

CORNELL
AGRICULTURAL ECONOMICS
STAFF PAPER

TRENDS IN THE MARKETING OF ONIONS

by

Kenneth W. Stone

February 1978

No. 78-6

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

TRENDS IN THE MARKETING OF ONIONS

by

Kenneth W. Stone

The major objective of this study, primarily a situation statement, was to determine what trends were occurring in the marketing of New York State onions. An additional objective was to determine the trends in the marketing of onions from competing states and areas. Further studies are needed to determine the reasons for the trends and to offer possible solutions for the benefit of the onion industry in New York State.

This analysis is based entirely on the data published annually in Fresh Fruit and Vegetable Unload Totals for 41 Cities^{1/}. Thirteen cities were selected from the 41 for which data are available. These 13 markets account for essentially all of the reported unloads of New York grown onions during the time period studied. The cities are: Albany, N.Y.; Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N.Y.; Cleveland, Ohio; Columbia, S.C.; Miami, Fla.; New York, N.Y. (including Newark, N.J.); Philadelphia, Pa.; Pittsburgh, Pa.; Providence, R.I.; and Washington, D.C.

The unload data does not account for all the actual marketings. The fraction that is reported, however, appears to be quite constant over the time period used in this analysis. The percentage of the total onion production in New York State which is reflected in the reported unloads in the 13 markets during the years 1964-65 through 1975-76 varied from a low of 39 percent to a high of 46 percent. When the data are converted to a 3-year moving average for the periods 1964-65, 1965-66, 1966-67 through 1973-74, 1974-75, 1975-76, the percentage of the New York onion crop reflected in the reported unloads varied from 40 percent to 45 percent. There were no trends

^{1/}U.S.D.A., Agricultural Marketing Service, Fruit and Vegetable Division, Market News Branch, Washington, D.C. FVUS-5

evident in the percentage reported for either the annual data or the 3-year moving average.

In this analysis the 13 major markets have been grouped into 6 market areas based largely on geographical location. These are New York City (including Newark); Boston-Providence-Albany; Philadelphia-Baltimore-Washington; Atlanta-Columbia-Miami; Pittsburgh-Cleveland; and Buffalo.

To smooth out the normal year to year variations, a three year moving average was used. This gives ten time periods starting with 1964-65, 1965-66, 1966-67 and ending with 1973-74, 1974-75, 1975-76.

All unload data are given in "carlot equivalents". A carlot was defined as 800 50 lb. bags. Boat, truck and rail shipments are all converted to this one common denominator.

Unless otherwise noted, all statistics are for the nine month marketing period August through April. Onions produced on Long Island are excluded from the New York State figures.

Trends in Total Unloads in Major Markets

Changes in total unloads from all states, including imports, were different for the major market areas in the East and South between 1964-66 and 1973-75 (Table 1).

The total reported unloads of onions in the New York City area declined steadily over the time span of this study. The total declined 24 percent from an average of 3218 carlot equivalents during the 1964-66 period to 2450 during the 1973-75 time period. The New York City area accounted for 32 percent of the total unloads reported in the six major areas during the period 1964-66. By 1973-75, this figure had dropped to 24 percent. During the same time period, total unloads in the entire 6 market area remained essentially the same.

Table 1 UNLOADS OF ONIONS FOR MAJOR MARKET AREAS, AUGUST - APRIL
1964-66 AND 1973-75

Markets	Total Unloads		Percent of Total	
	1964-66	1973-75	1964-66	1973-75
New York City	3218	2450	32	24
Philadelphia - Baltimore - Washington	2885	2608	29	26
Atlanta - Columbia - Miami	1387	1996	14	20
Boston - Providence - Albany	1142	1570	11	16
Pittsburgh - Cleveland	1193	1232	12	12
Buffalo	232	242	2	2
Total	<u>10057</u>	<u>10098</u>	<u>100</u>	<u>100</u>

A decline in total unloads of onions on the Philadelphia-Baltimore-Washington markets also occurred during the period between 1964-66 and 1973-75. There was an increase between 1964-66 and 1967-69, but unloads then declined steadily to 1973-75. The average number of unloads went from 2885 at the beginning of the period to 2608 at the end for a decline of 10 percent. The share of the total 6 market area declined from 29 percent to 26 percent.

The Boston-Providence-Albany market area was the one location in the East that showed an increase. Total unloads from all areas went from an average of 1142 carlots in 1964-66 to 1570 in 1973-75 for an increase of 37 percent. The share of the total 6 market area increased from 11 percent to 16 percent.

The Atlanta-Columbia-Miami market area showed a dramatic increase in total unloads between 1964-66 and 1973-75. The average number of unloads went from 1387 to 1996 for an increase of 44 percent. The share of the total 6 market area increased from 14 percent to 20 percent.

The Pittsburgh-Cleveland market area represents the western fringe of the market for New York State onions. Total unloads from all states showed a very modest increase from 1964-66 to 1973-75. The average number of unloads went from 1193 to 1232 for an increase of 3 percent. The share of the total 6 market area remained steady at 12 percent.

Buffalo, although a relatively small market area, is included to round out the total picture. Total unloads from all states increased 3 percent from 232 carlots to 242. The share of the total 6 market area remained steady at 2 percent.

As indicated above, the total average number of unloads from all states, including imports, remained essentially constant from the 1964-66 period to 1973-75 for the entire 6 market area. The total went from 10,057 at the beginning of the period to 10,098 at the end of the period for an increase of only 0.4 percent. There was relatively little variation from one time period to another. The low point was in the 1970-72 time period when the average number of reported carlots was 9973. The high point was in 1967-69 when the average number was 10,343. This is less than a 2 percent variation from the average of the 10 time periods between 1964 and 1975.

Origins of Onion Unloads in Major Market Areas

Who supplies the onions for the 6 market areas in the study? In most cases, New York State is the major supplier. However, New York's share of most of these markets is shrinking.

During the 3 year period 1964-66, the average number of unloads in New York City from New York State accounted for 61 percent of the total unloads in New York City (Table 2). By 1973-75, New York State's share of this market had shrunk to 47 percent. During the same time span, unloads from Idaho and Oregon increased from 20 percent to 29 percent of the total

New York City market.

Unloads at New York City from the other Western States (primarily California, Colorado, Texas and Washington) increased from 10 percent to 19 percent of the market. The Central States (primarily Michigan) and other Eastern States (primarily Long Island and New Jersey) each maintained a 1 to 2 percent share of the market over this period. Imports varied from 5 percent of the market at the beginning of this period to 3 percent at the end.

Table 2 UNLOADS OF ONIONS IN NEW YORK CITY BY AREA OF ORIGIN,
AUGUST - APRIL, 1964-66 AND 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	1948	60.5	1163	47.4
Other East	79	2.5	31	1.3
Central	73	2.3	27	1.1
Idaho - Oregon	628	19.5	703	28.7
Other West	331	10.3	460	18.8
Imports	159	4.9	66	2.7
Total	<u>3218</u>	<u>100.0</u>	<u>2450</u>	<u>100.0</u>

Changes also are occurring in the sources of supply for the Philadelphia-Baltimore-Washington market area (Table 3). At the beginning of the period under study, New York State accounted for 56 percent of the total reported unloads. By the end of this period, New York's share had shrunk to 42 percent. At the same time, Idaho and Oregon increased their share of the market from 22 percent to 28 percent.

The other Western States, primarily Texas, increased their share of the Philadelphia-Baltimore-Washington market from 14 percent to 22 percent. The Central States maintained a fairly steady 6 to 8 percent share and the other Eastern States held around 2 to 3 percent of the total. Imports were relatively insignificant in this market area.

Table 3 UNLOADS OF ONIONS IN PHILADELPHIA-BALTIMORE-WASHINGTON
BY AREA OF ORIGIN, AUGUST - APRIL, 1964-66 AND 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	1608	55.7	1089	41.8
Other East	71	2.5	48	1.8
Central	168	5.8	150	5.8
Idaho-Oregon	633	21.9	734	28.1
Other West	395	13.7	570	21.9
Imports	10	.4	19	.7
Total	<u>2885</u>	<u>100.0</u>	<u>2608</u>	<u>100.0</u>

Increased unloads in the Boston-Providence-Albany market area were shared by most regions. New York State's share of the total reported unloads increased moderately from 48 percent to 52 percent (Table 4). Actual numbers of unloads of N.Y.S. onions increased nearly one-third due to the steady increase in the total number of unloads. Idaho and Oregon showed a slight increase from 23 percent to 25 percent.

The other Western States, primarily California and Texas, maintained about the same number of unloads on the Boston-Providence-Albany markets throughout this period, but because of the increasing number of total unloads, their

percentage share of the market declined from 20 percent to 18 percent. The share for the Central States declined from 7 percent to 3 percent. Unloads from other Eastern States and imports were relatively insignificant in this market area.

Table 4 UNLOADS OF ONIONS IN BOSTON-PROVIDENCE-ALBANY
BY AREA OF ORIGIN, AUGUST - APRIL, 1964-66 AND 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	552	48.3	813	51.7
Other East	17	1.5	20	1.3
Central	83	7.3	50	3.2
Idaho-Oregon	257	22.5	388	24.7
Other West	227	19.9	287	18.3
Imports	6	.5	12	.8
Total	1142	100.0	1570	100.0

The Atlanta-Columbia-Miami market area has shown a substantial increase in total unloads of onions (Table 5). New York State has a relatively small percentage of this market. Between the 1964-66 period and the 1973-75 period, New York's share declined from 19 percent to 11 percent, although actual numbers of cars held fairly steady. Idaho and Oregon are in a position very similar to New York's in this southern market area.

The other Western States increased their share of the Atlanta-Columbia-Miami market area from 32 percent to 43 percent. Texas was the largest supplier in this group of states. California, Colorado and New Mexico also had significant numbers of unloads. On a percentage basis, the Central States,

primarily Michigan, increased their share only 1 percent from 27 percent to 28 percent. Unloads from other Eastern States were relatively insignificant in this market. Imports accounted for 4 to 5 percent of the total.

Table 5 UNLOADS OF ONIONS IN ATLANTA-COLUMBIA-MIAMI
BY AREA OF ORIGIN, AUGUST - APRIL, 1964-66 and 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	265	19.1	224	11.2
Other East	3	.2	3	.2
Central	372	26.8	561	28.1
Idaho-Oregon	249	18.0	245	12.3
Other West	443	31.9	857	42.9
Imports	55	4.0	106	5.3
Total	1387	100.0	1996	100.0

As might be expected, the Central States are the major suppliers of onions for the Pittsburgh-Cleveland market area (Table 6). Their percentage share of a steady market went from 47 percent to 45 percent at the end of this period. New York's share dropped from 16 percent to 10 percent. Idaho and Oregon increased their share slightly from 16 percent to 18 percent over the period of this study.

The other Western States increased their share of the Pittsburgh-Cleveland market sharply from 18 percent to 25 percent of the total unloads. Unloads from other Eastern States and imports were few in number.

There have been some major shifts in sources of supply for the Buffalo market (Table 7). As might be expected, New York is the major supplier

although its share of the market is shrinking. New York's share of the total reported unloads declined from 60 percent in 1964-66 to 46 percent in 1973-75.

Table 6 UNLOADS OF ONIONS IN PITTSBURGH-CLEVELAND
BY AREA OF ORIGIN, AUGUST - APRIL, 1964-66 AND 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	190	15.9	117	9.5
Other East	2	.2	2	.2
Central	564	47.3	551	44.7
Idaho-Oregon	192	16.1	222	18.0
Other West	217	18.2	304	24.7
Imports	28	2.3	36	2.9
Total	<u>1193</u>	<u>100.0</u>	<u>1232</u>	<u>100.0</u>

Table 7 UNLOADS OF ONIONS IN BUFFALO BY AREA OF ORIGIN,
AUGUST - APRIL, 1964-66 AND 1973-75.

Origin of Unloads	1964-66		1973-75	
	Reported Unloads	Percent Of Total	Reported Unloads	Percent Of Total
New York	138	59.5	111	45.9
Other East	1	.4	0	-
Central	0	-	2	.7
Idaho-Oregon	51	22.0	72	29.8
Other West	40	17.2	53	21.9
Imports	2	.9	4	1.7
Total	<u>232</u>	<u>100.0</u>	<u>242</u>	<u>100.0</u>

At the same time, Idaho and Oregon increased their share from 22 percent to 30 percent. Unloads from the other Western States on the Buffalo market increased during this period from 17 percent to 22 percent of the total reported unloads. Imports, other Eastern States, and the Central States were minor factors in the Buffalo market.

Trends in Unloads in Three Major Market Areas

The three northeastern market areas (Boston-Providence-Albany, New York City, Philadelphia-Baltimore-Washington) provide the major markets for New York State onions (Figure 1). The total number of carloads on onions reported unloaded in this large area decreased 8 percent from 1964-66 to 1973-75. At the beginning of this period, 57 percent of the unloads originated in New York State. By the end of the period, New York's share had declined to 46 percent. There was some recovery in this downward trend during the last two periods. The total number of unloads of New York State onions declined 25 percent over the whole period.

During this same time unloads from Idaho-Oregon increased 20 percent and their share of these three large markets increased from 21 percent to 28 percent. Unloads from the other Western States increased 38 percent and their share of the market total increased from 13 percent to 20 percent.

Seasonal Distribution of Onion Unloads

The number of carlots of onions unloaded in New York City, Boston-Providence-Albany and Philadelphia-Baltimore-Washington, by state of origin for each month during the marketing period July through June shows the seasonal pattern (Figure 2). These unloads represent the average of three years, 1973-74, 1974-75 and 1975-76.

The pattern for New York State onion unloads and Idaho-Oregon unloads was very similar during these three years. The peak consumption period for onions

Figure I. UNLOADS IN THREE NORTHEASTERN MARKET AREAS BY AREA OF ORIGIN, 1964-66 THROUGH 1973-75
 (BOSTON-PROVIDENCE-ALBANY, NEW YORK CITY, PHILADELPHIA-BALTIMORE-WASHINGTON)

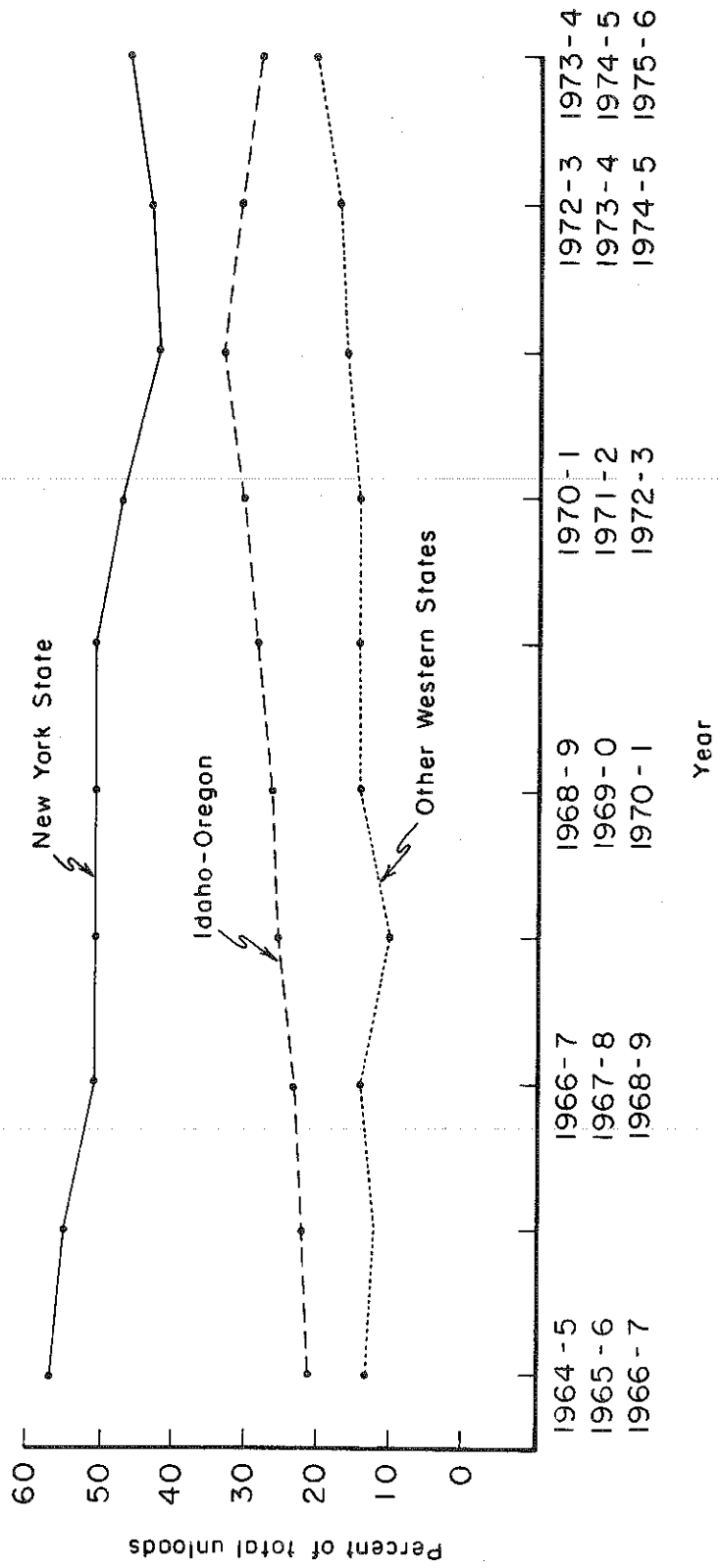
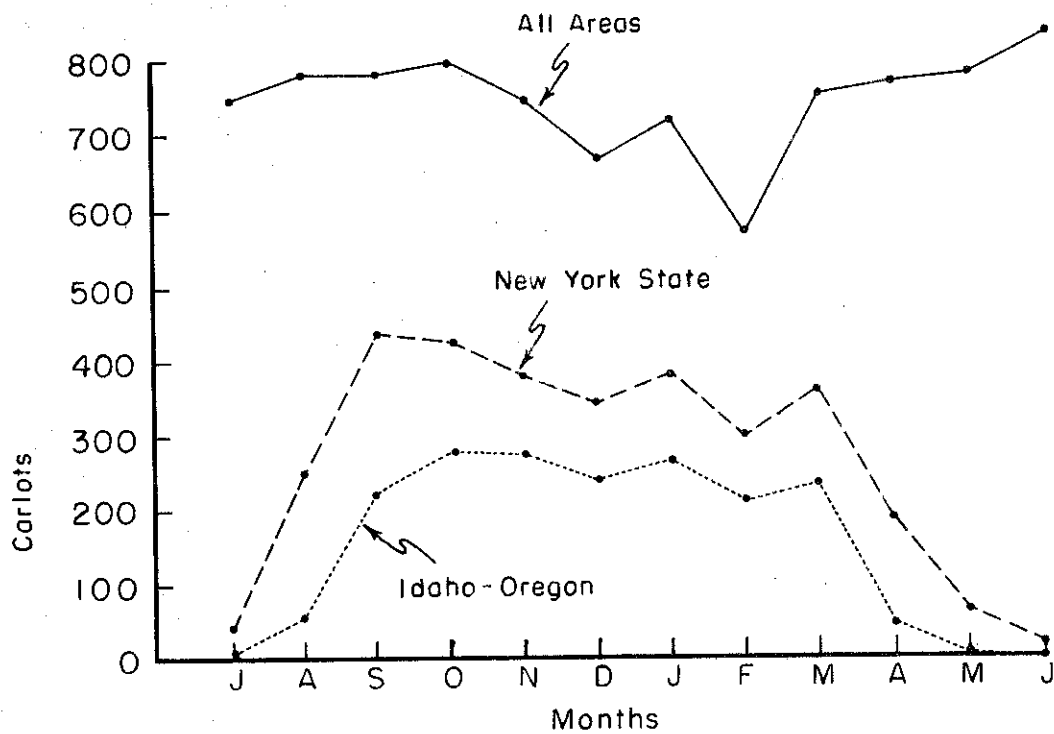


Figure II. UNLOADS IN THREE NORTHEASTERN MARKET AREAS BY MONTHS AND BY AREA OF ORIGIN, 1973-74 THROUGH 1975-76 (NEW YORK CITY, BOSTON-PROVIDENCE-ALBANY, PHILADELPHIA-BALTIMORE-WASHINGTON)



in the Northeast, as measured by the number of unloads, was June and the slowest month was February.

Observations

This study is based on the assumption that the number of carlots of onions unloaded in major markets, as reported by the USDA Market News Branch, reflects with reasonable accuracy the trends in the usage of onions in these market areas.

The apparent increase in the usage of onions from the Western States, especially Idaho and Oregon, and the apparent decline in the usage of New York grown onions, should be of real concern to everyone with an interest in the New York State onion industry.

A number of questions need to be answered. First, are the data and observations valid? If they are, why are the shifts in demand occurring? Are changes in population numbers, ethnic make-up, and style of living, factors in the demand trends? Is packaging, or bulb size, or pungency or ease of peeling or merchandising or promotion involved in these changes? Is there anything the New York onion industry can do to meet these apparent changes in demand?

These and other questions must be answered and solutions explored.

Many Eastern and Central States, from Massachusetts to Wisconsin, have been important onion producing areas in years gone by. Only New York still holds a prominent position. The past is not necessarily prologue.

If New York is to maintain a prosperous onion industry, people in research, extension, agri-business and, most important, the growers, must define the problems and seek answers to the questions raised in this study.