

MSU Extension Publication Archive

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

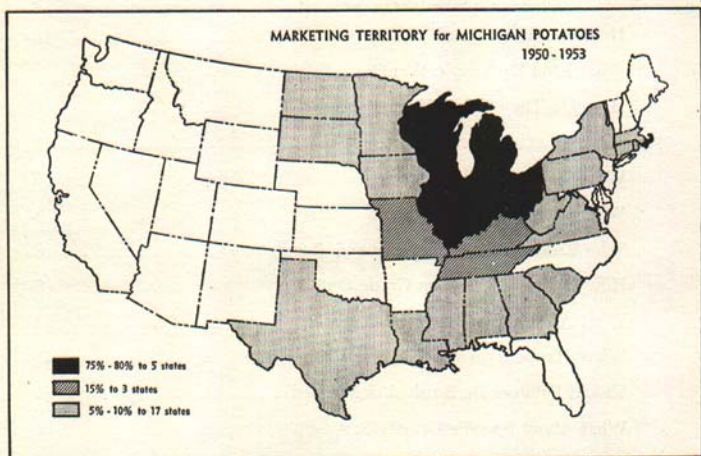
Marketing Michigan Potatoes
Michigan State University Extension Service
G. N. Motts, Agricultural Economics
Issued September 1954
24 pages

The PDF file was provided courtesy of the Michigan State University Library

Scroll down to view the publication.

Marketing

Michigan Potatoes



By G. N. MOTTS

MICHIGAN STATE COLLEGE
COOPERATIVE EXTENSION SERVICE

EAST LANSING

CONTENTS

	PAGE
Summary	3
Potato Growing in Michigan.....	4
What's Happened to Acreage and Production?.....	4
Where Are They Grown?.....	6
What Are the Leading Varieties?.....	6
Market Demand for Potatoes.....	6
How Are They Used?.....	6
What Kind Do People Want?.....	7
How Do They Want Them Packed?.....	8
Grading	8
Why Do We Grade?.....	8
What's the Law on Grading?.....	8
Who Enforces Grading Laws and Regulations?.....	9
How Did the 1951 Crop Grade Out?.....	9
What Are the Serious Grade Defects?.....	11
What Happens to the "Pick-outs"?.....	11
Should Potatoes Be Brushed or Washed?.....	11
What About Specific Gravity Sorting?.....	12
Marketing Needs Planning	13
When Does It Pay to Store?.....	13
Where Are They Stored?.....	14
Who Buys Them From the Growers?.....	14
How Fast is the Crop Marketed?.....	16
Where Are They Marketed?.....	18
Who Gets the Consumer's Dollar?.....	19
Recommendations	22

Marketing Michigan Potatoes

By G. N. MOTTS¹

SUMMARY

Michigan potato growers have a distinct marketing advantage over growers in the leading potato producing states, due to the shorter distances to their principal Michigan markets. In order to compete more successfully in these markets, Michigan growers must further reduce their costs per bushel through higher yields, offer a more uniform quality, and adopt more efficient marketing practices.

Homemakers prefer clean, medium-sized potatoes which are free from grade defects and cook white in color, are mealy in texture, and of uniform quality through the marketing season. A supply of such potatoes requires a wise selection of varieties; good cultural practices; careful harvesting; proper storage; accurate grading; attention to market preferences, in regard to containers and pack; and a well-considered marketing plan on the part of individual growers and handlers.

Early selling has generally been wise in years when the late potato crop was large. A rather steady rate of sales through the season has been a safe policy with medium-sized crops. Late selling has usually been profitable in small crop years. In recent years 10 to 11 percent of the Michigan potato crops have been sold monthly from August through March, except for an average of 16 percent in September. Sales in July, April and May are comparatively small.

Michigan growers sell close to one-third of their potatoes direct to country shippers, another third to wholesalers and jobbers, and the balance largely to merchant truckers and retailers.

Since the 1949-50 season from 75 to 80 percent of Michigan potatoes have been marketed in Michigan and the four adjacent states. Another 15 percent have been shipped to cities in Missouri, Kentucky, and Tennessee. The remaining 5 to 10 percent have been sold in 17 other states from the Atlantic Coast to the Great Plains.

During the 1953-54 season Michigan growers received about one-third of the consumer's dollar spent for Michigan potatoes. Nearly one-fourth of the retail price was represented by the shipper's costs

¹Extension Specialist in Agricultural Economics. The writer wishes to acknowledge the contribution of A. D. Bond to this bulletin. While a graduate assistant at Michigan State College, he obtained the information regarding the potato marketing practices used by 250 representative growers during the 1951-52 crop season. Several staff members in the Departments of Agricultural Economics and Farm Crops have also contributed to the publication through their review of the manuscript.

and margin. Transportation and the retailer's costs and margin each represented close to 20 cents of the dollar, while wholesale receivers shared the remaining 7 cents. The grower's share is substantially greater in years when retail potato prices are relatively high than in years when they are low in price, because the marketing costs are then a smaller percentage of the retail price.

POTATO GROWING IN MICHIGAN

What's happened to acreage and production? Potatoes are one of the major crops in Michigan—the average farm value of the 1949-53 crops was \$18.5 million. Potato acreage has been declining for the past 15 years in both Michigan and the United States, as shown in Fig. 1. During this period, average yields per acre have increased more rapidly in the country at large than in Michigan, so that the

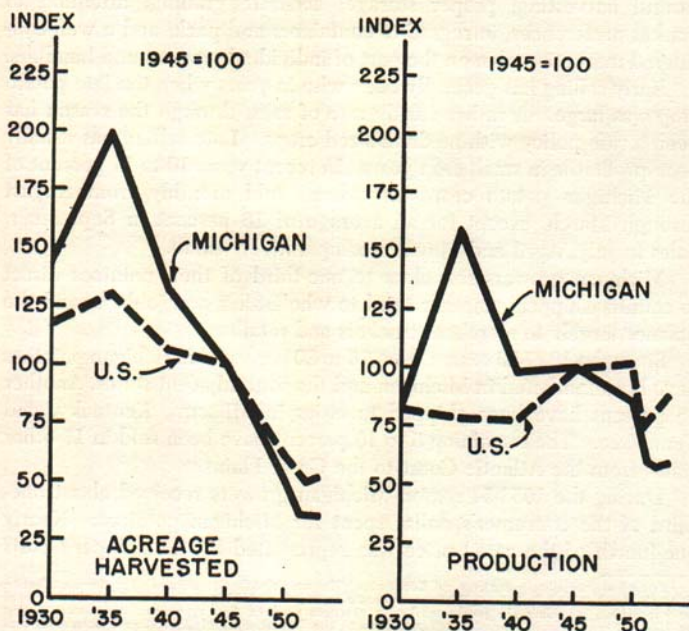


Fig. 1. Trend of potato acreage and production in United States and Michigan, 1930-1953.

national crop has kept pace with domestic needs. In Michigan, however, the larger yields have not offset the sharp decline in potato acreage which resulted from shifts to livestock or other crop enterprises. The 1942-51 average yield in Michigan was 132 bushels per acre—compared with 364 in Maine, 338 in California, 310 in Washington, and so on.

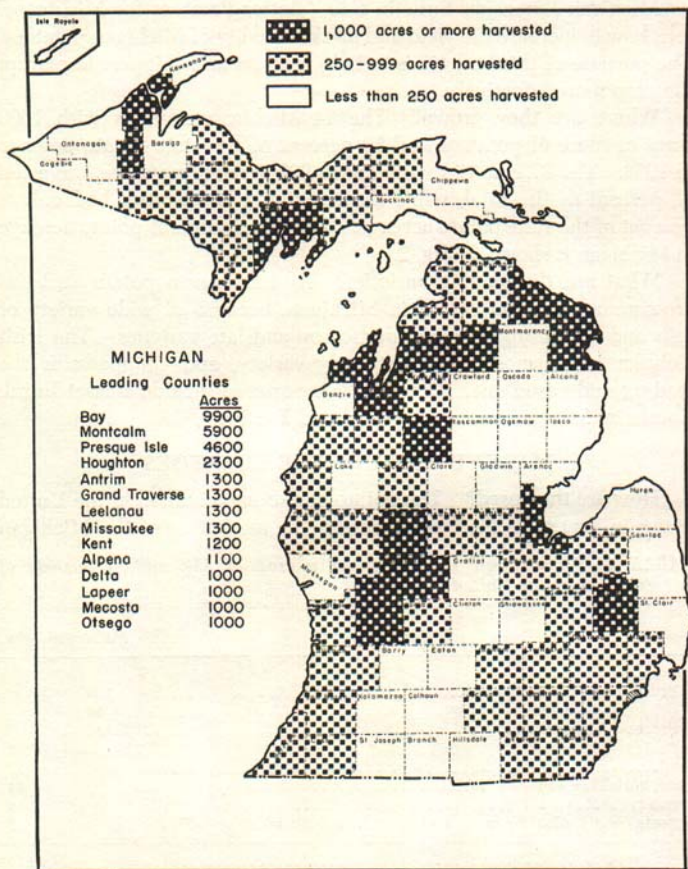


Fig. 2. Principal potato producing counties in Michigan, 1953.

The greatest single marketing advantage that Michigan growers now have and will always retain over the growers in Maine, California, and Washington is the much shorter distance to their principal markets. Successful competition with the leading potato producing states also depends upon: (1) higher acre yields to lower the cost per bushel, (2) a larger percentage of uniformly high quality potatoes, and (3) more efficient marketing practices.

Michigan Extension Bulletin E49, "Better Potatoes for Michigan," tells how to increase the yield and market quality of Michigan potatoes. The purpose of this bulletin is to help growers and shippers to market the crop more effectively.

Where are they grown? The 14 Michigan counties with 1000 acres or more of potatoes had 59 percent of the state potato acreage in 1953. The 37 counties with 250 to 999 acres of potatoes harvested 33 percent of the total, while the remaining 32 counties had only 8 percent of the state potato acreage. The distribution of potato acreage in Michigan is shown in Fig. 2.

What are the leading varieties? At least seven potato varieties are commercially important in Michigan, because of wide variety of soils and the desire for early, midseason and late varieties. The Irish Cobbler is the most important early variety, and Chippewa is the leading midseason one. Principal late varieties include Russet Rural, Katahdin, Sebago, Green Mountain and Pontiac.

MARKET DEMAND FOR POTATOES

How are they used? The potato marketing situation in the United States in general is the basic factor in the marketing of the Michigan

TABLE 1—Approximate disposition of a crop of 350 million bushels of potatoes in the United States*

Use	Million bushels
Food:	
Fresh form—household use.....	183
—institutional use.....	65
Processed forms.....	35
	283
Seed.....	32
Feed, shrinkage and other loss.....	24
Starch.....	6
Exports (partly offset by imports of 3.5 million bushels).....	5
Total.....	350

*Based upon data in Agr. Inf. Bul. No. 114, USDA, 1953, and other USDA sources.

crop, so it may be well to consider the disposition of the national supply. At the present time about 350 million bushels of potatoes will meet the annual domestic requirements, as shown in Table 1.

Domestic food requirements take close to 24 million bushels per month, which is about 2.5 times the Michigan potato crop in 1952 or 1953. Practically all of the decline in potato consumption per person in the past 50 years has been in home use.

What kind do people want? A recent nationwide survey by the U. S. Department of Agriculture showed that homemakers rate quality first when buying potatoes. Size was the second factor in importance and price was third, particularly as incomes increased. Nearly four times as many consumers buy fewer potatoes when the *quality declines* as when the *prices rise*. General appearance is important because most shoppers are more concerned with the appearance than the indicated grade.

Homemakers want potatoes with the following characteristics:

Clean—well brushed or washed.

Smooth skin—not wilted or shriveled.

Few eyes—easier to peel, less waste.

No damage—from handling, disease or insects.

Medium size—easy to judge portions, easy to handle, suited to variety of uses.

Light color—white skin preferred in most markets.

Cooking quality—cook up soft, mealy, evenly throughout, without falling apart.

Potatoes ranging from $2\frac{1}{4}$ to $3\frac{1}{4}$ inches in diameter meet the size preferences of 90 percent of Chicago consumers, according to another recent study. Packages with 60 percent or more of that size meet the standards for Size A potatoes. In some markets, uniformly small, medium or large potatoes may be preferred to a package containing different sizes, but not generally at a premium price.

Michigan potatoes are often criticized for wide variations in cooking quality. These variations result from the number of varieties grown, soil types, and different climatic conditions in the state. Potato cooking qualities are closely associated with the percentage of dry matter—chiefly starch—and thus with their specific gravity. The specific gravity of potatoes—their weight per cubic inch compared with the weight of an equal volume of water—commonly ranges from 1.060 to 1.085.

Potatoes with a high specific gravity are particularly suited to

baking or the manufacture of potato chips, those with a medium rating for boiling, and those with a low specific gravity for frying. Methods of mechanically sorting potatoes according to specific gravity by means of brine solutions are being developed and tested. The results of marketing research on the sale of such potatoes have been encouraging, as noted later (pages 12 and 13).

How do they want them packed? More and more potatoes are being sold in consumer packages of 5 to 15 pounds. But a recent study by the U. S. Department of Agriculture showed that a majority of consumers still preferred to buy potatoes from a bulk display, because "you can pick out the ones you want." Three out of five Chicago customers bought only 5 pounds of potatoes at a time—another reason for large sales from bulk displays. Those who preferred packaged potatoes found them easier and quicker to buy, and had gained confidence in the pack from past experience.

GRADING

Why do we grade? The basic importance of grading can be emphasized by simply listing the advantages of grading.

1. Grading helps to eliminate produce that is not worth the cost of storage, transportation and marketing.
2. Grading makes selling easier by—
 - a. Permitting sales to distant buyers by description;
 - b. Reducing misunderstandings and rejections of shipments on arrival;
 - c. Reducing the time needed to complete a sale to a distant buyer.
3. Grading makes more precise price reports possible.
4. Grading permits pooled sales in cooperative marketing.
5. Grading permits produce in bonded warehouses to be used as security for a loan.
6. Grading encourages better production through prices based on quality.

What's the law on grading? Potatoes are one of several commodities that must be sold by grade under Michigan law. There is only one exception: on sales by growers direct to consumers. Copies of the full text of the Michigan Potato Marketing Law, and the United States grade standards for potatoes, can be obtained from the Bureau of Marketing and Enforcement, Michigan Department of Agriculture, Lansing 13, Michigan.

Growers and shippers must be competent to grade potatoes accurately and also have a grader's license. Any person engaged in the business of purchasing potatoes with the intent of transporting or offering them for sale must have a dealer's license.

Containers of potatoes prepared for market must be legibly branded or stenciled with the name and address of whoever is responsible for the grading and packing, the name of the grade, and true net contents. Bulk shipments must be accompanied by two cards bearing the name and address of the consignor, the name of the grade, the name of the loading station, date of loading, and the name and address of the consignee, if known.

Who enforces grading laws and regulations? The Bureau of Marketing and Enforcement of the Michigan Department of Agriculture enforces the state laws and regulations on potato grading, and administers the Federal-State Fresh Fruit and Vegetable Inspection Service in Michigan. This service is available to producers, shippers, or buyers on a fee basis. Federal-State grade certificates establish the quality, condition, and grade of the potatoes on a sample basis at the time of inspection and are prima facie evidence of the truth of the statements contained therein in all United States courts.

Shipping point inspection is a form of marketing insurance. An inspection certificate protects the shipper against unwarranted rejection by buyers. The Lansing office of the Bureau, county agricultural agents, and local shippers can supply growers with the name and address of the inspector who serves a particular district.

How did the 1951 crop grade out? Interviews with 250 representative potato growers in 15 Michigan counties revealed that 93 percent of them sold all their 1951 crop of potatoes by grade, 4 percent sold some graded potatoes, and 3 percent sold to buyers who graded the potatoes on the grower's premises. These growers graded 70 percent of their 1951 crop; buyers graded the rest of the potatoes. The *U. S. No. 1* grade accounted for 93 percent of the 954,744 bushels of potatoes sold by these growers, as shown in Table 2.

These 250 growers sold 71 percent of their 1951 crop in 50- or 100-pound sacks or bushels, and 29 percent in consumer bags. These Michigan growers supplied the bags for 44 percent of their sales, while buyers furnished containers for 56 percent of the potatoes.

Twenty-nine percent of the growers interviewed reported that the minimum size of the *U. S. No. 1* potatoes they sold exceeded the 1 $\frac{3}{8}$ -inch minimum diameter specified for that grade. Such packs generally

TABLE 2—Grade and pack of potatoes sold by 250 Michigan growers during the 1951-52 season

Grade	Number of bushels sold as indicated					
	100 lb. sacks	50 lb. sacks	Bushels	15 lb. bags	10 lb. bags	Total
U. S. 1.....	391,160	177,327	42,100	262,635	11,944	885,166
U. S. Com.....	3,571	2,800	210	282	.....	6,863
U. S. 2.....	9,583	7,414	849	900	.....	18,746
*(a).....	.....	.....	43,969	.....	.....	43,969

Grade	Percent of sales					
	100 lb. sacks	50 lb. sacks	Bushels	15 lb. bags	10 lb. bags	Total
U. S. 1.....	42	18	4	28	1	93
U. S. Com.....	†	†	†	†	..	1
U. S. 2.....	1	1	†	†	..	2
*(a).....	..	..	4	..	..	4
All.....	43	19	9	28	1	100

*Sold to buyers who graded on growers' premises.

†Less than 1 percent.

had a 2-inch minimum. Only 4 percent of the growers used a larger minimum than 1½ inches in diameter for the *U. S. Commercial* grade, but 44 percent of those who sold some *U. S. No. 2* potatoes used a 2- or 2¼-inch minimum size.

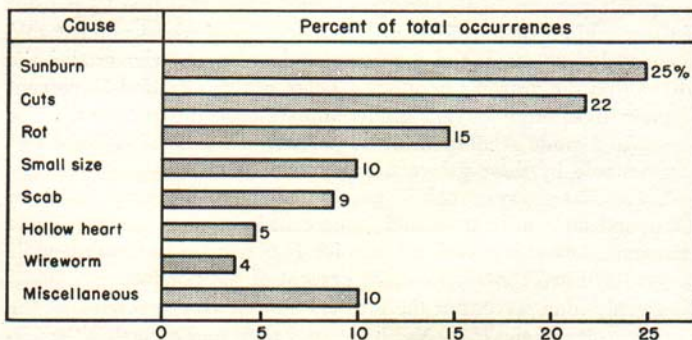


Fig. 3. Grade defects found in the 1951 Michigan crop.

What are the serious grade defects? Sunburn, cuts, and rot caused 62 percent of the total "pick-outs" in grading the 1951 Michigan crop, according to the 250 growers interviewed during the 1951-52 season. The relative importance of the major defects reported during that season are shown in Fig. 3. Michigan Extension Bulletin E49 tells how to prevent or greatly reduce these defects, and further information on reducing mechanical injuries is included in U.S.D.A. Agricultural Information Bulletin No. 114.

What happens to the "pick-outs"? Since the "pick-outs" are of little value to growers aside from home use, it is obviously desirable to have as few as possible consistent with economic commercial production practices. The poor market quality of the "pick-outs" in general is suggested by the fact that only 13 percent of them were sold as a lower grade than *U. S. No. 1*, as shown in Fig. 4.

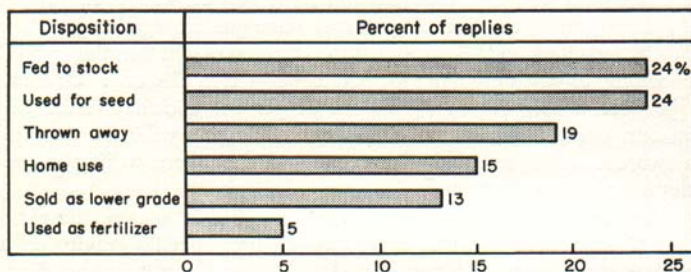


Fig. 4. Disposition of "pick-outs" in 1951 Michigan crop.

The use of "pick-outs" for seed is not a good production practice. If the "pick-outs" from the *U. S. No. 1* grade cannot be sold at a lower grade, they can be fed to stock or used as fertilizer rather than simply "thrown away".

Should potatoes be brushed or washed? The growing consumer preference for clean potatoes means that brushing is desirable whenever some dirt adheres to the tubers. Brushing, however, cannot be relied upon to clean all lots of potatoes in a locality during a given season.

Many arguments have arisen regarding the benefits of washing potatoes. When potatoes are washed, grade defects are more readily visible, and more mechanical damage often results than from dry packing. The grading crews are likely to pick out more of the tubers

that barely meet the grade specifications then when sorting unwashed potatoes. Whether drying is necessary after washing depends largely on climatic conditions, the package used, and the type of shipping service.

Those considering the installation of washing equipment should check with experiment stations and machinery manufacturers to be sure they are getting the benefit of the latest improvements. Terminal receivers and jobbers handling Michigan potatoes have generally paid a sufficient premium to cover the cost of brushing potatoes, but have rarely offered enough extra for washed potatoes from this state to encourage the practice.

What about specific-gravity sorting? Surveys of market acceptance of potatoes sorted according to their specific gravity or cooking qualities, have been made in at least two states.

Two pilot studies in Colorado indicated that consumers can detect the differences in mealiness of potatoes when graded according to their specific gravities, and 75 percent of the consumers said that they would be willing to pay a premium for potatoes sorted in this way. Of those who were willing to pay a premium, 49 percent said they would pay an extra one cent per pound, 37 percent indicated a willingness to pay a two cent premium, and 13 percent said they were willing to pay three cents more per pound.

In a New York study made during the 1952-53 season, the extra cost of separating potatoes according to their specific gravity on a commercial basis was estimated at slightly over 19 cents per hundred-weight.

TABLE 3—Effect of price premiums on sales of "baking" and "boiling" potatoes at six large supermarkets in Syracuse, N. Y.; Dec. 1, 1952-Jan. 10, 1953*

Baking (Specific gravity over 1.080)		Boiling (Specific gravity below 1.080)	
Premium per 15-pound bag	Percent of total potato sales	Premium per 15-pound bag	Percent of total potato sales
None.....	16	None.....	19
5 cents.....	17	5 cents.....	16
10 cents.....	14	10 cents.....	14
10 cents.....	12	5 cents.....	13
5 cents.....	14	10 cents.....	15

*"The Effect on Retail Sales of Sorting Potatoes by Specific Gravity" W. P. Rasmussen and J. R. Johnson. N. Y. (Cornell) Agr. Exp. Sta. Mimeo A. E. 925 Sept. 1953.

In this same New York study 15-pound bags of "baking" potatoes (specific gravity over 1.080) and "boiling" potatoes (specific gravity less than 1.080) were offered for sale in six retail stores along with unseparated check lots. Table 3 shows the results of selling these "baking" and "boiling" potatoes at no extra price and at different price premiums.

Apparently premiums of 5 to 10 cents per 15-pound bag could be charged under the marketing conditions of the 1952-53 season for separated potatoes, and still maintain the sales of such potatoes at 25 to 33 percent of total potato sales in these stores. In this experiment, bags of washed-but-unseparated potatoes from the same source as the separated stock amounted to 20 percent of total potato sales.

MARKETING NEEDS PLANNING

When does it pay to store? Some growers may have to sell much of their crop at harvest time for financial reasons, or because of limited storage facilities. Some distribute their sales rather evenly through the season, and thus secure close to the average season prices. Others make or accept a forecast of the coming seasonal price trend based on supply-and-demand situations, and plan their sales accordingly.

Signs of the probable trend for the coming season appear as early as the March issue of *Crop Production*, a free monthly publication of the U. S. Department of Agriculture. Succeeding issues include information on acreage and anticipated yields and production. The monthly "Crop Report" and "Price Report" of the Michigan Cooperative Crop Reporting Services, Box 1020, Lansing 4, Michigan, present more detailed information for Michigan potatoes than can be included in *Crop Production*.

Early selling in the years of large, late-potato crops has generally been more satisfactory than other plans. A rather steady rate of sales through the season has been a safe policy with medium-sized crops. Late selling has usually been profitable in small, late-potato crop years.

The 1942-51 average production of potatoes in the 29 late-crop states was 320 million bushels. Late-potato crops below 290 million bushels can be considered "small" for price trend forecasting, crops from 291 to 355 as "medium", and crops over 355 million bushels as "large".

The usual upward trend in market prices during the potato marketing season, and the availability of storage facilities, were the two reasons why close to half of the farmers interviewed stored their 1951

crop. Only the more frequently mentioned reasons are listed separately in Table 4.

TABLE 4—Reasons given by 250 growers for storing or not storing their 1951 crop

Reasons	Percent of replies
For storing:	
Prices usually rise as the season continues...	42
Storage facility available.....	7
Lack time to handle all of crop at harvest time.	7
Stored for seed only.....	4
Store every year.....	4
Prefer to make sales uniformly through season.	2
Store for own use.....	2
For not storing:	
No storage facility.....	3
Miscellaneous, for or against storing.....	29

When deciding on whether or not to store potatoes, these Michigan growers considered several sources of information, as shown in Table 5.

TABLE 5—Sources of information used in deciding whether or not to store potatoes in 1951

Sources	Percent of replies
Buyers.....	15
Past experience.....	14
Government reports.....	12
Radio.....	7
Farm magazines.....	5
County agricultural agent.....	4
Miscellaneous.....	43

Where are they stored? These 250 Michigan growers stored 80 percent of their 1951 crop in their own buildings and 20 percent in rented storage. As would be expected, the small-scale producers used their home cellars primarily. Larger growers used specialized storages and barns.

Who buys them from the growers? The majority of Michigan potato growers can select their sales outlets from several kinds of buyers:

1. Sales at the farm to traveling buyers, truckers, and consumers.

2. *Sales at farmers' markets* to truckers, grocers, hucksters, and consumers.
3. *Sales at shipping points* to or through local shippers, cooperative associations, brokers, and processors.
4. *Consignments* to commission firms.
5. *Sales in terminal markets* to wholesalers and jobbers, chain stores, and processors.

A careful consideration of the following factors will usually indicate the more satisfactory sales outlets in particular instances:

1. Volume of production.
2. Number of different kinds of fruits or vegetables grown.
3. Length of marketing season.
4. Usual quality or grade of crop produced.
5. Location of the farm in relation to markets.
6. Kind and amount of available labor and the cost of labor.
7. Previously established trade connections.
8. Personal abilities and preferences in marketing.
9. Available facilities for storage, grading, packing and other marketing operations.
10. Financial resources.

Of 238 Michigan growers who reported the number of different buyers to whom they sold their 1951 crops, 88 percent sold to fewer than four buyers, and less than one percent sold to as many as nine (Table 6).

Since the production and marketing situations of Michigan potato growers vary widely, it is not surprising to find that there was no

TABLE 6—Percentage of growers who sold potatoes to one or more different buyers in 1951

Number of buyers to whom sales were made	Percent of growers selling to each number of buyers
Sales to only 1 buyer.....	44
Sales to 2 buyers.....	26
3.....	18
4.....	5
5.....	3
6.....	3
7.....	1
8.....	0
9.....	*

*Less than 1 percent.

predominant sales outlet used by those interviewed in the 1952 survey. Slightly less than a third of the potatoes sold by 155 growers who supplied such information were handled by the leading type of sales outlet used (Table 7).

TABLE 7—Relative importance of sales outlets used by 155 Michigan growers in 1951-52

Class of buyers	Percent of growers who sold some or all to each class	Percent of potatoes sold to each class
Wholesalers and jobbers.	29	31
Country shippers.....	24	30
Retail stores.....	22	16
Merchant truckers.....	22	20
Other farmers.....	2	2
Brokers.....	1	1

Buyers took delivery of the potatoes at the farm for 62 percent of the 1951-52 sales reported by the growers interviewed, and at the buyer's place of business in 38 percent of the sales.

How fast is the crop marketed? Although some Michigan potatoes are marketed in July, the active marketing season extends from August through March, as shown in Figure 5.

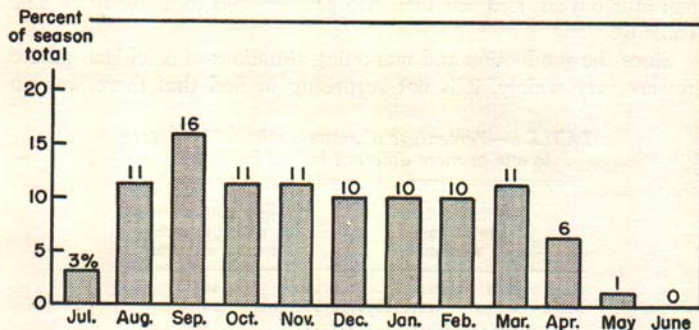


Fig. 5. Market movement of Michigan potatoes: 5-year average, 1948-49 to 1952-53.

Less than one percent of the 250 Michigan potato growers interviewed in 1952 began to market their 1951 crop in July 1951. And 3 percent of these growers did not make their first sales until May

1952. Only 7 percent of the growers completed their potato sales by October 1, and all but 8 percent finished their marketing by May 1. The left-hand side of Fig. 6 shows the relative number of growers who made their first potato sales in each of the months of the 1951-52 crop season. The right-hand side of Fig. 6 shows the percentage of growers who finished their potato sales in the various months.

Few of these 250 Michigan potato growers marketed potatoes over more than a six-month period during the 1951-52 season, as shown in Figure 7. Fifty-five percent of the group sold all their potatoes within two months, and 70 percent within three months. Close to one-fourth of the growers completed their potato sales in 4 to 6 months.

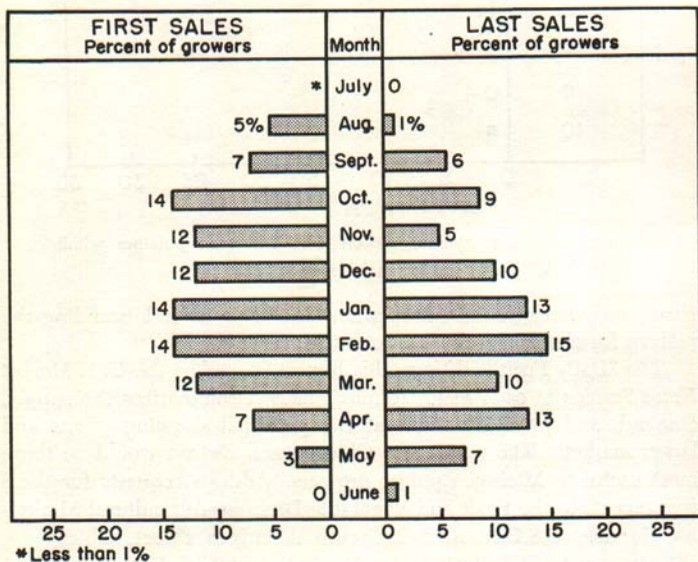


Fig. 6. Percentage of growers who made their first and last sales in various months, 1951-52 season.

Once the marketing season has begun, it is well to keep informed on market developments. This means frequent contact with shippers, wholesalers, chain stores, jobbers or other established trade sources. Trade journals and the daily press supply additional market news,

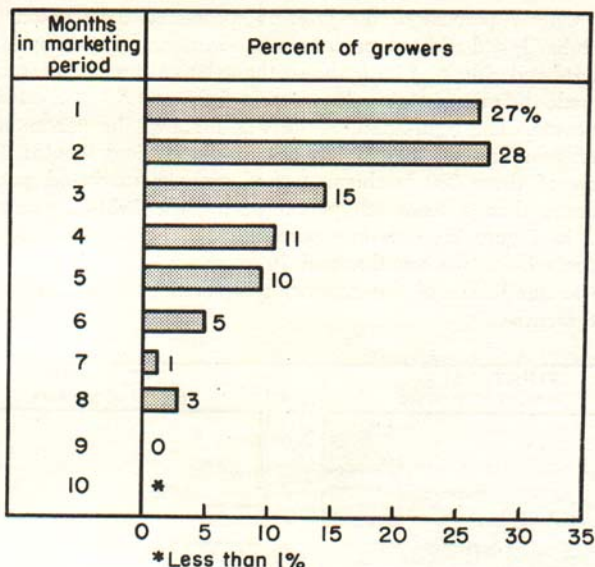


Fig. 7. Percentage of growers who sold their potatoes within periods of one or more months, 1951-52 season.

particularly background information that helps in understanding the reasons for changes in the market situation.

The "Daily Fruit and Vegetable Report" issued by the *U. S. Market News Service* at each major terminal market summarizes the supply, demand, and price situations at the principal shipping points and larger markets. The reports for Chicago and Detroit would be those most useful to Michigan potato growers. Address requests for these free reports to the Fruit and Vegetable Division, Agricultural Marketing Service, U.S.D.A. at 1421 South Aberdeen Street, Chicago 8, Illinois — or to 21 Detroit Union Produce Terminal, Detroit 9, Michigan.

Where are they marketed? Since the 1949-50 season Michigan potatoes have been sold largely within Michigan and the four adjacent states, as shown on the cover chart.

The boundaries of the market territory are largely determined by three factors: the supply of Michigan potatoes, in relation to popula-

tion within the region; the location of competing production areas; and transportation costs.

Twenty percent of the U. S. population lives in Michigan and the four adjacent states, and another 7 percent lives in Missouri, Kentucky and Tennessee. The large production in Maine, New York and Pennsylvania results in very small shipments of Michigan potatoes beyond Buffalo, Pittsburgh and Atlanta. Heavy production in Colorado, Idaho and the three Pacific Coast states, plus western freight-rate structures, limits most western sales close to the Missouri-Mississippi River line and to northern and eastern Texas.

The cooking and processing qualities of potatoes grown in different producing areas are also factors in market distribution. For example, Michigan is an important source of chipping potatoes and Idaho for bakers.

Fifty-five percent of the buyers who bought potatoes from the 250 Michigan growers interviewed during the 1951-52 season were located within 50 miles of the farms. Those buyers bought practically one-third of the potatoes marketed by these producers. At the other extreme were 16 percent of the buyers located more than 250 miles from the farms, who also handled a third of the potatoes sold by this group of growers, as shown in Fig. 8.

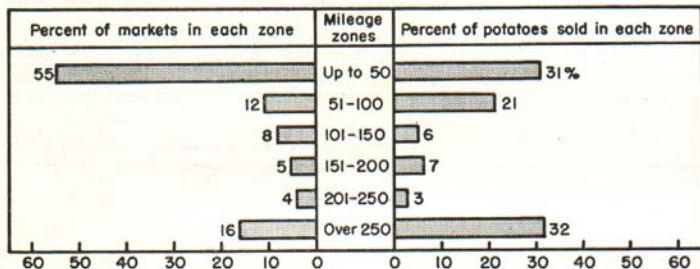


Fig. 8. Market distribution of potatoes, from 328 Michigan farms, by mileage zones, 1951-52.

Generally speaking, the larger scale growers are the ones who sell more often to distant buyers. Sales to the buyers over 250 miles from the farms averaged 2713 bushels during the season, compared with 485 bushels for the buyers within 50 miles of the farms.

Who gets the consumer's dollar? One of the factors that affect potato marketing costs is the sales channel through which the potatoes

pass from the grower to the consumer. Michigan potatoes may move through a wide variety of sales channels, as shown in Fig. 9.

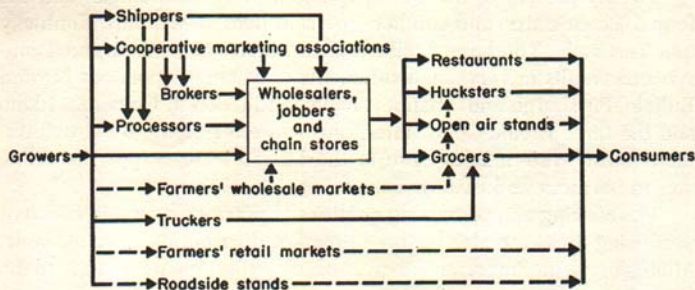


Fig. 9. Sales channels—from grower to consumer.

The sales channels indicated by solid lines in Figure 9 account for the bulk of the Michigan potato crop. The broken lines show sales channels that may be very important to individual growers, but only a small part of the state crop is marketed through those channels.

One of the principal sales channels for Michigan potatoes is from the grower to a shipper or cooperative association, and from there to a jobber who sells to retail grocers. The marketing margins and trans-

TABLE 8—A representative example of Michigan potato marketing costs, 1953-54 season

Costs and margins	Amounts per hundredweight	Cents of the consumer's dollar
To growers for bulk stock*	\$.80	32
Shipper's margin	.57	23
FOB price in 50 pound bags†	\$1.37	
Transportation‡	.48	18
Cost to jobber	\$1.85	
Jobber's margin§	.18	7
Cost to retail grocer	\$2.03	
Retailer's margin	.42	20
Retail price¶	\$2.45	100

*Average Michigan 1953-54 cash price to growers.

†Average Michigan 1953-54 quotations for unwashed potatoes of all grades.

‡Average truck rates from Cadillac to Detroit, Toledo, Cleveland, Columbus, Cincinnati and Indianapolis.

§Representative commission charge or jobber's margin.

¶Based on 32 cents per peck, a representative retail price for 1953-54 in Michigan cities.

portation costs shown in Table 8 are quite representative for a state where there are considerable differences in distance from farm to market and in the sales channels used. They are based on data for the 1953-54 crop season as noted below the table.

Individual growers cannot reduce their marketing costs significantly unless they have a sufficient volume of business, and the skill to operate more economically than the marketing agencies. In order to gain the necessary volume of business, growers frequently form a cooperative marketing association. There must be a real need for such an organization in a community, however, and the cooperative must be more efficient than its competitors to be fully successful.

Present and future marketing research and experimentation by members of the trade will probably lead to greater efficiency in the marketing operation, and thus to lower money costs. Such progress, however, is likely to take longer than the majority of growers or consumers realize.

The size of the money savings through improved marketing methods is also likely to be disappointing to many growers and to the general public, because such a large part of the total marketing cost represents items that cannot be changed quickly or drastically. These include wages, interest on borrowed capital, depreciation, taxes, electric power, transportation rates and similar costs.

The largest single "spread" in fresh fruit and vegetable marketing is normally the retailer's margin. Because of the unusually low potato prices during the 1953-54 season and because the usual retail margin on potatoes is almost always below the average for fresh produce in general, the shipper's gross margin exceeded the retailer's in the example in Table 8.

A frequently cited goal for an efficiently operated produce department of a large retail grocery, is an average gross margin of 25 cents of the customer's dollar spent for all fresh fruits and vegetables as a group. The average margin in the produce department for all retail grocery stores in the United States is close to 30 cents of the consumer's dollar. In stores that handle fresh produce on a gross margin averaging 25 percent of sales, the various parts of the gross margin are usually close to the figures in Table 9.

Similar considerations of the marketing costs at the shipping point and at the wholesale level lead to the following conclusions. Further reductions in marketing costs are likely to be in terms of a few cents of the consumer's dollar here and there in the marketing

TABLE 9—*A representative pattern of costs and net profit for an efficient retail produce department*

Cost elements	Cents of the consumer's dollar
Wages, rent, utilities, maintenance and repair, taxes, advertising, etc.	16
Spoilage	3
Mark-down losses, overage,* pilferage	3
Net profit	3
	25
Total margin, as percent of sales	25

*Overage is the shrink that results in weighing out retail units from wholesale containers. A 50 pound package will rarely yield ten 5 pound sales units.

process. And such savings will occur quite gradually, because they depend upon the development and general adoption of new operating methods and equipment, and upon reductions in rather rigid utility and transportation rates and in taxes.

RECOMMENDATIONS

1. Grow varieties of potatoes that are well adapted to your farm and are preferred by consumers. The Irish Cobbler is the most important early variety in Michigan; the Chippewa is the leading midseason variety; and the principal late varieties include Russet Rural, Katahdin, Sebago, Green Mountain and Pontiac.

2. Use cultural practices that result in high acreage yields of good quality.

3. Harvest the crop with the least possible mechanical injury.

4. Store dry, sound potatoes in a dark, well insulated storage at a temperature of 40°F. and relative humidity of 85 to 90 percent. Handle carefully to avoid bruising. Provide a free circulation of air during the first few weeks of storage to cool the potatoes and remove excess moisture.

5. Grade and pack carefully to meet the preferences of your best market outlets.

6. Reconsider your marketing program each year, emphasizing the following questions:

- a. Shall I sell at harvest time or later from storage?
- b. Will the sales outlets I used last year be the best ones this year?
- c. Could I get any higher net returns from sales in other cities than I could from sales in the markets I used last year?

7. Check your marketing plan with such sources of further information as these:
 - a. Potato buyers, wholesalers or other members of the trade.
 - b. Crop and market reports issued by the Michigan Cooperative Crop Reporting Service and by the United States Department of Agriculture.
 - c. Trade journals in the fruit and vegetable marketing field, general farm magazines and the daily press.
 - d. County agricultural agents.

