	101	81	19				5	1			124	652
<b>1930</b>														
Virginia	59	11	18	59	27								17	191
Total	132	124	183	128	27					1	2	109	706	
<b>1931</b>														
Virginia	4		12	40									1	57
Total	140	149	186	104							2	37	616	
<b>1932</b>														
Virginia	8	2	1	40	14							19	5	89
Total	137	134	155	123	17			1	3	3	34	96	703	

Table 17.- Yearly and Average Unloads of Spinach from Virginia and Competing States During the Virginia Seasons, at Four Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928 Cars	1929 Cars	1930 Cars	1931 Cars	1932 Cars	Average Cars
<b>Baltimore:</b>	<b>March</b>	<b>193</b>	<b>184</b>	<b>185</b>	<b>179</b>	<b>146</b>	<b>177</b>
Virginia	Nov. - May	57	70	53	51	20	50
Texas	Nov. - April	82	118	121	125	81	105
Other		7	5	3	1		3
<b>Total</b>		<b>146</b>	<b>193</b>	<b>177</b>	<b>177</b>	<b>101</b>	<b>158</b>
<b>Boston:</b>	<b>April</b>	<b>1686</b>	<b>1820</b>	<b>1899</b>	<b>978</b>	<b>911</b>	<b>1459</b>
Virginia	Nov. - May	552	500	264	248	218	356
Texas	Nov. - April (Apr. - June)	307	357	611	284	646	441
Maryland	(Sept. - Oct.)	78	68	16	99	38	60
Other		121	206	345	6	9	137
<b>Total</b>		<b>1058</b>	<b>1131</b>	<b>1236</b>	<b>637</b>	<b>911</b>	<b>994</b>
<b>New York:</b>	<b>March</b>	<b>3642</b>	<b>3489</b>	<b>3009</b>	<b>2842</b>	<b>2824</b>	<b>3173</b>
Virginia	Nov. - May	2045	1639	1062	816	789	1270
Texas	Nov. - Apr.	853	1549	1889	1863	1470	1525
So. Carolina	Dec. - Apr.	180	110	70	57	1	84
Maryland	(Apr. - June) (Sept. - Dec.)	109	60	6	77	21	55
New Jersey	(Mar. - Apr.) (Oct. - Nov.)	24	8	5	4	-	8
Other		23	46	6	9	9	19
<b>Total</b>		<b>3234</b>	<b>3412</b>	<b>3038</b>	<b>2826</b>	<b>2290</b>	<b>2961</b>
<b>Philadelphia:</b>	<b>March</b>	<b>660</b>	<b>652</b>	<b>706</b>	<b>616</b>	<b>703</b>	<b>667</b>
Virginia	Nov. - May	227	250	191	57	89	163
Texas	Nov. - Apr.	273	266	511	408	604	412
Other		19	4	1	2	3	6
<b>Total</b>		<b>519</b>	<b>520</b>	<b>703</b>	<b>467</b>	<b>696</b>	<b>581</b>



Chart No. 12. Carlot Shipments of Spinach  
 From Virginia And Competing States  
 by Weeks  
 Seasons 1928-'29 - 1932-'33





### Strawberries

Virginia is a second early strawberry producing state. The Virginia crop follows heavy production from Florida and Louisiana, and competes mainly with the latter, North Carolina, Maryland, and Delaware.

In 1928 the Virginia crop ranked second, with 968,000, thirty-two quart crates. Louisiana led with 1,392,000 crates, a large part of which did not come into competition with Virginia berries. In 1929, Virginia production decreased by 186,000 crates, and in 1930, decreased again to 279,000 crates below the 1929 figure, ranking fourth to Louisiana, Maryland and North Carolina. These states have continued to exceed Virginia, and with an increase in production from New Jersey in 1932, Virginia now (1933) ranks fifth among its competitors.

(Table No. 18).

Car lot shipments from all sources by rail and boat for 1928 and 1929 totaled 18,716, and 18,732 cars respectively. In 1932, these shipments were reduced to 12,924, and in 1933, to 13,211. The total estimated production during this period remained comparatively unchanged. These trends are fairly indicative of car lot shipments and production from Virginia and competing areas. The difference between production and car lot shipments represents the "unknown quantity", the disposal of which cannot be adequately determined. Motor truck shipments from Virginia and competing areas move a considerable volume of strawberries, due mainly to the perishable character of the crop. For the 1928 season, an estimate of 1,008 cars were

Table 18.- Yearly Acreage, Production, and Shipments of  
Strawberries for Virginia and Competing  
States. (1928-1933)

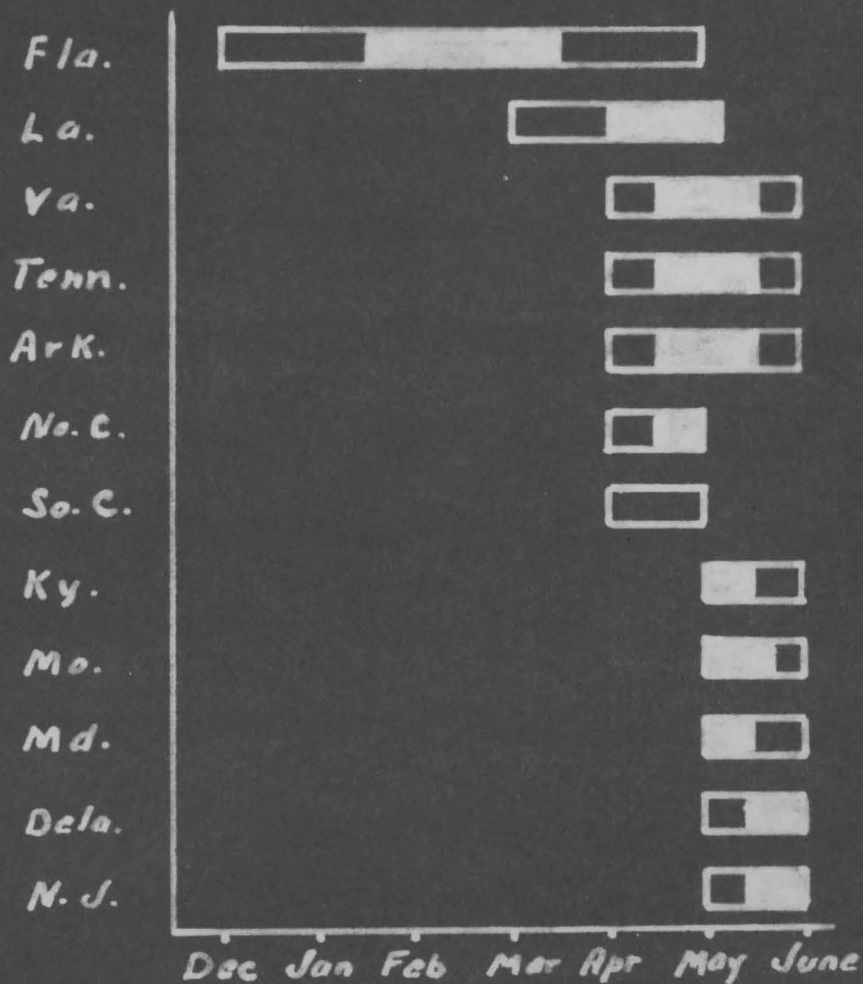
Strawberries		1928		1929		
States	Acreage	Production		Production		
		1,000 crates	Shipments	1,000 crates	Shipments	
Virginia	9,980	968	984	8,980	682	849
Delaware	4,600	451	621	4,500	382	418
Louisiana	23,200	1,392	2,850	24,360	1,437	2,859
Maryland	11,500	770	980	9,500	684	734
New Jersey	4,000	364	186	4,000	276	176
No. Carolina	7,500	818	2,151	7,000	679	1,483
			<u>1930</u>		<u>1931</u>	
Virginia	7,900	403	336	5,520	370	525
Delaware	4,100	242	203	2,400	140	111
Louisiana	24,600	1,181	2,389	24,600	1,870	4,720
Maryland	7,600	413	424	4,300	258	352
New Jersey	4,500	306	106	5,000	400	60
No. Carolina	5,400	437	756	5,300	678	1,228
			<u>1932</u>		<u>1933</u>	
Virginia	6,350	413	393	7,440	595	475
Delaware	3,600	324	94	3,900	468	158
Louisiana	29,500	1,504	2,664	26,000	1,243	2,610
Maryland	7,600	608	319	8,060	846	388
New Jersey	6,000	678	67	6,500	630	41
No. Carolina	6,200	496	619	6,500	650	849

Chart No. 13. APPROXIMATE SHIPPING SEASONS

OF STRAWBERRIES

FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)



Note: The crop-movement season for the United States is for the calendar year except Florida which begins in December of the preceding year.

moved by motor truck from Delaware, as compared with 621 cars by rail.<sup>1</sup> For the Eastern Shore of Maryland during the same year, 937 cars were shipped by truck and 947 by rail. For the Eastern Shore of Virginia, 445 cars were shipped by truck and 463 by rail. The following table indicates the increasing importance of motor truck transportation of strawberries from Virginia and competing areas.

Table 19.- Shipments of Strawberries by Rail and Boat and Reported Motor-truck Movement from Delaware and the Eastern Shore of Maryland and Virginia, 1926 and 1928-1930, and the Chadbourn and Wallace Sections of North Carolina, 1928-1930<sup>2</sup>

Year	Delaware and Eastern Shore of Maryland and Virginia			Two principal sections of North Carolina	
	Rail and Boat (Cars)	Motor Truck (Cars) <sup>1</sup>	Percentage of total reported by Motor Truck	Rail (Cars)	Motor Truck Cars
1926	2,862	1,086	28		
1928	2,121	2,396	53	2,151	136
1929	1,649	2,073	56	1,483	401
1930	839	1,129	57	765	468

Heavy car lot shipments from Louisiana begin in April and continue throughout May. Virginia shipments begin in May, competing principally with Louisiana and North Carolina, and continue until about the middle of June. Maryland, Delaware and New Jersey shipments compete heavily at the end of the Virginia shipping period. (Chart No. 13)

<sup>1</sup> Motor truck figures for Delaware and for the Eastern Shore of Maryland and Virginia are based on the records of the Delaware State Highway Department, and are estimated to be only about 80 percent of the total long distance motor truck movement from the area.

<sup>2</sup> "The Marketing and Distribution of Fruits and Vegetables by Motor Truck" by Brice Edward and J. W. Park, Technical Bulletin No. 272; pages 31 and 57.

Baltimore and New York are the principal markets receiving strawberries from Virginia. (Table No. 20). Of the 393 cars shipped from Virginia to all points in 1932, 211 were sent to Baltimore and New York City. Forty-three cars were received during the Virginia shipping season at Baltimore in 1932, 22 of which were from Virginia, (Table No. 21) 16 from Maryland, and one each from Louisiana and North Carolina. On the markets further north, Louisiana and North Carolina are the principal competitors of Virginia.

The strawberry crop is a principal one grown within the market garden area located near the large outlets of the northeast, to which the commercial crop from Virginia is distributed. Adequate data as to the extent of the competition from these market garden areas is not available, although from the observations of Governmental officials, it is believed that the importance of this supply is increasing.

Table 20.- Market Distribution of Strawberries by Car Lot Shipment from Virginia. (1924-1933)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Albany*				5	1	21	9	6	3	
Baltimore	136	147	231	185	141	104	50	72	22	
Boston	129	94	36	131	88	137	25	60	79	
Buffalo	28	36	27	18	32	5	11	7	1	
Hartford*				4	7	24	7	3	4	
Newark	96	33	32	48	47	7	8	22	6	
New Haven*				-	11	16	1	1	3	
New York	430	382	281	365	358	252	80	194	189	
Philadelphia	182	73	26	39	13	3	13	5	3	
Pittsburgh	22	4	11	14	20	11	7	9	1	
Portland, Me.				1	-	10	2	2	3	
Providence	50	31	23	8	25	28	12	21	21	
Rochester*				9	1	5	5	7	1	
Syracuse*				9	2	12	8	8	1	
Washington	18	20	17	23	8	8	3	1		

\* Cities not reporting for 1924, 1925, 1926.

Table 21.- Monthly Unloads of Strawberries from Virginia  
and Totals from All Sources at Two Principal  
Markets. (1928-1932)

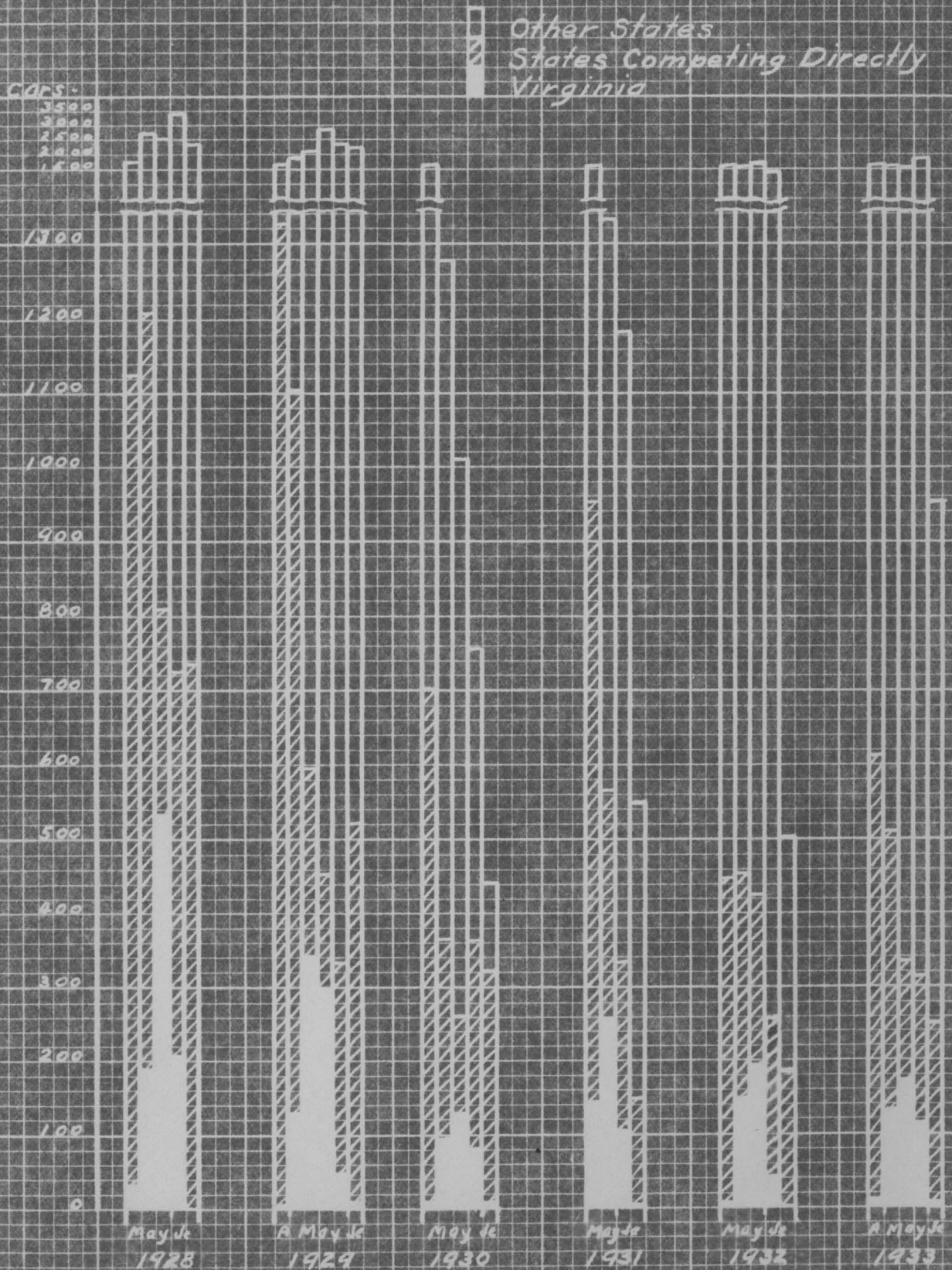
		<u>Baltimore</u>												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1928														
Virginia						127	14							141
Total				2	14	157	40							213
1929														
Virginia					8	96								104
Total		5	4	23	111									143
1930														
Virginia						48	2							50
Total		3	1	6	18	70	8							106
1931														
Virginia						38	34							72
Total		3	10	11	29	47	47							147
1932														
Virginia						21	1							22
Total		9	11	7	8	30	13							78
		<u>New York</u>												
1928														
Virginia						345	21							366
Total		15	32	125	342	1333	448	72	4	2		3		2376
1929														
Virginia					2	249	3							254
Total		63	230	325	616	631	156	48				29		2095
1930														
Virginia						78	2							80
Total		104	106	203	248	572	107	22	1			2		1365
1931														
Virginia						123	71							194
Total		33	106	174	393	805	149	9				75		1744
1932														
Virginia						178	11							189
Total		154	166	94	205	731	50	13				5		1418



Table 22.- Yearly and Average Unloads of Strawberries from Virginia and Competing States During the Virginia Seasons, at Two Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928 Cars	1929 Cars	1930 Cars	1931 Cars	1932 Cars	Average Cars
Baltimore:		213	143	106	147	78	137
Virginia	May	141	104	50	72	22	78
Maryland	May	39	12	16	14	16	19
No. Carolina	May	17	4	6	5	1	7
Louisiana	April	-	12	6	3	1	4
Other		10	2	-	-	-	2
Total		207	134	78	94	40	110
New York:	May	2376	2095	1365	1744	1418	1800
Virginia	May	368	254	80	194	189	217
Louisiana	Apr. - May	106	171	148	171	199	159
Maryland	May - June	131	68	23	33	11	53
New Jersey	May - June	200	105	67	10	1	77
No. Carolina	Apr. - May	805	584	237	421	224	454
Other		173	210	22	125	157	137
Total		1781	1392	577	954	781	1097

Chart No. 14 *Carlot Shipments of Strawberries  
From Virginia And Competing States  
by Weeks  
Seasons 1928-1933*



### Sweet Potatoes

Although Virginia produces only about 6 per cent of the total sweet potato crop, this state, with Tennessee and Kentucky, contributes the bulk of the total market supply. During the peak season, which lasts from August to November, Virginia meets small competition with shipments from Maryland, Delaware, New Jersey, North Carolina, and Louisiana. Tennessee is a heavy shipping state, but does not come into direct competition with Virginia on the principal markets. Shipments from Tennessee continue all through the year, with the peak season usually between November and May, while heavy Virginia production is limited to a four-months period, from August to December. (Chart No. 18).

In 1928, Virginia shipped 6,618 cars, while five competing states shipped 7,856. In 1932, Virginia shipments decreased to 4,973 cars, and competing shipments decreased to 4,664 cars. (Table No. 23). There has been a steady decline in car lot shipments from Virginia and competing states since 1929. (Chart No. 17). There were 22,042 cars shipped from all sources during the 1929-1930 season, 7,090 of which were from Virginia. In 1933, 11,215 cars were shipped from all states, 2,959 of which were from Virginia. (Table No. 23).

Sweet potatoes from Virginia are widely distributed throughout the principal consuming areas of the northeast. (Table No. 24). Of a total 4,973 cars shipped from Virginia in 1932, 1,220 were received at the main re-distributing markets of Baltimore, Boston, Cleveland, New York, and Pittsburgh. A review of the "Unloads at 66 Principal City

Table 23.- Yearly Acreage, Production, and Shipments of Sweet Potatoes for Virginia and Competing States. (1928-1933)

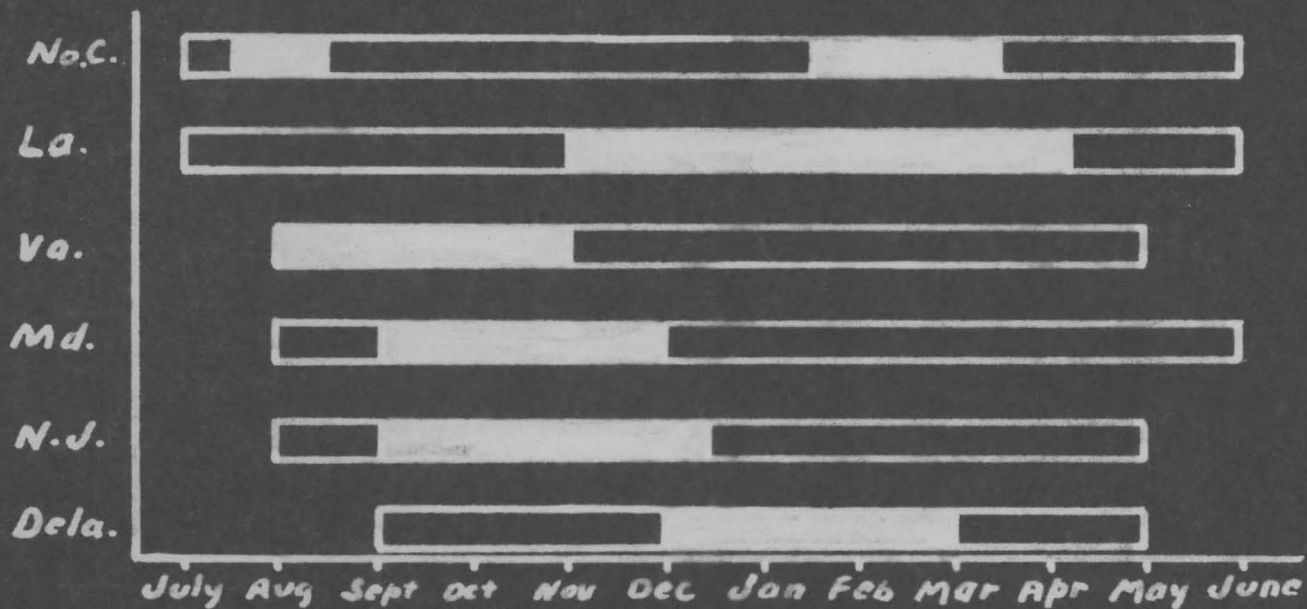
States	1928			:	1929		
	Acreage	Production			Acreage	Production	
		1,000 bushels	Shipments			1,000 bushels	Shipments
Virginia	36,000	5,184	6,618	:	36,000	5,076	6,460
Delaware	6,000	870	1,517	:	6,000	888	1,470
Maryland	8,000	1,710	2,256	:	9,000	1,629	2,106
New Jersey	13,000	1,690	1,225	:	12,000	1,500	1,223
No. Carolina	62,000	6,076	1,711	:	60,000	6,720	760
Louisiana	62,000	4,650	1,147	:	67,000	4,958	981
		<u>1930</u>		:		<u>1931</u>	
Virginia	37,000	2,960	7,090	:	38,000	4,750	5,361
Delaware	7,000	525	1,454	:	8,000	1,400	771
Maryland	9,000	630	1,859	:	11,000	2,013	975
New Jersey	12,000	1,440	1,090	:	13,000	1,950	1,076
No. Carolina	76,000	6,750	729	:	80,000	6,560	883
Louisiana	60,000	4,200	1,463	:	72,000	5,400	1,224
		<u>1932</u>		:		<u>1933</u>	
Virginia	38,000	3,610	4,973	:	35,000	3,885	2,959
Delaware	7,000	826	1,364	:	7,000	910	740
Maryland	8,000	920	862	:	6,000	840	499
New Jersey	12,000	1,560	1,531	:	11,000	1,925	1,308
No. Carolina	94,000	7,990	592	:	85,000	7,905	433
Louisiana	84,000	5,544	1,315	:	74,000	5,180	947

Chart No. 16. APPROXIMATE SHIPPING SEASONS

OF SWEET POTATOES

FROM VIRGINIA AND OTHER STATES

(Peak periods shown in white)



Note: The crop-movement for the United States extends from July 1, of one year through June of the next.

Table 24.- Market Distribution of Sweet Potatoes by Car Lot Shipment from Virginia. (1924-1933)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Alcon*				36	49	47	33	33	10	
Albany*				66	43	73	73	65	44	
Baltimore	262	252	151	256	392	254	320	226	175	
Boston	440	446	495	512	504	577	463	492	461	
Bridgeport*				30	30	26	29	25	12	
Buffalo	36	59	44	57	50	39	69	36	25	
Chicago	97	89	79	132	129	75	80	56	37	
Cincinnati	132	46	47	63	74	44	40	17	7	
Cleveland	144	127	144	135	136	140	75	155	99	
Columbus	36	47	61	92	94	93	92	89	51	
Dayton*				23	23	17	9	14	16	
Detroit	28	26	26	32	77	76	57	78	41	
Grand Rapids*				35	48	71	37	42	35	
Hartford*				92	48	64	59	74	58	
Indianapolis	74	55	70	83	87	103	52	47	20	
Milwaukee	30	34	7	16	14	19	12	7	9	
Minneapolis	39	45	60	76	62	65	49	56	36	
Newark	118	106	183	241	183	232	136	78	36	
New Haven*				58	49	75	60	63	42	
New York	835	833	1152	1083	988	1066	780	490	343	
Philadelphia	147	160	199	170	115	147	135	35	30	
Pittsburgh	176	184	179	217	219	250	164	154	142	
Portland, Me.				62	64	79	62	74	46	
Providence	78	67	96	73	81	76	58	69	60	
Rochester*				73	91	94	69	84	64	
St. Paul	8	13	13	33	17	23	22	22	18	
Springfield, Mass.				63	64	77	69	71	48	
Syracuse*				38	34	59	55	59	45	
Toledo	12	31	90	95	91	77	58	84	54	
Washington	77	74	43	35	39	33	52	50	32	
Worcester*				22	11	5	12	5	11	
Youngstown*				54	61	61	59	79	66	

\* Cities not reporting for 1924, 1925, 1926.

"Markets", issued by the Department of Agriculture, will show the competition at the four leading markets studied, fairly representative of the competition that can be expected at all markets receiving sweet potatoes from Virginia. Maryland is the chief competing state at Baltimore, having shipped an average of 271 cars during the five year period 1928 to 1934, while Virginia shipped an average of 262. (Table No. 26).

At Boston, Virginia shipped over half of all the car loads of sweet potatoes received on that market. (Table No. 25). An average of 750 cars were shipped to that market during the Virginia seasons, of which 499 were from Virginia, 141 from Delaware, 44 from Maryland, 29 from North Carolina, and 15 from New Jersey. (Table No. 26).

At Cleveland, Virginia shipments led with an average of 119 cars, out of a total average of 364 cars during the Virginia season. Competing states on this market in order of importance are Louisiana, New Jersey, Maryland, and Delaware. (Table No. 26).

New York City is the largest individual market. At this market a total average of 1,606 cars were unloaded during the 1928-1932 seasons, 1,568 of which were shipped during the Virginia period. Competing with an average of 733 cars from Virginia, New Jersey shipped 254, Maryland 223, North Carolina 170, and Delaware 86. (Table No. 26).

At Pittsburgh, Virginia meets competition mainly from New Jersey, Delaware, and Louisiana, in order of importance.

It will be noted that for each of these markets the 1932 figure for unloads from Virginia is somewhat below the average for the period 1928 to 1934. (Table No. 26).



Table 25.- Monthly Unloads of Sweet Potatoes from Virginia  
and Totals from All Sources at Five Principal  
Markets. (1928-1932)

	Jan.	Feb.	Mar.	Apr.	May	June	<u>Baltimore</u>		Sept.	Oct.	Nov.	Dec.	Total
							July	Aug.					
<b>1928</b>													
Virginia	8	14	22	11			1	30	58	76	98	21	339
Total	60	58	72	47	19		3	85	85	103	118	75	725
<b>1929</b>													
Virginia	12	7	10	2				21	47	66	71	18	254
Total	60	59	60	44	19	10	16	72	90	96	106	88	722
<b>1930</b>													
Virginia	10	12	23	9	4		1	17	65	99	62	16	312
Total	76	68	100	53	26	7	21	71	88	156	97	88	851
<b>1931</b>													
Virginia	8	6	5	5	1			11	49	70	52	21	226
Total	63	48	49	37	14	6	19	73	66	78	62	67	581
<b>1932</b>													
Virginia	10	8						35	41	46	29	6	175
Total	53	59	36	27	18	9	19	49	51	71	49	23	464
<b>Boston</b>													
<b>1928</b>													
Virginia								46	172	189	95	2	504
Total	67	41	41	19	11	5	3	83	194	196	119	72	851
<b>1929</b>													
Virginia	2	1		1				49	240	198	80	6	577
Total	50	43	35	27	14	13	36	65	248	208	106	75	920
<b>1930</b>													
Virginia	9	3	2	2				35	150	160	92	10	463
Total	55	46	44	23	7	4	18	66	160	165	104	101	793
<b>1931</b>													
Virginia	2							51	163	161	88	27	492
Total	53	27	29	22	6	5	19	113	172	186	114	133	879
<b>1932</b>													
Virginia	7	1		1	3			63	138	138	106	4	461
Total	76	67	68	37	20	12	24	101	143	152	140	79	919

Table 25.- Monthly Unloads of Sweet Potatoes from Virginia and Totals from All Sources at Five Principal Markets. Continued (1928-1932)

	<u>Cleveland</u>												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
<b>1928</b>													
Virginia		1						18	51	45	21		136
Total	58	46	47	29	20	6	3	28	77	97	82	71	564
<b>1929</b>													
Virginia	1	1		5				4	52	33	40	6	140
Total	65	44	43	34	26	16	26	24	66	71	84	63	562
<b>1930</b>													
Virginia	1		1					4	17	22	27	2	74
Total	68	57	58	29	23	1	4	29	48	90	70	85	562
<b>1931</b>													
Virginia								11	42	52	45		148
Total	55	51	50	26	21	4	6	39	84	132	101	91	660
<b>1932</b>													
Virginia	1							14	35	41	8		99
Total	84	77	58	49	31	21	15	36	49	95	91	70	676
	<u>New York</u>												
<b>1928</b>													
Virginia	14	10	40	7	4	1	1	130	260	249	210	62	988
Total	344	313	246	125	59	14	14	209	333	332	359	247	2595
<b>1929</b>													
Virginia	17	3	5	2	1			110	305	290	277	56	1066
Total	169	133	102	66	39	22	62	178	356	406	389	203	2125
<b>1930</b>													
Virginia	11	6	21	4			1	116	180	211	207	23	780
Total	146	127	107	60	24	4	49	169	209	289	266	120	1570
<b>1931</b>													
Virginia	6	5	8	4	3			51	124	130	121	38	490
Total	88	74	79	39	24	8	31	161	154	172	145	82	1057
<b>1932</b>													
Virginia	16	6	3	5	7	3		72	67	54	76	34	343
Total	42	36	37	34	31	26	40	108	87	89	88	65	683

Table 25.- Monthly Unloads of Sweet Potatoes from Virginia  
and Totals from All Sources at Five Principal  
Markets. Continued. (1928-1932)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<b>1928</b>													
Virginia	1			1				13	70	69	59	6	219
Total	132	82	73	76	52	24	9	56	126	148	115	60	973
<b>1929</b>													
Virginia		1		1				26	97	74	43	3	260
Total	97	76	112	64	39	28	45	66	141	181	151	135	1135
<b>1930</b>													
Virginia			1	1				27	51	44	39	1	164
Total	141	110	89	60	33	18	20	59	91	126	90	125	962
<b>1931</b>													
Virginia								13	39	41	46	15	154
Total	94	62	68	44	18	11	23	63	116	143	129	133	904
<b>1932</b>													
Virginia	2	1		1				30	38	35	25	10	142
Total	104	106	99	73	39	18	26	50	78	106	80	89	868

Table 26.- Yearly and Average Unloads of Sweet Potatoes from Virginia and Competing States during the Virginia Seasons, at Five Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928	1929	1930	1931	1932	Average
		Cars	Cars	Cars	Cars	Cars	Cars
Baltimore	Oct. - Dec.	725	722	651	481	464	669
Virginia	Sept. - Nov.	339	254	318	226	175	262
Maryland	Dec. - Feb.	266	351	405	210	122	271
No. Carolina	April	66	62	74	91	52	73
Other		19	8	25	30	6	18
<b>Total</b>		<b>710</b>	<b>675</b>	<b>822</b>	<b>557</b>	<b>355</b>	<b>624</b>
Boston	Sept. - Nov.	851	920	793	879	919	872
Virginia	Sept. - Nov.	504	577	463	492	461	499
Maryland	Nov. - Dec.	35	48	38	49	51	44
New Jersey	April	17	14	20	9	17	15
Delaware	Dec. - Mar.	62	160	169	98	215	141
No. Carolina	August	30	5	30	36	45	29
Other		16	2	44	34	20	24
<b>Total</b>		<b>664</b>	<b>806</b>	<b>764</b>	<b>718</b>	<b>815</b>	<b>750</b>
Cleveland	Oct. - Dec.	564	562	562	660	676	605
Virginia	Aug. - Nov.	136	140	74	148	99	119
Delaware	Dec. - Feb.	17	81	28	26	3	31
Maryland	Oct. - Nov.	62	28	25	20	8	29
New Jersey	Oct. - Jan.	40	6	52	110	72	56
Louisiana	Aug. - May	24	108	72	100	77	76
Other		50	88	71	43	12	53
<b>Total</b>		<b>329</b>	<b>451</b>	<b>322</b>	<b>447</b>	<b>271</b>	<b>364</b>
New York	Oct. - Nov.	2595	2125	1570	1057	683	1606
Virginia	Aug. - Nov.	988	1066	780	1190	543	733
Maryland	Sept. - Jan.	438	393	195	56	35	223
Delaware	Jan. - Apr.	208	106	72	34	9	86
New Jersey	Dec. - Mar.	697	326	174	71	2	254
No. Carolina	Oct. - Apr.	188	71	155	236	199	170
Other		76	79	166	131	55	101
<b>Total</b>		<b>2595</b>	<b>2041</b>	<b>1542</b>	<b>1018</b>	<b>643</b>	<b>1567</b>
Pittsburgh	Sept. - Dec.	973	1135	962	904	868	963
Virginia	Sept. - Nov.	219	250	164	154	142	186
Delaware	Dec. - Mar.	42	114	28	66	38	58
New Jersey	Sept. - Oct.	150	162	215	226	152	181
Louisiana	Mar. - May	1	25	25	30	24	21
Other		113	123	59	108	47	90
<b>Total</b>		<b>525</b>	<b>674</b>	<b>491</b>	<b>584</b>	<b>403</b>	<b>536</b>

Unloads from all areas at the markets mentioned above are heavier during the fall and winter months. (Table No. 25). Virginia shipments arrive at these markets in comparatively large numbers between August and November. Competing shipments from Louisiana and North Carolina are large in April, May and August, while shipments from Maryland, Delaware and New Jersey are greater between September and January. (Table No. 26 and Chart No. 16).



Chart No-17 Carlot Shipments of Sweet Potatoes  
 From Virginia And Competing States  
 by Weeks  
 Seasons 1928-'29 — 1932-'33

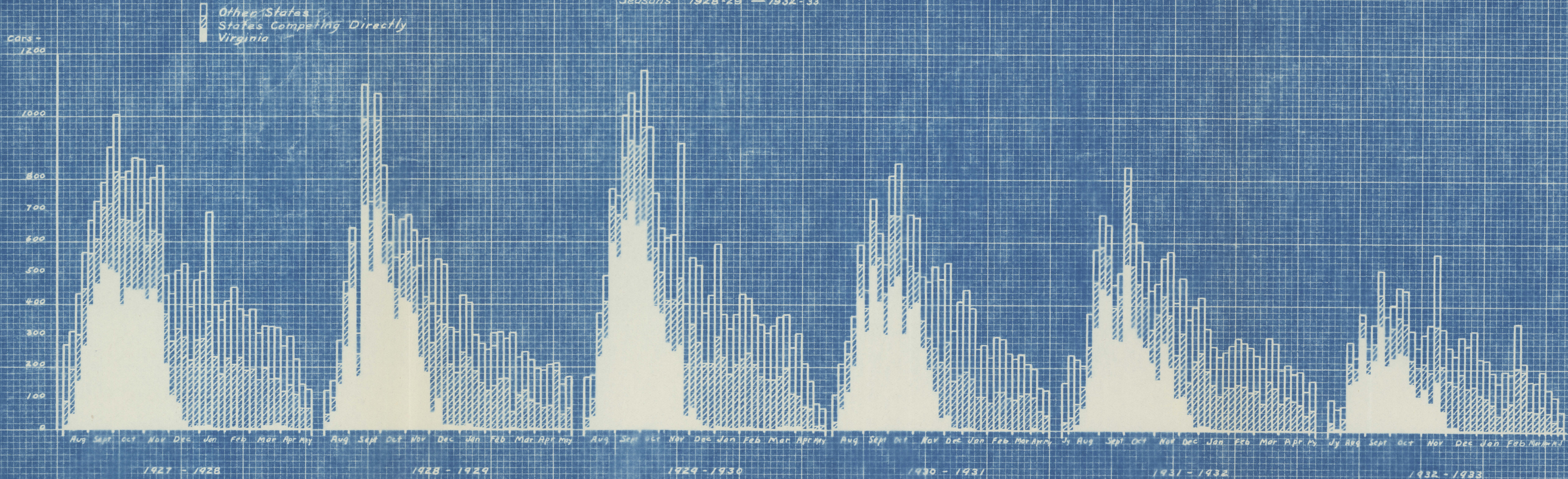
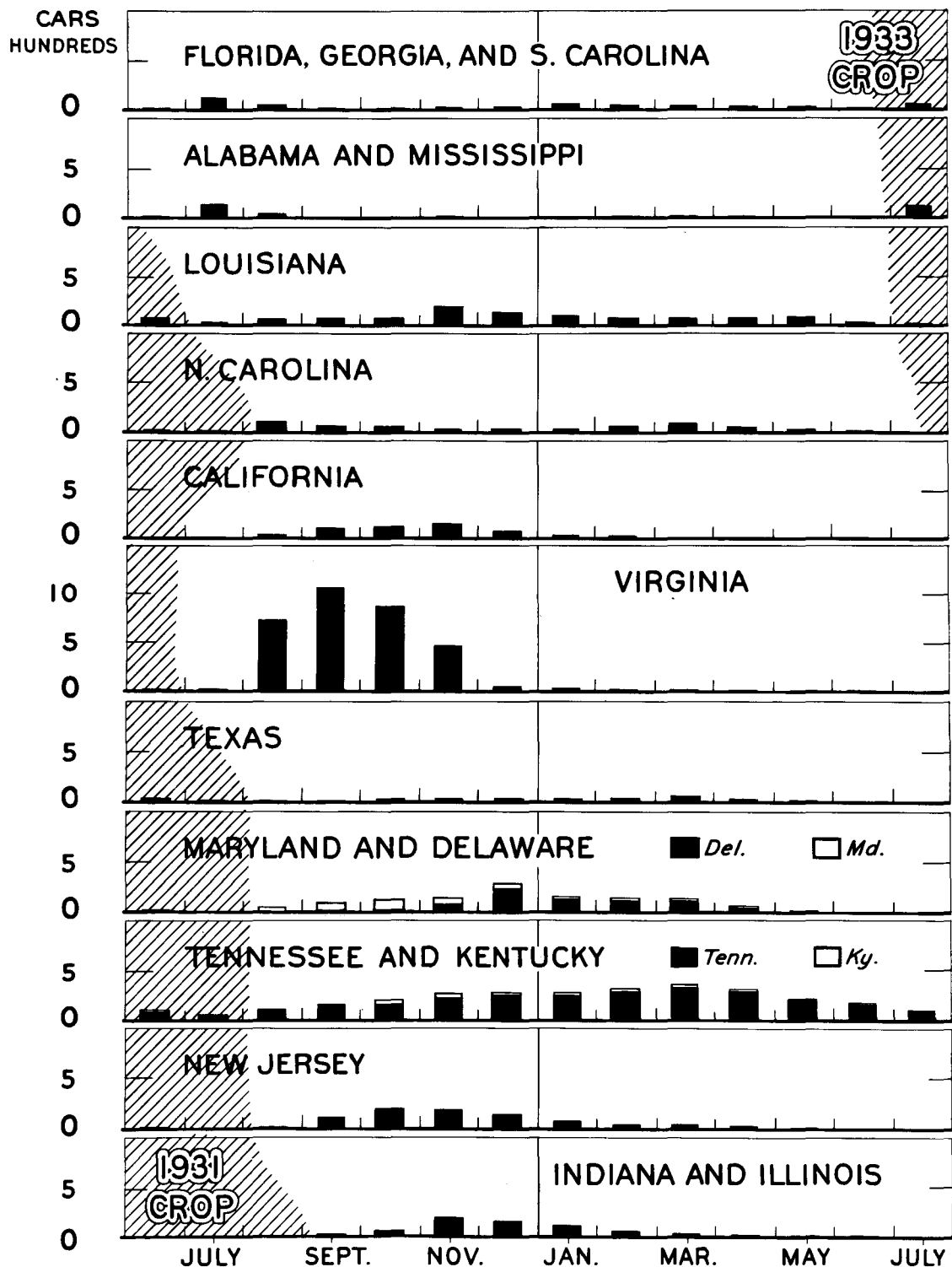




Chart No. 18

# Sweetpotatoes: Monthly Car-lot Shipments, 1932 Season





## Watermelons

Virginia rail and boat shipments of watermelons compete mainly with Maryland, Georgia, and the Carolinas, and in a small degree with Delaware and Florida shipments. The acreage and production in Virginia and Maryland increased decidedly during the period 1928 to 1933, while in Georgia and the Carolinas taken as a whole, a steady decrease in acreage and production occurred from 1930 to 1933. (Table No. 27).

Car lot shipments from Virginia increased steadily from 294 cars in 1927 to 961 cars in 1932.<sup>1</sup> During the same period shipments from Maryland increased from 161 to 462 cars. Shipments from Georgia decreased from a peak of 19,379 cars in 1926 to 9,003 in 1932, and in the Carolinas during the same period declined from 6,696, to 5,225 cars.<sup>2</sup>

These data do not show the true competition met by Virginia on the principal markets, however, but indicate the probable condition of the markets before shipments begin from Virginia. Shipments from Florida, Georgia, and the Carolinas are usually rapidly declining throughout the middle of August, when Virginia shipments are at a peak. Maryland and Delaware compete to a much smaller degree at the end of the Virginia season.

In regard to supply, it appears that the best marketing period for Virginia would be toward the end of August and beginning of September. However, the relation of supply and price shown in the

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<sup>1</sup> Preliminary for 1932.

<sup>2</sup> Yearbook, 1933, page 56, table No. 251.

Table 25.- Yearly Acreage, Production, and Shipments of  
Watermelons for Virginia and Competing  
States. (1928-1933)

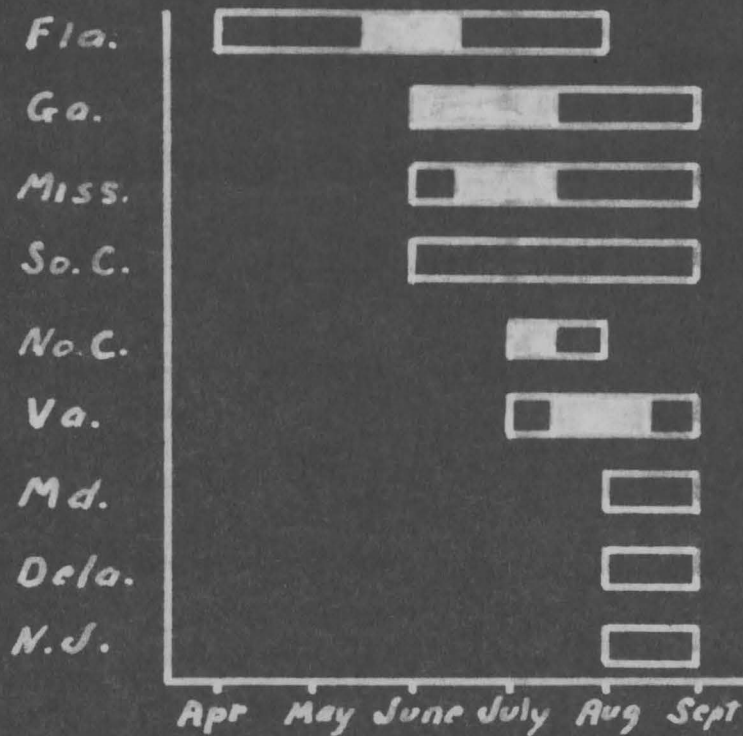
Watermelons		1928			1929		
States	Acreage	Production		Shipments	Production		
		(1,000)			(1,000)	Shipments	
Virginia	2,320	784	488	4,100	1,476	487	
Maryland	1,180	401	208	1,400	385	210	
Georgia	62,950	18,885	17,558	71,000	23,430	21,882	
No. Carolina	5,610	1,683	1,252	5,500	990	758	
So. Carolina	14,340	4,302	3,822	11,500	3,795	3,494	
		<u>1930</u>			<u>1931</u>		
Virginia	4,300	1,376	610	4,300	1,505	935	
Maryland	1,600	360	311	1,900	760	620	
Georgia	80,000	32,000	25,998	75,000	20,000	18,545	
No. Carolina	7,600	2,082	1,769	10,500	2,940	2,486	
So. Carolina	15,200	5,472	5,018	16,000	4,560	4,206	
		<u>1932</u>			<u>1933</u>		
Virginia	4,040	1,495	961	5,100	2,040	1,047	
Maryland	2,000	900	462	1,900	665	370	
Georgia	76,000	13,300	9,003	47,000	10,340	9,291	
No. Carolina	8,200	1,845	1,628	8,000	2,080	1,698	
So. Carolina	15,000	3,750	3,597	16,000	4,640	4,085	

Chart No. 19. APPROXIMATE SHIPPING SEASONS

OF WATERMELONS

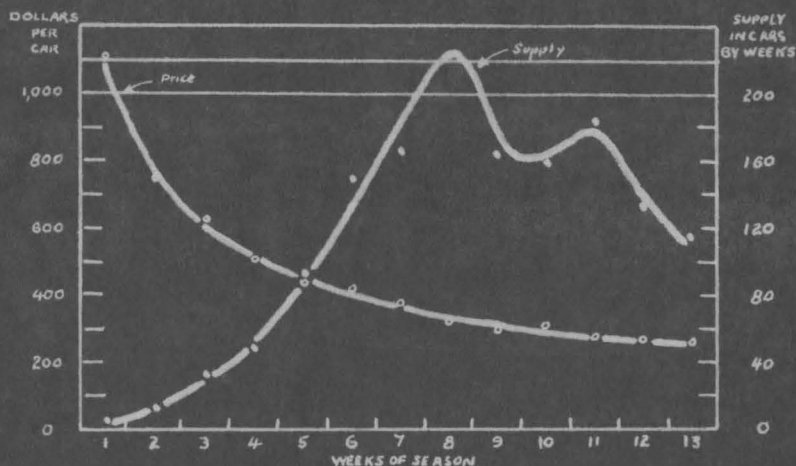
FROM VIRGINIA AND OTHER STATES

(Peak periods shown in light)



Note: The crop-movement season for the United States extends from April 1, through November of a given year.

figure below indicates a continued decline in price irrespective of the supply. These trends are typical of other large markets, and apparently recur year after year.<sup>1</sup>



Relation of Supply and Price of Watermelons at New York City, 5 Season Average, 1926 - 1930.

About 75% of all shipments of watermelons from Virginia are distributed on the New York, Baltimore, and Washington markets, in that order of importance. (Table No. 28).

At Baltimore, Virginia meets competition mainly from Maryland and South Carolina. In the period 1928 to 1932 Maryland shipped an average of 267 cars to Baltimore, while Virginia shipped 232 and South Carolina 125.

<sup>1</sup> U. S. D. A. Technical Bulletin No. 398. Origin, Distribution, and Market Price of the Commercial Watermelon Crop, by J. W. Strowbridge.

At New York, Virginia competes principally with North and South Carolina. During the period 1928,-1932 388 cars were shipped from North Carolina, 185 from Virginia, and 160 from South Carolina. (Table No. 30).

Virginia leads among the competing states of origin on the Washington market. The average for the 1928-1932 period showed 151 cars from Virginia competing with 90 from Georgia, the nearest competing state, 87 from South Carolina, 55 from North Carolina, 48 from Maryland and 27 from Florida. (Table No. 30).

The watermelon season at the markets mentioned above extends from June throughout September. (Table No. 29) Shipments from Virginia are particularly heavy in August and the first part of September. Competing shipments from Georgia and North and South Carolina begin in June and July and reach a peak during August. Shipments from New Jersey, Maryland, and Delaware compete with Virginia shipments at the end of the season. (Charts No. 19, 21A, 21B).



Table 28.- Market Distribution of Watermelons by Car Lot  
Shipment from Virginia. (1924-1933)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Baltimore	28	60	144	103	137	249	140	325	307	
Boston	2	19	4	15	1	1	1	7	22	
Newark	-	1	1	1	-	-	10	17	-	
New York	6	47	32	39	60	80	159	306	318	
Philadelphia	-	3	3	42	29	10	6	25	24	
Providence	2	5	-	3	2	3	-	-	13	
Washington	45	156	193	94	153	132	129	167	174	

Table 29.- Monthly Unloads of Watermelons from Virginia and Totals from All Sources at Three Principal Markets. (1928-1932)

		<u>Baltimore</u>											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1928													
Virginia								127		10			137
Total						1	54	325	370	30			730
1929													
Virginia								246		3			249
Total						12	143	271	409	37			879
1930													
Virginia								2	129	9			140
Total							63	446	401	75			985
1931													
Virginia								298		27			325
Total							81	343	839	134			1397
1932													
Virginia								1	268	38			307
Total						2	70	296	699	190			1257
		<u>New York</u>											
1928													
Virginia								43		17			60
Total						30	761	2052	787	53			3663
1929													
Virginia								65		15			80
Total					1	325	1918	1542	425	40			4251
1930													
Virginia								83		76			159
Total			2			12	599	2089	807	142	1		3652
1931													
Virginia								181		125			306
Total						11	589	1757	1094	181			3632
1932													
Virginia								269		48	1		318
Total			2	2	63	532	1392	760	116	116	1		2798

Table 29.0 Monthly Unloads of Watermelons from Virginia and  
Totals from All Sources at Three Principal  
Markets. (1928-1932) Continued

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
<b>1928</b>												
Virginia							7	98	48			153
Total						53	222	179	48			502
<b>1929</b>												
Virginia								94	38			132
Total					15	137	169	162	47			530
<b>1930</b>												
Virginia							7	108	15	1		129
Total					4	65	304	217	42	4		636
<b>1931</b>												
Virginia							2	121	42	2		167
Total						124	268	292	54	2		740
<b>1932</b>												
Virginia							2	125	44	3		174
Total					10	88	200	178	78	3		557

Table 30.- Yearly and Average Unloads of Watermelons from Virginia and Competing States During the Virginia Seasons, at Three Principal Markets. (1928-1932)

	Approximate Seasonal Peak Unloadings	1928	1929	1930	1931	1932	Average
		Cars	Cars	Cars	Cars	Cars	Cars
Baltimore	Apr. - Sept.	780	879	985	1397	1257	1060
Virginia	July - Sept.	137	249	140	325	307	232
Maryland	Aug. - Sept.	141	120	245	459	368	267
Georgia	June - Sept.	10	4	112	14	46	37
So. Carolina	June - Sept.	86	38	302	41	159	125
No. Carolina	July - Aug.	26	35	47	121	252	96
Florida	Apr. - Aug.			64		14	16
Delaware	Aug. - Sept.			11	13	39	13
Other							
<b>Total</b>		<b>400</b>	<b>446</b>	<b>922</b>	<b>973</b>	<b>1165</b>	<b>786</b>
New York	June - Sept.	3663	4251	3652	3632	2798	3599
Virginia	July - Sept.	60	80	159	306	318	185
Delaware	Aug. - Sept.	20	24	12	9	36	20
Georgia	June - Sept.	86	36	141	148	4	83
Maryland	Aug. - Sept.	31	29	15	7	10	18
No. Carolina	July - Aug.	344	230	433	581	351	388
So. Carolina	June - Sept.	259	53	191	178	118	160
New Jersey	Aug. - Sept.	2	13	22	45	40	24
Other					1		
<b>Total</b>		<b>802</b>	<b>465</b>	<b>973</b>	<b>1275</b>	<b>877</b>	<b>878</b>
Washington	Apr. - Sept.	502	530	636	740	557	593
Virginia	July - Sept.	153	132	129	167	174	151
No. Carolina	July - Aug.	21	32	58	120	42	55
So. Carolina	June - Sept.	90		145	103	95	87
Georgia	June - Sept.	142	7	129	102	70	90
Florida	Apr. - Aug.	43		47	38	8	27
Maryland	Aug. - Sept.		38	49	86	67	48
Other				10		3	3
<b>Total</b>		<b>449</b>	<b>209</b>	<b>567</b>	<b>616</b>	<b>459</b>	<b>461</b>

Chart No. 20. Carol Shipments of Watermelons  
 From Virginia And Competing States  
 by Weeks  
 Seasons 1928-1933

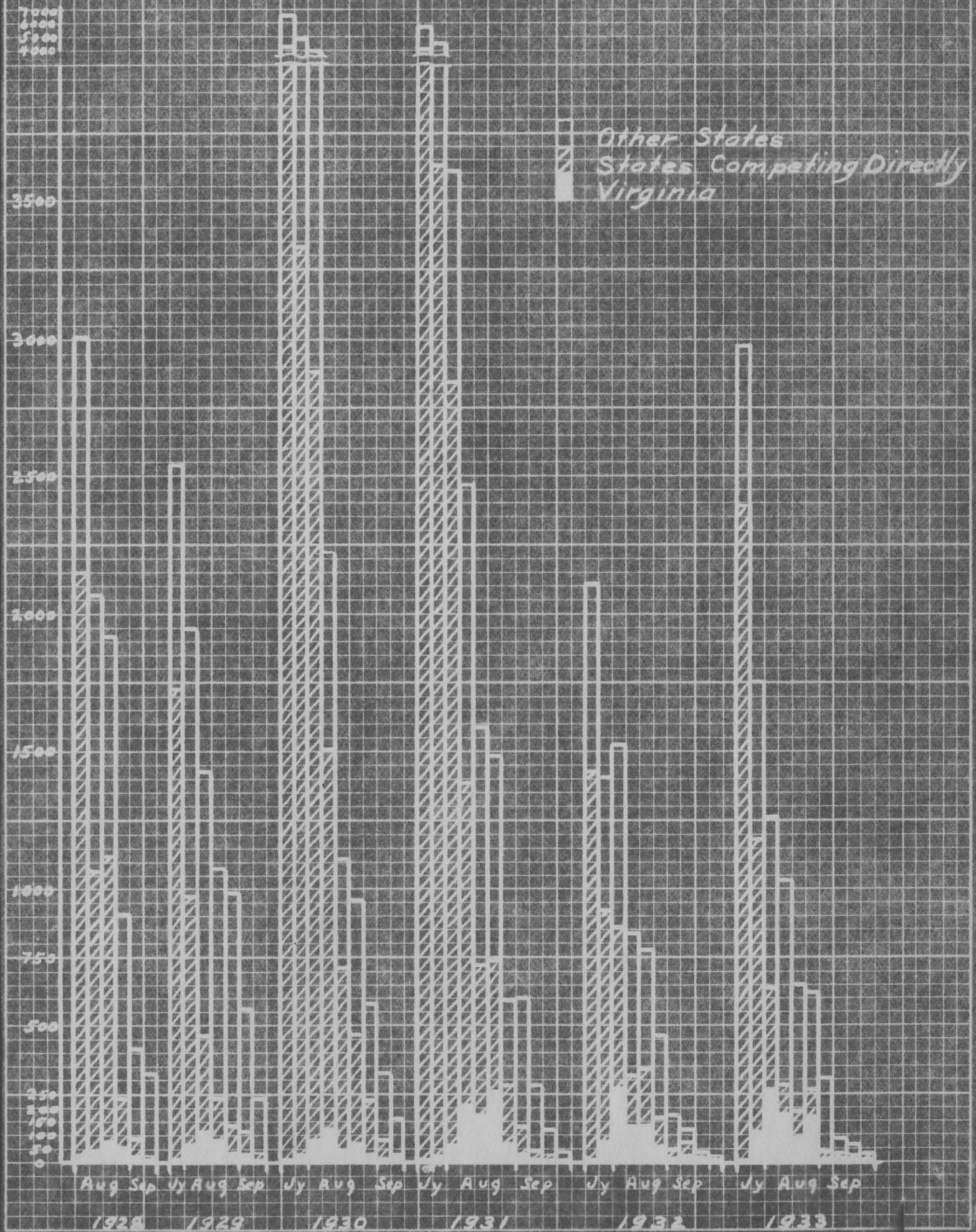
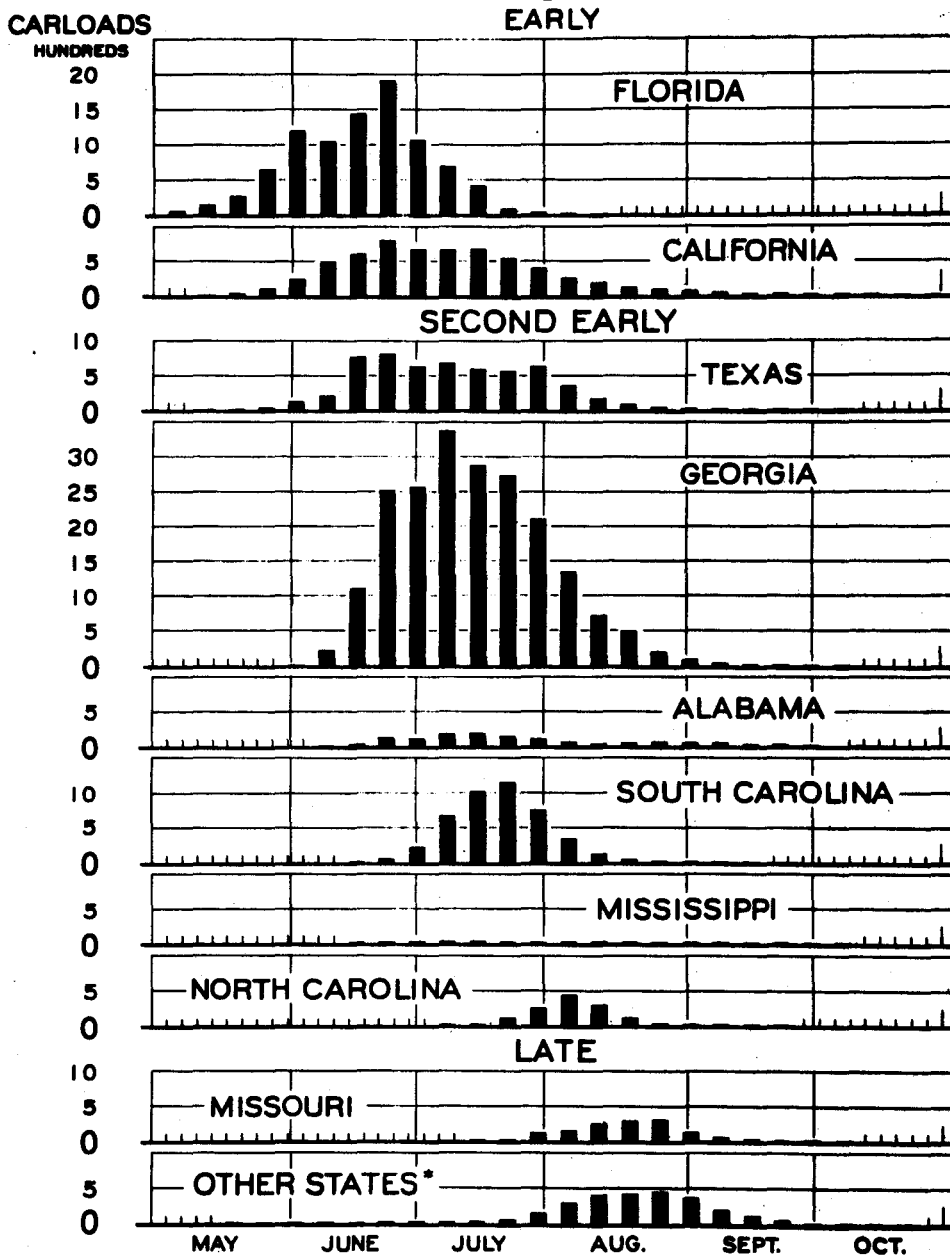




Chart No. 21a  
**Watermelons: Carlot Shipments  
 by Weeks, Average 1926-1930**



\*ARIZ., LA., ARK., VA., IDAHO, OKLA., WASH., ILL., KANS., MO., OREG., DEL., IND., IOWA, COLO., N.J., S. DAK.

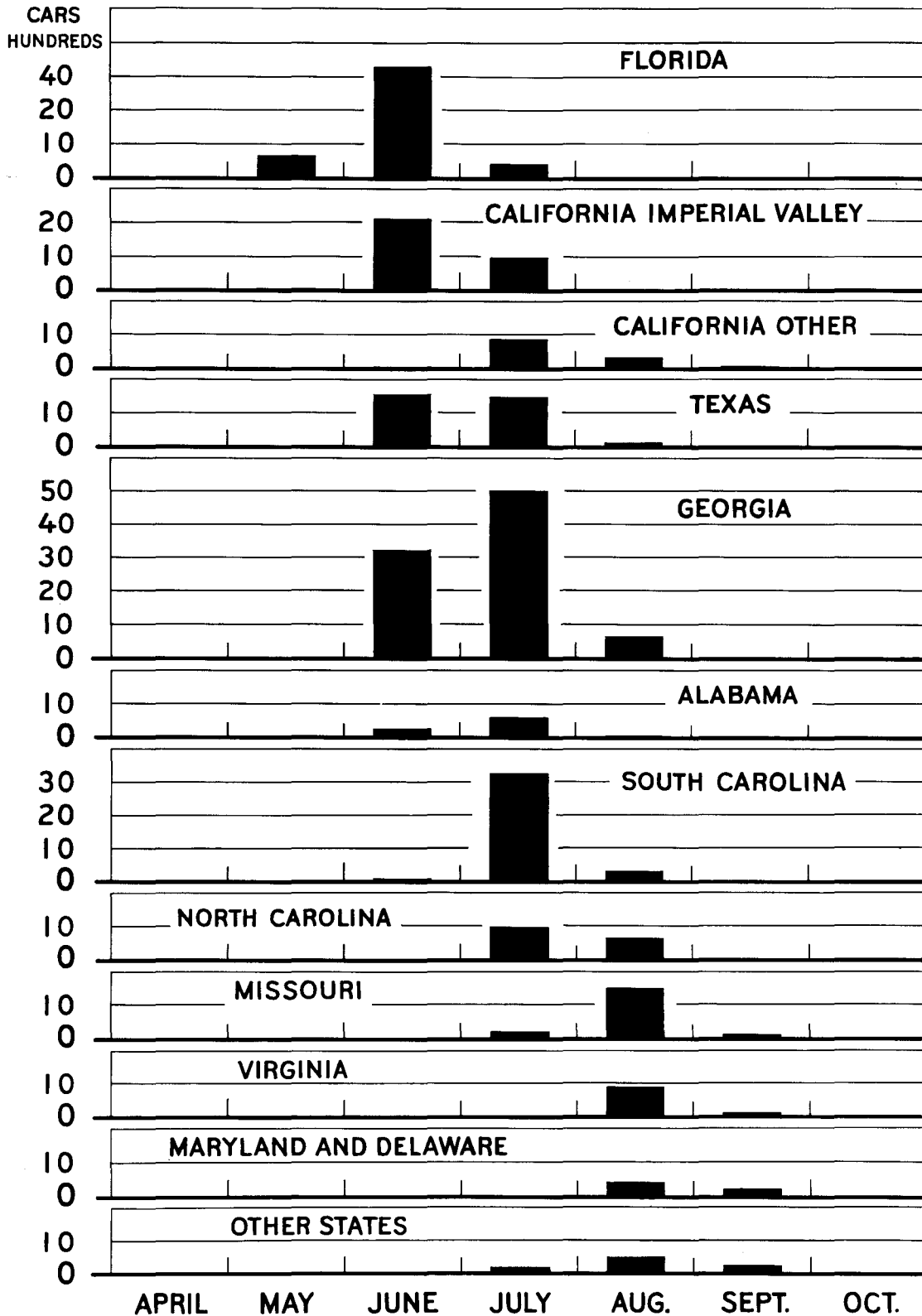
U.S. DEPARTMENT OF AGRICULTURE

NEG. 23752-B BUREAU OF AGRICULTURAL ECONOMICS

EARLIEST CAR-LOT SHIPMENTS OF WATERMELONS ORIGINATE IN FLORIDA, USUALLY IN EARLY MAY. CALIFORNIA SHIPMENTS BEGIN IN LATE MAY BUT DO NOT COMPETE WITH FLORIDA, FEW OF THEM COMING EAST OF THE MISSISSIPPI RIVER. TEXAS AND GEORGIA SHIPMENTS COME ON THE MARKET WITH THE LATTER PART OF FLORIDA'S CROP, AND IN YEARS OF UNFAVORABLE GROWING CONDITIONS IN FLORIDA, COMPETE DIRECTLY WITH PEAK MOVEMENT FROM THAT STATE

Chart No. 21B

# Watermelons: Monthly Car-lot Shipments, 1932 Season



### Miscellaneous Commercial Truck Crops

There are a number of other Virginia truck crops that move by car lot shipments, but these crops are not of the same relative economic importance as the preceding ones. Beets, cucumbers, eggplant, green peas, tomatoes and kale are the other crops that will be discussed briefly.

#### 1. Beets

Car lot shipments of beets were not reported by the market news service until the 1931 season. For the three years, 1931-1933, Virginia shipped an average of 243 cars, compared with an average of 383 cars from all sources during the Virginia shipping season. Virginia begins shipments the last of April and continues until about the end of June. Competition from Texas is met at the beginning of the season, followed by North Carolina during the month of May. With Virginia's peak weeks occurring the first of June, shipments from competing states are practically completed, thereby allowing Virginia producers considerable freedom at the markets. (Chart 22).

#### 2. Cucumbers

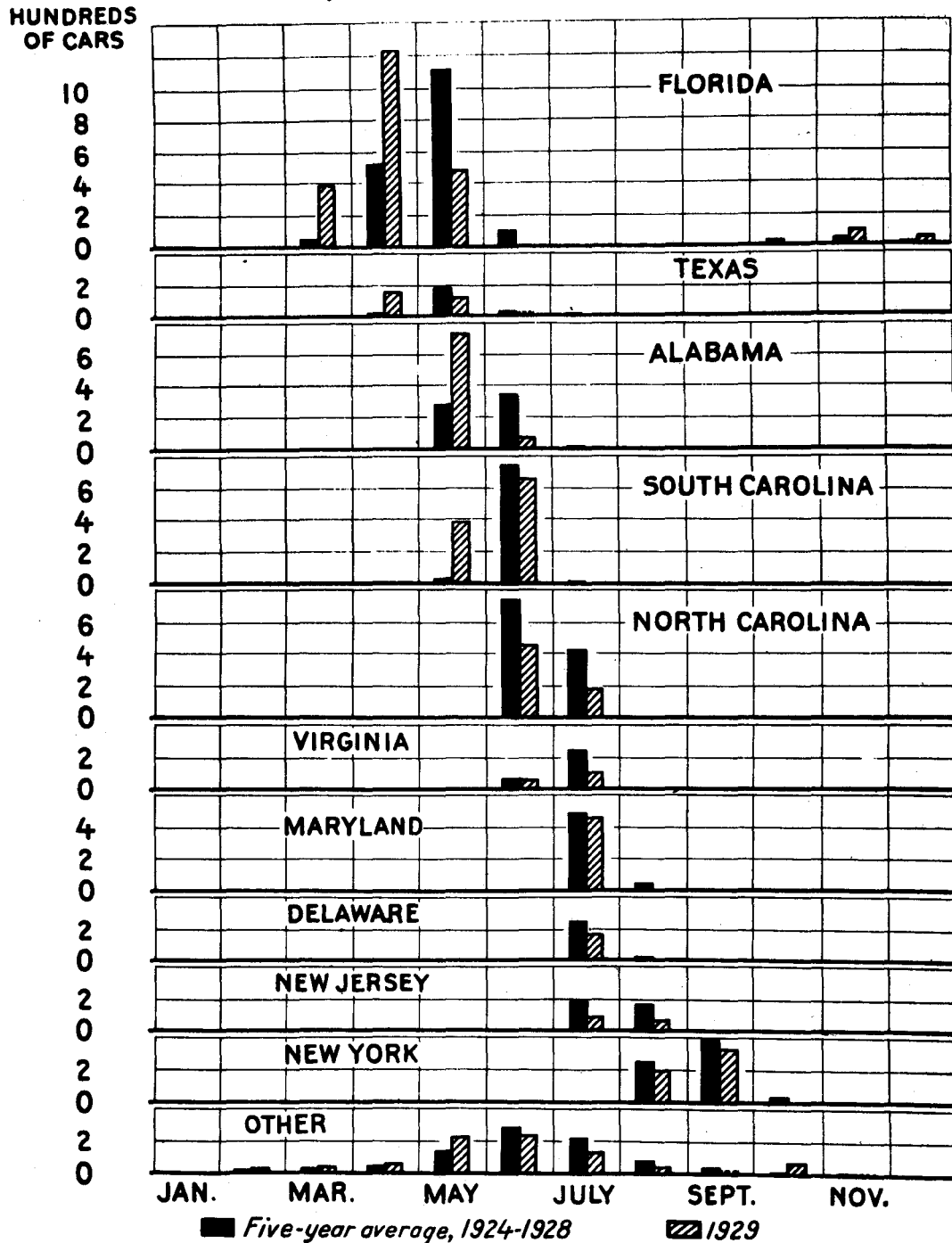
The Virginia cucumber season is from the last week in May to the last of July. Florida, Alabama, South Carolina, and Texas compete with heavy shipments at the beginning of this season, followed by Arkansas and especially North Carolina throughout the month of June. Maryland, Delaware, and New Jersey begin shipping during the latter part of June and continue for the remainder of the Virginia season. (Chart No. 23). Car lot shipments of cucumbers from all sources

Chart-22- Carlot shipments of Beets  
 from Virginia and Competing States  
 May 3, 1931 to June 24, 1933  
 by Weeks



# Chart No. 23

## Cucumbers: Monthly Car-lot Shipments, by States



U.S. DEPARTMENT OF AGRICULTURE

NEG. 21736-B BUREAU OF AGRICULTURAL ECONOMICS

FLORIDA IS THE ONLY STATE PRODUCING CUCUMBERS FOR FALL SHIPMENT, THE PEAK OF THE SHIPPING SEASON IS IN MARCH, APRIL, AND MAY. AS THE SEASON ADVANCES, PRODUCING AREAS FARTHER NORTH ARE THE SOURCES OF SUPPLY UNTIL AUGUST AND SEPTEMBER, WHEN NEW YORK AND NEW JERSEY ARE THE MAIN SOURCES



declined from 8,180 cars in 1927, to 4,615 in 1932. Virginia shipments followed this trend, declining from 339 to 101 cars between the six years.

### 3. Eggplant

Regarding car lot shipments of eggplant, Virginia shipments exceed all competing states during the Virginia season. (Chart No. 24). However, the extent of the competition by motor truck from New Jersey is not known and must not be overlooked, considering that an average of 250,000 bushels are produced yearly in that state, practically none of which is moved by rail or boat. Total eggplant production in Virginia is not available. Judging, however, from an average of 84 cars yearly, with 200 sixty quart crates each, Virginia produced an annual average of 31,500 bushels for shipment between 1929 and 1933.

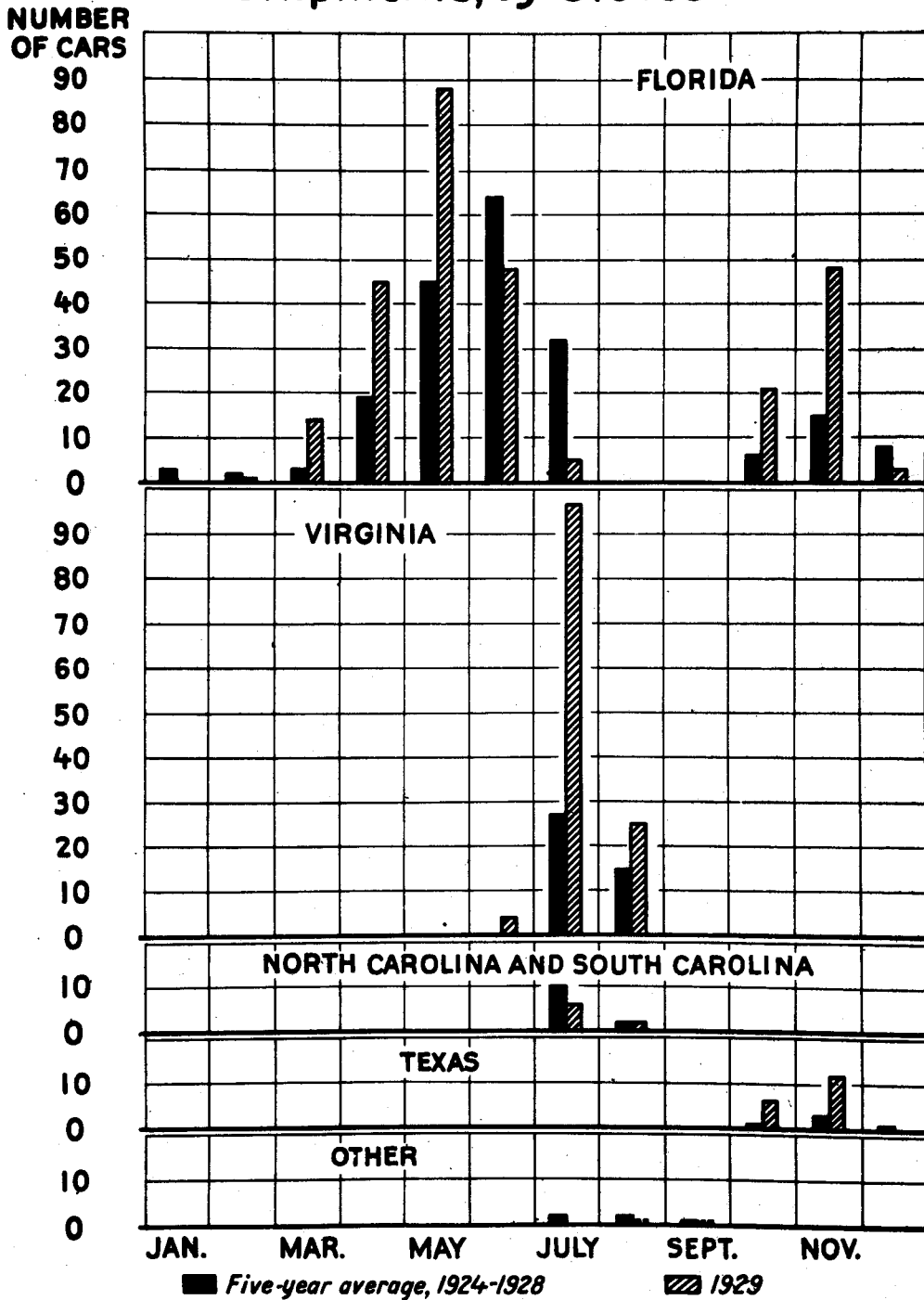
The Virginia season lasts throughout the month of July, with an occasional car load the last week of June or the first of August. Shipments from Florida, the principal competitor, with the exception of New Jersey, gradually decline with the appearance of the Virginia shipments. (Chart No. 24).

### 4. Green Peas

There are usually two crops of green peas grown in Virginia. The first crop, and the largest, is shipped throughout May and a part of June, the second between October 15 and November 15. Shipments from all sources are comparatively heavy during the first season, with North Carolina and California, the main competitors. (Chart No. 25). Only the western states ship during Virginia's second shipping season.

Chart No. 24

# Eggplant: Monthly Car-lot Shipments, by States



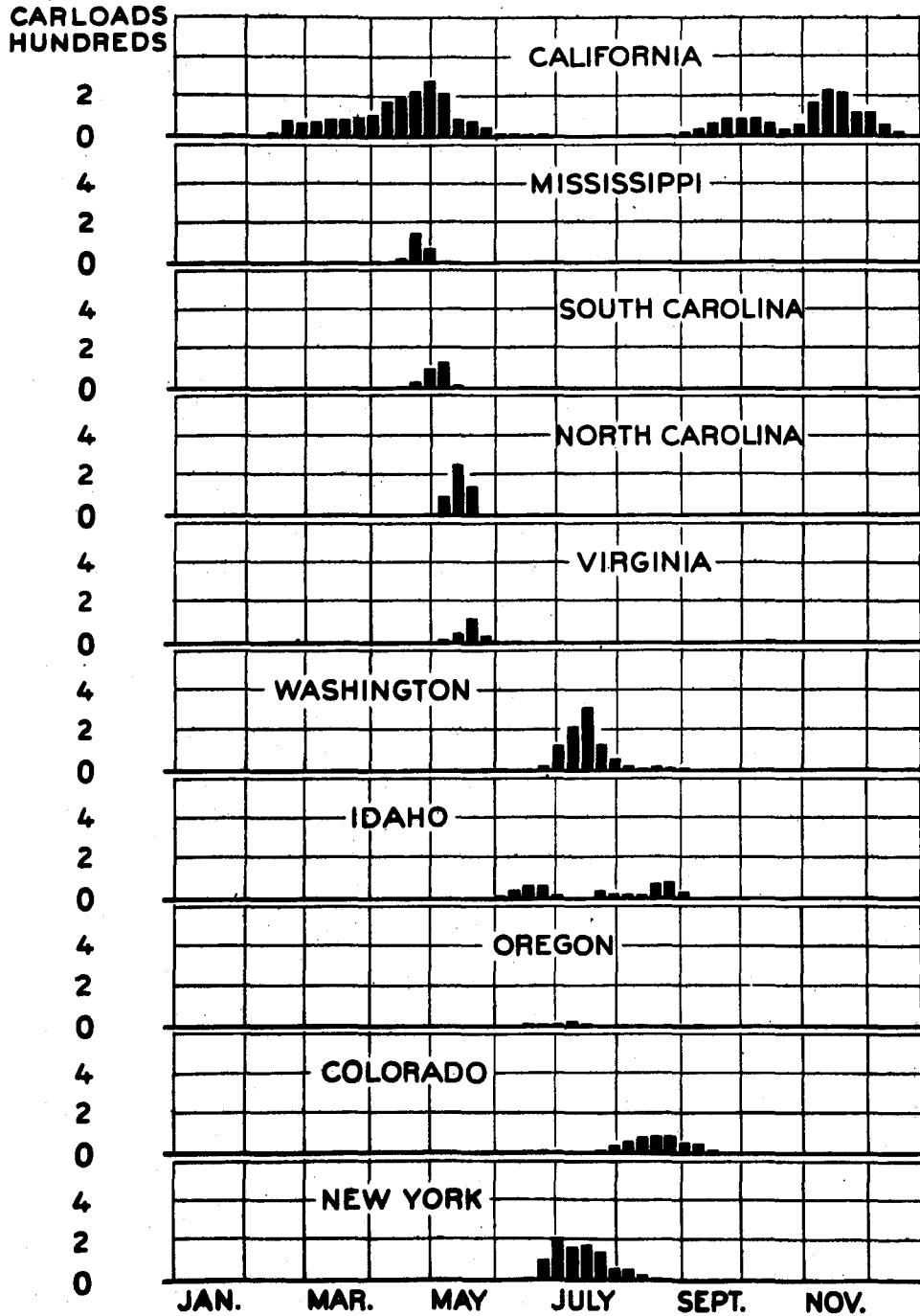
U.S. DEPARTMENT OF AGRICULTURE

NEG. 21735-B BUREAU OF AGRICULTURAL ECONOMICS

FLORIDA DOMINATES THE EGGPLANT MARKET DURING NEARLY ALL MONTHS EXCEPT JULY AND AUGUST WHEN VIRGINIA IS USUALLY OF GREATER IMPORTANCE. ONLY A FEW STATES SHIP EGGPLANT, AND THE TOTAL NUMBER OF CARS IS SMALL COMPARED WITH OTHER COMMERCIAL TRUCK CROPS

Chart No. 25

# Green Peas: Weekly Car-lot Shipments, 1930



U.S. DEPARTMENT OF AGRICULTURE

NEG22092-8 BUREAU OF AGRICULTURAL ECONOMICS

CALIFORNIA IS THE MOST IMPORTANT SOURCE OF CAR-LOT SHIPMENTS OF GREEN PEAS IN SPRING AND FALL MONTHS. OUTSIDE OF CALIFORNIA THE SEASON SELDOM LASTS OVER ONE MONTH FROM ANY STATE, WITH SHIPMENTS FROM WASHINGTON AND NEW YORK NEXT IN IMPORTANCE TO CALIFORNIA IN 1930

With increasing supplies from the western states, total car lot shipments have increased steadily since 1925. Compared with 4,801 cars shipped from all sources in 1926, 7,823 were shipped in 1932. During this period, Virginia shipments decreased from 281 cars in 1926 to 129 in 1930, 232 in 1931, and 82 in 1932.

#### 5. Tomatoes

Car lot shipments of tomatoes from Virginia have rapidly declined since the peak year of 1929. Likewise, shipments from all sources have declined considerably since the peak year of 1930. In the latter year, a total of 33,578 cars were shipped from all sources, 243 of which were from Virginia. In 1932, a total of 23,102 cars were shipped from all sources, and 63 from Virginia.

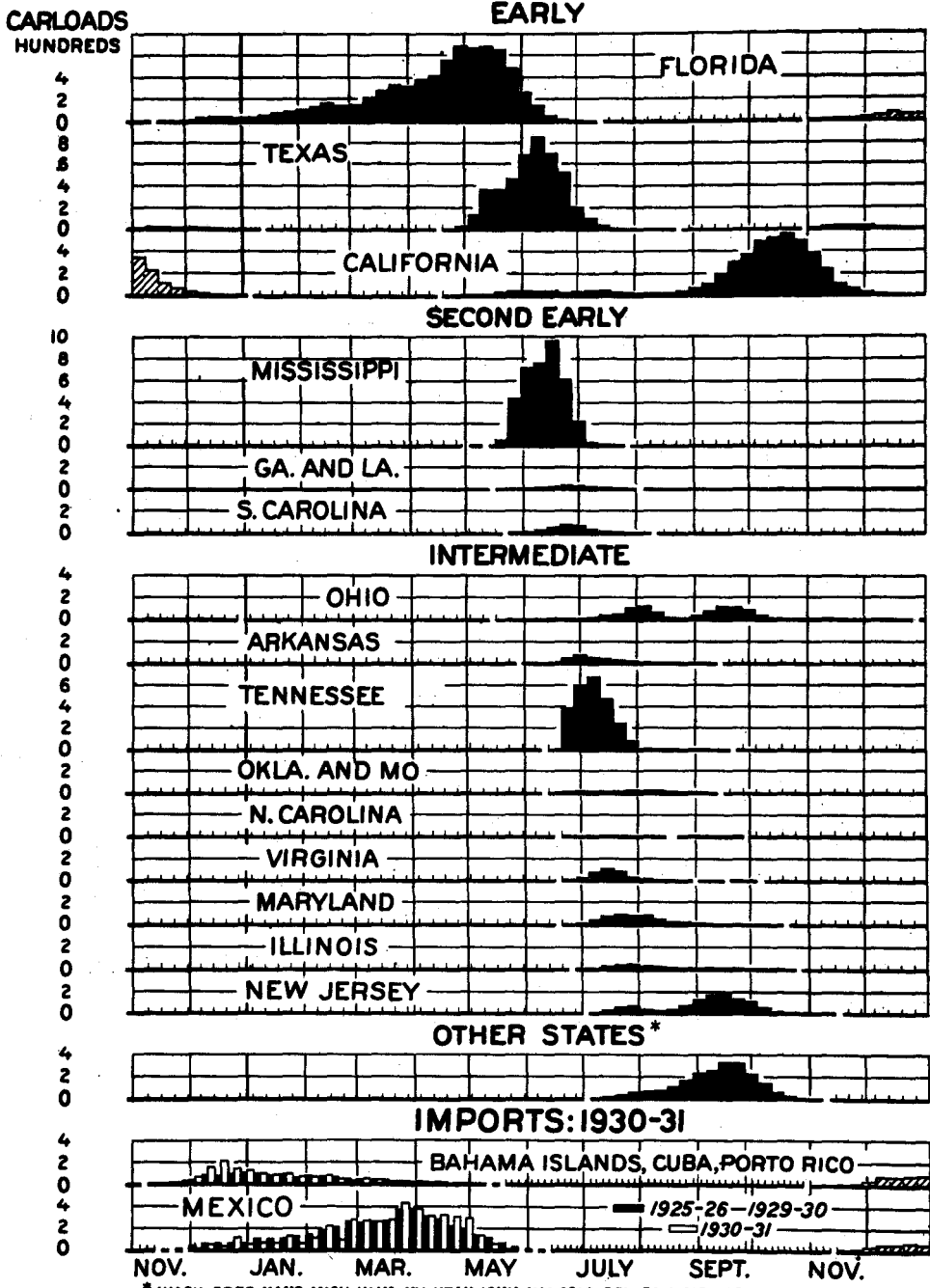
Tomatoes move from Virginia from the last of June and throughout July and part of August. Severe competition is met from Tennessee, South Carolina, North Carolina, Maryland, and New Jersey. Other states shipping heavily at this time are California, Texas, Arkansas, Ohio, Oregon, and Mississippi. (Chart No. 26).

#### 6. Kale

Car lot shipments are not recorded for this commodity. However, practically all of the kale shipped by rail and boat originates in Virginia. Unloads of kale in New York and Philadelphia during 1931 and 1932 indicate that the car lot quantities shipped to these markets by rail and boat from Virginia meet no competition from other sources within the United States. (Table No. 31). Truck receipts at the New York market show a considerable quantity originating in New Jersey,

# Chart No. 26

## Tomatoes: Weekly Car-lot Shipments by States 5-Year Average, 1925-26-1929-30



U.S. DEPARTMENT OF AGRICULTURE

NEG. 38802 B-BUREAU OF AGRICULTURAL ECONOMICS

THE NEW TOMATO CROP SEASON BEGINS WITH SHIPMENTS FROM FLORIDA AND TEXAS IN NOVEMBER AND DECEMBER. LATE SHIPMENTS FROM THE PREVIOUS CROP SEASON IN CALIFORNIA COMPETES WITH THE NEW CROP DURING THESE TWO MONTHS. SHIPMENTS FROM THE WEST INDIES (MAINLY CUBA) AND MEXICO ALSO BEGIN AT THIS TIME AND COMPETE IN VOLUME WITH THE WINTER AND SPRING CROPS OF FLORIDA



New York state, and Long Island.<sup>1</sup> Much of this motor truck movement does not come into competition with Virginia, although it is not known to what extent.

The Virginia season extends from November to May. During this season, slight competition is felt from Bermuda, Maryland, and Texas, in addition to the motor truck movements mentioned above.

Table 31.- Unloads of Kale in New York and Philadelphia During 1931 and 1932. Car Lots.

New York													
1932													
State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Virginia	132	103	171	87	10						3	67	573
Bermuda	5	2	2	2								1	10
Total	135	105	173	89	10						3	68	583
1931													
Virginia	101	48	41	46	9						3	39	287
Bermuda	-	2	3	3								1	9
Total	101	50	44	49	9						3	40	296
Philadelphia													
1932													
Virginia	19	40	49	17	5							3	133
1931													
Virginia	28	5	3	9									45

<sup>1</sup> Unloads of Fruits and Vegetables at New York City, 1932 and 1933.

### Reference

For further study relative to the subject matter of this thesis, the following publications are recommended:

1. "Potatoes, and Truck Crops Outlook Charts". Issued by the United States Department of Agriculture.
2. "Shipments and Unloads of Certain Fruits and Vegetables", for calendar years 1918 to 1930, inclusive. Statistical Bulletins Nos. 7, 23, 30, and 38, issued by the United States Department of Agriculture.
3. "Car Lot Unloads of Certain Fruits and Vegetables in 66 Cities". Issued yearly by the Market News Service of the United States Department of Agriculture.
4. "Car lot Shipments of Fruits and Vegetables from Stations in the United States", for the calendar years 1920 to 1923, inclusive, and 1926 to 1931, inclusive. Statistical bulletins Nos. 8, 9, 27, 35, and 42, issued by the United States Department of Agriculture.
5. "Car Lot Shipments of Fruits and Vegetables by Commodities, States, and Months", (including boat shipments reduced to car lot equivalents). Issued by the United States Department of Agriculture.
6. "The Marketing and Distribution of Fruits and Vegetables by Motor Truck", by Brice Edwards and J. W. Park. Statistical bulletin No. 272, issued by the United States Department of Agriculture.
7. "Truck Receipts of Fresh Fruits and Vegetables at 10 Important Markets for calendar years 1932 and 1931. Stated in car lot equivalents by months for 1932, and totals for 1932 and 1931". Issued by the Market News Service of the United States Department of Agriculture.

8. "Vegetable Statistics", Statistical Bulletin No. 22, issued by the United States Department of Agriculture. (In this bulletin are tables for the specific vegetables which show acreage, yield per acre, production, price and value by states, grown for both commercial and manufacturing purposes, for the year ending December 31, 1928, with comparable data for earlier years. Except for shipments and unload figures, it contains no data on potatoes and sweet potatoes).

9. "Statistics of Potatoes and Sweet Potatoes", Statistical Bulletin No. 10, issued by the United States Department of Agriculture.

10. "Origin, Distribution and Market Price of the Commercial Watermelon Crop", by J. W. Stowbridge. Technical Bulletin No. 398, issued by the United States Department of Agriculture.

11. "Origin and Distribution of the Commercial Strawberry Crop", by J. W. Stowbridge. Technical Bulletin No. 180, issued by the United States Department of Agriculture.

12. "The Marketing of Delaware Sweet Potatoes", by Harry S. Gabriel, pages 4 to 22, Bulletin No. 161, issued by the University of Delaware Agricultural Experiment Station, Newark, Delaware.

13. "Statistics of Fruits and Vegetables", issued yearly in the Yearbook of Agriculture of the United States Department of Agriculture.

14. "Weekly Summary of Car Lot Shipments". Issued weekly by the Market News Service, United States Department of Agriculture. Files of 1928, 1929, 1930, 1931, 1932 and 1933.