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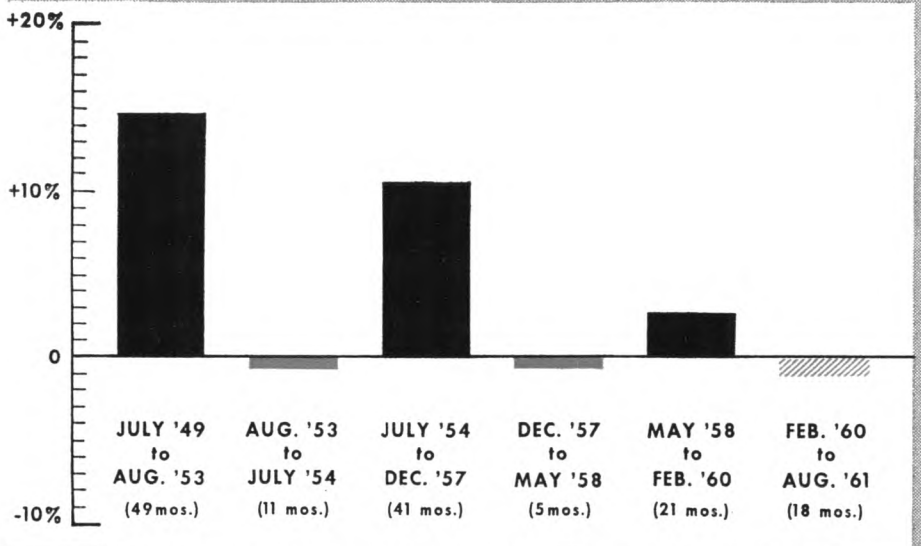
CHANGES IN INDUSTRIAL PRICES



In each postwar price cycle the cumulative rise has been less and the period shorter.

(Based on BLS Wholesale Price Index, excluding farm and food prices; three-months averages.)

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Changing Patterns of Industrial Price Behavior

THE BEHAVIOR of industrial prices as measured by changes in the Wholesale Price Index of all commodities other than farm products and food has generated considerable comment this year. This index is an aggregate of the prices of approximately 1,750 items sold at wholesale. Each of the items is classified according to thirteen industry groupings and weighted according to its importance in primary markets as measured by value of shipments.

A comparison of the behavior of industrial prices in this expansion year and in previous postwar expansions shows an interesting pattern both as to the turning point of prices relative to that of general business and as to the succeeding amplitude of the price upswing. The behavior of industrial prices in each succeeding business cycle since World War II indicates that inflationary waves accompanying expansions have tended to be more moderate with each succeeding expansion.

The failure of industrial prices to react vigorously in the current period of expansion may have significant implications, although it is admittedly early to make a judgment. Recent developments may be a sign, for example, that the present buildup in defense spending will have litttle inflationary impact on the economy in early 1962. Also, if it becomes obvious to many industries that wage increases can no longer be passed on to customers in the form of price increases, may not the resistance of management to wage increases be intensified? Such questions seem worthy of being raised in the light of the developments to be discussed in more detail below, even though no forecast of the outcome will be undertaken here.

The Pattern of Price Behavior Since 1958

During the recovery in general business which followed the recession of 1958, until the beginning of the steel strike in mid-1959, prices of industrial commodities moved very slightly but quite steadily upward; then, following a period of hesitation during the steel strike in the latter half of 1959, they reached their highest level of the postwar period in January and February 1960. Since then there has been a net decline amounting to just over one percent, with practically no movement of the industrial price index since May of this year.(1)

This decline in industrial prices, which began in February 1960, several months prior to the decline in business activity, has not yet been reversed. In fact, industrial prices declined more during the first five months of the current recovery than they did during the period covered by the decline in industrial production, which ended in February 1961.

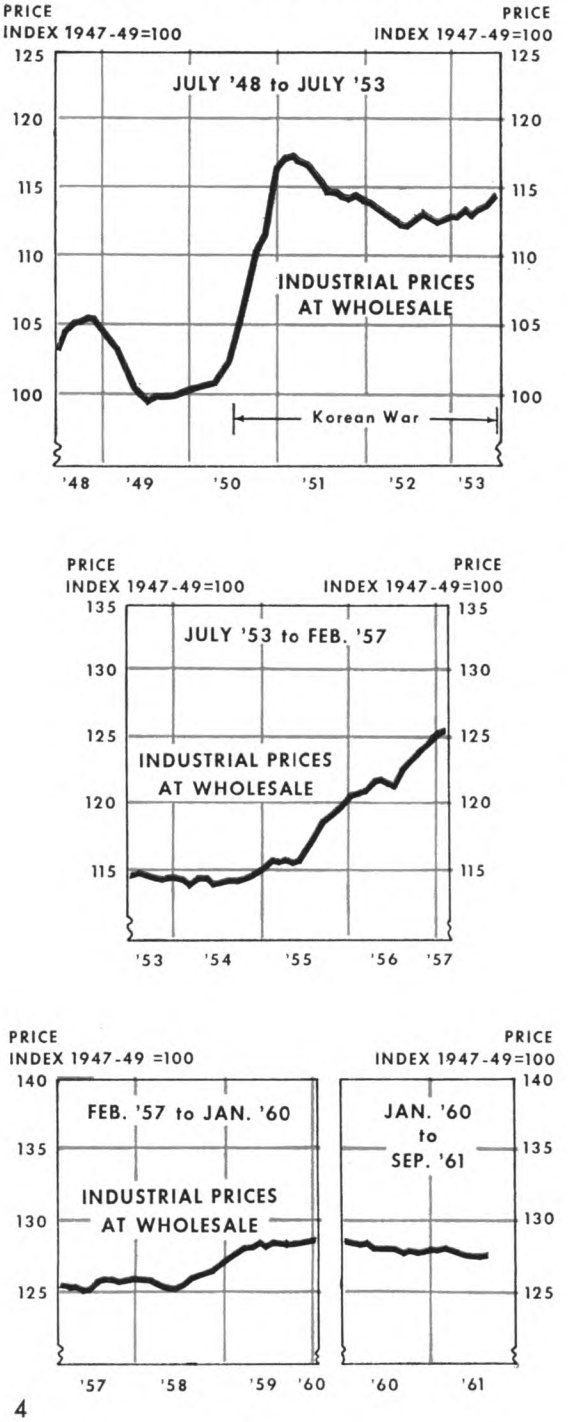
Changes in Industrial Prices During Postwar Business Cycles

The accompanying chart shows the changes in the index of industrial prices (part of the Wholesale Price Index) during postwar production cycles. Each panel shows the change in price during a period of change in the Index of Industrial Production as measured from peak month to peak month of the production index for the various cycles.

The substantial price rise in the 1948-53 period is quite understandable since it was

(1) Because the wholesale commodity price index measures changes in list price, it tends to understate the movements of prices to the extent that discounts, freight, and other miscellaneous costs are changed during the course of the business cycle.

When industrial prices are plotted over periods between the peaks of the industrial production index, it is apparent that successive waves of price increase have become much less marked.



clearly a reaction to a wartime shortage of supply and an excess of liquidity, followed by a period of scare buying at the start of the Korean War. Perhaps more significant is the progressively smaller inflationary wave in each succeeding expansion since then. The advances in the three following periods of expansion amounted to approximately 15 percent, 10 percent, and 3 percent, as measured by the change in a three-month average of the industrial price index. (These are percent changes during the rising phase of the price cycle rather than of the business cycle or the production cycle, as measured by three-month averages.) Each successive period of advance was of shorter duration than the the preceding one; corresponding phases of the general business cycle also were shorter in duration, although the precise timings of the price cycles have not been identical.

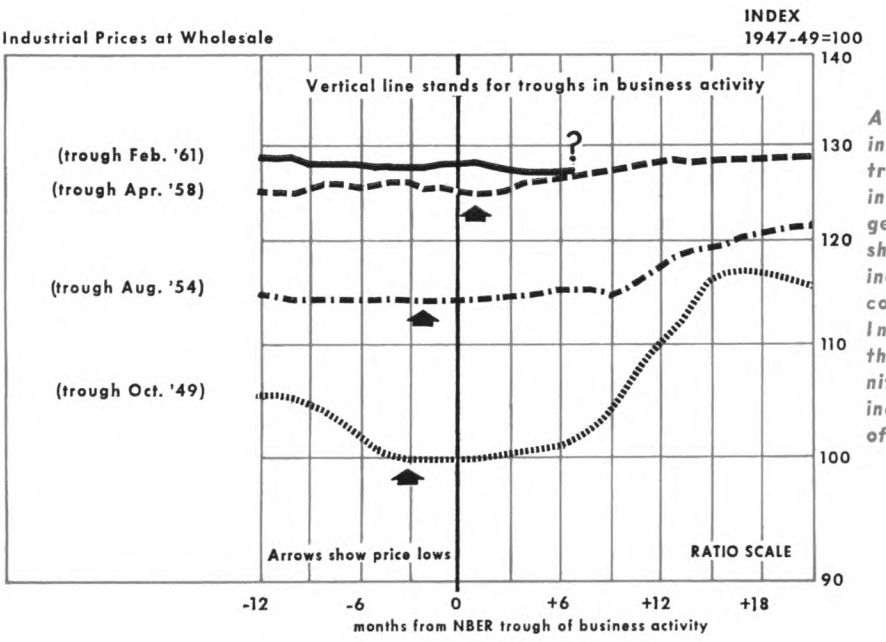
The bar chart on the cover brings out some of the points just mentioned in a somewhat different form. On the cover chart, the time periods are determined by successive peaks and troughs of prices rather than by peaks in production or general business. The cover chart depicts clearly the fact that declines in the price index have been much smaller than rises during the various succeeding phases of postwar price movements, reflecting what has been termed a tendency toward "rigidity" of price behavior during business declines.

Turning Points

Coincident with the changing magnitude of price increases has been a changing pattern of turning points in the price index relative to the turns in business activity. An accompanying chart shows the monthly change of industrial prices during the twelve months preceding the low points of business activity in four postwar recessions, and for the twenty-one months following the low points.

Note to Chart: The first and final months of the periods covered by each of the panels represent cyclical peaks in the Index of Industrial Production, except for the '60-'61 panel which begins with a production peak and ends at the present stage of the current period of business expansion.

PRICE TURNING POINTS AND BUSINESS TURNING POINTS



A comparison of the timing of changes in industrial prices with the timing of troughs of the general business cycle shows that upward turning points in prices have come progressively later. In the present cycle there has been no significant rise in the price index during seven months of business recovery.

(Each curve depicts the course of industrial prices for 12 months prior to, and 18 months subsequent to, the cyclical troughs of business activity.)

The low points of business activity are the "business troughs" as selected by the National Bureau of Economic Research.[2] The lines on the chart connect monthly plots through August 1961. The arrows identify the low points of industrial prices.

Prices reached their low point in 1949 three months before business generally and in 1954 two months earlier than business. In 1958 they did not reach a low until one month *after* the low point in business; and seven months after the trough of the 1961 recession, there was still no observable upturn in prices.[3]

(2) Although the cyclical turning points selected by the NBER are widely used and generally respected, they do not purport to be final or authoritative determinations. Students of business cycles whose considerations have led them to a selection of alternative turning points in certain cases would find that the treatment outlined above would need to be modified accordingly.

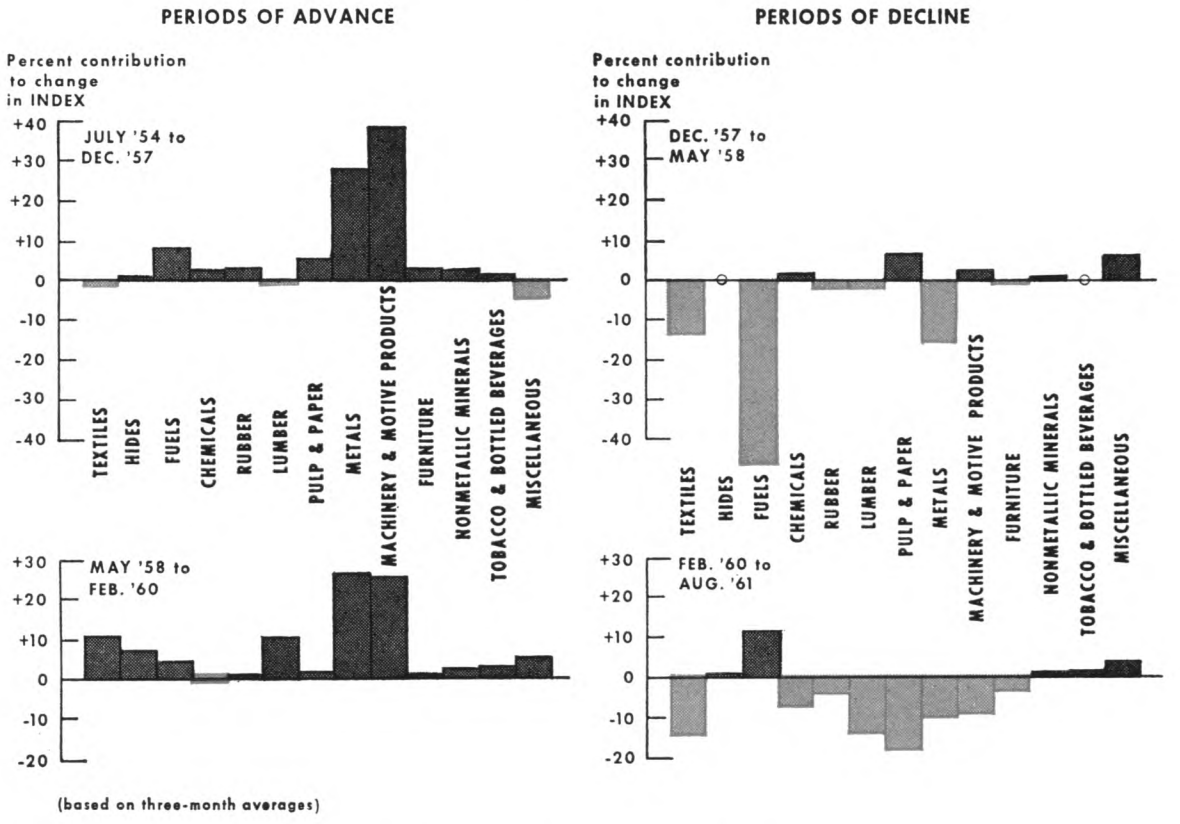
(3) According to preliminary figures, the industrial price index rose one-tenth of a point in September. This may or may not be indicative of a turning point in the making.

Industry Contributions to Change in the Index

Changes in the index of industrial prices are in considerable part the result of relative changes in demand as business conditions improve and decline; they are also, of course, influenced by cost factors. Statistically, the index reflects the many different changes both of direction and of magnitude of the 1,750 different items of which it is composed.

Just as each expansion and contraction of the business cycles generally is unique in some respects, so the different components of the price index behave differently in different cycles. The point is quite apparent in the chart on the next page which shows the contribution made by each of the industry groupings to the total change in the industrial price index in the last two business cycles. The percent change directly contributed by each

ROLE OF INDUSTRY GROUPS IN CHANGES IN INDUSTRIAL PRICE INDEX



Price declines were more widely diffused among industry groups during the '60-'61 decline than during the '57-'58 decline.

industry is determined by its relative importance in the index together with the amount of change in price.

The upper left portion of the chart shows the expansion of prices from 1954 to 1957, according to industry groups. The upper right shows the period of decline in 1958. The lower left side of the chart shows the advance in prices from May 1958 to February 1960. On the lower right is the period of decline from February 1960 through August 1961.

It is noticeable that a larger number of industry groupings shared substantially in the decline during the current period (1960-61) than during the 1957-58 period. A direct comparison of the groupings which contributed the largest shares of the decline in this period and the previous one would not be of general significance because the large decline in fuel prices in the 1957-58 period appears to have been primarily an episodic reaction to the abnormally large price increase which had occurred during the Suez crisis.

Importance of Price Changes in Metals and Metalworking Industries

Slightly over one-half of the increases in the index of industrial prices which took place between July 1954 and December 1957,

and between May 1958 and February 1960, was caused by increases in the prices of the industry groupings known as "metals and metal products" and "machinery and motive products." These two industry groups are assigned 43 percent of the total weight of all industry groups. No attempt is made here to assign the indirect effects of such price changes upon the price behavior of other industry groups.

Iron and steel products account for slightly less than one-third of the weight in the industry group known as "metals and metal products." Because the output of the steel industry is primarily a producer's good rather than a consumer good and because it is used so widely in both the capital equipment and actual production of manufacturers, increases in price are directly reflected in the costs of other industries, and tend to be indirectly reflected in the prices of such industries. In contrast, price increases of consumer goods such as autos do not raise material or capital costs of manufacturers in the same way that higher steel prices do.

A final word of qualification may be in order. The changing pattern of industrial prices which has been discussed above appears largely attributable to the tendency of succeeding postwar expansion periods to be shorter and more moderate. It is in the later stages of expansion, when capacity is being pressed, that prices are likely to rise most vigorously. Thus, if the current expansion period should last longer than the two previous expansions and if industrial capacity should be utilized to a larger extent than in the two previous periods of expansion, a substantial rise in industrial prices might likewise occur once again.

NOTES ON FEDERAL RESERVE PUBLICATIONS

Among the articles recently published in the monthly business reviews of other Federal Reserve banks are:

"Financing the Business Upsurge", Federal Reserve Bank of Chicago, October 1961.

"Individual Income Tax—Structure and Coverage", Federal Reserve Bank of Kansas City, October 1961.

"Changes in Selected Liquid Assets", Federal Reserve Bank of St. Louis, October 1961.

(Copies may be obtained without charge by writing to the Federal Reserve Bank named in each case.)

Growing Greens in Urban Areas

IN THE MOST RECENT YEAR for which complete data are available, total sales of agricultural products in the Fourth Federal Reserve District amounted to $1.2 billion.[1] Of this amount, $258 million, or 22 percent, was accounted for by the sales of agricultural producers operating within the confines of the various urban areas of the District. Among the large number of different agricultural commodities produced in urban areas, those of nurseries and greenhouses represent the largest single group, as measured by dollars of sales. This article discusses the nursery and greenhouse industry from the standpoint of sales volume, with emphasis on the types of products that are sold.

Cash receipts from the sale of nursery and greenhouse items have increased sharply in recent years. In 1959, Fourth District producers of such items grossed $68.4 million, which represented a rise of 43 percent from the dollar volume of sales in 1954 and 78 percent from 1949.

As can be seen from the map on page 9, the nursery and greenhouse industry is concentrated in the heavily populated urban areas of the Fourth District. As a result of such concentration, producers in urban areas of the District accounted for 71 percent of total sales of nursery and greenhouse products in 1959.

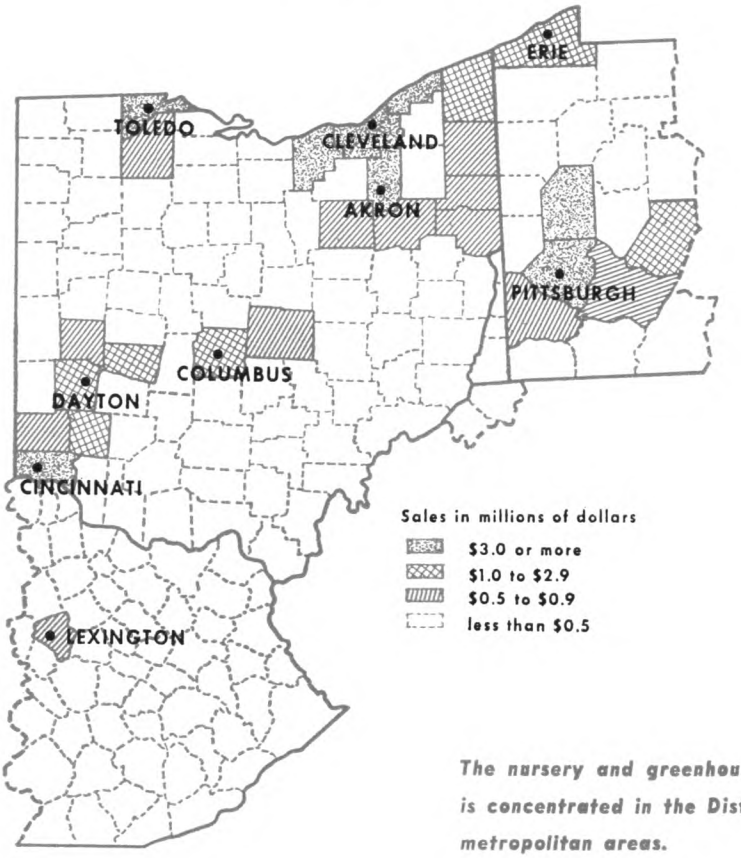
An indication of the dollar magnitude of the operations of the nursery and greenhouse industry in urban areas is found in the fact that sales receipts from high-value horticultural specialty crops are sufficiently large in a number of urban counties to place those counties on a par, in terms of dollar sales, with others having much more land devoted to agricultural production. As a case in point, Cuyahoga County, with the fewest number of farms and with less than half as much land in farms as any other county in Ohio, ranked thirty-seventh among the eighty-eight Ohio counties in regard to cash receipts of farmers in 1959. The principal reason of course was that farmers in Cuyahoga County sold $10.0 million worth of nursery and greenhouse products in 1959.

Nearness to potential markets is one of the principal factors which tends to locate the nursery and greenhouse industry in and around urban areas. Another factor is the relatively high value per acre of such specialty crops. In this connection, producers of agricultural items are attracted to nursery and greenhouse crops as a means of coping with the higher land values found in urban areas. It seems likely that some of the present nursery and greenhouse producers formerly grew less intensive crops. As land values and taxes increased, however, it became necessary for these growers to specialize in crops which would yield a larger gross per input of land.[2] This would seem to have been the case in Cuyahoga County, where from 1954 through 1959 the total amount of land in farms dropped 41 percent, while the amount of land used in turning out nursery products increased 61 percent and the area under glass rose 33 percent.

(1) All data used in this article are from the 1959 Census of Agriculture. Sales of nursery and greenhouse products include only sales of products grown by producers; sales of products purchased or resold are excluded.

(2) To gain some perspective on the value of these crops as compared with more common agricultural products, the following figures may be helpful: the sale of corn from an acre of land grosses from $75 to $125; in 1959, the sale of nursery products grossed nearly $1,000 per acre, and greenhouse products, which require much greater labor and capital investment, grossed nearly $50,000 per acre.

NURSERY and GREENHOUSE SALES
Fourth District, 1959



The nursery and greenhouse industry is concentrated in the District's metropolitan areas.

Sales of nursery and greenhouse products are divided into the following categories by the Bureau of the Census, with no significance necessarily attached to the numerical order: (1) nursery sales of trees, shrubs, vines, and ornamentals; (2) the sale of cut flowers, potted and bedding plants, and florist greens; and (3) sales of vegetables grown under glass, bulbs, and mushrooms.

The second of the above categories, with sales amounting to $33.2 million in 1959, is the most important grouping in the Fourth District in terms of farm cash receipts.

The perishability of cut flowers is a factor of considerable influence in the location of flower growers, even though cut flowers are currently being transported across the nation. As the table on page 10 shows, Summit County is the leading county so far as sales are concerned; but Cuyahoga County, with the equivalent of 49 acres under glass, has the largest covered area devoted to floral production. Although county data which show totals of individual items in this category are not available for the entire District, chrysanthemums appear to be the leading commodity by

far in terms of cash receipts. In Ohio, the sale of chrysanthemums, as potted and unpotted plants, rooted cuttings, and cut flowers, grossed $10.3 million in 1959, accounting for 45 percent of the state total. Next in line were bedding plants, amounting to $2.2 million, geraniums with sales of $1.7 million, and carnations with sales of $1.6 million. The following table shows the ten top flower-growing counties in the District, all of which are located within urban areas.

Leading Counties in Flower Production

Fourth District, 1959

County	State	Sales (thousands)
Summit	Ohio	$ 3,849
Cuyahoga	Ohio	3,616
Lucas	Ohio	2,268
Allegheny	Pennsylvania	2,165
Lorain	Ohio	1,988
Hamilton	Ohio	1,871
Clark	Ohio	1,200
Franklin	Ohio	788
Stark	Ohio	719
Lake	Ohio	677
Total Fourth District		$33,214

The production of greenhouse vegetables, bulbs, and mushrooms, ranked second in dollar importance among specialty crops in the Fourth District, with the sale of greenhouse tomatoes providing the bulk of farm receipts in this category. In Ohio, tomato sales accounted for $12.0 million of the $14.4-million state total in 1959. Lettuce, in second place, was far down the list of items, with $1.1 million in cash farm receipts. The principal areas of greenhouse vegetable production are listed in the accompanying table.

Leading Counties in Greenhouse Vegetable Production

Fourth District, 1959

County	State	Sales (thousands)
Cuyahoga	Ohio	$ 5,535
Butler	Pennsylvania	3,348
Lorain	Ohio	3,062
Lorain	Ohio	1,252
Hamilton	Ohio	1,048
Total Fourth District		$19,352

One of the largest concentrations of greenhouses in the U. S. is located in northeastern Ohio, where, in Cuyahoga and Lorain counties, the equivalent of 284 acres was covered with glass and used for vegetable production in 1959. This area has been important for many years in the production of greenhouse vegetables, and output in these two counties continues to experience substantial growth. Between 1954 and 1959, the amount of land covered with glass and devoted to vegetable production increased 43 percent. The availability of grading, packing, and transportation facilities that permit shipment of glass-grown tomatoes and other vegetables to the principal population centers in the midwestern and northeastern parts of the nation, has been an important factor in the growth and development of the greenhouse vegetable industry in northeastern Ohio. More than half of the output in the area is shipped to cities outside the Cleveland area. Although Lake Erie affords producers the advantage of moderate temperatures, northeastern Ohio does not receive as many hours of sunshine as do other parts of the District.

Butler County in Pennsylvania, with sales of more than $3.3 million in 1959, is also an important area for greenhouse vegetable production. Ninety acres of land in that county were covered with glass and used in the production of vegetables in 1959.

Lake County in Ohio stands out as the leading county in the Fourth District in the output of nursery products. It has also been one of the leading nursery-producing centers in the nation for many years and has continued to experience sharp growth in recent years. The number of acres devoted to nursery production in Lake County rose from 2,864

Leading Counties in Nursery Product Sales

Fourth District, 1959

County	State	Sales (thousands)
Lake	Ohio	$ 4,773
Cuyahoga	Ohio	726
Allegheny	Pennsylvania	710
Butler	Pennsylvania	677
Clark	Ohio	602
Hamilton	Ohio	587
Erie	Pennsylvania	478
Miami	Ohio	449
Fayette	Kentucky	441
Warren	Ohio	420
Total Fourth District		$15,815

in 1954 to 4,242 in 1959. Concurrent with the increase in acreage, sales of nursery products rose from $2.1 million to $4.8 million. As indicated by the figures in the following table, Lake County producers, in 1959, received 30 percent of all cash receipts from the sale of nursery products in the Fourth District.

Principal factors that favor nurserymen in Lake County include a fertile sandy-loam soil and weather conditions which, because of the influence of Lake Erie, are relatively free from extreme fluctuation. Of the total of $11.6 million received by Ohio producers from the sale of nursery products, coniferous evergreens were the leading item, accounting for sales of $3.7 million, with deciduous trees and shrubs following with gross sales of $1.9 million.

Around the Fourth District—

The *automotive market* in Cleveland has strengthened considerably. New car sales posted week-to-week increases throughout October and continued at a brisk rate in early November.

* * *

According to preliminary estimates, *department store sales* in the Fourth District advanced to a new high in October, on a seasonally adjusted basis. During September, sales gains had been noted in homefurnishings, particularly in household appliances, radios, phonographs, and television sets.

* * *

The market value of *farm real estate* moved up 2 percent in Pennsylvania and Kentucky during the twelve months ended July 1, 1961, but declined 2 percent in Ohio. For the entire U. S., the year-to-year gain averaged 2 percent.

(The above items are based on various series of District or local data, which are assembled by this bank and distributed upon request in the form of mimeographed releases.)

FOURTH FEDERAL RESERVE DISTRICT