March 31, 1958
Volume 13 • Number 15

Monthly Review
OF THE FEDERAL RESERVE BANK OF MINNEAPOLIS

Recession less severe in district

Economic distress signals in the Ninth district are not quite as sharp as they appear to be for the country as a whole. Primarily this is due to the farm scene—where a record 1957 crop year and favorable experience in livestock production and prices have maintained farm purchasing power at slightly higher levels than in the previous year.

This situation has given substantial support to business activity in the predominantly agricultural areas. In fact, the entire central area of the Ninth district has been well insulated against the current recession. Cumulative January-February bank debits in South Dakota and North Dakota of plus 8 percent and 15 percent, respectively, above a year ago are indicative of business activity in this area.

Nevertheless, the district has not exclusively escaped the economic distress associated with the national business recession—a recession which thus far has been centered in industrial centers and in mining and lumbering sections of the country.

In the lumbering and copper mining areas of the district, which were particularly hard hit early last year by loss of product demand and growing unemployment, the recession apparently has not deepened in recent weeks. The situation seems to have stabilized but at a relatively low level com-

Statistical release available

Copies of the **1957 Annual Statistical Review**, presenting data for principal statistical series relating to the Ninth Federal Reserve district, are available from the Research Department of this bank.

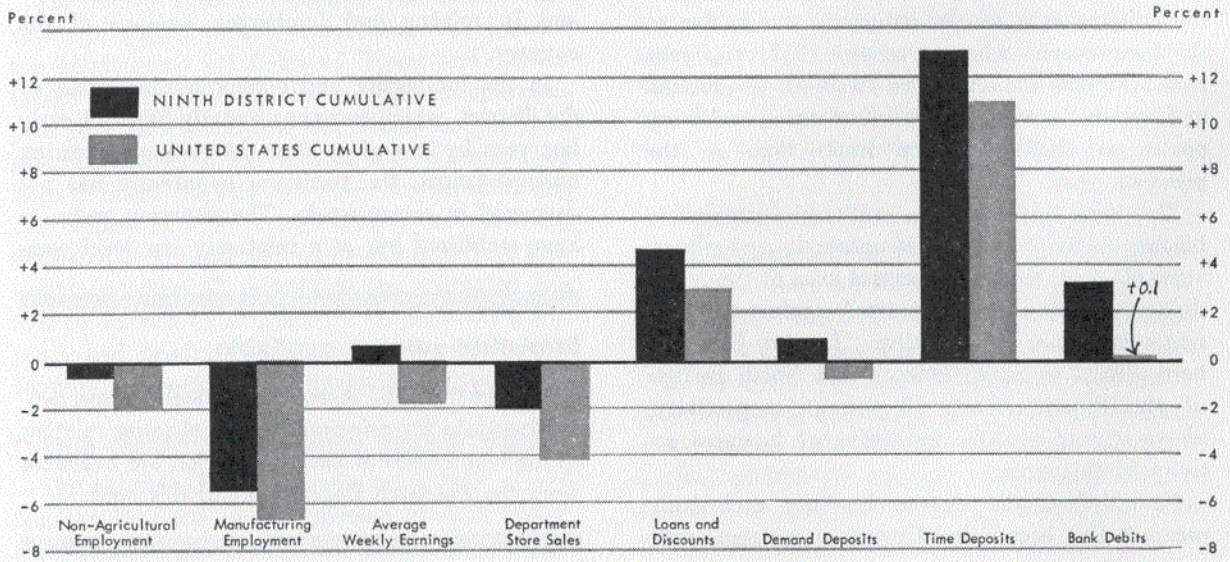
pared with peak periods of activity.

Total district non-farm employment was down in February almost 1 percent from a year earlier. This was the first time that such a yearly decline occurred in February since 1955. Hours worked per week and average weekly earnings in manufacturing during February also were slightly below year ago levels. Department store sales, too, registered a disappointing 7 percent decline in February compared with a year earlier.

Although many of the district's business indicators are showing up in the minus column, the degree of decline in each instance appears to be less severe than for the country as a whole. For example, total February bank debits in the district were 2.4 percent more than in February of 1957. For the United States as a whole, the comparable figure was 1.2 percent less than a year earlier. Also, the percentage increase in unemployment claims in recent months has been less pronounced here than it has for the country as a whole. Bank deposits are holding up better, too, in the Ninth district.

Even though we may take some comfort that our business indicators have not slipped too sharply, the district economy is extremely sensitive to national trends. For example, a movement down the lakes this season of around 65 million tons of ore has been forecast compared with nearly 85 million tons last year. Many large processors and fabricators of various industrial items have keenly felt the slackening of demand intensified by general inventory liquidation. That total industrial production has suffered a relapse is shown by the Federal Reserve Board's industrial production index, which dropped from 146 (1947-49=100) in December of 1956 to 130 this February—a decline of 11 percent. This lower production together with a postwar high of 6.7 percent of the civilian labor force unemployed in February, on a seasonally adjusted basis, has documented the recession as being of greater severity than either the 1949 or 1953-54 declines. The drop in the discount rate of ½ percent at the Federal Reserve Bank of Minneapolis on March 21 was in recognition of both the downturn in general economic trends and the substantial decline in market yields of government securities that had taken place.

Economic indicators for January-February 1958, for Ninth district and U. S.



The following selected topics describe particular aspects of the district's current economic scene:

RECENT BANKING DEVELOPMENTS

The current recession reflects, in part, the efforts of business to reduce inventories. A smaller output is required of producers when orders are filled out of stocks on hand without replacement. Inventory liquidation is also reflected by a smaller volume of bank loans to business since merchants are borrowing less to finance the purchase of inventory.

Business loans declined in the early weeks of 1958 both at weekly reporting member banks throughout the nation and at those located in the Ninth district. Nationally, from the first of the year through March 5, the decline was $2,018 million in contrast to a reduction of only $674 million in the comparable period last year. In the district, a decline of $10 million was registered for business loans through March 5 this year in contrast to an increase of $9 million during the same weeks of last year. *Total* loans of district weekly reporting member banks—the city banks —fell $22 million in the same 1958 period and $9 million in the 1957 period.

In contrast to city banks, country member banks in the district have been adding to loans more rapidly than was true a year ago. In the three-month period from December through February, country bank loans rose each month by more than in the comparable month a year earlier.

The seasonal outflow of deposits from member banks in the district during January and February amounted to $152 million in 1958; a year earlier deposits fell by $185 million. Both city banks and country banks experienced a smaller outflow this year. Time deposits rose $36 million in the 1958 period and $47 million in the 1957 period. Time deposit growth was smaller at both city and country banks.

DISTRICT EMPLOYMENT DROPS MORE

February was the third consecutive month in which Ninth district[1] nonfarm employment recorded declines from comparable year ago figures. December employment totaling 1,388,600 was down .4 percent, January with 1,336,800 was down .1 percent, and February with preliminary figures totaling 1,318,800 was down 1 percent. This larger than seasonal decline in district employment takes on greater significance when the annual increase in the labor force of around 25,000—mainly those who have terminated or completed their education and married women—is taken into account.

Average weekly insured unemployment in the district rose markedly during the winter reaching 95,535 persons in February. This was the eighteenth consecutive month in which unemployment exceeded that of the same month of the preceding year. The rise in the number of claimants had been nominal until the fourth quarter of 1957. In that quarter the number of claimants was almost 50 percent above the fourth quarter of 1956. In the first two months of this year, the number of claimants was 32 percent and 39 percent, respectively, above the corresponding months of last year.

The district states hardest hit by unemployment are, in order: Montana, Upper Michigan and Minnesota. This is based upon the percentage increase in unemployment insurance claimants over a year ago. Severe unemployment struck Montana early in 1957 and reached a peak in October 1957 when the number of claimants was 363 percent above a year earlier. This was mainly due to the depressed market for copper and lumber. The same economic developments were the main causes of unemployment in Upper Michigan but the peak came later, in January 1958, and was not as severe as in Montana. The contraction in mining was also a contributing factor in the unemployment increase in Minnesota, but a

[1]Four full states plus Upper Michigan peninsula.

much greater impact was attributable to a decline in durable goods manufacturing. The percentage increase over a year ago in the unemployment insurance claimants from such industries has been fluctuating between 35 percent and 47 percent since last October.

South Dakota is the only district state in which unemployment is less than a year ago. September and October 1957 were the only months since last July that did not show a decrease in the state's unemployment figures.

DEPARTMENT STORE SALES

Department store sales held up well during the early stages of the recession in the latter half of 1957. Even in January of this year sales averaged 2 percent above the receipts of a year ago for the Ninth district as a whole. In about half of the retail trade areas of district states, sales were up as much as 10 percent or more. (Such increases indicate that merchants in many cities were enjoying an excellent volume of business.)

Nevertheless, evidence began to appear in January that department store sales were starting to slip in the large cities. In the Twin Cities metropolitan area, sales were off by 1 percent for the month. In Duluth and Superior sales still were 2 percent above the year ago receipts, but in the smaller centers in Minnesota sales were up by 8 percent.

During February, department store sales turned down significantly. In this district, sales were down by 6 percent from a year ago. In many regions of the nation, exceptionally severe winter weather contributed to the decline in sales. However, this district has had one of the mildest winters on record with a minimum amount of precipitation. A change in consumer attitude apparently has contributed to a lower level of sales in this area.

Individuals in this district are saving a larger proportion of their incomes than during the early months of 1957. Time deposits in banks and shares in savings and loan associations have risen substantially since the first of the year. Furthermore, people are paying off their debts, especially their instalment contracts. However, an increasing number are also paying more than the minimum amount on their mortgage loans.

The aggregate amount of income consumers have at their disposal has held up well in this district. Only in the manufacturing and mining areas has it declined somewhat due to the laying off of workers and cutting down of the work week.

March department store sales were strongly influenced by the approaching Easter season. The shifting dates of Easter often makes it difficult to draw valid comparisons in sales with those of a year ago. As a result of the early date of Easter, April 6, as compared with April 21 last year, much of the buying for this occasion will be done in March this year.

CAR REGISTRATIONS DIP

New car registrations for January (the latest date for which figures are available by state) in the four full states of the Ninth district are 15 percent under those of January 1957. This compares with a 13 percent decline nationally. Minnesota, with the largest volume of registrations in the district, showed the greatest dip—25 percent, or 2,297 fewer registrations in January 1958 than the 9,297 total for January 1957. North Dakota also recorded a decline—12 percent, or less than half that of Minnesota. The two other states both had increases; South Dakota was up 10 percent and Montana, 5 percent.

More recent figures are available for the four county area encompassing the Twin Cities. Here the volume of registrations is approximately half the state total. In January registrations were 2 percent less than a year ago and in February, 16 percent less. Although March figures are incomplete and inconclusive, they indicate that through March 20 registrations were 20 percent off from the same period in 1957.

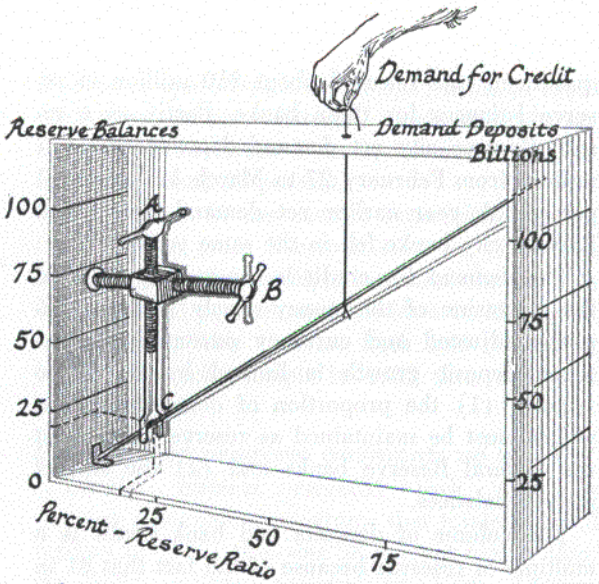
RESERVE REQUIREMENTS CUT AGAIN

The recent across-the-board cut of ½ percent in required reserve ratios has released about $500 million in reserve balances held against demand deposits by the nation's member banks. This was the second of two ½ percent reductions made since January 1 as part of the Federal Reserve System's efforts to ease credit and stimulate the level of economic activity. Required reserve ratios on demand deposits are now 19 percent for banks in the Central Reserve cities of New York and Chicago, 17 percent for banks in Reserve cities, and 11 percent for country banks. The latest cut became effective on March 20 for Central Reserve city banks and Reserve city banks, and on April 1 for country banks. The ratio on time deposits remains unchanged at 5 percent for all member banks.

The range of possible reserve requirements is fixed by law. Required reserve ratios on net demand deposits may not exceed twice the minimum levels of 7 percent for country banks, 10 percent for Reserve city banks, and 13 percent for Central Reserve city banks.

Required reserve balances must equal a specified fraction of the average of net demand deposits during the 'reserve period.' The fraction is called the required reserve ratio. Reserves may be deficient on some days during the reserve period, providing excesses on other days raise the daily average enough to at least equal the minimum legal requirements. For Central Reserve city banks and Reserve city banks, the reserve period is one week. The reserve period for country banks is half a month.

In the Ninth Federal Reserve district, country bank net demand deposits totaled $1.5 billion during the reserve period ended February 28. Thus, the two successive ½ percent reserve ratio reductions released about $15 million in district country bank reserve balances. Net demand deposits at Reserve city banks in the Twin Cities and in Helena averaged over $900 million during the reserve period ended February 27. The re-



A. Represents open-market operations
B. Represents reserve requirement changes
C. Represents the fulcrum

This rather improbable machine purports to show the relationship between the instruments of monetary policy and the size of the money supply. The heart of the machine is the fulcrum, C; its position determines the maximum height to which the pointer, measuring total demand deposits on the right hand scale, may be raised. The instruments of monetary policy are the adjustments, A and B. These adjustments, by affecting the position of the fulcrum, C, can set a maximum to which demand deposits may rise, but cannot force demand deposits to actually achieve this maximum. Reaching the maximum, as you can see, lies outside the control of the monetary instruments and is dependent upon the willingness of users of money to borrow from banks and the willingness of banks, in turn, to extend credit. Raising the fulcrum in a vertical direction by adjustment A is equivalent to the Federal Reserve adding to bank reserves by an action such as buying securities on the open market. Moving the fulcrum to the left by adjustment B is equivalent to the Federal Reserve reducing reserve requirements. Both of these actions would allow the pointer more headroom for upward movement. Providing sufficient demand exists, an increase in demand deposits would then presumably take place. The recent adjustments in reserve requirements, for example, by moving the fulcrum from 16.5 to 15.5 percent as illustrated, permit a new maximum for deposits some $6.5 billion higher than before.

quirement cuts released about $10 million in reserve balances for these banks. Partly as a result, Reserve city net demand deposits rose $27 million from February 27 to March 12—nearly 3 percent. A year earlier net demand deposits at Reserve city banks fell in the same period.

The demand for credit is the moving force in the expansion of the money supply (demand deposits adjusted and currency outstanding). Demand deposit growth is limited by these two factors: (1) the proportion of demand deposits which must be maintained as reserve balances at the Federal Reserve banks and (2) the size of reserve balances.

The volume of deposits and bank credit is a multiple of reserves because of the fact that $1 in reserve balances will support many more dollars of deposits. If reserve requirements are 16.5 percent, then $19 billion in reserve balances can support up to $115 billion in demand deposits. Expansion is limited at $115 billion since at that amount the requirement is just satisfied—16.5 percent of $115 billion equals $19 billion. Cutting the ratio from 16.5 percent (which happened to be the weighted average reserve ratios on the call report date of October 11, 1957) to 15.5 percent permits the demand for credit to push up the volume of deposits. Although 'theoretical' expansion of $6.5 billion in demand deposits is possible on the basis of $1 billion of released reserve balances it may not be achieved. A number of 'real world' leakages such as growth in vault cash (which is not included in legal reserves) or growth in currency or pocketbook money would prevent attainment of the full possible expansion.

Some of these qualifying situations are illustrated in the following table which shows the possible expansion of demand deposits and earning assets under the listed conditions. If the entire expansion is in time deposits which have a required reserve ratio of 5 percent at all member banks, there will be no expansion in the volume of demand deposits, an additional $20 billion in time deposits, and an additional $20 billion in earning assets. If, on the other hand, the growth results in a $1 billion increase in pocketbook money, there will be no expansion in demand deposits or earning assets and only a $1 billion increase in the money supply. Various other alternatives are shown in the table. Assuming proportions of the total remain as before between cash holdings and demand deposits, between Reserve city banks and country banks, and time deposits remain unchanged, expansion of demand deposits would amount to a possible $5.1 billion.

Recent changes in the required reserve ratios are an attempt to achieve the economic objectives of stable purchasing power, high employment and balanced economic growth as stated in the Employment Act of 1946. Reserve requirement cuts permit banks to increase credit and thereby stimulate such credit-financed spending as purchases of new houses, plants, equipment, consumer goods, etc. Such an increase in spending will normally cause an increased flow of goods when the economy is operating at less than full production. As a result, additional output will be needed to satisfy the additional demand, additional workers will be needed to produce that additional output, and the economy will have a tendency to operate at a higher level of activity.

Maximum increase in demand deposits and earning assets due to $1 billion increase in excess reserves

(billions of dollars)

Conditions	Resultant increase in: Demand deposits	Earning assets
Demand deposit growth at only Central Reserve city banks	$5.3	$ 5.3
Reserve city banks	5.9	5.9
Country banks	9.1	9.1
Time deposit growth	0.0	20.0
Currency growth	0.0	0.0
Vault cash growth	0.0	0.0
Growth in demand deposits, vault cash, currency according to existing distribution	5.1	5.1

District farm income higher in 1957

Cash receipts from the sale of agricultural products in the Ninth district totaled $2,796 million in 1957 compared with $2,725 million in 1956 for an increase of 2.6 percent. The increase in cash receipts resulted from higher livestock and livestock product income in 1957 mainly because of higher livestock prices. District livestock receipts were $102.3 million over 1956.

Crop income was lower in 1957 than in 1956. The decrease of $31.2 million in crop receipts was due largely to lower crop prices.

Thus, the proportion of cash receipts coming from the sale of crops decreased to 40 percent, down 2 percent from 1956. Livestock and livestock product sales gained accordingly in relative importance, accounting for 60 percent of cash receipts in 1957.

Crop income in 1957 was down 9 percent and 5 percent respectively in Minnesota and North Dakota compared with a year ago; while in Montana crop income remained unchanged during the period. In South Dakota, however, crop receipts increased 23 percent.

Every state in the district experienced higher cash receipts from livestock sales in 1957 than in 1956. Livestock receipts increased the most in Montana—12 percent, and the least in Minnesota —4 percent. The Dakotas both had 9 percent higher livestock receipts in 1957 than they had a year earlier.

Government program payments up in 1957

District farmers received cash payments through government programs that totaled $109.8 million in 1957; this was 58 percent higher than the $69.5 million received in 1956. District farmers receive payments under four government programs: the soil bank program, the wool program, the sugar program and the agricultural conservation program.

The bulk of government payments to district farmers in 1957 was received under the soil bank program. Soil bank payments at $79.2 million accounted for 72 percent of total government payments received by district farmers in 1957. In 1956 this source of government payments accounted for $38.1 million or 54 percent of total receipts under government programs.

Cash receipts from farm marketings, 1956 and 1957

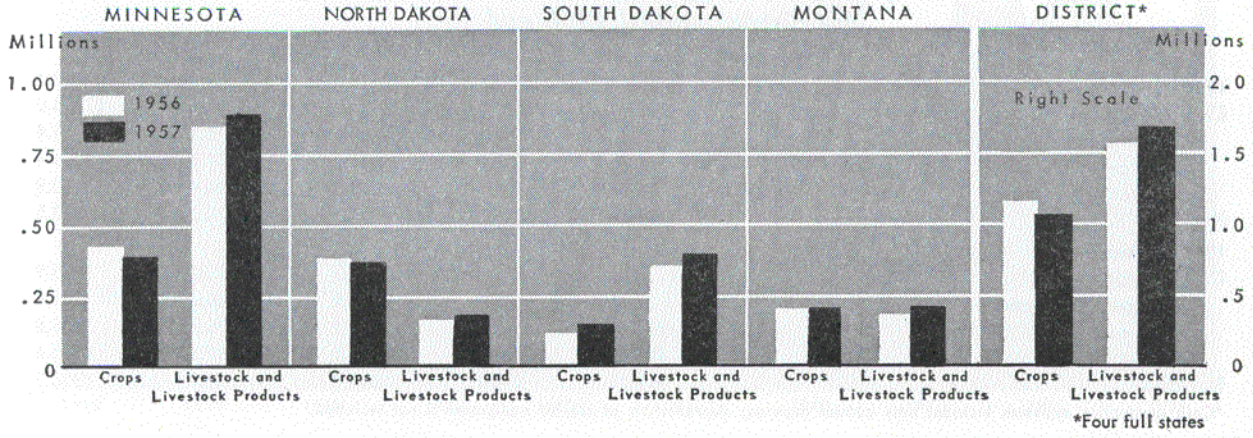


Table 1—Government payments to Ninth district* farmers by programs, 1956 and 1957

(millions of dollars)

Program	1956	1957**
Agricultural conservation program	$18.7	$ 18.2
Sugar program	4.8	4.9
Wool program	7.8	7.5
Soil bank program	38.2	79.2
Total	$69.5	$109.8

*Includes only the four full states
**Estimated

Prices paid for items included in production expenses increased 3.6 percent during 1957. The average index of prices paid in 1957 was 258 (1910-14=100) compared with 249 in 1956. Assuming no change in the pattern of production expenses, and also assuming that the prices paid by district farmers for production increased by an amount equal to the national average, the cash production expenses in 1957 can be estimated (table 2).

Increased cash receipts, coupled with higher government payments, offset the increase in production expenses so that district net cash income in 1957 was $56.7 million or 4.4 percent above 1956.

Net cash farm income differs from total net income in three important respects. First, provisions have not been made for depreciation expense. Second, non-money incomes (the value of products consumed in the home, the rental value of farm dwellings) are not included. These two items (home consumption and rental value of dwellings) usually account for about 7 percent of total farm income received in the district. And finally, net cash income does not include changes in the valuation of farm inventories.

Table 2—Farm cash production expenses* in the Ninth district**, 1956 and 1957

(millions of dollars)

States	1956	1957***
Minnesota	$ 738.5	$ 765.1
North Dakota	302.8	313.7
South Dakota	289.2	299.6
Montana	190.4	197.3
Total	$1520.9	$1575.7

*Excludes depreciation on capital equipment.
**Includes only the four full states.
***Estimated on the basis of a 3.6 percent increase in prices paid for production items.

Net cash farm income declined by $23.9 million in Minnesota in 1957. North Dakota experienced a $.3 million increase in net cash income. Montana and South Dakota had net cash incomes in 1957 which were substantially above 1956—an increase of $23.7 million for Montana and $56.6 million for South Dakota.

Table 3—Cash receipts, government payments, production expenses and net cash income by district states, 1956 and 1957

(millions of dollars)

	Minn.	N.D.	S.D.	Mont.	District
1956					
Cash receipts	$1279.5	$560.0	$489.2	$396.3	$2725.0
+Government payments	19.0	18.7	22.4	9.3	69.4
Total cash	1298.5	578.7	511.6	405.6	2794.4
—Production expenses*	738.5	302.8	289.2	190.4	1520.9
Net cash	560.0	275.9	222.4	215.2	1273.5
1957 Estimated					
Cash receipts	1273.5	554.7	549.7	418.0	2795.9
+Government payments	27.7	35.2	28.9	18.2	109.9
Total cash	1301.2	589.9	578.6	436.2	2905.8
—Production expenses*	765.1	313.7	299.6	197.3	1575.6
Net cash	536.1	276.2	279.0	238.9	1330.2

*Cash production expenses includes only current expense; depreciation of capital equipment is not included.

Trends in farm income

The flow of income into the agricultural sector of the economy shows wide variation over time—rising very rapidly at times and falling just as rapidly at other times. The most dramatic swings in farm income have been associated with wars and the adjustment periods following wars (chart 1).

What factors subject agriculture to these wide variations in income? An examination of the characteristics of the supply and demand relationships found in agriculture may supply some answers to this question.

Agricultural production over a period of time has exhibited extreme stability, increasing gradually but steadily, seemingly regardless of price changes (chart 2). The only substantial interruption to this production trend occurred during the widespread drouth of the mid-1930's. Numerous reasons have been presented to explain this lack of response in production to changing prices.[1] The gamut of reasons put forth are illustrated by the following: (1) the cost structure in agriculture is largely fixed and production must be maintained to cover the high fixed costs; (2) production resources are fixed in agriculture—the prices of resources used in agricultural production change

[1] For examples, see the following:
1. Brewster, John M. and Parson, Howard L., "Can Prices Allocate Resources in American Agriculture," **Journal of Farm Economics,** November, 1946.
2. Johnson, D. Gale, "The Supply Function for Agricultural Products," **American Economic Review,** September, 1950.
3. Cochrane, Willard W. and Butz, William T., "Output Responses of Farm Firms," **Journal of Farm Economics,** November, 1951.

Chart 1—U.S. net income of farm population

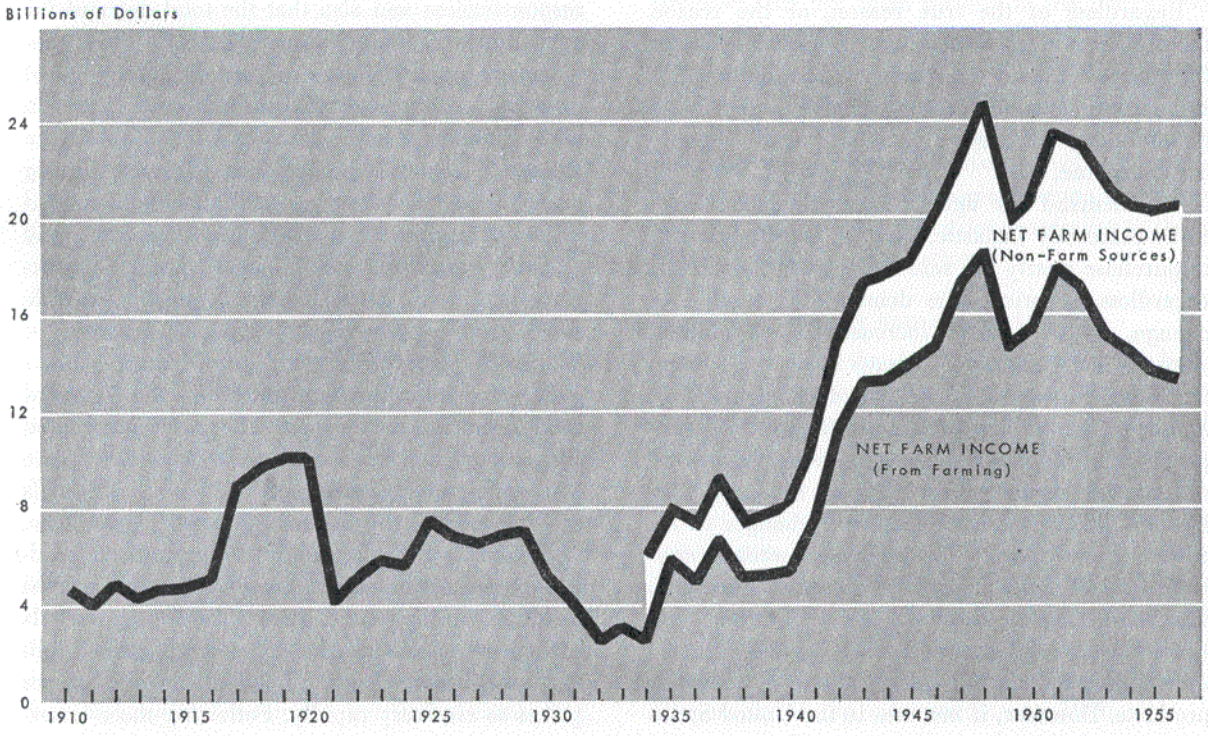
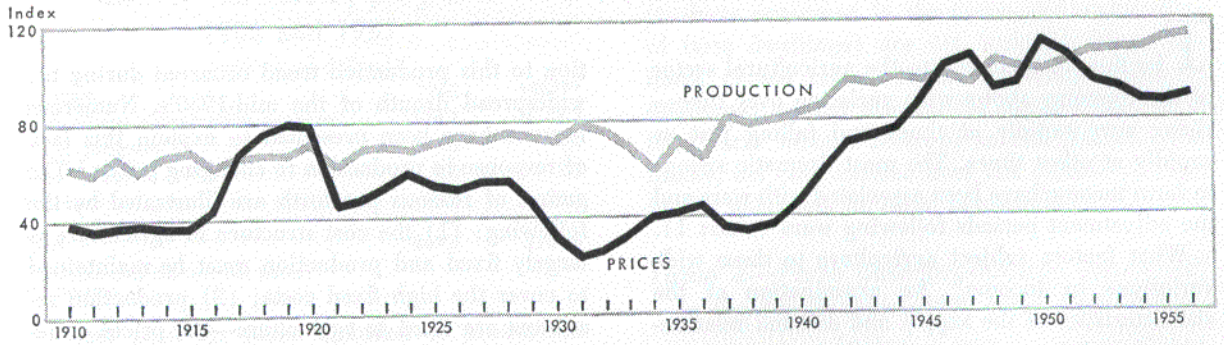


Chart 2—Index of farm production and farm prices

(1947-49 = 100)



with agricultural product prices but the resources remain in agriculture because they do not have (or do not see) alternatives outside of agriculture; (3) farmers do everything possible to maintain a suitable income and level of living, thus production must be maintained when prices fall (some people argue that farmers increase production to offset the falling prices).

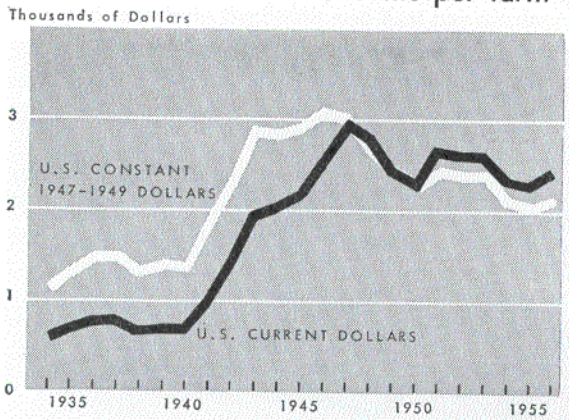
Regardless of the true reason, or the reason the reader prefers to accept, it is only important for the purposes of this article to recognize that agricultural production does display a great deal of stability, increasing gradually but steadily through time.

The demand for agricultural products is said to be extremely inelastic. That is, consumers tend to purchase nearly the same total quantity of food regardless of price. The demand for food does change, however, with increases in population, changes in income and changes in exports. Population growth increases the total demand for food. Although the per capita consumption of food (approximately 1,550 pounds per person each year) reflects remarkable stability through time, the quality of food consumed varies with changes in incomes. For example, as incomes increase consumers shift from cereals to livestock products, thus increasing the demand for farm products because an average of seven feed calories are required to produce one food calorie of livestock products. However, if incomes in the United States continue to increase as they have in the past, the food consumption patterns will tend to reach a level that will no longer change with further increases in incomes. The export demand for food products changes in either direction, increasing at times, decreasing at others.

Thus, we have noted that the supply of agricultural products over time does not exhibit price responsiveness and also that the total demand for agricultural products is inelastic. With these conditions, a small change in either the total demand or supply of agricultural products will result in wide changes in price level and incomes. And a change in demand is exactly what happens during war and post-war periods—the demand for food expands rapidly to supply a fighting force and friendly countries, and prices skyrocket; reductions in demand following a war precipitate wide drops in the price level. During the periods of World Wars I and II and the Korean conflict wide price changes occurred while the index of total farm production was almost uninterrupted from its gradual rise. These wide changes in price level experienced during and following war periods are reflected in the incomes going to agriculture.

It appears that the supply of agricultural products tends to outrun the demand for agricultural products through time. It is only during periods of 'emergencies' that the demand for farm products presses on the supply available and causes prices to rise very rapidly. Following these 'emer-

Chart 3—Net realized income per farm



gencies' the demand drops, prices fall and supply again shows signs of outracing available demand.

Since the last 'emergency,' the Korean conflict, the income to U. S. farmers from farming has been decreasing—from $18 billion in 1951 to $13.4 billion in 1956, a drop of 25 percent. At the same time, the income to farmers from nonfarm sources has been increasing — from $5.6 billion in 1951 to $6.7 billion in 1956 — as farmers turn more to outside employment to boost incomes. Nonfarm income has been increasing in importance over the last two decades and particularly since 1951. (See chart 1—the widening space between the two lines reflects the increasing importance of nonfarm incomes.)

The decline in farm income has also been offset somewhat on a per farm basis by a decrease in the number of farms. Farm numbers in the nation have declined 26.7 percent since 1934 and 10.3 percent since 1951. The fastest drop in farm numbers has occurred in the poorest farming areas and among the smallest farms — the share croppers in the South and the 'cut-over' area farmers, such as those in the northeastern part of the Ninth district.

In spite of the rapid decline in farm numbers since 1951 the decrease has not been as rapid as the drop in farm incomes, and thus, per farm income dropped substantially during the period (chart 3). In terms of purchasing power, per farm net realized income in the United States had declined to $2,033 in 1955 and recovered slightly to $2,131 in 1956.

A comparison of per capita incomes in the farm and nonform sectors of the economy shows that there is an increasing disparity between the two income flows (chart 4). Per capita farm income and nonfarm income figures are available only for the United States as a whole. Why is the disparity between per capita farm incomes and nonfarm incomes increasing? The answer, although quite simple, is somewhat unpalatable to many people. Essentially the problem has been caused by the fact that people have not been moving out of agriculture as fast as technological improvements have dictated. This is true in spite of the fact that the population movement out of agriculture has been extremely rapid in recent years.

District picture similar to nation

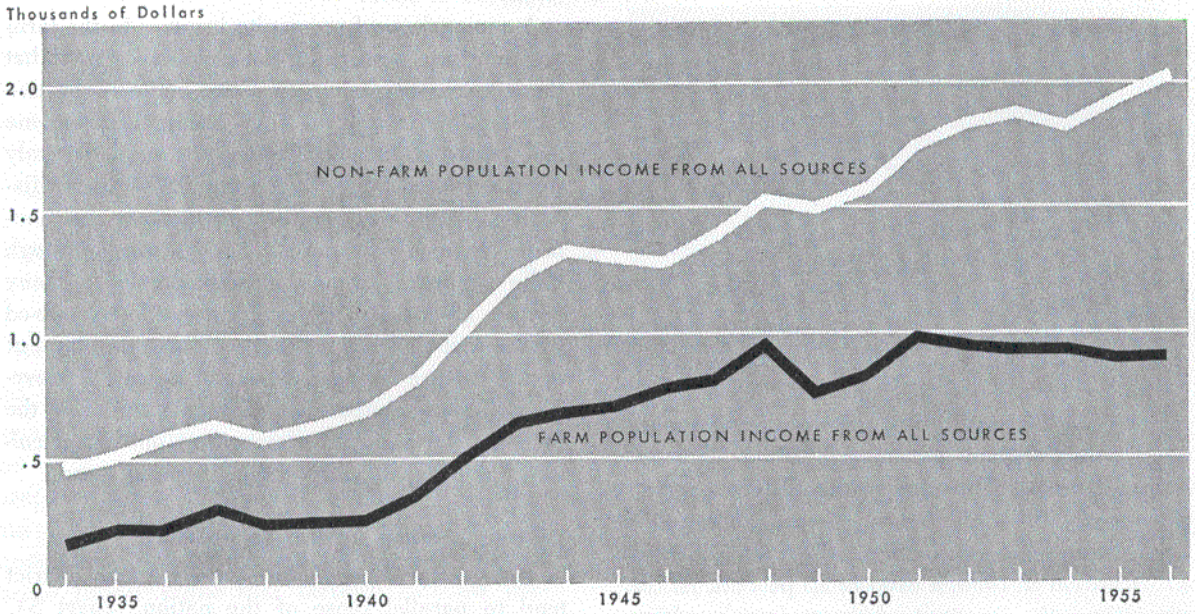
The per farm net income trends in the district tend to parallel those of the nation (chart 5). However, the per farm income in the district exceeded the national average in all years. The slight variations that exist between the district and the nation are those which would arise because of differences in the relative importance of crop and livestock programs, and because of variations in cropping conditions. However, the major factors affecting income for the district are similar to those affecting farm income nationally.

District trends in sources of income

A review of the trends in cash receipts from farm marketings in the district indicates that numerous shifts have occurred in the relative importance of the various crop and livestock enterprises (table on page 14).

Livestock and livestock products decreased in importance during the period since 1930; livestock income accounted for 72 percent of total cash receipts in the 1930-34 period, compared with 58 percent in 1956. Crop income conversely gained in relative importance and accounted for 42 percent of the total income in 1956.

Chart 4—Per capita income of farm and nonfarm populations



There are several reasons for the changing relative importance of total livestock and total crop receipts. First, the trend toward larger farms may have been accompanied by an increase in the size of the grain enterprise relative to the livestock enterprise, and this being the case, surplus grain over livestock needs would then exist on farms. An increase in the relative importance of wheat, soybeans and flaxseed would also point to an increase in grain sold off farms, rather than fed to livestock. Also, cash grain farming may have received some impetus under the crop price support programs which began in the early 1930's. Changes in the relative prices of various commodities would also influence production patterns.

Changes in livestock

The livestock products that have decreased in relative importance as a source of district farm income over the years are dairy products, hogs, chickens and broilers, sheep and lambs, and wool. Dairy products were the major source of cash receipts in 1930-34, accounting for 21.4 percent of total cash receipts compared with 12.8 percent (and third highest position) in 1956. The trend toward increased specialization has been significant in dairy production. Dairying as a source of income has increased in importance in the areas that specialize in dairying—areas in the eastern end of the district—while dairying has declined in other parts of the district.

Hogs declined from 18.6 percent of total cash receipts (the second highest source of cash receipts) in 1930-34 to 10.6 percent and fourth place in 1956. Cash receipts from the sale of hogs show considerably more variation than do dairy product receipts. However, all states in the district except Minnesota show a downward trend in the proportion of cash receipts coming from hog sales. Minnesota's position in hogs has been essentially unchanged throughout the period.

Chickens and broilers as a source of income in the district decreased from 3.3 percent in 1930-34 to .6 percent of total district cash receipts in 1956.

The specialized broiler industry which has developed mainly in the South and East has displayed production advantages in cost, quality, uniformity and constancy of supply that has replaced in large part the midwest flock-produced chicken in the retail market.

Sheep, lamb and wool production declined from 3.1 percent of cash receipts in 1930-34 to 1.8 percent in 1956. The decrease has been centered in the range areas. Farm-flock sheep production did not decrease as much; in fact, recently the farm-flock areas have registered increases in sheep and lamb production.

The only livestock source of income to show a substantial increase during the period since 1930 was cattle and calves. The states of South Dakota and Montana substantially increased the proportion of cash receipts coming from cattle and calves. South Dakota reached a high of 40.3 percent of cash receipts coming from the sale of cattle and calves in 1956, compared with 23.1 percent in the 1930-34 period. This was over twice as large as the next most important source of income which was hogs. Montana had 34 percent of cash receipts from cattle and calves in 1956, compared with 19.3 percent at the beginning of the period. Minnesota and North Dakota showed little change in the proportion of income received from cattle and calves during the period—Minnesota received 16.5 percent of total cash receipts from this source in 1956, while North Dakota received 15.5 percent.

Changes in crops

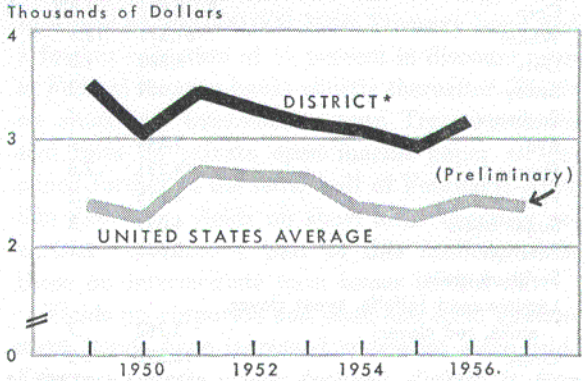
The major increases in cash receipts from crops were from wheat, corn, soybean and flaxseed sales. Wheat was the most important crop source of cash receipts in the district throughout the period; wheat receipts were 16.1 percent of cash receipts in 1956, second only to cattle and calves.

Cash receipts from wheat display considerable variation over time—due largely to variations in physical output. Only Montana had a substantial upward trend in wheat production throughout the period—from 19.9 percent of state cash receipts in 1930-34 to 39.8 percent in 1956. South Dakota received slightly over 7 percent of its cash farm receipts from the sale of wheat in both 1930-34 and 1956; however, it did receive as much as 15.4 percent of its cash receipts from wheat sales during the period—that high was reached in 1951.

Receipts from corn have increased from 1.8 percent of total district receipts in 1930-34 to 6.8 percent in 1956. Corn receipts increased as production per acre increased with the introduction of hybrid seed corn and with increased fertilization. Improved hybrids have also tended to expand corn producing areas; shorter maturing varieties have enabled corn production to move northward and westward in the district. Minnesota received 2.8 percent of its receipts from cash corn sales in 1930-34 and 11.1 percent in 1956. South Dakota increased corn from 2 percent of cash sales in 1930-34 to 8.1 percent in 1956. Cash receipts from corn in South Dakota show somewhat greater variability from year to year than in Minnesota; this may be explained mainly by less advantageous corn growing conditions in South Dakota. Corn was a negligible source of cash receipts in the other two district states.

Soybeans appeared on the scene during the period under study. In 1940-44 soybeans accounted for .3 percent of district farm sales and

Chart 5—Net realized income per farm



*State per farm net income figures are available only since 1949

increased to 4.2 percent by 1956. Soybeans have become an important crop in Minnesota, second only to corn in 1956, supplying 8.2 percent of cash farm income. Soybeans provided only 1.1 and .6 percent of the cash receipts in South Dakota and North Dakota, respectively, in 1956.

Flaxseed production increased from 2.8 percent to 4.8 percent of cash receipts between 1930-34 and 1956. Flaxseed production during the period grew substantially in North Dakota—to equal 14.9 percent of total cash farm receipts in 1956, up quite steadily from 5.1 percent in 1930-34. South Dakota also increased the share of its farm income received from flax, from 1.2 percent in 1930-34 to 3.6 percent in 1956. Slight decreases were noted in the proportion of cash receipts coming from flaxseed in Minnesota and Montana.

Long run changes in production and cash receipt patterns are discernible among many of the various commodities produced in the Ninth district. In addition to these changes that evolve over a period there are also yearly commodity cash receipt variations which have considerable effect on the district economy.

Year to year variations in the receipts from a particular commodity occur for two major reasons. First, physical output changes with variations in cropping conditions; this is particularly important in the Ninth district because much of the district is semi-arid. And, second, cash receipts from a commodity vary with variations in prices.

Individual commodity price variations cause

Trends in cash receipts in the Ninth district

	1930-34		1940-44		1950-54		1956	
	Average	Percent	Average	Percent	Average	Percent	Average	Percent
Livestock and livestock products								
Cattle, calves	$ 86,427	16.9%	$ 215,550	15.7%	$ 627,087	23.3%	$ 630,739	23.1%
Dairy products	109,281	21.4	201,867	14.7	323,407	12.0	348,861	12.8
Hogs	94,813	18.6	252,669	18.4	386,740	14.3	288,101	10.6
Eggs	23,274	4.6	85,787	6.2	152,896	5.7	152,897	5.6
Chickens and broilers	16,739	3.3	39,634	2.9	30,098	1.1	17,277	.6
Turkeys	7,846	1.5	20,248	1.4	35,166	1.3	42,187	1.5
Sheep, lambs	15,987	3.1	43,179	3.1	46,607	1.7	48,071	1.8
Wool	9,703	1.9	22,726	1.6	20,121	.7	18,087	.7
Other	4,561	.9	12,254	.9	16,415	.6	25,284	.9
Total livestock and livestock products	**$368,630**	**72.2%**	**$ 889,909**	**64.8%**	**$1,638,934**	**60.8%**	**$1,571,504**	**57.7%**
Crops								
Corn	$ 8,971	1.8%	$ 36,827	2.7%	$ 140,294	5.2%	$ 185,000	6.8%
Wheat	61,571	12.1	236,673	17.2	464,357	17.2	437,863	16.1
Oats	6,285	1.2	27,466	2.0	63,041	2.3	44,836	1.6
Barley	6,669	1.3	39,533	2.9	84,670	3.1	95,022	3.5
Soybeans			3,938	.3	56,796	2.1	114,358	4.2
Rye	3,244	.6	6,751	.5	10,837	.4	10,321	.4
Flaxseed	14,231	2.8	57,917	4.2	104,064	3.9	130,803	4.8
Hay	6,015	1.2	6,296	.5	22,100	.8	22,557	.8
Sugar beets	4,064	.8	7,737	.6	16,483	.6	24,695	.9
Potatoes	10,693	2.1	21,680	1.6	33,472	1.2	31,294	1.1
Sorghum grain			282				545	
Legume seed (alfalfa, sweet clover, alsike, red clover)	3,792	.7	4,697	.3	8,044	.3	6,367	.2
Other	16,572	3.2	37,423	2.7	53,477	2.0	5,037	1.8
Total crops	**$142,128**	**27.8%**	**$ 482,485**	**35.2%**	**$1,057,430**	**39.2%**	**$1,153,408**	**42.3%**
Total crops and livestock	**510,738**	**100.0%**	**$1,372,394**	**100.0%**	**$2,696,364**	**100.0%**	**$2,724,912**	**100.0%**

production planning problems for farmers. To the extent possible, farmers shift back and forth between commodities to the higher return enterprises attempting to maximize income from available resources. The shifting of resources between commodities causes variability in the supplies, and in turn, in prices, of the individual commodities. Although individual commodity supplies are quite variable over time the total output of agriculture as noted earlier displays extreme stability.

Thus, we have noted two basic problems facing farm operators today: the major problem of widely varying incomes; and, the lesser problem of commodity price variation.

NATIONAL BUSINESS CONDITIONS

From the National Summary of Business Conditions released by the Board of Governors March 17, 1958.

INDUSTRIAL PRODUCTION. The Federal Reserve Board's seasonally adjusted index of output at factories and mines declined three points further in February to 130 percent of the 1947-49 average, 11 percent below the high level of a year earlier. Severe weather contributed to the reduction in industrial activity last month but also led to a rise in the Board's index of utility output of electricity and gas.

Durable goods production in February was 16 percent below a year earlier, reflecting widespread curtailments in equipment and consumer goods industries and sharp reductions in production of steel and most other materials. Over-all activity in machinery and other equipment lines declined to a level about 15 percent below the record year-ago level. Production of consumer durable goods was down 20 percent from a year earlier and at the lowest level since December 1953. In early March auto output was curtailed further and steel production remained near the low February rate.

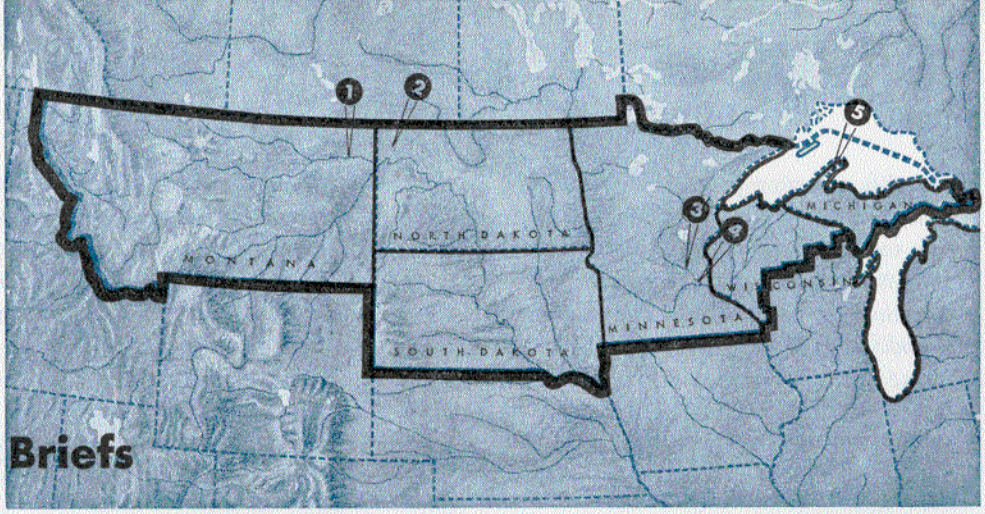
Activity in the rubber products, paper, chemicals and petroleum refining industries edged downward in February, and total output of nondurable goods was about 5 percent below last year's high. Minerals output also receded somewhat further last month, and in early March was reduced considerably owing to a sharp curtailment in crude petroleum production.

COMMODITY PRICES. The general level of wholesale commodity prices rose slightly further from mid-February to mid-March, reflecting increases in farm products and foods. With market supplies continuing much smaller than usual for this time of year, prices of livestock and meat and fresh fruits and vegetables rose further and were about one-fourth above a year ago. Industrial commodities changed little at a level slightly below the January high.

Consumer prices rose .6 percent in January, owing mainly to increases in fresh foods. Services continued to advance while prices of new autos, some household goods and apparel declined.

SECURITY MARKETS. Yields on long term government bonds changed little from mid-February to mid-March, despite the cash sale in early March of a new $1,250,000,000 1966 Treasury bond and a further reduction of ½ percent in discount rates at Federal Reserve banks shortly thereafter. Yields on short and intermediate term Treasury issues and rates on private open market paper all declined further in the latter half of February. After late February, yields on short term Treasury securities recovered a part of this decline, while those on intermediate term issues leveled off.

Yields on corporate and state and local government bonds have increased somewhat since mid-February. Stock prices declined slightly in late February, then increased in early March.



Economic Briefs

1. New crop set for tryout

About 55,000 acres are scheduled for production of safflower seed in northeastern Montana and western North Dakota during the 1958 crop year. The oil from this seed is used for a variety of purposes, but the most recent use is as an edible oil for combating certain types of heart diseases. If safflower does well General Mills, Inc. of Minneapolis and Pacific Vegetable Oil Corporation of San Francisco plan to build a processing plant somewhere in the area this summer.

2. N. D. oil project approved

The North Dakota industrial commission has approved a giant pressure-maintenance project for the neighboring oil fields of Tioga and Beaver Lodge in the Williston basin. Several operators plan to inject water into the Madison lime in a program involving 458 wells on 40,436 acres. They hope to boost ultimate recovery from an estimated 132 million barrels through primary means to an estimated 258 barrels through water injection. This would be about 72 percent of the estimated 358 million barrels of original oil in place. The two pools had produced 35.3 million barrels up to January 1, about 10 percent of the original oil.

3. Firm chosen to build Minn. nuclear plant

The Atomic Energy Commission has picked Nuclear Products—Erco Division of ACF Industries, Inc. to build and test a boiling water nuclear reactor for the Rural Cooperative Power Association of Elk River, Minnesota. The AEC will retain ownership of the reactor, with the co-op purchasing steam for its system. Construction of the 22,000 kilowatt capacity plant will begin this spring, with testing scheduled for the end of 1959 and full operation scheduled for early 1960.

4. Ward's plans 3 stores for Twin City area

Montgomery Ward and Company will build three major stores in Minneapolis and St. Paul suburbs, the first of which will be started later this year in Bloomington and opened in 1960. The two others are planned for suburbs north of Minneapolis and St. Paul, but may not be built for several years. The two-story, 150,000 square-foot store, at a cost of $2.5 million, will be part of a new $8 million shopping center being developed on a 46-acre tract south of Minneapolis.

5. Michigan firm halts copper operation

The Quincy Mining Company, Hancock, Mich., has closed down all its copper operations due to the low price of copper. This affected the reclamation plant on Torch Lake and the smelter, both near Hancock. The plant was closed January 4, after operating quite steadily since it was built in 1943. During 1956, the reclamation plant handled a total of 988,041 tons of mill tailings with a recovery of 4,800,032 pounds of copper, or 4.86 pounds per ton of tailings treated.