FEDERAL RESERVE BANK OF MINNEAPOLIS
MONTHLY Review
VOL. 11 NOVEMBER 30, 1954 SERIAL NO. 23

FROM LATEST CALL REPORT

Member Bank Deposits Set New Mark

THE autumn call reports disclosed that district member bank deposits had advanced by $312 million—to a new high level—since the previous call date, reflecting a combination of forces.

Part of the gain since June is usual. It results from the large volume of agricultural commodities moving off farms during the harvest season. Buyers of these products from all over the world make payments to Ninth District farmers, whose deposit balances move up in consequence.

But a part of the deposit gain reflects other than seasonal factors. This is disclosed by a comparison of deposits on this year's autumn call with those of a year ago. An autumn-to-autumn increase of $340 million was registered.

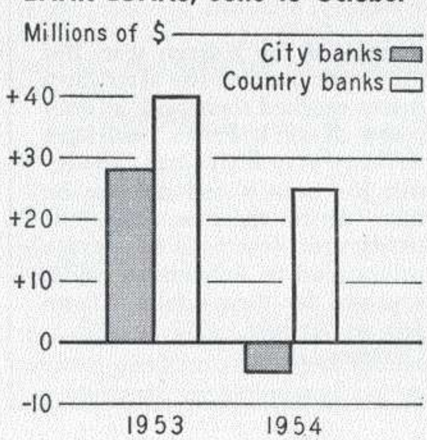
Principal among factors responsible for this increase was a reduction of reserve requirements for member banks last summer. This reduction permitted all member banks to hold a larger amount of earning assets and deposits per dollar of reserves than formerly. Thus credit expansion, with attendant deposit creation, was fostered.

An important part of the recent credit expansion occurred on October 4—only three days prior to the last call date—when many banks purchased a new issue of U. S. Treasury notes and made payment by a credit entry to Treasury deposits. These credits, of course, helped to establish the new high level of deposits in Ninth district banks. As they are withdrawn and spent by the Treasury, however, these deposits will, in part, be lodged at different banks from those which now hold them.

Efforts of district member banks to keep fully invested in the face of a more rapid growth of deposits than of loans are reflected by the enlargement of investment portfolios. Securities held by these banks in October were valued at a figure $196 million higher than a year earlier and $218 million higher than at the end of June, 1954.

In the three months and seven days, which elapsed between the mid-year call date and the autumn call date, Ninth district member banks added $20 million to their loans. During this period a liquidation of corn loans guaranteed by the Commodity Credit Corporation took place. Otherwise, the loan increase would have amounted to twice what it did. On October 7, total loans amounted to $1,480 million.

CHANGE IN DISTRICT MEMBER BANK LOANS, June to October



Commercial and industrial loans advanced by $7 million, while real-estate loans were up by $25 million. Consumer loans rose $20 million.

A study of the call reports further disclosed a difference in the behavior of loans between the reserve city banks and the country banks. Total loans, for example, declined by $5 million at reserve city banks, while they rose almost $25 million at country banks. Thus, all the loan growth in the most recent call period took place at country banks.

While the entire $7 million addition to loans classified as *commercial and industrial* was made at the city banks, this gain was more than offset at these banks by a $15 million reduction of Commodity Credit Corporation loans. Other components of the city loan total changed very little in the period June through October, 1954.

At country banks there was no change in the total *commercial and industrial* loans, but $12 million of Commodity Credit Corporation loans were repaid. In spite of this, country bank loan totals rose almost $25 million. Substantial extensions of consumer and real-estate credit were responsible. END

Farm Forecast Review

"RELATIVE STABILITY" KEYNOTES USDA FARM OUTLOOK DISCUSSIONS

CONDITIONS resulting from the Korean war loom large among the influences that have been affecting the economic climate of agriculture. Ninth district farmers have already experienced most of the adjustment from a wartime to a "relatively peacetime" economy.

What, then, are the likely trends for agriculture in the months ahead? Each fall the U. S. Department of Agriculture holds its annual Outlook Conference to review the economic conditions that affect farmers and to present the Department's best-informed estimates of the future. The following observations about the outlook are based largely on information provided in connection with these forecasts.

Present price levels may be forecast of 1955

USDA forecasters indicate that farm prices during 1955 will probably average very close to the levels of late 1954. Total farm output might drop slightly, they think, due to acreage restrictions and some drought effect. As a result, farm income in 1955 may be slightly below this year. But the general tone of predictions is for stability near present levels. This would mean a parity ratio (ratio of prices paid by farmers to prices they receive) in the high 80's.

To maintain net income under these conditions, farmers will need to make further improvements in efficiency—to cut costs and save expense while maintaining output close to present levels.

1954 farm income down 4 percent

For the nation, farmers' total gross income in 1954 is estimated to be about 4 percent lower than in 1953. This estimate is based on (1) somewhat lower prices and (2) a volume of farm marketings about the same as last year. Production costs are estimated at about 3 percent lower. Net income of farmers may be about 6 percent below last year.

For the first 8 months of 1954, district cash receipts were down only 1 percent compared with a year ago—less than the national decline of 4 percent. Thus, the decline in farm income between 1953 and 1954 will very likely be less for the average Ninth district farmer than for farmers in the nation as a whole.

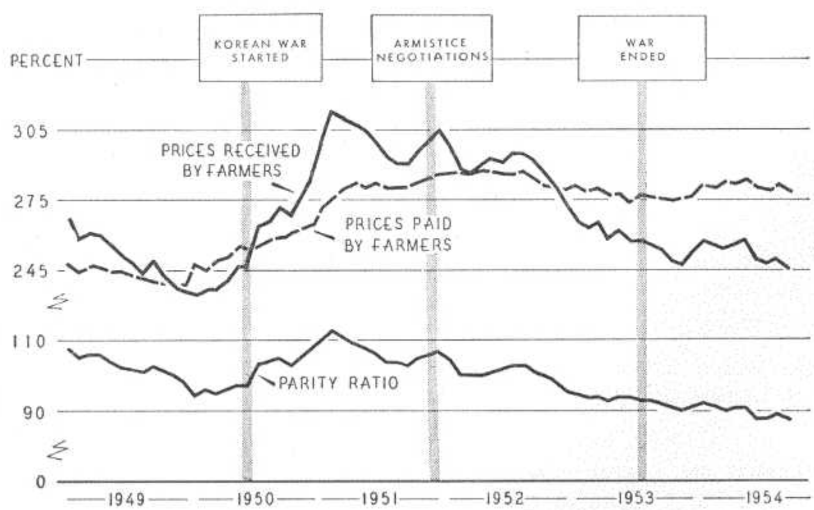
Prices of things farmers buy have declined very little during the period of sharp price declines for farm products. Likewise, only slight further declines are expected during 1955. This follows a consistent pattern—for as farm prices move up and down in sensitive response to changing supply and demand conditions, prices of things farmers buy characteristically follow a more steady course.

Expense outlays are down

Production expenses on farms reached their peak in 1952, totaling \$23 billion, or nearly four times the prewar level.

Such expenses declined about 5 percent in 1953 and are expected to decline another 3 percent in 1954. Next year's outlook is for a further slight downward adjustment in total farm operating expenses.

Higher cash operating costs are typical of the Ninth district as well as in other farming areas. In one sense they establish a higher minimum of income required to pay purely operating expenses. But many of these additional cash ex-



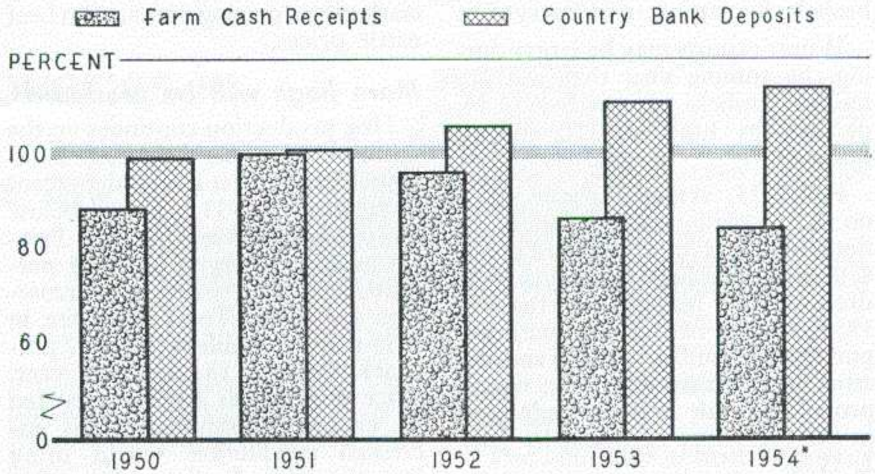
Farm prices (solid line) went up sharply with the outbreak of hostilities in June of 1950. They reached an all-time high in February, 1951. Then in September of 1952, farm prices began the prolonged decline that has extended over a 2-year period.

In contrast to the downtrend of prices farmers receive, prices of things farmers buy (broken line) rose slowly during the early months of the Korean war. But they continued to rise after farm prices reached their peak in February of 1951. Prices paid have declined very little since. The result has been a real squeeze on farm profit margins, with the parity ratio (the ratio of average prices paid to farmers to prices received by them) falling from 103 in August, 1952, to 87 in October, 1954.

penses go for things which increase output, make production more efficient, and tend to make production more certain under adverse conditions. Thus, while they add to the financial hazards of farming, they tend to reduce production and income risks to some extent.

During 1955, district farmers will be under additional pressure to make the right choice between which expenses on the farm can be reduced to maintain income and which expenses must be continued or perhaps even increased in order to maintain income.

Farm Cash Receipts and Average Deposits at Country Banks for the Ninth district, 1950-54—shown as a percent of 1951



The chart shows that for the Ninth district, deposits at country banks have been rising steadily since 1951, at the same time that cash receipts from farm marketings have declined. Farm cash receipts declined 16 percent from 1951 to 1954; average deposits at country banks increased by 14 percent.

*Estimate based on first eight months.

Off-the-farm conditions rule

Assuming a continued high level of production from the nation's farms, what are the conditions that lead the forecasters to expect relatively stable farm prices, costs and incomes in 1955? Nearly all these conditions are determined largely by influences outside of agriculture.

Most important from the standpoint of demand is the over-all level of income and spending on the part of the nation's consumers. This year, despite some decline in employment, the total income after taxes of consumers was slightly larger than last year. Consumer spending also is expected to increase 1 percent during 1954, exceeding the record spending of last year. Most economists analyzing the outlook expect a continued high level of consumer spending during 1955.

Since consumers normally spend about 25 percent of their disposable incomes (after taxes) for food, this would seem to assure a continued high level of demand for farm products.

Exports of farm products are expected to be higher in the months ahead, according to USDA estimates. They edged up 4 percent during 1953-54, reversing the sharp cutback of farm exports in 1951-53. The decline from $4.1 billion in the fiscal year 1951-52 to only $2.8 billion in 1952-53 measured 25 percent. This past year (ending June, 1954) farm exports totaled $2.9 billion. Next year they may total $3.2 billion, or a further 10-percent rise.

Making the adjustment

Although farm prospects for 1955 indicate little or no improvement in the relationship between prices and costs, they at least call for an end to the sort of "active squeeze" felt over the past two years. Under these conditions farmers may be in a somewhat better position to make needed adjustments in their operations. New enterprises and new production can be entered into on a basis more in line with current costs and returns.

USDA Estimates for District Farm Commodities

Just as the type of farming varies from one section of the Ninth district to another, the outlook for those areas is closely geared to the prospects for the individual commodities produced. Here are summarized forecasts for the main farm commodities produced in the Ninth district.

Dairy products

Dairy prices during 1955 are likely to average at a level similar to the last 9 months of 1954. Production of milk, consumption of dairy products, and cash receipts of farmers from the sale of dairy products are also expected to be similar to 1954.

For this year, total milk output of dairy farmers is estimated at about 124 billion pounds. With normal weather and feed conditions, about the same output is expected in 1955.

This year farmers offset part of the decline in dairy prices by increased production. Despite declining prices the cash receipts from the sale of dairy products for 1954 total $4.2 billion. This compares with $4.4 billion in 1953, and $4.6 billion in 1952. Receipts in 1955 promise to be close to $4 billion.

Wheat outlook

Total U. S. wheat supplies for the current 1954-55 year are estimated at about 1,867 million bushels. This consists of a carryover of 903 million bushels, an estimated crop of 959 million bushels, and an allowance for imports of 5 million bushels (mostly feed wheat from Canada).

Domestic use of wheat is expected to be 660 million bushels during this period. That leaves 1,207 million bushels for export and carryover.

Wheat exports may be larger during the coming year than the 216 million bushels exported 1953-54, perhaps as high as 250 million bushels.

For 1955, average wheat yields on the 55 million acres allotted nationally would mean a crop of about 850 million bushels, roughly a hundred million bushels less than in 1954. A crop of this size, with exports at 250 million bushels and the same domestic use of wheat, would probably result in some reduction in the carryover of wheat by July 1, 1956.

Support levels for the 1955 wheat crop will not be less than $2.06 per bushel, national average—82½ percent of the August parity price for wheat. This support rate will apply to the commercial wheat area. In the noncommercial wheat area, supports will be 75 percent of this level, or about $1.50.

Livestock and meat

Livestock and meat production during 1955 will continue large. Red meat production in 1954 is expected to total about 25½ billion pounds, representing a 20 percent increase since 1949, and a new record.

Total meat output may be close to 26 billion pounds in 1955.

Cattle numbers at all-time high

Beef cattle numbers appear to be at the peak of the current cattle cycle. A slight reduction in cattle numbers is expected by the end of this year, USDA livestock specialists believe.

Cow numbers this coming January are expected to be no larger than a year ago. Large slaughter of young stock suggests also that fewer beef heifers and steers will be on farms and ranches this January. But because of our present large capacity for production, and adequate feed supplies, the reduction of cattle herds during 1955 is likely to continue moderate.

As a result, total beef output is expected to remain close to 1954 levels. Favorable weather would reduce slaughter somewhat; severe drought would step up the rate of marketings, putting pressure on beef cattle prices.

More hogs will be produced

Hog production continues on the uptrend. This year's pig crop numbered 91.5 million head—12 percent more than in 1953 but well below the 102 million head of 1951. Present estimates suggest a 2 to 5 percent increase in spring pig farrowings for 1955. Total slaughter in 1955 may be 5 million larger (7 percent) than in the current year. Since corn prices are not expected to change substantially, this increased production would bring less favorable feeding ratios as a consequence of lower prices for market hogs.

Sheep and lambs

Sheep inventories this January will show the third reduction in 3 years. As a result, lamb which now provides less than 3 percent of our total meat supply will be more scarce in 1955.

Soybeans set a record

Ninth district farmers helped produce a record U. S. crop of soybeans in 1954, totaling 331 million bushels. Since corn acreage will again be restricted in 1955, continued large acreage of soybeans is expected.

Support prices for soybeans are discretionary. The 1954 crop is being supported at 80 percent of parity—at about $2.22 per bushel, national average. No support for 1955 has been announced.

Export outlets for soybeans have been increasing during the past few years. Some 50 million bushels may be exported in 1954-55. This would leave about 250 million bushels available for crushing and domestic use. This is a larger supply than a year ago, but does not differ much from the quantities crushed in the 1950 and 1951 crop years.

Flax production has also been large in recent years, larger than our domestic use of flaxseed. But export sales (at well below domestic prices) have reduced stocks. Farmers increased their flax plantings 26 percent in 1954—mostly in the Dakotas and Montana.

With additional wheat acreage reductions in 1955 (wheat allotments will be 11 percent smaller than this year) normal flax yields would probably result in a crop of about 50 million bushels—some 30-40 percent above present commercial use. Prices this year have averaged close to the support level of $3.14 per bushel—about 70 percent of parity.

Poultry and eggs

The year 1954 has not favored producers of eggs, chickens and turkeys. Egg prices are currently the lowest since 1950, broiler and turkey prices the lowest since 1942. Production of all three have set new records, ranging from 6 percent to 9 percent higher than the 1953 output.

The normal reaction would be for farmers to cut back egg production next year, with some improvement in prices expected as a result. Broiler and turkey raisers, more dependent on volume for efficient production, may not cut back as much.

Feed supplies to continue large

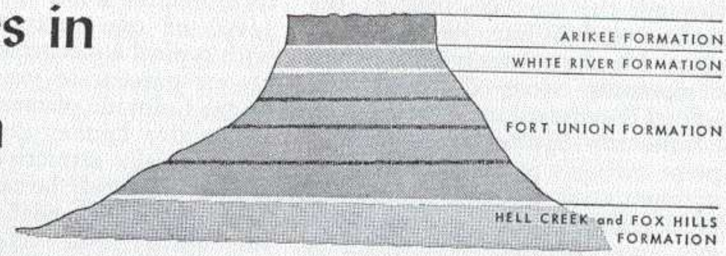
Despite spreading drought, the total supply of feed grains and other concentrates for the 1954-55 feeding season is only slightly smaller than the record supply of 1950-51. It is 4 percent larger than 1953-54. Most of the increase over last year consists of larger carryover stocks of feed grains, however, the bulk of which are under loan or owned by the Commodity Credit Corporation.

Because of larger livestock numbers, feed supplies for grain-consuming animal unit are about the same as last year.

Protein feed supplies are also currently about equal to the 1953-54 season. Hay supplies are slightly larger than last year, but are poorly distributed in many areas. District farmers are much better off in this regard than many other sections in the Midwest.

Department economists expect feed prices to average about the same this season as the price levels of 1953-54, with total feed grain production in 1955 maintained at or near 1954 output. END

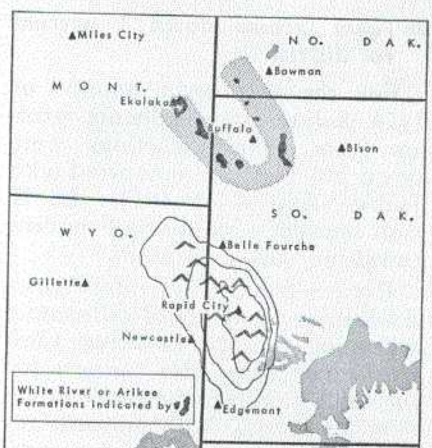
Uranium discoveries in the Black Hills area



URANIUM ORE discoveries in the Black Hills and surrounding area have been accelerated during the past few years by the Atomic Energy Commission's program to encourage development of domestic uranium sources. Small quantities of carnotite (a bright yellow, earthy ore of uranium) were mined south of the Black Hills as early as 1952. In December of that year the AEC opened a station at Edgemont, South Dakota, for the purchase of uranium ores.

Since that time, many claims have been staked and new mines opened at widely scattered points in eastern Wyoming and western South Dakota. Until this year, however, production has been relatively small and the ores thus mined were shipped for processing to plants on the Colorado plateau (scene of the current U. S. uranium "boom").

Spring and summer of 1954 witnessed a considerable increase in output from the Black Hills area. By September, AEC representatives indicated the area had enough production to warrant a processing plant of "moderate capacity," and preliminary discussions with contractors to build such a plant were going on.



Deposits typically small, low-grade

Uranium ores of this area typically are found as small, low grade deposits. They occur primarily in sandstone beds (similar to those on the Colorado plateau), although igneous rocks and even lignites have shown possibilities. Geographically they range from the immediate Black Hills uplift to the badlands and prairie region that stretches for hundreds of miles in all directions from the Black Hills.

One locality of interest is near the junction of Montana and the two Dakotas. Here a number of large buttes form a loose horseshoe cluster that curves around the southern end of the Williston basin's oil-rich Cedar Creek anticline. The buttes, bearing such names as Long Pine Hills and Slim Buttes, are capped by a steep-sided layer of sandstone called the *Arikee formation,* as indicated in the diagram above. Parallel bands of lignite, in which uranium minerals have been chemically "tied" to carbon, contour the eroded hillsides.

A connection between carbon and uranium has been noticed for some time—on the Colorado plateau fossil plants are found in abundance in uranium ore deposits. AEC geologists took a clue from this association and started checking coal deposits. As a result they found some lignite beds in the Dakota-Montana region to be strongly radioactive.

Story of buttes provides clue in search

The buttes are actually scattered remnants of once-continuous rock layers. The story behind the formations they contain suggests a practical guide in the search for uranium deposits of this type.

The buttes had their "beginning" toward the close of the age of dinosaurs, when a great inland sea—one that had covered this region for millions of years—began a slow retreat. Migrating shorelines left a thick beach of sand—which now forms the Fox Hills sandstone indicated in the diagram above. In broad lagoons and stagnant swamps left by the shifting beach, lush growths of vegetation collected into thick layers of peat. These carbon-rich peat beds, intermittently overlain by thick layers of sand (the sea staged numerous "comebacks") make up the lignite-banded Fort Union formation well-known in the region today.

Those formations called *White River* and *Arikee* (they are the top ones and last to be deposited) represent a rather dramatic change in conditions. Fine volcanic ash containing traces of radioactive minerals was sifted in great quantities into stream-borne sands that comprise these layers. The ash, likely carried by winds from volcanic outpourings in the Yellowstone region, was the original source of uranium now found in the lignite beds.

In the millions of years that have elapsed since these deposits were laid down, the continent has been raised with respect to sea level, and erosion has cut deeply into the formations depicted above. In fact, only a few traces of the Arikee remain in the region.

The "finishing touch" was supplied by rainwaters soaking down through the sand-ash beds of the Arikee and White River formations. Minute amounts of uranium compounds were dissolved and seeped downward until they reached the top lignite layer. At that point carbon's peculiar affinity for uranium took the compounds out of solution, and the uppermost lignite layer became radioactive. A clue for further exploration has, of course, been provided by this relation between volcanic ash layers and lignite layers.

The concentration of uranium in these lignites is low—perhaps about 1/100 of one percent compared with typical concentrations of 1/10 of one percent or greater for ore on the Colorado plateau. Therefore, radioactive lignites do not appear commercially attractive at present. It may ultimately be possible, however, to burn the coal, make use of heat energy, and recover uranium ores as a by-product from ashes. The AEC has carried out investigations directed toward their use.

In summary, utilization of the lignites must be considered only a future possibility. For the present, production of uranium ores from other types of deposits in the Black Hills and surrounding area has apparently reached a point where its first processing plant is warranted. In the years ahead, continued discovery of at least small amounts of satisfactory grade ores can be expected. END

CURRENT TOPICS ☆ *Business* ☆ *Banking* ☆ *Farming*

Firmness Marks District Economy Near Year's End

THE Christmas season is here again with its stimulating influence on sales and trade activity for the twelfth month of 1954.

Based on current conditions in the district, the 1954 holiday season promises from an economic viewpoint to be an excellent one for consumers and businessmen alike. This conclusion seems logical, because total bank deposits have been at record levels in recent weeks, and there are indications of strong spending for goods and services as measured by the expanding volume of bank debits in relation to year-ago levels. Department store sales, too, have been running above those of a year ago. Even farmers, with just a little less cash income than they had in 1953 are spending about as much as a year ago, judging by current bank debits and store sales in the farming areas.

District manufacturing industries, many parts of which have been in the economic doldrums during part or most of this year, are now showing signs of renewed activity. Leaders in these fields seem to be thinking in terms of strength in the economy, not weakness. Perhaps one factor in their thinking is the general inventory liquidation which has been in progress for over a year and which many expect may be near its cyclical low point. In fact, most observers of the business scene in the district now seem to be discussing the speed, extent, and duration of a possible rise in activity during the period immediately ahead.

Unemployment apparently has leveled off in the district and there seems to be a basis for the assumption that seasonal unemployment this winter will be less than that of a year ago.

Then, too, total agricultural production and marketings thus far in 1954 have exceeded earlier expectations. District cash farm income during the current year may average almost the same as a year earlier. Competent observers say that farmers now are spending a bit more freely compared with a year earlier, apparently because they have regained much of their confidence following the Korean post-war decline.

The following factors then summarize the economic situation: large farm marketings; a less than seasonal decrease in employment; a record level of bank deposits; expanding bank debits and store sales; and an apparent optimistic attitude towards the future. All these are important in shaping up the economic forces for a strong finish in 1954's final month.

FARMING

► *Farm income down 1 percent for district*

For the first eight months of 1954, cash receipts of district farmers from their marketings were down just 1 percent compared with January-August of 1953. (U. S. cash receipts were down 4 percent compared with a year ago.)

Figures for the individual states show more pronounced differences according to area, however. Cash receipts of Minnesota farmers for the eight-month period were down only 1 percent. Montana cash receipts were down 7 percent compared with a year ago. In North Dakota, where crop sales are the main source of income, cash receipts were down 5 percent. In South Dakota, where livestock is the main income source, cash income during January-August was 10 percent higher than last year.

► *Corn quotas announced*

Corn acreage allotments will be in effect for the 1955 corn crop, the U. S. Department of Agriculture has announced. The exact amount of national and state allotments will be announced later on.

Allotments will apply only to the so-called commercial corn growing area, which will cover an 804-county area in 1955 instead of the 834 counties included in 1954. The change affects only South Dakota among the Ninth district states, where Buffalo, Hand, Lyman and Spink counties have been transferred out of the commercial area.

To be eligible for the corn support program, district farmers will have to comply with all other acreage allotments as well as restrictions on corn acreage. However, the Agricultural Act of 1954 exempts corn from marketing quotas, so there will be no direct penalties for overplanting.

Outside the designated "commercial" counties there are no acreage allotments, but producers will get only 75 percent of the ¾ of the support rate that applies to the commercial area.

BUSINESS

► *Iron ore shipments down sharply*

The iron ore shipping season from the Lake Superior region was scheduled to close on November 29, with the loading of the last boat at Escanaba, Michigan. The ore docks at Duluth were already closed at the end of October.

The tonnage of ore shipped in the past season may be down more than a third from the total shipped in 1953. By November 8, the shipments were down 33.5 million gross tons from their record level of 92.6 million gross tons in the comparable period of last year.

► *No upturn yet from new orders*

The rise in new orders received by manufacturers in the nation apparently has not stimulated noticeably the output among the district's industrial firms.

In September, the kilowatt hours of electrical energy used by industrialist consumers in the eastern half of the district did not rise significantly; and in October, they declined more than a year ago. The energy used during October was only a fraction of one percent above the total used a year ago.

BANKING

► *Bank deposits and assets rise*

The deposits and earning assets of both city and country member banks were larger at the end of October than at the end of September. The deposit gain of $108 million contrasts with a gain of only $10 million in October last year.

The loan total for all district member banks changed very little, since an increase of $13 million at the country banks was "masked out" by a reduction of $14 million at city banks.

A drop in the amount of loans classified as "Commercial, industrial, and agricultural," together with the repayment of consumer loans, accounted for the loan decline at city banks.

But the value of investments at these banks increased by $35 million, so that total earning assets grew despite loan repayments. At the country banks net purchases of securities amounted to $26 million in October.

Thus, investments of all district member banks increased by $61 million in October. Of this amount $58 million represented the purchase of U. S. government obligations. END

HIGHLIGHTS FROM NATIONAL CONDITIONS . . . .

Industrial production, which had shown a slight increase during October, continued the upward trend into November. Unemployment declined more than seasonally in October, while construction activity and retail sales were maintained at high levels. In early November, sales at department stores showed a greater than seasonal rise. Commodity prices generally continued stable while common stock prices rose further.

Prices—The average level of wholesale commodity prices was stable from mid-October to mid-November. Prices of some foodstuffs, which had declined earlier, strengthened. Industrial materials generally changed little. Prices of hogs and products rose somewhat as marketings, contrary to expectations, increased little further. Wool prices decreased, but steel scrap, copper scrap, and rubber advanced.

Consumer prices are estimated to have continued their slightly declining trend through mid-October, reflecting mainly decreases in retail prices of meats. Since then little further change has occurred.

Member Bank Position—In early November member bank reserve positions tightened due to a currency outflow and a decline in float. Reserve positions eased substantially thereafter, however, reflecting primarily a reduction in treasury balances at the Reserve and an increase in float. During October and early November the Federal Reserve purchased approximately 700 million dollars of government securities, about offsetting the effects on bank reserve positions of a seasonal outflow of currency and an increase in required reserves.

From the National Summary of Business Conditions prepared by Board of Governors of the Federal Reserve System, November 15, 1954.

ECONOMIC *Briefs*

SIGNIFICANT HAPPENINGS IN THE NINTH DISTRICT

1 - Flathead area job outlook good

The employment outlook for the Flathead area of northwestern Montana indicates that more construction jobs will be available during the coming winter than was the case during the winter of 1951-52, when construction work on nearby Hungry Horse dam was at its peak. Estimates of the number of jobs to be available during January and February (assuming reasonable weather) range from 1,000 to 1,200.

By early November nearly 1,600 persons, representing a weekly payroll of $150,000, were at work on the new Anaconda Aluminum Company plant at Columbia Falls.

2 - Discovery extends oil field

A discovery well brought in by Shell Oil Company in Wibaux County, Montana, flowed at a rate of 734 barrels of oil a day during preliminary tests. The section tested was a 30-foot thick limestone layer at a depth of about 8450 feet.

Significance of the discovery is that it extends the known length of Pine Field (presently the most prolific oil field on the Cedar Creek anticline) to about 6½ miles.

3 - Plan Rapid City refinery

Plans for construction of a 3,000-barrel-a-day oil refinery at Rapid City, South Dakota, were announced in early November by the Great Plains Refinery and Development Company. The firm has taken an option on 76 acres of land southeast of the city, although no date has been set for starting construction. The refinery would cost between $2 million and $3 million.

4 - Resistant durum speeded

Fifty bushels each of four promising strains of rust resistant durum wheat have been sent from Langdon, North Dakota, to Yuma, Arizona, to be grown on irrigated land during the winter. It is hoped that 5,000 to 6,000 bushels of seed will be realized from the planting.

This seed will be made available to North Dakota growers next spring at a cost of $7 to $10 a bushel. Durum millers, among other interests, have advanced money for the seed increase program. These emergency moves are directed against the 15-B stem rust epidemic that has drastically reduced durum output.

It is hoped that by 1956 enough seed will be available for all growers. The four new rust-resistant strains, developed at North Dakota Agricultural College, started as just four individual seeds in 1952.

5 - New Mesabi Range plant

The Plummer mine and ore beneficiation plant near the town of Taconite, Minnesota, began operations this fall. It is the sixth plant to be built by U. S. Steel's Oliver Mining division for the purpose of preparing low grade iron ores for commercial use. The plant will turn out iron ore concentrates at a rate of 1.2 million tons annually.

6 - Refrigerator cars for N. P.

A new fleet of 500 ice-refrigerator cars is rolling off the assembly line at Northern Pacific railroad's car shop at Brainerd, Minnesota. Cars are being turned out at a rate of about five a day, with completion of the $5 million order scheduled for the end of November. These cars are capable of carrying a 40 percent heavier load than earlier models. They will be used principally for hauling fresh fruits and vegetables, but will accommodate frozen foods and other perishables as well.

7 - Southdale center begins

Ground breaking ceremonies on October 29 marked the beginning of construction on the $10-million Southdale shopping center in the Minneapolis suburb of Edina. Two Minneapolis department stores, Dayton's and Donaldson's, are the major participants.

The shopping center, scheduled for completion in the fall of 1956, is the largest in this area and one of the major suburban commercial developments in the nation. Two-thirds of the available 800,000 square feet of commercial floor space has now been rented and negotiations with other prospective tenants are proceeding daily. Also included on the 500-acre tract will be a large residential development.

8 - Bond issue for new power plant

The city of Gladstone, Michigan, sold a $2.1-million issue of electric utility revenue bonds in October, the proceeds to be used for construction of a new municipal utility

For a number of years Gladstone (and near-by Escanaba) have purchased their power needs wholesale from Mead Corporation's Escanaba Paper mill. The power to be released to Mead by construction of the municipal plant will permit continuation of expansion plans at the paper company.