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UNITED STATES DEPARTMENT OF AGRICULTURE

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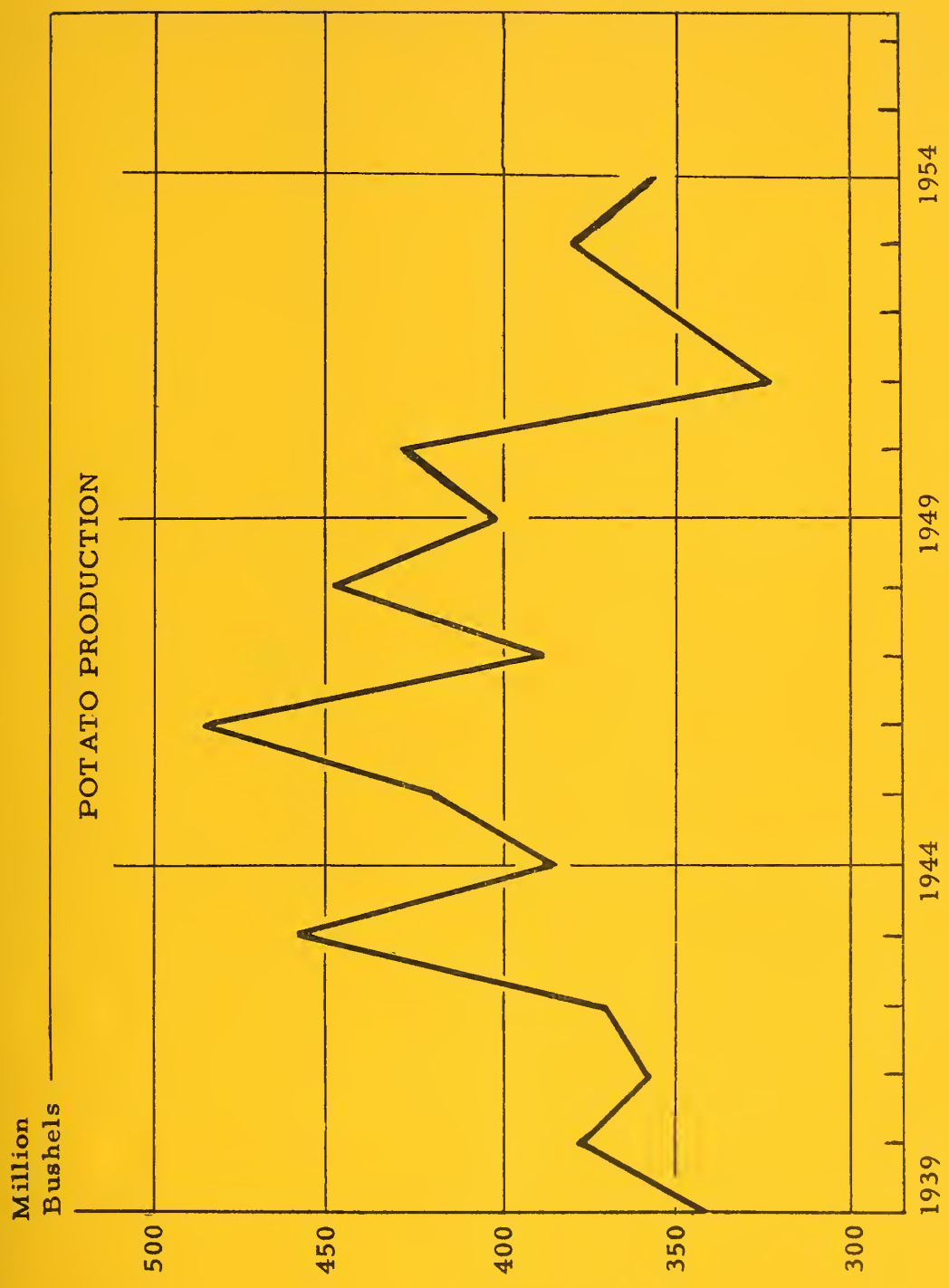
PROGRAM

33rd ANNUAL AGRICULTURAL OUTLOOK CONFERENCE

Washington, D. C.

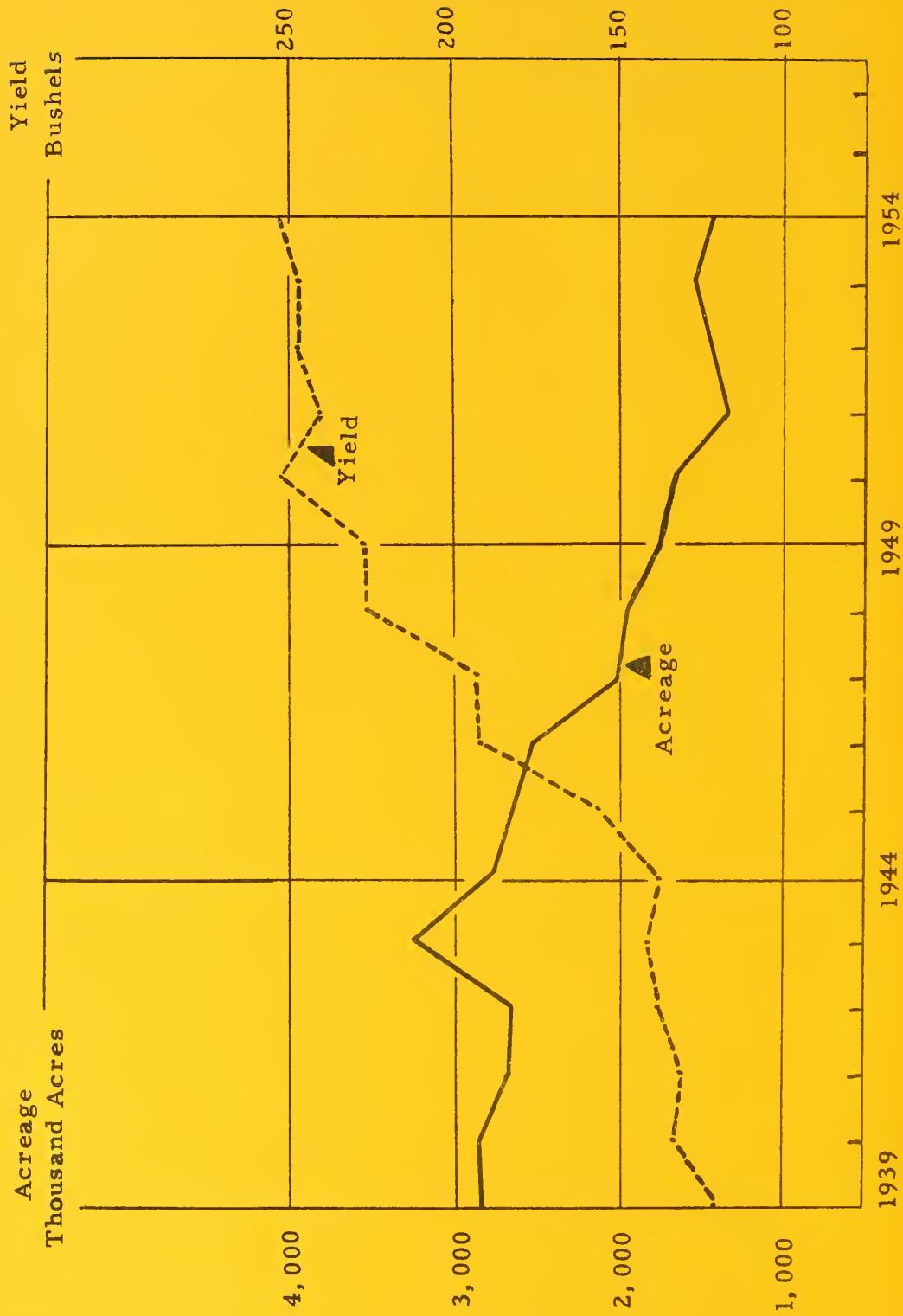
Nov. Dec.
~~December 28-January 1~~, 1955

PRODUCTION CONSIDERATIONS
IN THE 1956 POTATO OUTLOOK



Prepared for the 33rd National Outlook Conference,
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Statistics Branch, Agricultural Estimates Division,
Agricultural Marketing Service, U. S. D. A.

POTATOES - ACREAGE HARVESTED AND YIELD PER HARVESTED ACRE



PRODUCTION CONSIDERATIONS

IN THE 1956 POTATO OUTLOOK

Background: Potato production during the past 17 years has been characterized by a drastic reduction in acreage, a phenomenal increase in yield per acre, and the maintenance of volume at a high level. Back in 1939, about 2.8 million acres were harvested. The 1955 harvested acreage will be a little less than 1.5 million acres. During the same period, yield per harvested acre rose from about 122 bushels to better than 250 bushels.

At the beginning of the 17-year period, production averaged 361 million bushels (1939-42 ranged from 342 to 377 millions). For the following 8 years, 1943-50, when war-time incentives and price supports were stimulating factors, production reached an all-time record of 487 million bushels and averaged 428 millions. During the 4 years 1951-54, when the crops were grown without the benefit of price supports, production averaged 351 million bushels. The 1955 crop is currently (November 1) estimated at 384 million bushels. The 1955 yield per acre, at 266 bushels, is the highest of record.

The greatest upsurge in yields per acre coincided with the period following World War II, 1946-50, when prices were supported at 60 to 90 percent of parity and growers were required to comply with Government acreage allotments in order to be eligible to receive payments. From 1945 to 1950, harvested acreage was cut from 2,664,000 acres to 1,696,000 (36 percent) but yield per acre rose from 157 bushels to 253 bushels, an increase of 61 percent. This phenomenal increase in yield was brought about by several factors, including the reduction of low-yielding acreage, the concentration of production on specialized potato farms, and improved cultural practices.

A large part of the acreage decrease was brought about by the elimination of much marginal acreage and by many growers who discontinued producing potatoes solely for farm use. Between 1944 and 1949, the number of farms growing potatoes dropped from 2,065,227 to 1,649,906, according to the Census. The Census also showed that 82 percent of the 1949 crop was produced on only 30,789 farms that grew 10 acres or more of potatoes.

The reduction in marginal acreage and noncommercial acreage resulted in a larger part of the crop being grown on the more fertile, higher-yielding soils. This change occurred both within States and between States. Growers in the low-yielding States made more drastic acreage cuts than those in high-yielding States, thereby shifting a larger part of production into the high-yielding States.

Better cultural practices, including the wider use of improved potato varieties and certified seed, contributed significantly to the increase in yields. With the assurance of 60 to 90 percent of parity for potatoes, growers placed the potato rows closer together, planted more seed per row, applied more fertilizer per acre, and sprayed more frequently with more potent insecticides and fungicides. In addition, potatoes were often left in the ground beyond the usual digging date in order to attain maximum size. Beginning with 1951, when price supports were taken off, yield per acre leveled off and remained fairly stable until 1955.

The regional production picture shows some significant trends since 1939. In the 7 intermediate States, the crop declined from 8 percent to 4 percent of the total United States production. In the 13 early States, production increased slightly from 14 percent to about 16 percent of the total crop. In the 29 late States, a slight increase also was registered, production rising from 78 percent to about 80 percent of the United States total. Perhaps of more significance are the regional shifts within the late group of States. A significant decline is shown for the 9 Central States which now produce less than 20 percent of the national crop compared with 28 percent in 1939. Most of these States have relatively low yields per acre. The 9 Eastern States have about held their own at approximately 30 percent of the crop. The 11 Western States have shown a pronounced upward trend and now produce 32 percent of the national crop compared with 23 percent in 1939.

An examination of farm disposition of the potato crop shows additional evidence of the recent trend towards commercialized production. As recently as 1940 only 67 percent of the crop was sold. During the 5 most recent seasons, sales have averaged close to 84 percent of the crop. During the 16-year period 1939-54, the total quantity of potatoes used or lost on farms where grown has declined in both quantity and as a percentage of production. The quantity saved for farm household use declined from about 60 million bushels in 1939 to 18.4 millions in 1954. This decline reflects both the decrease in the number of farms growing potatoes and in the quantity used per farm. The quantity saved for seed to plant on farms where grown also declined drastically from 24.5 million bushels to about 12 millions. This reduction was caused partly by the cut in acreage and partly by the tendency of commercial growers to purchase certified seed for planting. Potatoes that were fed to livestock on farms where grown or that were lost through shrinkage and decay have remained at a fairly constant percentage of production, averaging 7 percent for the 5-year period 1950-54, compared with 8.4 percent for 1939-43.

Aside from the changing trends in farm disposition, important changes also have occurred over the past 15 years in the uses made of potatoes after they leave the growers' hands. As previously pointed out, the level of production is about the same as it was 15 years ago but the quantity sold is larger, averaging about 307 million bushels in 1950-54 compared with 262 millions in 1939-43. The larger

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quantities now being sold are finding their way, to an increasing extent, into new outlets, the largest change occurring in the quantities processed for human food. Back in 1940, only 5.4 million bushels, or 2.1 percent of total sales, were processed for food, according to industry estimates. Most of this processed quantity, 83 percent, went into the manufacture of potato chips. The remainder was used in the processing of hash, stews, soups, and potato flour. By 1954, according to industry figures, the quantity processed for food had increased to 42 million bushels or 14 percent of the quantity sold. Of this amount, 32 million bushels were used for the manufacture of potato chips, 3.6 million for frozen french fries and other forms of prepared frozen foods, 3.0 million for dehydration, and 34 million for other uses, as canning, hash, stews, and soups. In 1940, processors of food purchased 1 bushel out of every 50 sold by growers, whereas in 1954 they purchased 1 bushel out of every 7 leaving growers' hands. Processors are specific-use purchasers, as potatoes used for potato chips and frozen prepared food should be high in solid matter content, limited to a few varieties, conditioned before using in especially equipped storages in the late States, and meet certain interior and culinary requirements of the final products.

Potatoes sold for non-food products such as starch and alcohol amount to a sizable volume each year. Since these uses are usually a diversion of surplus production at salvage prices, the volume sold depends on the price. In the last 15 years the amount used by processors for starch has varied from 3.4 million bushels from the 1942 crop (1.4 percent of quantity sold by growers) to over 21.8 million bushels for the 1950 crop (6.1 percent of potatoes sold). Large quantities of potatoes were used for the manufacturing of alcohol during the war. In recent years, potatoes have not been used for this purpose and distillers are not now equipped to use potatoes.

Another important non-food outlet has been the volume of potatoes sold by farmers for livestock feed. In recent years, while no official estimates are available, probably from 5 to 8 percent of the crop is used in this manner.

Current Supply Considerations: Acreage and marketing guides issued by the Department of Agriculture in advance of the planting season indicated that a production of 339 million bushels in 1955 would be sufficient to meet anticipated market requirements at fair price levels to growers. The 1955 planted acreage exceeded the acreage guides by nearly 9 percent and total production is estimated at 384 million bushels--45 million bushels in excess of the Department's recommended production. Overplanting of acreage guides was pronounced in most of the higher yielding States of the various seasonal groups and in the Red River Valley. In the group of 13 early States, Florida, California, and Arizona averaged 22 percent in excess of the guides; in the 7 intermediate States, Delaware, Virginia and New Jersey averaged 15 percent in excess; and among the late States, the aggregate acreage planted in Washington, Maine, Idaho, Minnesota,

California, North Dakota, Oregon, Colorado, Utah, and Long Island, New York, exceeded the guides by 14 percent. The combined acreage in all of the 16 States listed above exceeded acreage guides by 15 percent and accounted for about 96 percent of the total for all States overplanting their acreage guides. The 17 States planting below the guides planted 6 percent less than the recommendations.

The large 1955 crops in the early and intermediate producing States set a pattern of marketing problems that has carried over into the Late States. Low prices retarded harvesting of summer potatoes and built up a backlog of summer supplies that exerted a depressing effect on the price of fall harvested potatoes. Currently, growers in the 29 late potato States are grappling with the problem of marketing a crop estimated at 303 million bushels, or 31 million bushels in excess of the marketing guide recommended by the Department for these States. In view of this large production, storage supplies for marketing after January 1 will be large.

Future Production Considerations: If the present tendency of growers in specialized and high-yielding areas to maintain or increase acreage continues, future crops can be expected to be too large to be marketed at a profit. Large crops usually bring growers a smaller gross income than small crops. For example, sales from the crop of 356 million bushels in 1954 were valued at 384 million dollars compared with only 248 million dollars from the large crop of 380 million bushels produced in 1953. Prices to growers in September and October 1955, at only 50 percent of parity for both months, are indicative of the low income which growers will receive from the large 1955 crop. Such being the case, it would seem logical for potato growers to give serious consideration in the future to the effect of large crops on income and attempt to keep production in line with market requirements. This cannot be done by cut-throat competition between growers and between the various commercial areas. This type of competition results in losses by growers in all areas.

Unless all potato growers in the specialized potato areas show a greater disposition to hold production more nearly in line with market outlets, recurring large crops and low prices normally can be expected. The Department publishes Acreage-Marketing Guides to assist growers in planning an acreage that under average conditions will produce the desired crop.

Potatoes: Acreage, yield, and production, United States, 1939-54

Crop yr	Planted Acreage	Harvested Acreage	Yield per Acre	Production
	Thous. Acres	Thous. Acres	Bushels	Million Bushels
1939	2867.4	2812.8	121.7	342.4
1940	2885.7	2832.1	133.1	376.9
1941	2749.1	2692.6	132.1	355.7
1942	2755.1	2670.8	138.1	368.9
1943	3354.7	3239.0	141.7	458.9
1944	2878.2	2779.8	138.1	383.9
1945	2728.7	2664.3	157.4	419.4
1946	2570.6	2526.6	192.9	487.3
1947	2033.6	2001.3	194.4	389.0
1948	2007.3	1980.7	227.1	449.9
1949	1778.4	1758.6	228.8	402.4
1950	1711.8	1696.4	253.4	429.9
1951	1358.7	1334.1	240.3	320.5
1952	1421.4	1401.9	249.0	349.1
1953	1548.6	1524.6	249.3	380.1
1954	1425.7	1408.1	252.8	356.0

Potatoes: Production and farm disposition, United States, 1939-54

Crop of	Production	Total used : for seed	Farm disposition 3/		
			Used on farms where grown	Fed to livestock, : For farm	Sold
				For : shrinkage, and : household	seed : loss after harvest : use
- Million Bushels -					
1939	342.4	42.9	24.5	30.9	60.1
1940	376.9	42.0	23.4	37.2	63.1
1941	355.7	42.3	23.4	28.1	58.5
1942	368.9	52.3	27.0	24.4	60.7
1943 1/	458.9	47.6	22.9	42.1	64.4
1944	383.9	46.7	20.5	24.1	48.5
1945	419.4	45.3	18.5	28.1	49.2
1946	487.3	37.6	15.4	31.0	48.0
1947	389.0	39.0	14.4	22.2	37.5
1948	449.9	35.3	12.2	27.3	34.4
1949	402.4	35.7	13.4	27.8	29.9
1950	429.9	29.1	10.9	31.3	28.9
1951	320.5	31.1	12.0	18.6	23.5
1952	349.1	34.7	12.5	20.9	20.5
1953	380.1	32.6	12.4	30.9	19.0
1954 2/	355.1	32.4	12.0	29.0	18.4
1/	Production includes 440,000 bushels in Oregon left in the ground because of low prices.				
2/	Preliminary. May 6, 1955 estimates.				
3/	In some years, due to rounding, farm disposition will not add to the production.				

Potatoes: Production, quantity available for sale and merchantable stocks
in the 36 Late and Intermediate States - 1939-1954

Crop cf	Production		Available		January 1 2/ merchantable stocks		Jan. 1 stocks as	
	United States	36 States	for sale 36 States	1/ 36 States	following year 1/ 36 States	tion in 36 States	tion in 36 States	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
								- Percent -
1939	342.4	295.6	196.3	93.4				31.6
1940	376.9	328.1	220.3	109.1				33.3
1941	355.7	308.2	212.3	100.6				32.6
1942	368.9	315.9	221.1	97.9				31.0
1943 2/	458.9	393.6	283.8	131.7				33.5
1944	383.9	326.4	249.2	104.0				31.9
1945	419.4	356.4	275.7	120.5				33.8
1946	487.3	405.7	328.0	154.5				33.1
1947	389.0	329.5	268.3	121.9				37.0
1948	449.9	384.9	322.5	136.6				35.5
1949	402.4	342.8	282.1	151.0				44.0
1950 3/	429.9	366.1	306.6	161.6				44.1
1951	320.5	271.3	224.7	93.9				34.6
1952	349.1	296.6	248.9	113.5				38.3
1953	380.1	314.5	263.2	128.3				40.8
1954 4/	355.1	303.2	249.4	118.2				39.0

1/ Total sold for season. 2/ Production includes the following quantities left in the ground because of low prices (1,000 bu.): 1943, Oregon 440.

3/ Production includes 65,000 bushels of the early commercial crop in Nebraska not marketed and excluded in computing value.

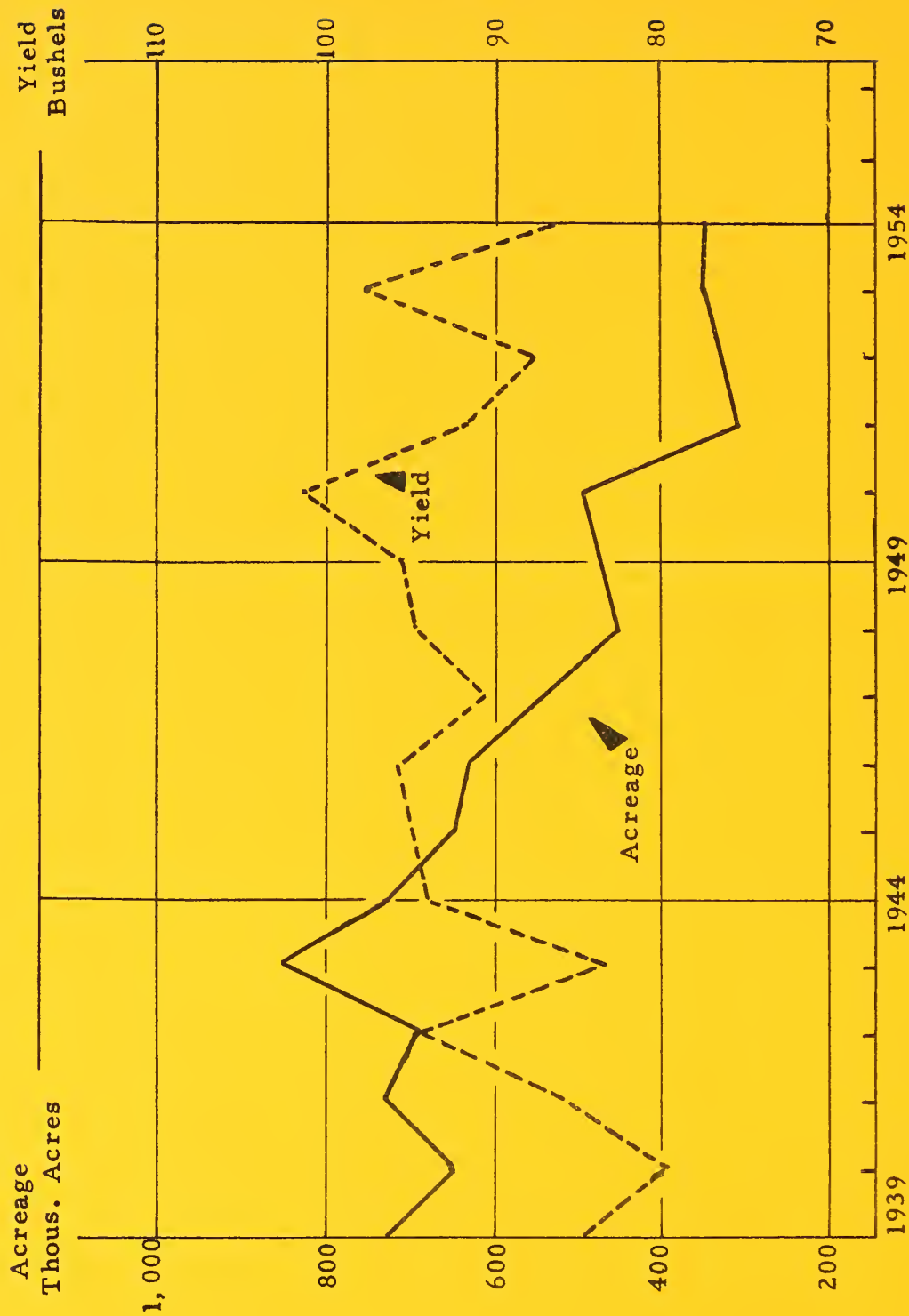
4/ Preliminary.

PRODUCTION CONSIDERATIONS
IN THE 1956 SWEETPOTATO OUTLOOK



Prepared for the 33rd National Outlook Conference,
Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable
Statistics Branch, Agricultural Estimates Division,
Agricultural Marketing Service, U. S. D. A.

SWEETPOTATOES - ACREAGE HARVESTED AND YIELD PER HARVESTED ACRE



PRODUCTION CONSIDERATIONS

IN THE 1956 SWEET POTATO OUTLOOK

Background: Acreage of sweetpotatoes has been on a downward trend since 1932 when the record high 1,059,000 acres were harvested. By 1939, the acreage dropped to 728,000. This decline continued steadily until 1951 except for the war year of 1943 when 856,600 acres were harvested. In 1951, the low record of 314,000 acres was reached. Since 1951, acreage has been on a slightly higher level and in 1955 is estimated at 338,700 acres.

Unlike Irish potatoes, where a drastic decline in acreage was accompanied by a phenomenal increase in yield per acre, the sweetpotato yield has shown no pronounced trend in recent years. The average yield per acre for the 5-year period 1950-54, at 93 bushels, is only moderately higher than the 1939-43 average of 86 bushels.

Production of sweetpotatoes has declined drastically since World War II, dropping from 60,825,000 bushels in 1946 to 29,880,000 bushels in 1954. For 1955, the crop is estimated at 36,101,000 bushels.

The pattern of acreage changes since 1939 has been characterized by drastic decreases in the non-commercial States and by moderate to big decreases in most commercial States except New Jersey, Louisiana, and California. New Jersey acreage has increased moderately; Louisiana and California show about the same acreage as in 1939. The number of farms growing sweetpotatoes in the United States dropped from 1,163,719 in 1939 to 785,983 in 1949, according to the Federal Census. Decreases were reported in each sweetpotato State. The current commercial nature of the crop is evidenced by the fact that in 1949 the Census reported about 75 percent of production grown on only 15 percent of the farms--those farms having 1 acre or more of sweetpotatoes. Also, sales have increased from 40 percent of the crop in 1939 to 57 percent in 1954.

Traditionally, sweetpotatoes have been popular as a "depression" crop. When employment opportunities have been limited and it was necessary for rural families to grow more of their food requirements, they have relied heavily on the sweetpotato as a source of home-grown food. This was shown during the depression period of the early 1930's when acreage was at the highest level of record. Conversely, the smallest acreages of record were planted during the prosperous years of 1951 to date. In view of the fact that the production of sweetpotatoes requires a large amount of hand labor, it appears that many rural families prefer to buy their supplies in times of high employment. The decrease in the number of farm families growing sweetpotatoes also has been augmented by the migration of large numbers of share croppers to industrial areas.

The decline in commercial acreages in many States probably has been accentuated by high labor requirements and the expense of providing the kind of storage facilities that are required to hold stocks in good condition. Further, despite the fact that intermittently good prices have temporarily stimulated production in various sections of the country, market demand for sweetpotatoes has not been consistently strong enough to encourage any appreciable expansion in the overall commercial crop. It appears that any deviation from the downward pattern of production sharply affects the prices received by the farmer, particularly during recent years. For example, in 1950 production rose 11 percent above the previous year while the average price dropped 23 percent. By contrast, production in 1951 dropped 42 percent and the average price increased 85 percent. Production in 1955, which is estimated to be the largest since 1950, is likewise having a depressing influence on prices received by growers.

Sweetpotatoes: Acreage, yield, and production, United States, 1939-54

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Crop of	Planted Acreage	Harvested Acreage	Yield per Acre	Production
	Thousand Acres	Thousand Acres	Bushels	Million Bushels
1939	735.0	728.0	84.8	61.7
1940	651.7	647.7	79.8	51.7
1941	730.9	730.9	85.5	62.5
1942	688.0	687.0	95.3	65.5
1943	369.7	856.6	83.1	71.1
1944	732.1	726.0	94.0	68.3
1945	652.0	645.9	94.8	61.3
1946	643.1	637.0	95.5	60.8
1947	562.7	546.6	90.8	49.6
1948	461.4	455.3	94.6	43.1
1949	478.2	472.1	95.3	45.0
1950	501.5	492.4	101.2	49.8
1951	320.5	314.0	91.7	28.8
1952	333.4	324.8	87.8	28.5
1953	357.2	350.8	97.7	34.3
1954 ^{1/}	354.0	345.5	86.5	29.9

^{1/} Preliminary.

Sweetpotatoes: Production and farm disposition, United States, 1939-54

Crop of	Production	Total used for seed	Farm disposition 1/				Sold
			Used on farms where grown				
			For seed	For shrinkage, and loss after harvest	For farm household use		
- Thousand Bushels -							
1939	61.7	3.3	2.5	12.0	22.8	24.5	
1940	51.7	3.7	2.8	8.5	19.0	21.4	
1941	62.5	3.5	2.7	12.5	22.1	25.3	
1942	65.5	4.4	3.3	13.0	21.9	27.2	
1943	71.1	3.8	2.9	15.8	23.8	28.7	
1944	68.3	3.3	2.5	13.6	21.3	30.9	
1945	61.3	3.3	2.5	11.3	19.8	27.7	
1946	60.8	2.9	2.1	12.0	18.9	27.8	
1947	49.6	2.4	1.7	11.6	15.5	20.8	
1948	43.1	2.5	1.9	8.4	13.5	19.3	
1949	45.0	2.8	2.1	8.9	13.1	20.3	
1950	49.8	1.7	1.3	12.3	12.7	23.5	
1951	28.8	1.9	1.3	4.2	8.1	15.1	
1952	28.5	2.0	1.4	3.9	7.3	15.9	
1953	34.3	2.0	1.5	5.4	7.5	19.9	
1954 2/	29.9	2.0	1.5	4.7	6.8	16.9	

1/ In some years, due to rounding, farm disposition will not add to the production

2/ Preliminary.