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THE MICHIGAN ONION INDUSTRY: A SUMMARY OF MARKETING INFORMATION

By

Edward W. McLaughlin
Thomas R. Pierson

Department of Agricultural Economics
MICHIGAN STATE UNIVERSITY
East Lansing

INTRODUCTION

Farm prices for Michigan onions have been low for three consecutive crop marketing years--1977-78, 1978-79 and 1979-80. This situation and its associated economic hardship led participants in the Michigan onion industry to request, via the Michigan Onion Committee, that marketing information relating to the present and likely future status of the Michigan onion industry be developed and compiled.

The purposes of this report are twofold: first, to provide information on the Michigan onion industry which describes the industry, its marketing systems and its current marketing position among other U.S. onion producing areas; and second, to identify and discuss a number of key issues confronting the industry. The issues include: grower prices, consumer reaction to retail onion prices, the quality of Michigan onions, onion storage and handling, onion sizing, advertising and promotion of onions, and changing consumer attitudes toward food and nutrition. The information is intended to be of value to individual operators within the industry as well as to the industry as a whole as various courses of action for more effective future marketing programs may be analyzed.

The report is based upon publicly available information and a series of interviews with persons knowledgeable about the industry. Interviews were conducted with: Michigan onion growers; onion packer-shippers and brokers; wholesale/retail buyers; retail produce department managers; and consumers. Sources of available information include: The U.S. Census of Agriculture, Michigan Onion Committee, National Onion Association, U.S. Department of Agriculture and other specific sources and research reports listed in the reference section at the end of the report. The support and cooperation of all parties interviewed and especially that of the Michigan Onion Committee is very much appreciated.

THE MICHIGAN ONION INDUSTRY

A SUMMARY OF MARKETING INFORMATION

Contents

I) U.S. ONION PRODUCTION--THE MAJOR PRODUCING AREAS

Although onions are grown commercially in all fifty states, the vast majority of production occurs in seven states: California, Texas, Oregon, New York, Idaho, Colorado and Michigan. It should be noted, however, that the extent of competition for Michigan producers posed by each of these areas varies greatly according to many factors, the three most important of which are types of onions produced, transportation costs to market areas, and production seasons.

Table 1, below, shows the 1976-78 average annual U.S. commercial onion production for all varieties ranked in order of major producing states. It should be noted that a very large portion of the onions from California, the leading producing state, is used for processing. Of total U.S. production, Michigan accounted for 6.4 percent with an average production of 2,236,000 cwt., while the seven leading states together made up 86.9 percent of the U.S. total production. The remaining 13.1 percent is accounted for by eight additional states for which the commercial production is officially reported. While minor production occurs in other states, it is not reported in USDA statistics.

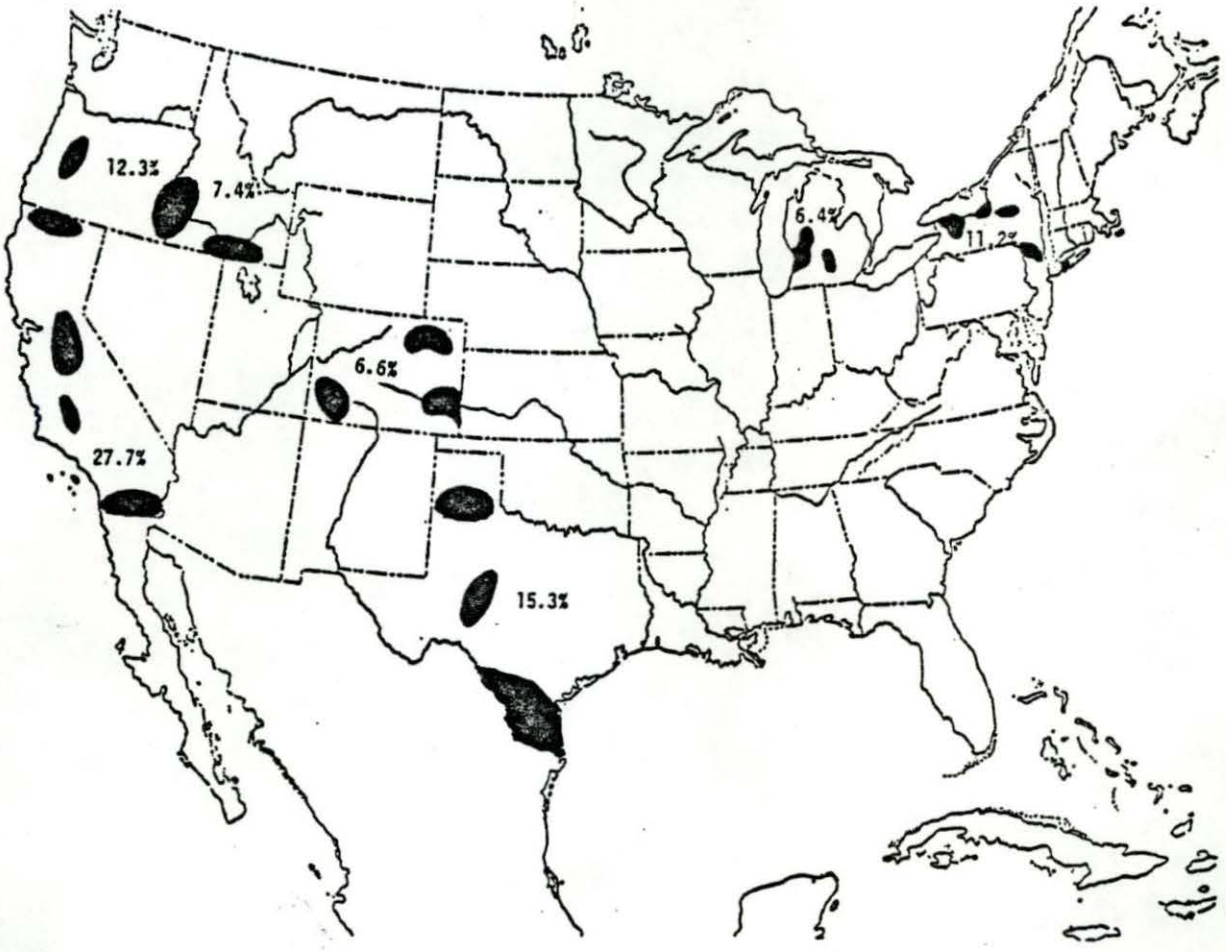
Table 1. Commercial Onion Production by Major States
(1976-78 average)

Rank	State	Production (1000 cwt.)	Percent of Total U.S. Production
1	California	9,755	27.7
2	Texas	5,400	15.3
3	Oregon	4,334	12.3
4	New York	3,953	11.2
5	Idaho	2,590	7.4
6	Colorado	2,318	6.6
7	MICHIGAN	2,236	6.4
Seven State Totals		30,586	86.9

Source: Compiled from Agricultural Statistics, 1977-79, E.S.C.S., U.S. Department of Agriculture.

Figure 1 which follows shows the approximate location of the onion production areas in the major producing states.

Figure 1. Major Onion Production Areas*
(all varieties)



*Figures represent the 1976-78 three year average commercial production per state as a percent of U.S. total production. Size of shaded areas does not reflect the importance of production, only the approximate growing regions.

Production of Late Summer, Storage Variety Onions

California and Texas together account for approximately 44 percent of total U.S. onion production; however, they primarily produce non-storage, spring and summer onions and, in the case of California, a large portion of the crop goes to processors, including dehydrators, freezers and canners. For

this reason, the most direct competition for Michigan's yellow globe type of onion, which accounts for about 90 percent of Michigan acreage, comes from other states which produce storage varieties of onions, namely: New York, Colorado and Idaho-Oregon.

Even though Michigan accounts for only about 6.4 percent of total U.S. onion production, Michigan produces about 12.5 percent of the nation's late summer, storage variety onions (Table 2) and accounts for about 14.4 percent (Table 3) of the late summer varieties' harvested acreage.

Table 2 indicates the 1959-63 five-year averages and the 1977-79 three-year average commercial production of late summer, storage onions in the leading producing states. In the earlier period New York and Michigan were the leading producing regions accounting for 31.9 percent and 16.8 percent, respectively. Both of these positions have been eroded, however, in the most recent period, 1977-79. New York ranks second, producing 23.4 percent of the total while Michigan's position has slipped to fifth, accounting for 12.5 percent of total late summer, storage onions. Oregon, Idaho and Colorado, on the other hand, have improved their positions relative to the 1959-63 period.

Table 2 also demonstrates a more equal distribution of production among the leading producers. In the 1959-63 period, for example, New York, the leading producer accounted for 31.9 percent of the total production while fifth-ranked Idaho only produced 5.5 percent of the total. By the 1977-79 period, however, the share of the leader, Oregon, declined to 23.5 percent while the share of the fifth-ranking state more than doubled, from 5.5 percent to 12.5 percent.

The ranking of leading summer, storage onion producing states in terms of acres harvested has also changed between these same time periods, 1959-63 and 1977-79, as is shown in Table 3. New York's harvested acreage led the nation

Table 2. Late Summer, Storage Onion Production[1]

1959-63 5-Year Average				1977-79 3-Year Average			
State	Rank	Production (1000 cwt.)	% of U.S. Total	State	Rank	Production (1000 cwt.)	U.S. Total
New York	1	4,823	31.9	Oregon	1	4,417	23.5
MICHIGAN	2	2,586	16.8	New York	2	4,395	23.4
Oregon	3	2,273	15.0	Colorado	3	2,435	13.0
Colorado	4	2,262	14.9	Idaho	4	2,392	12.7
Idaho	5	837	5.5	MICHIGAN	5	2,342	12.5
Wisconsin	6	567	3.7	Washington	6	1,295	6.9
Minnesota	7	378	2.5	Utah	7	707	3.8
Washington	8	369	2.4	Wisconsin	8	409	2.1
Utah	9	232	1.5	Ohio	9	222	1.1
Ohio	10	182	1.2	Minnesota	10	189	1.0
Total		14,461	95.4			18,803	100.0[2]

Source: Compiled from Agricultural Statistics, 1959-63, U.S. Department of Agriculture and Marketing Michigan Onions and Potatoes, 1979 Crop, Fruit and Vegetable Division, U.S. Department of Agriculture, 1979.

[1]California production is omitted since it is primarily for processing uses.

[2]In 1975 the Crop Reporting Service began estimating production only in states where the annual value of production was greater than $300,000. These figures therefore, represent production only in the ten states listed. Thus, the 1959-63 percentages are not exactly comparable with those of 1977-79.

in both periods, although the percentage of contribution to total harvested acreage declined slightly between the two periods. Michigan ranked third in the 1959-63 period, accounting for 15.8 percent of total acres harvested; but fell to fourth in the most recent period, accounting for 14.4 percent of acres harvested.

Table 3. Late Summer, Storage Onions--Area Harvested[1]

1959-63 5-Year Average				1977-79 3-Year Average			
State	Rank	Acres	% of U.S. Total	State	Rank	Acres	% of U.S. Total
New York	1	14,940	31.9	New York	1	13,933	28.1
Colorado	2	8,080	17.3	Oregon	2	9,167	18.5
MICHIGAN	3	7,400	15.8	Colorado	3	7,467	15.0
Oregon	4	5,120	10.9	MICHIGAN	4	7,167	14.4
Wisconsin	5	2,380	5.1	Idaho	5	5,000	10.1
Idaho	6	1,940	4.1	Washington	6	2,303	4.6
Minnesota	7	1,780	3.8	Utah	7	1,900	3.8
Washington	8	990	2.1	Wisconsin	8	1,400	2.8
Utah	9	770	1.6	Minnesota	9	763	1.6
Ohio	10	470	1.0	Ohio	10	567	1.1
Total		43,870	93.6	Total		49,667	100.0[2]

Source: Compiled from Agricultural Statistics, 1959-63, U.S. Department of Agriculture and Marketing Michigan Onions and Potatoes, 1979 Crop, Fruit and Vegetable Division, U.S. Department of Agriculture, 1979.

[1]California production is omitted since it is primarily for processing uses.

[2]In 1975 the Crop Reporting Service began estimating production only in states where the annual value of production was greater than $300,000. These figures therefore, represent production only in the ten states listed. Thus, the 1959-63 percentages are not exactly comparable with those of 1977-79.

Growth rates in the production of late summer, storage onions can be illustrated in several ways. Table 4 shows average annual growth rates for the five major producing states for two periods; for the ten-year period 1970-79 and, for the five-year period 1975-79.

Table 4 demonstrates three trends of interest. First, with the exception of Idaho, every state as well as the U.S. storage crop total, increased annual production more rapidly in the most recent five-year period than during the decade as a whole. Second, Michigan's average annual production grew at a rate

Table 4. Annual Percentage Growth Rates of Late Summer, Storage Onion Production

State	10-Year Period 1970-79 Rate of Growth[1] (percent)	5-Year Period 1975-1979 Rate of Growth[2] (percent)
Colorado	7.4	14.2
MICHIGAN	2.0	9.7
New York	1.1	9.6
Oregon	6.3	6.4
Idaho	3.2	.3
Total U.S. Storage Crop	3.7	9.3

Source: Calculated from Agricultural Statistics, 1970-79, U.S. Department of Agriculture. Calculations are based upon the development of a linear trend line. The data for the trend line are shown in Table 5.

[1]Using 1970 as the base year.

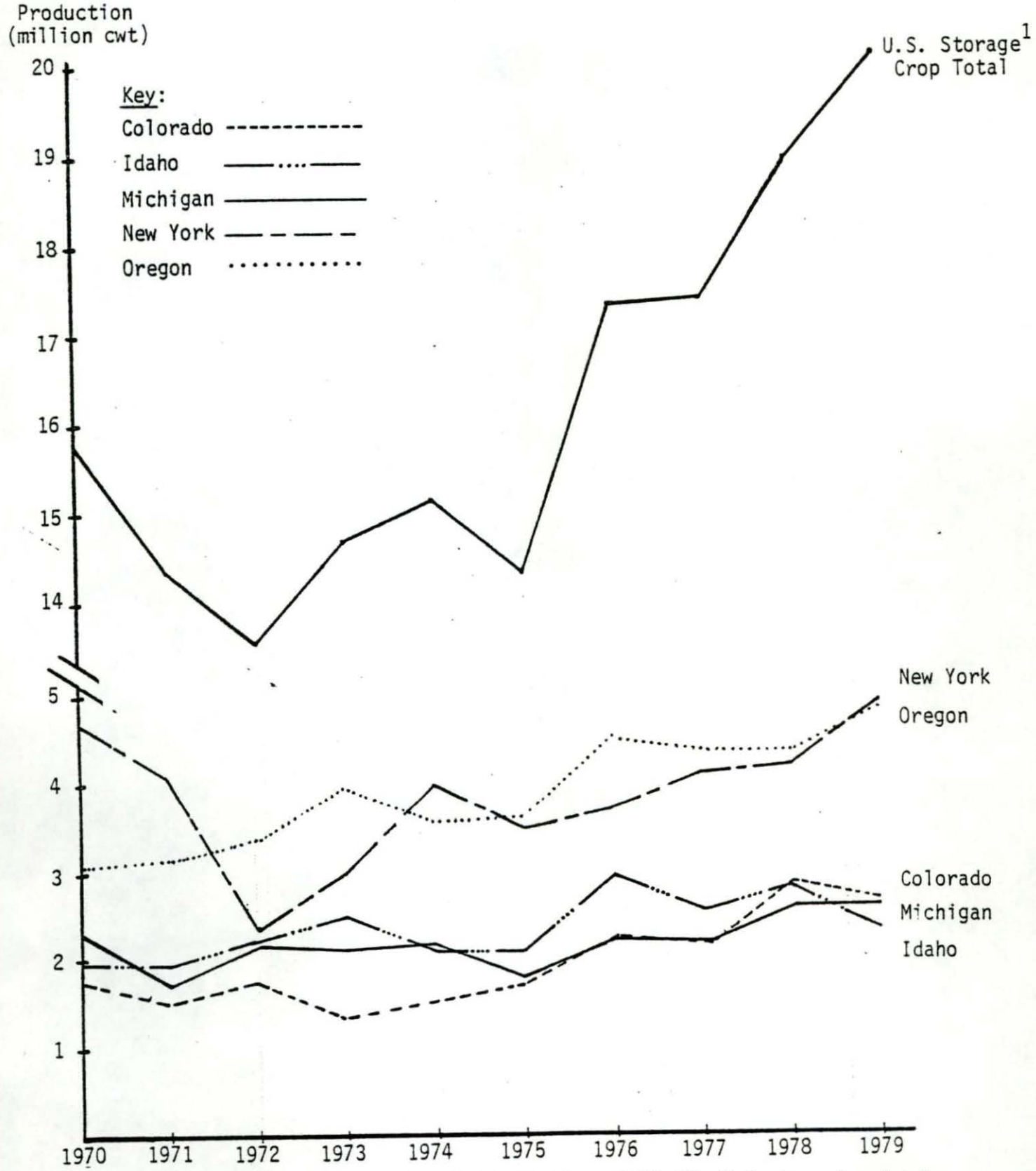
[2]Using 1975 as the base year.

almost five times as fast during the second half of the 1970's as it did during the entire ten-year period. This seems primarily to be the result of two relatively large crop years in 1978 and 1979. Third, Colorado had the highest growth rates in both periods.

Individual state production and acreage information is shown in Figures 2 and 3. Tables 5 and 6 furnish specific production and acreage data from 1970 through 1979 from which the growth rates and figures were developed.

Figure 2 illustrates the trends and relative shifts in production among the major producing states. Oregon and New York, the largest producers, have generally increased their production each year since 1975. In 1978, Colorado overtook Michigan and Idaho, and maintained this position in the 1979 crop year as well.

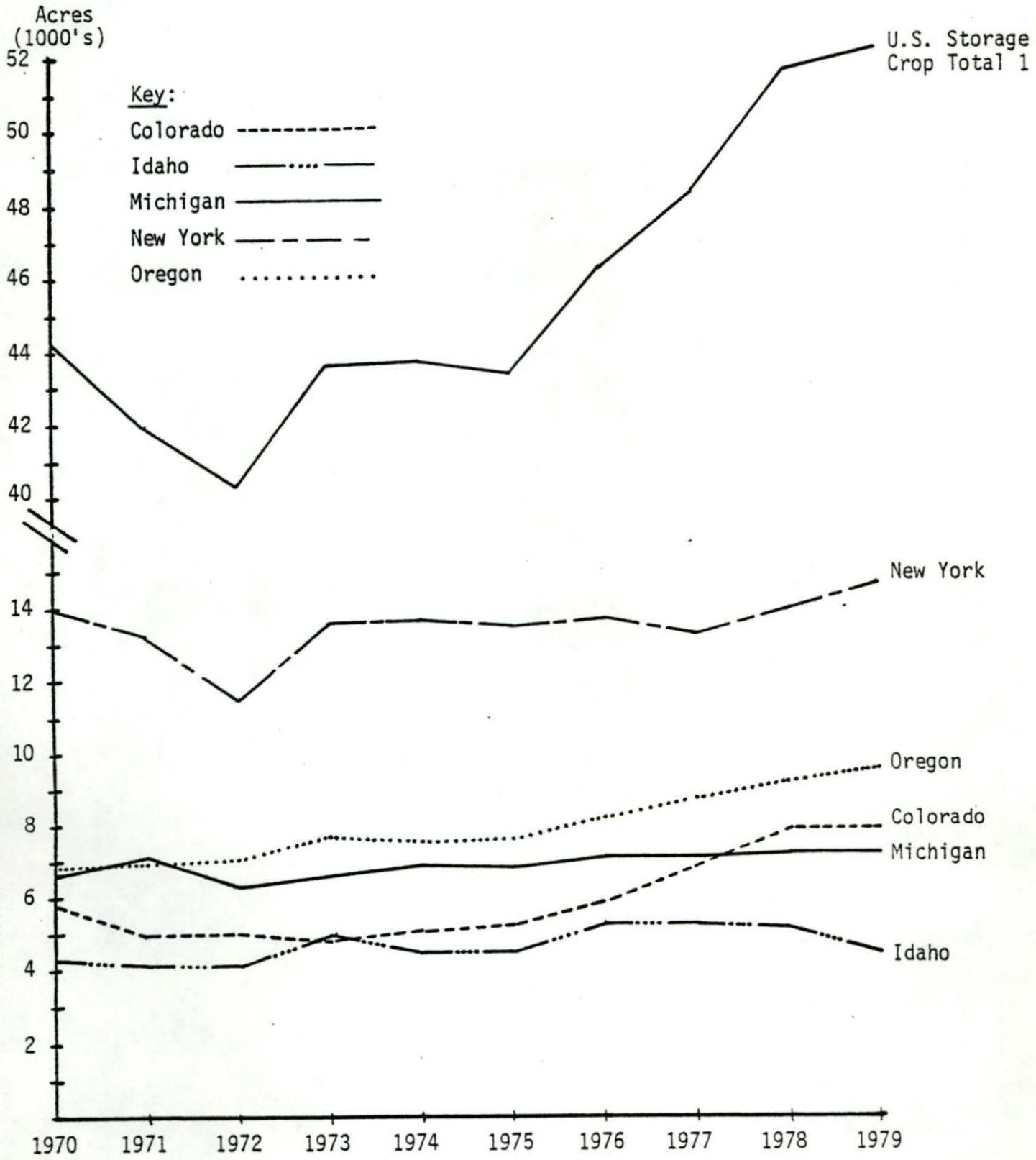
Figure 2. Late Summer, Storage Onion Production
(100 cwt.)



Source: Compiled from Agricultural Statistics, 1970-79, U.S. Department of Agriculture.

[1]Excluding California.

Figure 3. Late Summer, Storage Onion Acreage
(acres harvested)



Source: Compiled from Agricultural Statistics, 1970-79, U.S. Department of Agriculture.

Table 5. Late Summer, Storage Onion Production
(1000 cwt.)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979*
Michigan	2,232	1,674	2,144	2,046	2,139	1,768	2,166	2,095	2,448	2,484
New York	4,760	4,123	2,300	2,992	3,973	3,443	3,631	4,057	4,170	4,818
Colorado	1,711	1,475	1,709	1,392	1,479	1,643	2,183	2,040	2,730	2,535
Oregon	3,039	3,168	3,392	3,927	3,576	3,567	4,433	4,287	4,282	4,776
Idaho	1,978	1,953	2,184	2,475	2,070	2,025	*2,915	2,412	2,444	2,295
U.S. Storage[1] Total	15,719	14,326	13,556	14,610	15,187	14,286	17,257	17,350	18,842	20,117
U.S. Total (all types)	30,578	29,803	28,355	29,659	33,045	31,362	35,197	34,406	35,935	38,485

Source: Compiled from Agricultural Statistics, 1970-79, U.S. Department of Agriculture.

[1]Excluding California.

Table 6. Late Summer, Storage Onion Acreage
(acres harvested)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Michigan	6,700	7,200	6,400	6,600	6,900	6,800	7,100	7,100	7,200	7,200
New York	14,000	13,300	11,500	13,600	13,700	13,500	13,700	13,300	13,900	14,600
Colorado	5,800	5,000	5,100	4,800	5,100	5,300	5,900	6,800	7,800	7,800
Oregon	6,800	7,000	7,100	7,700	7,500	7,600	8,200	8,700	9,200	9,500
Idaho	4,300	4,200	4,200	4,900	4,500	4,500	5,300	5,300	5,200	4,500
U.S. Storage[1] Total	44,450	42,000	40,320	43,640	43,730	43,430	46,170	48,200	51,520	52,070
U.S. Total (all types)	101,000	98,800	94,470	104,890	109,330	102,880	109,220	107,900	120,770	123,440

Source: Compiled from Agricultural Statistics, 1970-79, U.S. Department of Agriculture.

[1]Excluding California.

Figure 3, similarly, indicates the relative trends and shifts in harvested acres. New York has a substantial lead in harvested acreage. In fact, New York consistently harvested approximately 50 percent more acres than Oregon, the state ranking second in acres harvested, although the two production totals have been very close, especially for the past three years. Colorado has increased harvested acreage in each year since 1973, overtaking Michigan for the first time in the 1978 crop year.

II) MICHIGAN ONION PRODUCTION AND MARKETING

Until 1977 the value of onion production was consistently the largest of any vegetable crop in Michigan, but it has been surpassed by cucumbers for pickles in each of the past three years. In 1979 the estimated value of onion production at the shipper level reached $12,421,000. Harvested production in 1979 of 2,484,000 cwt. placed Michigan seventh among all onion producing states and fifth among states producing late summer, storage onion varieties (See Table 1 and 2). Michigan's relative rank among other onion producing states has declined since the 1959-63 period (Table 2). In the case of late summer, storage varieties, Michigan's rank declined from second in the 1959-63 period to fifth in the 1977-79 period.

Onion Production by Counties

The Michigan onion marketing season begins in late August and generally concludes early in March, although some handlers suggest that the season can extend into April and even May. In 1974, five counties in the central western portion of the state accounted for 62 percent of the state's production (See Figure 4). Between 1959 and 1974 there were many changes in the rankings of the major producing counties. County acreage figures are shown in Table 7.

Figure 4. Leading Counties in Michigan Onion Acreage

The leading counties in onion acreage are:

1. Newaygo
2. Allegan
3. Ionia
4. Ottawa
5. Ingham

Source: 1974 U.S. Census of Agriculture

Although 1974 is the most recent year for which agricultural census information is available, it is generally believed that the relative importance of the various counties today remains similar to that of 1974.

Table 7. Michigan Onion Acres Harvested by County

1959		1969		1974	
County	Acres	County	Acres	County	Acres
1) Newaygo	1,696	Newaygo	1,583	Newaygo	1,593
2) Allegan	852	Ottawa	778	Allegan	1,024
3) Ottawa	726	Allegan	753	Ionia	691
4) Ingham	679	Eaton	402	Ottawa	681
5) Jackson	557	Muskegon	390	Ingham	662
6) Calhoun	536	Ingham	384	Muskegon	528
7) Eaton	390	Ionia	321	Calhoun	356
8) Kent	390	Jackson	309	Eaton	351
9) Ionia	353	Calhoun	180	Kent	232
10) Lapeer	289	Kent	155	Jackson	224

Source: U.S. Census of Agriculture, 1959, 1969, 1974, Department of Commerce.

Number of Onion Growers

In the 1977-78 and 1978-79 crop marketing years there were 137 and 139 growers respectively who accounted for the vast majority of Michigan's commercial onion production. This number declined significantly to 114 growers in the 1979-80 crop marketing year (See Table 8). In the most recent year, 1979-80, the "average" quantity of onions marketed per grower was 15,663 cwt., but this figure must be viewed in a broader perspective. For example, in the 1979-80 crop marketing year 20 growers, or 17.5 percent of all growers, accounted for over 62 percent of the total onions marketed; or, conversely, the 94 smallest growers, 82.5 percent of all growers, accounted for 37.8 percent of all onion marketings.

From Table 8 it can also be seen that in 1979-80 a larger percentage of total marketings, or 62.2 percent, was accounted for by the twenty largest

Table 8. The Number and Relative Size of Michigan Onion Growers

Crop Marketing Year		Number of Growers	Percent of Total Growers	Percent of Total Marketings
1977-78	largest	20	14.5	58.0
	other	117	85.4	42.0
	total	137	100.0	100.0
1978-79	largest	20	15.0	59.4
	other	119	85.0	40.6
	total	139	100.0	100.0
1979-80	largest	20	17.5	62.2
	other	94	82.5	37.8
	total	114	100.0	100.0

Source: Michigan Onion Committee.

operators than in the two previous years. It would be premature, however, to draw conclusions based on such a short time period.

It should be pointed out that the number of growers may actually be slightly larger than the figures indicated in Table 8. Crop Reporting Service, for example, reports 144 growers for 1978-79 as contrasted to the Michigan Onion Committee's listing of 139. Since the omitted growers are not thought to be large producers it is unlikely that their absence will affect the indicated trends.

Number of Onion Shippers

Michigan onions were marketed through thirty-one different selling desks in 1979-80. The size of this group of shippers fluctuates yearly. The Packer's 1980 Produce Availability and Merchandising Guide, for example, lists 56 different selling agents in Michigan for onions. There is general industry agreement, however, that a smaller number of core shippers, about 14, account

for approximately 90 percent of all Michigan onion shipments. Many members of this latter group operate on a year-round basis. Additionally, all but two of these largest shippers grow at least a portion of the onions they ship. As shown in Table 9, the largest shipper accounted for 16.7 percent of onion sales in 1979, whereas the largest four shippers sold slightly over 50 percent of all the Michigan onions marketed.

Table 9. Sales of Michigan Onions by Michigan Onion Shippers, Marketing Year 1979-80

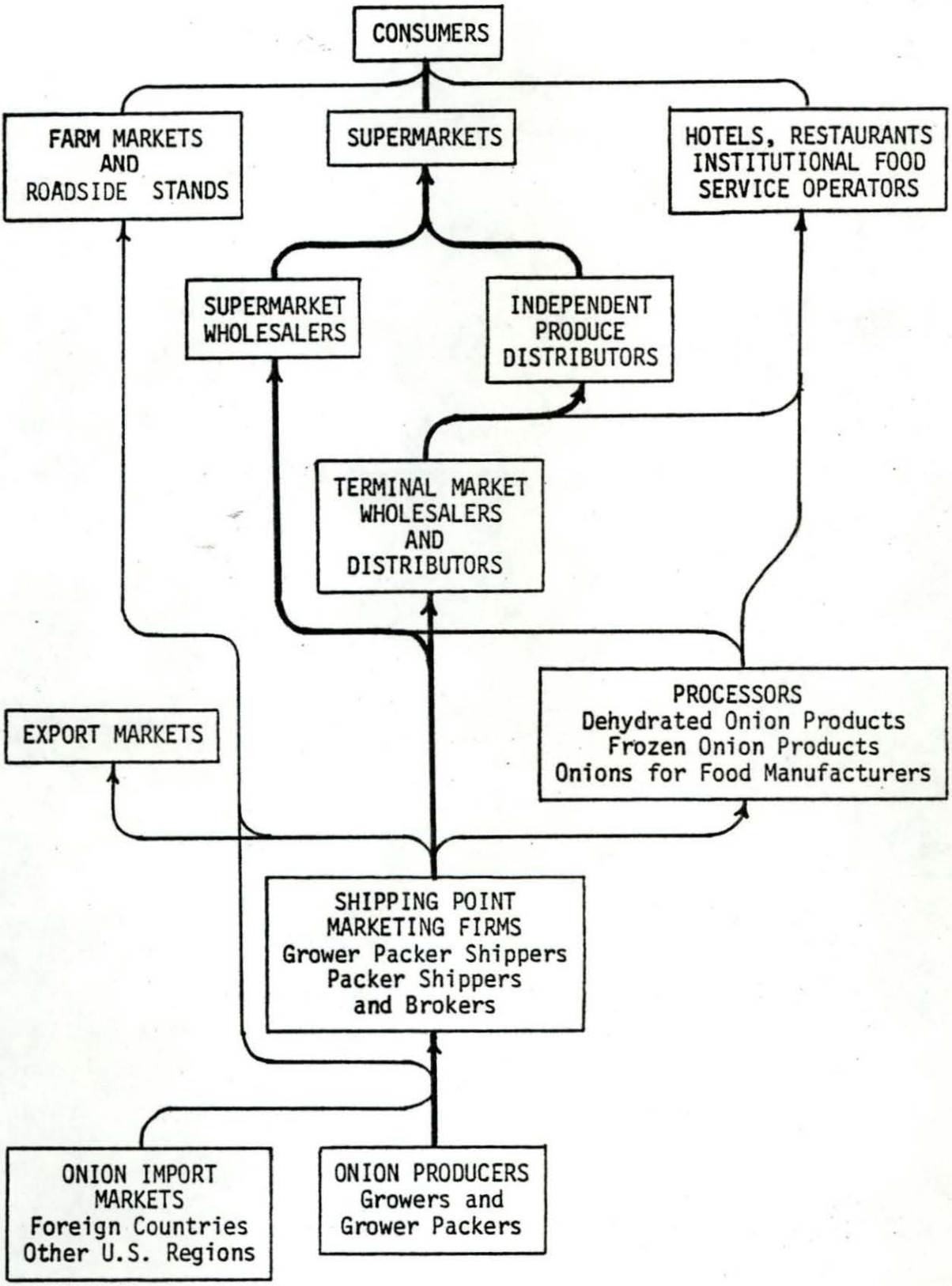
Sales Ranking	Percent of Total Onions Shipped	Sales Ranking	Percent of Total Onions Shipped
1	16.7	8	3.9
2	13.5	9	3.8
3	12.0	10	3.2
4	10.6	11	2.3
5	8.2	12	1.8
6	6.4	13	1.2
7	4.6	14	1.1
			89.3

Source: Michigan Onion Committee.

Onion Marketing Channels

Participants and marketing channels in the Michigan onion marketing system are shown in Figure 5. The most common market channels are shown by the heavy dark lines. Michigan onion producers typically operate in one of several categories according to the functions they perform. Growers and grower-packers produce, most frequently store, and generally deliver onions to shipping point marketing firms. The grower-packers differ from growers only in that they carry out some sorting, grading or packing operations as part of their business. Most often both of these groups have capacity for storage until packing time and consignment to a grower-packer-shipper, or a packer-shipper.

Figure 5. The Michigan Onion Marketing System



Grower-packer-shippers, packer-shippers and brokers comprise what may be described as shipping point marketing firms. These participants perform the selling function; the grower-packer-shippers have three operations integrated into one enterprise while the packer-shippers carry out packing and selling functions, but do not grow onions. Independent packer-shippers--currently there are thought to be only two major packer-shippers in Michigan--take onions, generally on consignment from producers, for grading, packing and shipping to wholesale and retail buyers. Grower-packer-shippers operate similarly, handling not only their own onions, but serving also as packers or repackers for other local producers. They pack and ship onions in consumer size packages as well as in 50 pound bulk bags for sale at retail and terminal markets. Since 1971, a packing and shipping cooperative has similarly served to integrate the production, packing and shipping activities for slightly over a dozen growers.

Although not normally involved in the physical handling of onions, Michigan brokers account for a significant amount of the onion selling activities. They arrange for shipping, often engage in credit and collection functions and collect information on market conditions. The brokers' primary functions are to bring buyers and sellers together to facilitate title transfer.

Nationally, processors and food manufacturers purchase onions for dehydrated and frozen purposes as well as for use in processed foods. Recently, it appears that only a very small portion of Michigan onions have been marketed to processors. This may be due in part to lower returns on onions over the past few years relative to the costs of transportation to processing facilities. This would seem likely since there are no onion processors located in Michigan. Moreover, onion ring processors tend to prefer an onion that is larger, on average, than the Michigan onion, and one that does not have multiple centers which can be fairly common among larger Michigan onions. With

respect to dehydrated onion products, the low specific gravity--higher water content--of the Michigan onion, especially in comparison with California varieties, is a major disadvantage for the dehydrated market since more energy must be used in the dehydration process.

Wholesalers may be divided into three sub-categories. First are the supermarket wholesalers who, most often, purchase onions directly from one of the various shipping point marketing firms. In fact, increasingly onions are being packed and shipped to meet chain-store specifications. They are often packed, for example, in three pound vexar bags. Second are the terminal market wholesalers who serve as distributors for a wide variety of retail buyers including independent grocery stores as well as hotels, restaurants, and other institutional outlets. Third are what can be described as independent produce distributors. This group consists of wholesale cash buyers serving a range of smaller grocery stores, restaurants and other outlets.

Hotel, restaurant and institutional food service operators (HRI) comprise the food for consumption away-from-home market. Previous research indicates that onion characteristics desired by these types of retailers may differ significantly from those desired by grocery chain-store buyers. Specifically, HRI retailers are less interested in retail size packs and also appear to favor a larger, milder onion variety.

Supermarkets are the major marketing channel by which onions reach the consumer. Individual store produce managers order daily or at least several times a week from their respective wholesale produce distribution centers. They generally are interested in maintaining a balance among the onion varieties desired by consumers.

Farm markets and roadside stands, although numerous, visible, and important to some growers with special contacts or marketing opportunities, account for only a small fraction of total onion marketing.

Import and export markets are important for some states, most notably California and the Northwest, but they are less significant for Michigan. It is true, however, that periodically a poor crop abroad will open the export market for Michigan onions. Mexico is the most important source of imported onions. According to the U.S. Department of Agriculture, Foreign Agricultural Service, Mexico accounted for over 92 percent of all U.S. onion imports in 1979, with the early spring months being the peak period.

Consumers are the final and perhaps the most important participants in the onion marketing system. Over the last 40 years consumers have demonstrated a relatively stable demand for onions. The per capita consumption of commercially produced onions has had only minor fluctuations around its 40-year average of 11.8 pounds per person per year. This figure is low when compared to world per capita consumption levels where 20 to 30 pounds per person per year is common. It should be noted that stable U.S. per capita consumption, and generally small import and export markets limit overall growth of the fresh onion market to the rate of population growth in the nation, or about one percent per year.

Consumers purchase the majority of their onions in fresh form with most of the remainder being consumed in dehydrated forms, chiefly as a flavoring in pre-processed food products.

Table 10 shows per capita consumption of fresh onions from 1965 to 1979 as well as the 1947 to 1949 and 1957 to 1959 averages. Note that after 1970 dehydrated onions are no longer excluded, thus slightly reducing the reported figures. In 1976, for example, 10.1 pounds of onions were purchased in the fresh form, from a total per capita onion consumption of 12.9 pounds, fresh weight equivalent. Most of the difference is accounted for by 2.2 pounds, fresh weight equivalent, of onions in dehydrated forms.

Table 10. Per Capita Fresh Onion Consumption[1]

Year	Pounds
1947-49 average	12.0
1957-59 average	11.7
1965	11.4
1966	11.5
1967	12.1
1968	11.9
1969	12.5
1970	11.9
1971	10.1
1972	9.9
1973	9.2
1974	10.5
1975	9.8
1976	10.1
1977	10.1
1978	10.6
1979[2]	11.8

Source: 1978 Produce Marketing Almanac.

[1]Excludes onions produced in home gardens. Figures through 1970 include the fresh weight equivalent of dehydrated onion consumption.

[2]Preliminary.

Michigan Onion Prices

Shipping point prices for Michigan onions have fluctuated considerably in recent years as can be seen in Table 11. This table shows that the two most recent years for which price information is available were marked by lower prices relative to the preceding years. Although precise price estimates for the 1979-80 crop marketing year are not yet obtainable, evidence indicates that the average price will again be low. The opening f.o.b. prices of the 1979-80

Table 11. Michigan Onion Prices[1]
(dollars per cwt.)

Crop Marketing Year	Value per Unit	Crop Marketing Year	Value per Unit
1970-71	2.84	1975-76	8.59
1971-72	4.28	1976-77	9.40
1972-73	8.74	1977-78	6.30
1973-74	7.40	1978-79	6.65[2]
1974-75	5.00		

Source: Agricultural Statistics, 1970-79, E.S.C.S., U.S. Department of Agriculture.

[1]Shipping point prices for onions are reported on a basis of f.o.b. shipping point.

[2]Preliminary.

season were generally lower than the 1978-79 opening prices. Furthermore, unlike the previous season, when the market recovered after the first of the year, prices in the 1979-80 marketing year followed a consistent downward trend.

The most common first transaction in the marketing of Michigan onions occurs between growers and packer-shippers or grower-packer-shippers. In the typical situation a grower-packer-shipper or a packer-shipper accepts a shipment of onions from a grower on a consignment basis. That is, the packer-shipper agrees to pack and sell the product for previously agreed upon packing and selling charges. The packer-shipper then packs the grower's onions and sells them at the best price possible and returns to the grower the shipping point selling price after deducting the agreed upon packing and selling charges. Except in a few cases, the shipper does not generally take title to the onions nor do shippers generally bear the risk of unfavorable market prices.

The grower's costs for the marketing functions may be broken down into two parts. First, is the grading and packing charge, typically a fixed rate for a particular type of pack , i.e., a carton or master bag of 12 three-pound consumer size bags. Second, is the sales commission, which is based either on a percentage of the selling price or is a fixed price per master bag or carton. These charges are generally known by the grower at or before the time of delivery; however, since the actual shipping point selling price is generally not known, the grower does not know what his returns will be until after his onions have been sold.

Shipping point sales methods vary considerably, but the primary markets are retail chain buyers or terminal market wholesalers. Sales to either of these market outlets may be direct or through the services of another market intermediary, such as a broker. Occasionally, shippers may sell onions through a terminal market broker who in turn markets the onions to hotels, restaurants or other institutional users. In some instances, shippers selling Michigan onions directly to chain store organizations also serve as agents in the sales of out-of-state onions to these chain stores once the Michigan season has ended.

In general, the exchange that takes place between shipping point marketing firms and buyers is an f.o.b. sale. In most cases the buyer arranges for transportation; however, shippers may aid in this process. Even though most sales are f.o.b. the arrangement still allows room for substantial differences in pricing strategies by various sellers and buyers. Sellers and buyers are in frequent contact and an initially quoted price may be subject to further negotiation. In other instances shippers may enter into longer run contractual arrangements with buyers, thus assuring the buyer a known volume and perhaps even a known price. In such arrangements the variety, grade, size and pack of

the onions may be specified. Additionally, some chain store organizations employ field representatives to verify the quality of onions at various shipping points and to initiate discussions on price and other terms of trade.

The price of onions and the factors which affect it are of special interest to the onion industry. Accordingly, some preliminary onion price analysis was conducted in conjunction with this study. Approximately 30 different factors that affect price were analyzed to determine which ones have the greatest impact on Michigan onion prices. The price influencing factors were selected based upon both economic theory and discussions with knowledgeable participants in the Michigan onion industry. The results of this analysis indicated that the single most important factor influencing Michigan onion prices is the quantity of onions produced in New York during a given crop marketing year. Although these results are preliminary, it should also be pointed out that New York production was almost twice as important as any other single factor in explaining average annual Michigan prices; more important than Colorado production, Texas crop size or the expected date for early marketings of the Texas crop, and even more important than Michigan's own production.

Although these relationships bear further examination, the strength of the association between New York production and Michigan prices points up the importance of New York as Michigan's major competitor. This situation results not only from the similarities of onion varieties and seasons, but also from the proximity of New York and Michigan to the same geographic marketing areas, especially the Middle and South Atlantic states. When New York producers have a large crop year they have more onions to ship and this typically depresses prices in many of the markets where Michigan shippers normally compete head-to-head with those from New York. Hence, Michigan shippers in some instances are compelled to accept market prices which are lower as a result of New York

shippers' selling patterns. The opposite situation is also likely to occur, i.e., higher Michigan prices, when New York has a short crop year.

Retail prices are set in a variety of ways. As the retailing and wholesaling marketing functions become increasingly integrated in most major chain store organizations, the prices of all produce, including onions, are often established at the regional or headquarters level. Likewise, decisions to run "sales" may be made on a chain-wide basis. On the other hand, among independent retailers, these types of decisions are generally made by, or in conjunction with, the individual produce department managers.

Major Markets for Michigan Onions

The important role of transportation costs in marketing Michigan's late summer, storage type onions is shown by the north to south corridor of states to which Michigan shipping firms typically market onions (See Table 12 and Figure 6). The eighteen highlighted metropolitan areas accounted for 99.2 percent of Michigan's 1979-80 onion unloads as reported in the Federal-State Market News Service report, "Marketing Michigan Onions and Potatoes." These 41 reporting cities were selected by the Agricultural Marketing Service (USDA) as having the largest fresh fruit and vegetable terminal markets. The reports generally cover the metropolitan area of each of the 41 cities and attempt to include all locations where onions are unloaded or warehoused in volume. It should be noted, however, that not all of Michigan's onion marketing activities show up in the "unloads reports" since many Michigan onions are shipped to smaller markets not included in the USDA reports.

Even though the "unloads" information does not account for onions shipped to markets or buyers outside the 41 major terminal cities, the figures do serve to illustrate the geographic areas where Michigan onions are marketed and where they compete with onions from other producing states. The map of

Table 12. Michigan Onion Unloads in Major Markets, July 1979-March 1980 (10,000 pound units)

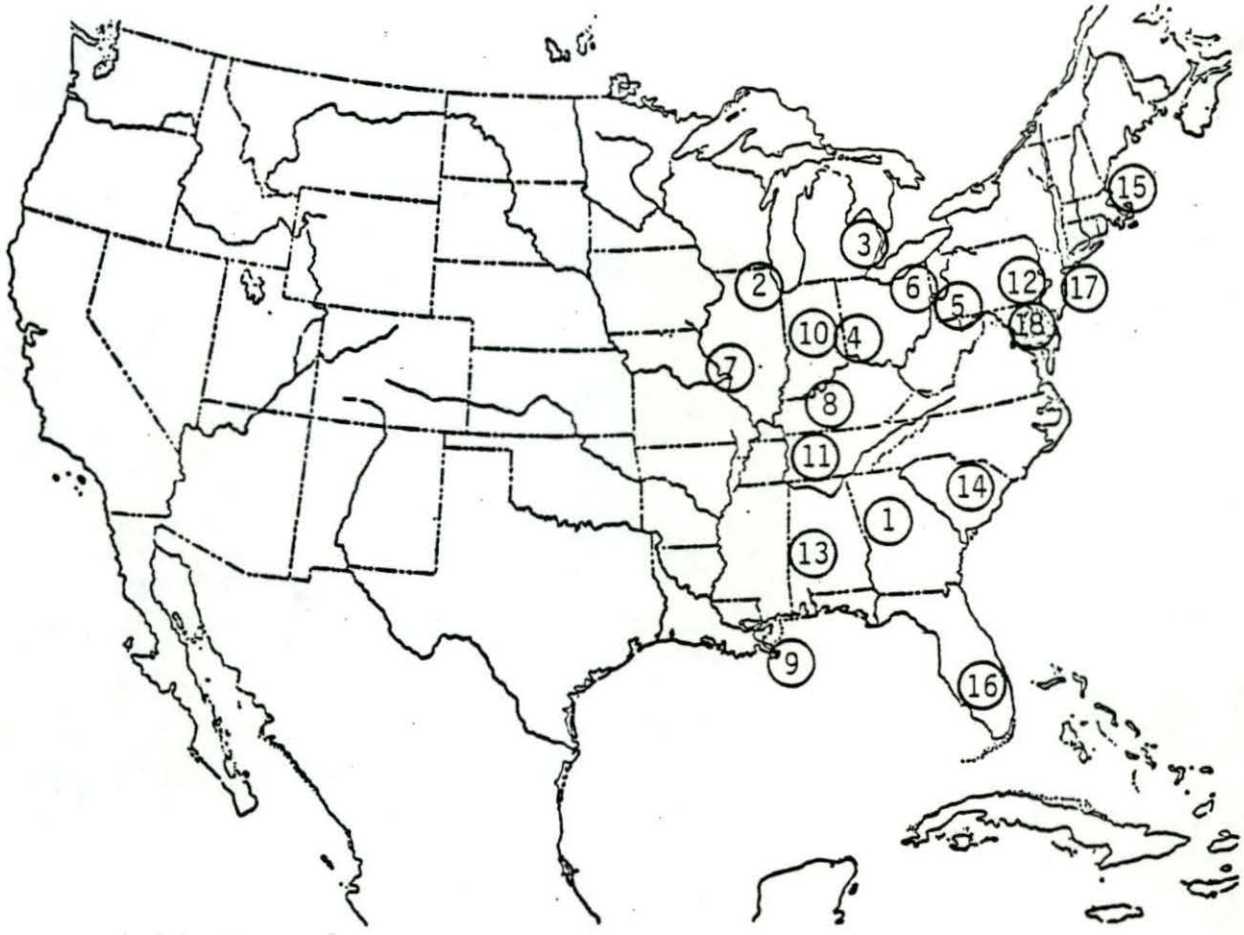
Rank	City	Unloads	Percent of Total Michigan Unloads
1	Atlanta	1,542	13.9
2	Chicago	1,463	13.2
3	Detroit	1,347	12.2
4	Cincinnati	1,023	9.2
5	Pittsburgh	868	7.8
6	Cleveland	861	7.8
7	St. Louis	670	6.0
8	Louisville	647	5.8
9	New Orleans	508	4.6
10	Indianapolis	429	3.9
11	Nashville	417	3.8
12	Philadelphia	375	3.3
13	Birmingham	283	2.6
14	Columbia, S.C.	272	2.6
15	Boston	92	.8
16	Miami	90	.8
17	New York City	50	.5
18	Balt-Washington, D.C.	47	.4
	Total	11,083	99.2

Source: Compiled from "Marketing Michigan Onions and Potatoes, 1979 Crop," Federal-State Market News Service, Michigan Department of Agriculture, Marketing Division, May 1980.

Figure 6 shows that Michigan onions are most likely to compete with New York onions in the Middle and Southern Atlantic states where transportation costs tend to be nearly equalized. Moreover, Idaho-Oregon and Colorado onions become important competitive factors in markets as one moves west toward the Mississippi River. Also, the amounts of onions marketed in each of these cities fluctuates considerably from year to year depending on a number of marketing circumstances such as crop size and demand conditions.

In the crop marketing year July 1979 through March 1980, Figure 6 indicates that markets and buyers in the Atlanta metropolitan area received 13.9

Figure 6. Major Unload Cities for Michigan Onions, July 1979-March 1980



Note: Numbers refer to rank of major unload cities in declining order. For key see Table 12.

percent of Michigan's reported onion unloads. Atlanta, Chicago, Detroit, Cincinnati and Pittsburgh, the leading five cities receiving Michigan onion shipments together accounted for 56.3 percent of Michigan's reported onion unloads.

Figure 6 also indicates that, except under unusual marketing conditions, cities close to New York State such as Boston, New York City, Washington, D.C. and Philadelphia do not provide large markets for Michigan onion sales.

The total quantity of Michigan onions unloaded in all cities as shown in Table 12 was 11,083 units of 10,000 pounds each in the crop marketing year July 1979-March 1980. This figure represents 45 percent of Michigan's 1979 field production of 2,448,000 cwt., and accounts for approximately 62 percent of Michigan's commercial onion shipments of 1,785,548 cwt.

III) MARKETING ISSUES WITHIN THE MICHIGAN ONION INDUSTRY

During the course of this study interviews were conducted with a number of participants involved in the Michigan onion marketing system: growers, packer-shippers and brokers, wholesale and retail buyers, and managers of retail produce departments. Several members of the Michigan Onion Committee, the National Onion Association and the U.S. Department of Agriculture Crop Reporting Service also furnished information and insights. A consumer perspective was also obtained. These interviews were conducted to provide a more complete picture of the current situation facing the Michigan onion industry.

In all of the discussions, interviewees were most generous with their time and observations regarding current issues in the industry. Their insights were extremely valuable and provided a set of priority marketing issues which should be considered in the process of moving toward a stronger industry. This list of issues includes the following: grower prices, consumer reaction to retail onion prices, the quality of Michigan onions, onion storage and handling, sizing, advertising and promotion of onions, and changing consumer attitudes toward food and nutrition. On a few issues individuals from various stages of the industry--growers, packer-shippers and retailers--agreed, but more often they did not. Following are some of the most frequently heard comments, opinions and perceptions regarding potential directions which might be taken to strengthen the Michigan onion industry.

Grower Prices

Virtually all interviewees believed that the low prices of the past several years has resulted primarily from an imbalance of overall onion supplies and demand--that production on a national basis was greater than the market was able to absorb at favorable grower prices. However, a number of growers felt that the low price situation in Michigan over the past three years has been worsened by a few "weak sellers" who tend to undercut the price offerings of other, more established shippers in order to gain entry into the market. More generally, growers expressed the sentiment that all shippers may in part be responsible for low prices as they inevitably bid against one another for business in what is a highly competitive market.

Shippers, although less unanimous than growers, also expressed concern about a group of fringe sellers who had the potential to adversely affect prices. These fringe sellers consist, it is believed, of growers who intermittently pack and sell their own crop at lower than "normal" prices in order to gain entry into the market. Some believe that these sellers may sell at low prices due to an incomplete knowledge of the costs of production, packing and selling. This situation may not only lower market prices, but may also reduce onion supplies for the larger, permanent shippers. Although this phenomenon was cited as a problem by several shippers, others commented that such temporary sellers do not pose a serious harmful effect.

There was also disagreement regarding the conditions under which these transitory shippers entered the market: some felt it was when prices were good and "anyone could sell onions" while others stated that it occurred when prices were poor, encouraging some growers to attempt to improve their returns by doing their own marketing. Furthermore, there was wide-spread speculation concerning the identity and location of such sellers.

Regarding activities that might be undertaken to improve future prices, most participants were in accord that something needs to be done to improve returns. Suggestions for improvements were wide-ranging. Many growers and shippers felt that the development of some form of onion processing or onion by-products utilization such as onion extract or the use of cull onions in alcohol production might give producers an outlet for onions which are currently sorted out of the fresh packs. It was noted that even at relatively low prices some value for by-product onions would in fact lead to closer and better sorting of the fresh onion pack, thus improving fresh pack quality and making onions at least somewhat more profitable.

Others felt that supply control of some form was necessary on a Michigan, regional or national basis. A set-aside program, with acreage to be determined late in the summer after most major damage from weather could be assessed, was thought by some to offer potential. On the other hand, several participants were skeptical about efforts to control supply and instead proposed some form of quality improvement, perhaps under a marketing order. The provisions of such an order could be designed in numerous ways, including the use of quality standards, inspection procedures and advertising or promotional programs. Still others, a minority, responded that any form of governmental intervention is not the answer. They believed that the forces of supply and demand in the marketplace will eventually resolve any imbalance that might exist at the present time. A final thought discussed by some growers was that of a cooperative packing and marketing organization. Growers did not have specific details, but suggested that such an organization might afford growers greater bargaining power.

Consumer Reaction to Retail Prices

A frequently heard comment was that recent onion prices did not fully reflect the value of onions to consumers. For example, many growers believed that onions "carry" the produce department and the produce department carries the rest of the supermarket. "Why," they asked, "should everybody make money on onions except the producers?" Further, some felt that the onion is such a staple commodity, a necessity, that farmer prices could be raised substantially above today's level without drastically reducing quantities purchased by consumers. In that way, they reasoned, grower returns would improve. On the other hand, when the price of a commodity such as onions is lowered, consumers are not likely to substantially increase their purchases above previous levels.

Produce buyers and supermarket produce department managers were of a similar opinion. They noted, however, a seeming contradiction: when onion prices are raised the quantity purchased does not seem to decrease, but during a sale, when prices are reduced and merchandising efforts intensified, customer purchases increase, often substantially, from normal movement levels. This phenomenon might be explained by consumers' tendencies to stock up on the sale item while the price is low, but to subsequently reduce their onion purchases below normal levels in the following weeks.

Quality of Michigan Onions

The quality of the Michigan onion was a topic which also generated divided opinion. The discussions revolved around the quality and characteristics of the Michigan pack in comparison with its closest competitors, New York, Colorado and to a lesser extent, Idaho-Oregon. Concern was also expressed regarding the declining relative quality of Michigan's pack over time--that improvements in the quality of the packs of competing states has not been matched in Michigan.

Among growers, opinions were mixed as to whether the Colorado and Idaho-Oregon "Spanish" type onions were actually milder or sweeter than the Michigan varieties or whether this was only a perception created by advertising and promotion. Some said they had tasted no dissimilarities while others readily indicated that they noticed a difference. Grower opinions also differed regarding the quality of the Michigan pack versus that of competition. Some felt that the New York pack is no better than the Michigan pack, while others claimed that the New York pack is superior since they frequently double-grade their onions. A preliminary on-farm grading often takes place before the onions reach the packing shed for a final grading.

Packer-shippers also expressed a range of opinion regarding the quality of Michigan onions. Some had the view that no difference exists between the Michigan onion and other yellow-globe types; that the only criterion for buyer choice between Michigan and New York yellow-globe type onions is price. However, the majority of packer-shippers believed that New York has a competitive quality advantage. In this regard, the grower comments on double-grading practices in New York were reiterated. It was felt that this gives the New York pack greater uniformity and fewer undesirable onions; however, it was noted that increased handling adds to costs and may increase bruising.

When discussing Colorado onions, several shippers felt that they are preferred since they tend to be a "brighter" onion. That is, due to the dry, sandy soil the onion has fewer stains than the muck-grown Michigan variety. Several buyers also agreed that cleaner onions are more desirable.

Onion Storage and Handling

Several shippers commented that New York producers generally handle their onions better. Frequently, it was believed, Michigan growers pile their onions to depths of 14 feet in bulk storage, whereas a depth of 10 to 12 feet is the

recommended level. This practice often results in more bruising and lower quality onions at the bottom of bulk storages. Additionally, many shippers believe that New York growers use less bulk and more pallet bin storage. Several shippers also thought that many growers do not realize the extent to which rough handling and overly deep storage deteriorates onion quality. Many packers indicated that they would welcome closer coordination with growers to periodically view packing operations and to analyze the quality of the pack-out.

Tables 13 and 14 may shed some light on the pack-out issue. Table 13 shows the quantities of onions for the period 1977 to 1979 that were not marketed due to shrinkage and loss. It indicates that Oregon consistently has the greatest shrinkage and loss figure. Table 14, based upon the same information, indicates the percentage of annual production which is not marketed due to shrinkage and loss. The 1977 to 1979 three-year shrinkage and loss average is indicated as well. Table 14 also shows that Michigan and New York have the lowest three-year average percentages of onion shrinkage and loss. This suggests two possible situations. First, the late summer, yellow globe varieties that are typically cultivated in these two states tend to be harder, less easily bruised onions that have longer storage lives. This results in a smaller amount of onions lost due to shrinkage and other factors. Second, the low shrinkage and loss percentages could be an indication of less thorough grading and sorting practices in New York and Michigan relative to other producing areas. This second possibility could have impacts on the quality of the onion packs from these two states. These situations might warrant further study.

Table 13. Summer, Storage Onions, Shrinkage and Loss
(1000 cwt.)

	1977	1978	1979[1]
Colorado	450	510	435
Idaho	676	642	663
MICHIGAN	415	392	250
New York	811	495	723
Oregon	1168	1057	1310

Source: "Marketing Michigan Onions and Potatoes, 1979 Crop," Federal-State Market News Service, Michigan Department of Agriculture, Marketing Division, U.S. Department of Agriculture.

[1]Preliminary.

Table 14. Summer, Storage Onion Shrinkage and Loss as Percentage of Total Production, 1977-1979

	1977	1978	1979[1]	1977-1979 Average
MICHIGAN	19.8	16.0	10.1	15.3
New York	19.9	11.5	15.0	15.5
Colorado	22.1	14.7	17.2	18.0
Oregon	27.2	25.2	27.4	26.6
Idaho	28.0	30.0	28.9	29.0

Source: "Marketing Michigan Onions and Potatoes, 1979 Crop," Federal-State Market News Service, Michigan Department of Agriculture, Marketing Division, U.S. Department of Agriculture.

[1]Preliminary.

Onion Sizing

The uniformity of onion size in the retail pack is another area where differences of opinion exist. Some growers said that consumers really prefer a variety of onion sizes in a consumer pack since the various sizes better meet the range of onion uses. They feel that chain stores could sell more onions if they did not insist on uniform size onions in a consumer pack. Chain buyers, on the other hand, explained that consumers buy "with their eyes" and that a closely sized pack appeals to what is perhaps the consumers' unconscious preference for consistency.

Regarding the question of increased selling activities for "boilers," the small-sized onions, some produce managers felt that they could sell more boilers, while others expressed the opposite judgement. One shipper felt that this apparent contradiction in views could be explained by the fact that produce managers often think that boilers are a by-product; and thus, they want more only if they are available at an extremely low cost. It was believed that produce managers may often overlook packing and transportation costs. Several packer-shippers also drew attention to their belief that some central market buyers often prefer smaller sized onions in bulk bags to permit more precise repacking. Finally, a number of consumers mentioned that both the preparation time and the relative amount of waste per onion were greater when using smaller onions.

Advertising and Promotion of Onions

Advertising and promotion was a topic of interest to all groups. The typical feeling was that there was not enough onion promotion and that there exist many opportunities for expanding efforts. Many interviewees drew attention to the consumer size onion bags. Predominately vexar--a plastic net--material, the

bag was thought to be technically functional, but messy, lacking in color and generally devoid of any promotional message. At the same time, it was noted that vexar packaging does an excellent job of maintaining the quality of the onion. Several participants suggested that more creative package designs might accomplish much in the way of establishing some degree of brand identification and loyalty.

There was also wide agreement that consumers eagerly use all promotional materials to which they have access--in the supermarket or elsewhere. Although there was some concern regarding the potential inconvenience of point of purchase advertising, many voiced the need for more effort in this area. It should be added however that a large percentage of point of purchase materials designed for supermarket use, for numerous reasons, never reaches the consumer. Some participants felt that a point of purchase display explaining onion uses would be very beneficial for customers.

One promotional technique which several buyers believe to be promising is the introduction of generic or unbranded onions. Although still graded US #1, these onions might be slightly stained or have multiple centers. Buyers feel there is significant consumer interest in this relatively new way to merchandise many food products including onions.

Changing Consumer Attitudes Toward Food and Nutrition

Several buyers made the point that the nationwide trend toward "healthier" and more calorie-conscious diets may not have a favorable effect on the Michigan yellow-globe type of onions. Heightened consumer interest in fresh and "lighter" foods has given rise to increased consumption of fresh produce in general, especially salad items. The industry perception is that the yellow-globe is employed primarily as a cooking onion, and that other milder, so-called

"sweeter" varieties are more often used on sandwiches and in salads. Thus, some produce buyers speculate that an increase in salad consumption may well increase the consumption of some onions, but perhaps not the Michigan onion.

A second, somewhat related, view is that increasing per capita income has resulted in the growth of away-from-home eating by many consumers in our society. Again, however, this trend may not bode well for yellow-globe onions. Several participants suggested that the hotel, restaurant and institutional trade did not prefer Michigan onions for two reasons. First, away-from-home food institutions tend to be more concerned with efficient preparation techniques and as a result, require an onion larger than the average Michigan onion. Second, it is felt that the restauranteurs have a greater demand for a milder type of onion for use in their fresh servings.

There was little agreement, however, concerning the impacts of these food consumption trends on the usage of yellow-globe onions. One produce buyer felt strongly that consumers do not recognize the sometimes subtle differences in tastes or recommended uses of different onions. Rather than selecting several different onions to accommodate several different needs, the consumer may often choose one type of onion--generally, the least expensive, which often is the Michigan onion--and use this onion for all purposes. This buyer also argued that not all consumers prefer the so-called sweeter variety. Rather, they enjoy the slightly more pungent, "real onion" flavoring in their cooking that the yellow-globe onion is more likely to produce. This view that the consumer does not really understand the differences in onions was often echoed by produce managers. One produce manager mentioned that the most frequently posed question by customers was, "which onion do I use?"

IV) CONCLUSION

This study and report on the Michigan onion industry has had two primary purposes: 1.) to collect and assemble information on recent trends and current situations in the industry, 2.) to gather and communicate opinions, viewpoints and preceptions of industry participants on issues confronting the industry.

To the extent that the report has accomplished the first purpose, each member of the industry has a common base of background information which can be used to help clarify the past and present; and also to better anticipate the future. It is hoped that this information will aid individuals, groups and the industry as a whole to develop plans for a stronger industry in the future.

The second purpose of the report was to summarize the great diversity of opinions and perceptions held by participants in the Michigan onion industry on several important issues--issues which were raised by members of the industry themselves. Varied as they are, these opinions and perceptions in all likelihood do not include the total breadth of views existing within the industry since a limited number of persons were interviewed. Thus, opinions and perceptions presented probably understate the diversity of thinking within the industry.

The spectrum of viewpoints which exists within the industry can be an asset as well as a liability. In terms of searching for improvements to strengthen the industry, new ideas and the willingness to explore them are crucial. Yet, when industry-wide action is called for, movement toward a concensus of thinking is clearly needed. A stronger Michigan onion industry in the near future will require both a search of new ideas--improved ways to do business--and the generation of industry-wide support for necessary change.

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