

CROP and BUSINESS CONDITIONS

IN THE
NINTH
FEDERAL RESERVE
DISTRICT



MINNEAPOLIS
JULY 29
1921

78th Report of the Federal Reserve Agent at Minneapolis to the Federal Reserve Board

EDITORIAL NOTICE: This report is prepared monthly in the office of the Federal Reserve Agent for the purpose of providing the public with accurate and impartial information concerning current business conditions. Under present conditions it is absolutely essential that correct information be available for those who must make business decisions. Therefore, we base all comment and opinion on facts. In proof of this, we submit statistical tables in detail regarding the essentials. This report will be mailed free of charge to any responsible person who makes request for it. Such request should be addressed to the Federal Reserve Agent, Minneapolis.

SUMMARY FOR THE MONTH

There are very favorable indications for a large corn crop and the holdover of corn from last year is known to be large. Harvesting of the smaller grains has begun with indication that the total crop production, other than of corn, will not be greater than an average year. Fortunately, for banks and business, those counties hardest hit with crop failures during the preceding three years now have as good or better prospects than the average condition in the other parts of the same states.

The marketing of grain in June was greater than normal owing to an improvement in the price of wheat and a desire to clean up bins and make room for the new crop. As a result, elevator stocks increased. Receipts were 8 million bushels greater in June than in May and 6 million bushels greater than a year ago. On the other hand, livestock receipts and shipments continued to decline. The shipments of feeders during June and for the six months ending with June totaled about 30 per cent less than a year ago.

The volume of business improved somewhat during the month of June, although business confidence regarding the future remained practically unchanged. Increases were shown as follows: 10 per cent in payments through banks; 3 per cent in postal receipts; 2 per cent in flour production; 65 per cent in receipts of grain at the terminals; 12 per cent in the production of linseed oil and oil cake; 39 per cent in shipments of iron ore from lake ports; 35 per cent in receipts of coal at Duluth-Superior Harbor; 1 per cent in savings deposits of Twin City banks; 26 per cent in valuation of building permits; 20 per cent in retail sales of

lumber; 3 per cent in orders placed with lumber manufacturers; and 5 per cent in lumber cut. However, similar gains were not shown in all other indexes of the volume of business. Copper production, flour shipments and retail trade were less in June. As compared with a year ago, the volume was much less in retail trade, linseed oil and oil cake, flour shipments, individual debits, Soo Canal traffic, lumber cut, and retail lumber sales.

Employment conditions were much less satisfactory in June than in May, the evidences of decline being the same from different sources of information.

Prices at wholesale of important commodities produced by this district exhibited more declines than increases. The tendency was downward for livestock and flour, and mixed for wholesale produce and the grains. The cost of living, however, increased slightly during the month; and therefore registered a total decline since January 1, 1921, of but 7.6 per cent.

The improvement in the housing situation noted last month has continued through June because prospective building activity is fully one-third greater than a year ago as shown both in the number and valuation of building permits granted. The rental situation indicates approximately the same rate of improvement over a year ago.

Rising loans and falling note circulation characterize the operations of this Federal Reserve Bank during the month of June. The total accommodation of this Federal Reserve Bank increased about 7 millions while note issues declined 3 millions. Member banks experienced a decline in demand deposits of their customers. Market inter-

est rates were practically unchanged although there were a few slight reductions in the maximum and minimum rates prevailing. The district has no surplus of investment funds which is indicated by the fact that of 10 millions of government certificates and notes purchased on June 15, fully 8 millions were resold outside the district within 30 days. Sales of securities by investment houses declined more than one-third in June as compared with May. And foreclosures on city mortgages increased 44 per cent as compared with the preceding month. Wholesalers of lumber report better collections but retailers of lumber have had an increase of accounts with poorer collections.

The Housing Situation

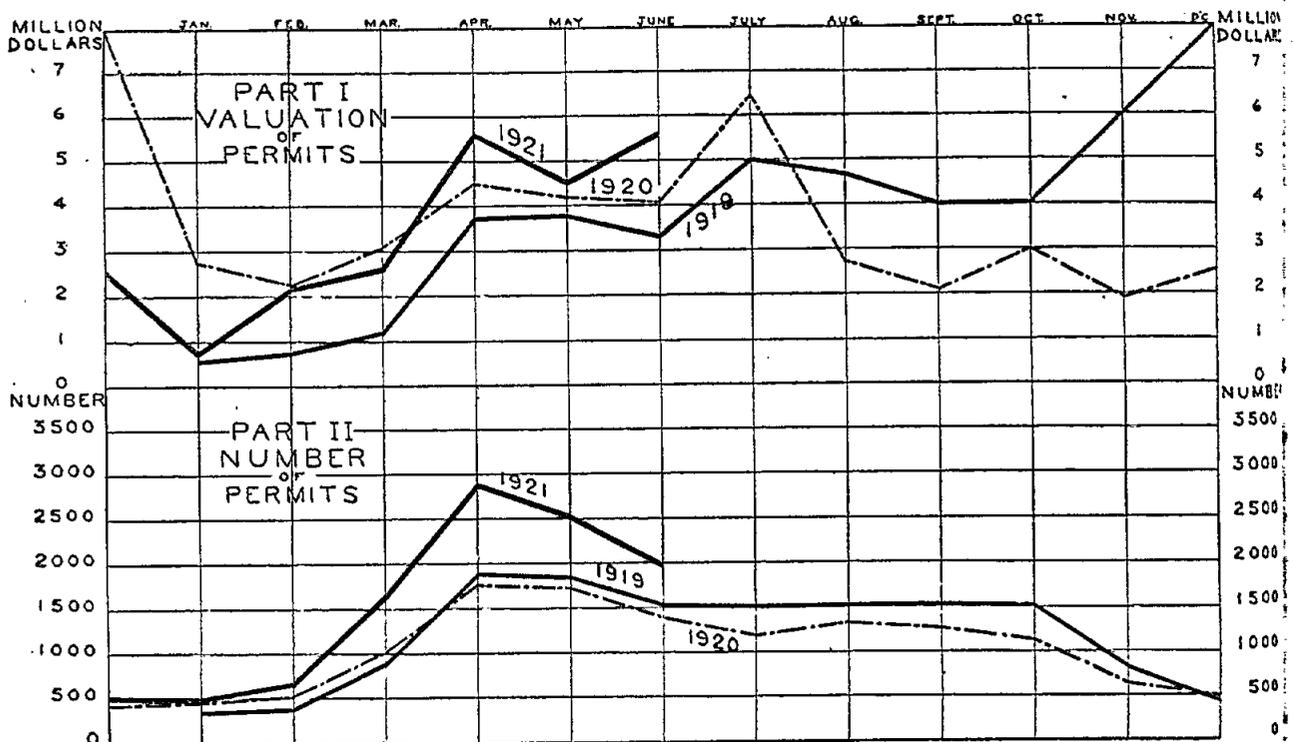
This is the time of the year for crop scares and rumors of a housing shortage. There has been quite a little loose talking recently on the subject of housing accommodation and some general statements have been made to the effect that a serious housing shortage exists which would justify increasing rents and maintaining high prices for home buildings. Doubtless there has been some increase in population during the last year or two and possibly the number of houses and apartments newly constructed may not be equal to the number of new families. It is at this point that most people stop thinking and draw

a hasty conclusion, particularly those who are interested in renting property or in disposing of present holdings. This is a superficial view, however, because there is an important distinction between want and need for a thing and the willingness or ability to pay at existing prices.

It is certain that there has been a considerable slump in the effective demand for residences and apartments at present sale prices and at present rentals. Unemployment is much greater than a year ago and business profits have suffered an enormous decline. Anyone who is in intimate touch with the situation can tell of many individual cases of unemployment or loss of profits bringing enforced economies, the giving up of automobiles, and the modification of ideas concerning requirements for residence purposes. This has gone so far in some cases as even to bring doubling up of families in rental properties. It is entirely possible for this effective demand to fall so rapidly in a period of business depression, such as we are now experiencing, that the existing stock of apartments and houses may prove entirely ample when compared with the ability to pay.

Such figures as are usually quoted for proof of a housing shortage make unfair comparisons between building recently and building during a group of prosperous years.

Chart I. Prospective Building in Nine Cities of the Ninth Federal Reserve District



NINTH FEDERAL RESERVE DISTRICT

There has been a very satisfactory rate of building recently in the Ninth Federal Reserve District as shown by Chart No. 1 for the years 1919, 1920, and 1921 to date. The first six months of 1920 and 1921 were much better than 1919, both in number and in total valuation of permits. The last three months (April, May, and June, 1921) totaled, give record-breaking amounts in the number and value of permits as compared with any preceding three consecutive months in this part of the year. Doubtless this has been stimulated by the price readjustments that have taken place in lumber and allied materials and in building labor. This additional construction will help materially to meet, for the present, whatever shortage may exist. However, there are houses which were built at war prices and which are now empty and unsold because of a stubborn determination to sell them at a profit. Doubtless some sales have been made at losses, but it will be necessary, in order to dispose of their properties, for such builders and owners to take losses. The leveling process must include not only foodstuffs, but also buildings.

The tendency among real estate brokers to discourage the use of "For Sale" and "For Rent" signs on property has concealed the true situation from the prospective home owners or renters. They are led to believe that there are few opportunities of this kind and are led to bid against others in the same situation. There has not been a complete or scientific statement made or published as to the number of idle houses and apartments, or the number for sale or for rent, as compared with preceding times.

An analysis of classified advertising in a large Minneapolis daily newspaper indicates that the rental situation is much better than a year ago. The number of advertisements for houses and apartments for rent increased 28 per cent in June over a year ago.

Indeed, it is regrettable that the usury laws of the states which limit the interest rate on money loaned to necessitous borrowers (to 10 per cent, more or less) has not also been applied to the ownership of rental property for residence purposes in order to prevent unconscionable exploitation of families whose circumstances compel them to rent at rates of profit to the landlords far exceeding that forbidden by the usury law of the state.

Building Activity in June

The number of permits granted for building in the nine cities of this district (Table No. 1) was 22 per cent less in June than in May, but 32 per cent more than in June last year. All cities show decreases between May and June in the number of permits granted, but as compared with last year the cities of Minneapolis, St. Paul, Sioux Falls, and Great Falls exhibit increases. The number of permits for new construction was more than twice as many as that for repairs and alterations.

The valuation of projected building as indicated by the valuation of permits granted during June was 26 per cent larger in June than in May, and 37 per cent larger than in June, 1920. The value of permits was greater in May than in June and than in June of last year in all of the cities except Duluth, Fargo, Sioux Falls, and Superior.

Prospective Building	No. of Permits June, '21	No. of Permits May, '21	Per Cent of June May	No. of Permits June, '20	Per Cent of June, '21 June, '20	No. for New Construction	No. for Repairs and Alterations
Minneapolis	946	1,243	76.0	668	141.6	617	329
St. Paul	532	606	87.8	307	173.2	423	109
Duluth	272	353	77.1	292	93.1	140	132
Fargo	49	87	56.4	52	93.4	37	12
Sioux Falls	35	52	67.4	28	124.9	28	7
Superior	93	109	85.3	107	87.0	44	49
Missoula	15	31	48.4	21	71.4	10	5
Great Falls	24	25	96.0	14	171.4	14	10
Helena	5	11	45.4	9	55.6	4	1
Total	1,971	2,517	78.4	1,498	131.8	1,317	654

	Valuation of Permits June, '21	Valuation of Permits May, '21	Per Cent of June of May	Valuation of Permits June, '20	Per Cent of June, '21 June, '20	Valuation for New Construction	Valuation for Repairs and Alterations
Minneapolis	\$3,120,205	\$2,539,855	123.1	\$1,171,890	268.1	\$2,845,605	\$274,600
St. Paul	1,555,004	1,083,436	143.7	726,406	214.1	1,318,259	230,765
Duluth	357,810	402,125	88.9	1,369,300	26.1	285,210	72,600
Fargo	141,170	249,015	56.8	221,000	64.1	117,820	23,350
Sioux Falls	93,750	117,625	79.8	405,755	23.2	82,250	11,500
Superior	63,900	87,503	73.1	151,205	42.3	44,511	19,389
Missoula	204,500	40,475	505.2	25,200	811.1	202,500	2,000
Great Falls	40,000	13,450	260.2	12,735	275.0	15,000	25,000
Helena	35,825	15,150	236.4	7,225	495.7	5,825	30,000
Total	\$5,612,164	\$4,448,634	126.2	\$4,090,716	137.0	\$4,916,980	\$689,204

The average valuation of the June permits for new construction was \$3,733 as compared with an average for the 12 preceding months of \$3,244. For repairs and alterations, the average June permit was \$1,053 as compared with a 12 months' average of \$1,179.

Lumber

Lumber cut during June (Table No. 2) was 5 per cent greater than the lumber cut in May, but 28 per cent less than the cut in June last year. Lumber manufacturers' stocks rose 2 per cent during the month of June and were 50 per cent larger than in June, 1920. Retailers' stocks continued to decline during June and were still more than 20 per cent greater than in June of last year. Retail lumber sales increased 20 per cent in June over May and manufacturers' shipments of lumber increased 7 per cent in the same interval. As compared with June a year ago, however, retail lumber sales were down 12 per cent and manufacturers' shipments down 21 per cent. Orders placed with manufacturers showed an increase of 3 per cent in June over May, but were 18 per cent lower in June than in June of last year, and orders for the first 6 months of 1921 were less than one-half of the orders placed with manufacturers during the same period in 1920.

Outstanding accounts on the books of lumber manufacturers indicate that collections are better in June than in May and better than in June of last year. There was a decrease in outstanding indebtedness to manufacturers of 7 per cent in June from the May figure, and a decrease of 42 per cent from the total on the books in June, 1920. In the retail trade, however, outstanding accounts have increased 8 per cent as compared with May and 1 per cent as compared with June of last year.

Table No. 2

Lumber	June, 1921	May, 1921	June, 1920
Manufacturers			
Lumber cut, Bd. Ft.	20,423,946	19,460,191	28,256,838
Stk. on hand, " "	217,916,596	212,771,186	145,285,214
Shipments, " "	15,011,140	14,002,674	18,969,118
Retailers			
Sales, Bd. Ft.	15,109,314	12,629,243	17,134,360
Stk. on hand, " "	110,829,375	114,439,996	141,546,621
Sales in dollars.....	\$2,116,143	\$1,318,610	\$2,245,879
Outstanding Accts.			
Manufacturers	\$956,111	\$1,032,770	\$1,648,741
Retailers	5,103,664	4,692,410	5,063,704
Orders			
Manufacturers, Bd. Ft.	11,405,701	11,087,896	13,827,021

Cumulative Orders, Jan. 1-June 30, Inclusive

	1921	1920	Per Cent 1921 of 1920
Bd. Ft	37,835,660	81,053,834	46.6

Grain Movement and Stocks

A surprising condition developed in the movement of grain (Table No. 3) during the month of

June. The experience in the 11 years from 1910 to 1920 has been that receipts and shipments during June are at about the same low level that maintains during May. This year receipts of all grains at Minneapolis and Duluth rose 65 per cent, or 8 million bushels, the increase being shared by both Minneapolis and Duluth. Wheat receipts were up 57 per cent or 4½ million bushels; oats rose 1½ million bushels; and corn and barley each rose 1 million bushels. Shipments of all grains in June at Minneapolis and Duluth were 22 per cent larger than during May, with increases in wheat, corn, and barley.

Table No. 3

Grain Movement Minneapolis-Duluth

	June, 1921	May, 1921	June, 1920
Receipts			
Wheat, Bushels.....	12,599,842	8,009,675	8,841,036
Corn, "	1,723,370	737,972	847,260
Oats, "	2,554,931	994,605	768,571
Barley, "	1,935,362	996,476	843,660
Rye, "	997,675	834,431	2,008,805
Flax, "	997,242	997,955	1,023,410
Total, "	20,808,422	12,571,114	14,332,642
Shipments			
Wheat, Bushels.....	8,062,861	5,464,006	6,986,897
Corn, "	1,266,694	780,929	691,140
Oats, "	804,800	1,691,052	1,964,300
Barley, "	1,945,159	1,006,053	1,058,945
Rye, "	633,802	876,230	4,104,261
Flax, "	453,610	937,335	720,700
Total, "	13,166,926	10,745,605	15,526,252

There are several factors which, when combined, have brought about this unexpected increase in the grain movement in June. It is evident that some farmers held their grain through reluctance to accept low prices for a crop which was raised and harvested with large costs. As their credit at the banks was limited through failure to settle previous debts, they have been compelled at the last moment to sell some of their grain to secure funds to pay the expenses of harvesting and threshing. Grain which has been stored in country elevators for the account of milling concerns or commission houses has been shipped to the terminal elevators during June to clean out the country elevators in preparation for new crop receipts. Undoubtedly the flurry in grain prices which occurred in June was also a factor inducing larger grain receipts.

In June, 1921, receipts of all grains combined were 45 per cent larger than in June, 1920. Receipts of oats more than trebled, corn and barley doubled, and wheat receipts were 42 per cent larger. Between the same dates shipments of all grains combined declined 13 per cent. Wheat, corn, and barley showed the only increases in shipments.

Milling demand has not increased in proportion to the increased receipts. Stocks in terminal eleva-

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tors at Minneapolis and Duluth (Table No. 4) rose 19 per cent between May 31 and June 30. Stocks of corn nearly doubled; wheat stocks showed an increase of 62 per cent; stocks of oats rose 14 per cent; and barley rose 40 per cent and flax 8 per cent.

Table No. 4

Elevator Stocks
Minneapolis and Duluth

	June, 1921	May, 1921	June, 1920
Wheat, Bushels.....	2,984,239	1,846,752	4,360,219
Corn, "	377,777	189,069	166,096
Oats, "	15,016,996	13,181,554	516,513
Barley, "	1,001,129	715,219	912,758
Rye, "	133,354	197,845	1,683,708
Flax, "	2,355,701	2,184,498	484,912
Total, "	21,869,196	18,314,937	8,124,206

As compared with last year, stocks of all grains but wheat and rye increased. Corn stocks more than doubled; stocks of oats, which have been larger than last year's stocks in every month since the bumper crop of 1920 was harvested, were 29 times as large in June of this year as in June, 1920. Flax stocks were nearly 5 times the figure for last year and barley stocks increased 10 per cent.

Rye Production and War Conditions

Rye stocks at Minneapolis and Duluth during 1920-21 have been less than 10 per cent of rye stocks during the preceding year. During the year 1919-20 several factors contributed to make rye stocks abnormally large. The transportation situation was unfavorable. During most of the period there was an actual car shortage which compelled shippers to hold rye in terminal elevators until cars could be secured to ship to the seaboard. Meanwhile export demand was large, owing to the reduced rye acreage abroad. It was profitable, to buy May rye and sell July rye, and when July became the near future, it was profitable to buy July and sell September rye. The carrying charge amounted to from 2 to 3 cents per bushel almost continuously from 1918 and through the first half of 1920. During the latter part of 1920, and the first half of 1921 there has been no carrying charge and no car shortage. As a consequence rye has been delivered promptly upon the receipt of orders; and rye stocks in terminal elevators are much lower this year than last.

The war had an interesting effect on the production and movement of rye. Before the war the average production of rye in this district was less than one-half of the production during war years. This is illustrated by the volume of rye receipts at Minneapolis for the past ten crop years. From the crop of 1910 Minneapolis received 1,756,000 bushels. In succeeding years Minneapolis rye receipts increased, indicating an increase in rye production, until the 1917 crop, when more than 12 million bushels, and until the 1918 crop when

more than 17 million bushels were received. Rye was in great demand for export, owing to reduced production abroad and also through an increase in domestic demand. Wheat was being conserved and rye used as a substitute in this country during 1917-18, and 1919. The price of rye rose continually until 1920. In 1919, while the foreign demand for rye continued, the domestic demand fell off, forcing the reduction in the price of rye in 1920. Rye production has declined since 1918. From the 1919 crop Minneapolis received only 8,335,000 bushels and from the 1920 crop through June 30th Minneapolis receipts have been only 4,350,000 bushels.

Flour

Flour mills in the Ninth district operated at 39 per cent of their capacity during June. (Table No. 5). This does not show any great change from their operation for the past year. Flour output in the district in June was 1.7 per cent greater than in May, although the Minneapolis and St. Paul output decreased. The average output for the 6 years from 1914 to 1920 in the United States increased one-fourth of one per cent in June over May.

Table No. 5

Flour Production

	Bbls. in 4 Weeks Ending July 2, '21	Bbls. in 4 Weeks Ending June 4, '21	Bbls. in 4 Weeks Ending July 3, '20
Minneapolis	859,885	925,205	1,264,020
Duluth-Superior	58,430	57,940	82,210
St. Paul.....	31,895	42,750	19,850
Outside	700,965	600,935	523,225

All Mills 1,651,175 1,626,830 1,895,305

These reporting mills represent about 75 per cent of the total production in this district.

Mill wages at Minneapolis have been cut during the past year. The unweighted average of the wages of 30 classes of employees shows a decline of 12.9 cents per hour or 17.1 per cent. All classes of labor have had reductions in wages. A comparison of wages of selected classes of labor for June 1, 1921, and a year ago is given in Table No 6.

Table No. 6

Mill Wages (cents per hour)

	June 1, 1921	June 1, 1920
Stone dressers	58 -75	82½-94½
Bolters	72 -75	84½
Oilers	52 -55	65½
Packers	63 -67½	75
Sewers	59 -60	70½-72½
Sweepers	47 -50	61½-62½
Foreman millwrights	82½-94	92½-106½
Millwrights	65 -78	74½-90½
First-class machinists	72 -76	84½-90
Plumbers and steamfitters.....	60 -72½	75½-78½
Engineers	68½-70	80½-82½
Fireman	60 -61½	72½-77½
Electricians	61½-75½	72½-77½
Watchmen	43 -48	49½-65½
Unweighted average of 30 classes	62.1	75.1

In addition to cuts in wages there has been a reduction from "double time" to "time and a half" for work on Sundays and holidays.

Flour shipments from Minneapolis and Duluth (Table No. 7) declined 7 per cent in June from May. Receipts between these two months increased nearly 4 per cent. As compared with June of last year, shipments were down 23 per cent and receipts were nearly 5 times as large. Minneapolis flour exports during June were 101,200 barrels or an increase of 7 per cent over May exports, but a decrease of 26 per cent from exports in June, 1920. In spite of the fact that June exports this year were less than exports in June last year the total exports from Minneapolis mills for the 10 months ending June 30, 1921, were 34 per cent larger than during the corresponding 10 months of last year.

Table No. 7

Flour Movement
Minneapolis and Duluth

	June, 1921	May, 1921	June, 1920
Receipts, Barrels.....	732,259	706,682	151,579
Shipments, ".....	1,695,914	1,833,346	2,186,780

Live Stock Marketing

Receipts of live stock at the South St. Paul market (Table No. 8) declined 5 per cent in June from the May figure. This decline was due to a 10 per cent decrease in receipts of hogs and cattle. Calves, sheep, and horses showed substantial increases. When the receipts are compared with a year ago, it appears that there has been a decline of 20 per cent in which cattle, calves, and hogs participated. Shipments of live stock declined 10 per cent in June from the May totals, but were 13 per cent larger than shipments in June a year ago. Shipments of calves were about one-half as large in June as in May and in June a year ago.

Table No. 8

	June, 1921	May, 1921	June, 1920
Receipts			
Cattle	31,865	35,220	43,559
Calves	38,617	34,524	45,369
Hogs	158,507	175,540	203,890
Sheep	15,138	12,186	10,558
Horses	386	324	370
Total Head	244,513	257,794	303,746
Shipments			
Cattle	16,965	18,392	23,366
Calves	1,565	2,825	2,980
Hogs	29,432	34,739	17,974
Sheep	5,822	3,624	3,121
Horses	378	343	464
Total Head	54,162	59,923	47,905
Shipments of Feeders			
Cattle	11,413	12,816	15,720
Calves	214	351	1,185
Hogs	5,878	3,599	6,533
Sheep	526	745	1,719
Total Head	18,031	22,511	25,157

June is a dull month in stocker and feeder sales. This assertion is borne out by the fact that shipments of feeders to the country were 20 per cent lower in June than in May. Shipments of all classes of young stock declined. When compared with a year ago, shipments of feeders declined 28 per cent, including declines of 11 per cent in hogs, 27 per cent in cattle, 69 per cent in sheep, and 82 per cent in calves.

Receipts of all live stock at South St. Paul for the first 6 months of 1921 (Table No. 9) were 9 per cent less than receipts in the first half year of 1920. Sheep receipts increased 42 per cent in this period and all other live stock receipts declined. Shipments from January to June, 1921, were 9 per cent larger than in the same period in 1920, although shipments of cattle and horses declined. An analysis of the cumulative shipments of feeders this year as compared with last year shows that there has been a decline of 31 per cent in the number of head of young stock sent to the country for fattening. As the year 1920 was below normal in the amount of feeders shipped out, it appears that 1921 is very unsatisfactory in this regard. Shipments of feeding cattle declined 35 per cent from the 1920 half-year figure, and calves declined 77 per cent in the South St. Paul district.

Table No. 9

	1921	1920	Per Cent of 1920
Cumulative Receipts			
Cattle	220,229	315,498	69.8
Calves	205,484	230,805	89.2
Hogs	1,198,864	1,308,476	91.6
Sheep	169,878	119,553	141.9
Horses	3,622	3,741	96.9
Total Head	1,798,077	1,978,073	90.9
Cumulative Shipments			
Cattle	112,295	158,874	70.8
Calves	17,521	15,172	115.6
Hogs	241,321	205,691	117.2
Sheep	96,199	48,214	199.5
Horses	3,845	3,687	90.8
Total Head	470,681	431,638	109.1
Cumulative Shipments of Feeders			
Cattle	73,544	112,912	65.1
Calves	1,931	8,549	22.6
Hogs	63,814	81,222	78.5
Sheep	9,059	13,447	67.3
Total Head	148,349	216,130	68.7

General Price Situation

The general trend of prices during the month of June was downward in important commodities in the Ninth Federal Reserve District. Grain prices showed as many ups as downs; wholesale produce prices showed more declines than advances; flour at Minneapolis, and live stock, other than calves, at the South St. Paul market showed pronounced declines.

The median prices of selected grades of corn, flax, oats, and barley (Table No. 10) showed only minor variations during June. There was a 5½ cent increase in the median price of wheat and a decline of 12½ cents in the median price of rye during the month, due to the effect of crop news upon the two grains. The June median price of rye at \$1.21 was the lowest median price reached by that grain during the past year.

Table No. 10
Grain Prices

	Month, 1921	High	Median	Low
Wheat—				
No. 1 Dark Northern.....	June	\$2.04¼	\$1.73½	\$1.38½
	May	1.96¾	1.68	1.44¼
Corn—No. 3 Yellow.....				
	June	.57½	.53½	.49
	May	.57	.53	.49¼
Oats—No. 3 White.....				
	June	.36¼	.34¼	.31¾
	May	.38½	.35	.32½
Barley—No. 3				
	June	.62	.56	.52
	May	.64	.57	.52
Rye—No. 2				
	June	1.43	1.21	1.06
	May	1.51½	1.33½	1.25¼
Flax—No. 1				
	June	1.97	1.85	1.71
	May	1.97½	1.84	1.66

The median price of hogs, lambs, and cattle with the exception of calves (Table No. 11), declined in June from the May medians. There were declines of \$1.50 in lambs, \$1.25 in stock and feeder steers, 75c in butcher cows, 25c in butcher steers, 12c in hogs, and an increase of 50c in veal calves. The June median showed that lambs have returned to the price at which they were sold in February, which was the previous low point for this year. Hogs, butcher cows, and stockers and feeders reached new low points for the year, but calves rose for the second month after reaching their low point for 1921 in April. Livestock prices were lower in June from a variety of causes. Less meat is consumed during the summer; there was an over-supply of canned and dried meat; the lack of country demand for stockers and feeders forced that class of cattle into the shambles; and there was a change during the month from dry-fed to grass-fed cattle, the latter grade commanding a lower price than the former.

Table No. 11
Livestock Prices

	Month, 1921	High	Median	Low
Butcher Cows and Heifers.....				
	June	\$8.75	\$4.75	\$2.75
	May	8.00	5.50	3.75
Butcher Steers				
	June	8.75	7.00	3.50
	May	9.00	7.25	5.00
Stock and Feeder Steers.....				
	June	7.50	5.25	2.00
	May	9.00	6.50	3.75
Veal Calves				
	June	8.50	7.50	2.00
	May	9.00	7.00	2.00
Hogs				
	June	8.50	7.60	6.50
	May	8.25	7.72	6.50
Lambs				
	June	12.25	8.50	2.00
	May	12.00	9.00	4.00

The median is that price at which the number of units sold at a higher price is exactly equal to the number of units sold at a lower price. These

median prices furnish an index of conditions prevailing throughout the month and are a means of simplifying the variations due to changes in daily quotations.

The price of the best grade of flour at Minneapolis (Table No. 12) declined 85 cents during June. The price of \$8.50 per barrel on the 30th of June was 25 per cent below the peak price of last fall.

Table No. 12
Flour Prices

	Last of May	Middle of June	Last of June
Washburn - Crosby's Gold Medal Flour; two 98-lb. cotton sacks.....			
	\$9.35	\$9.10	\$8.50

In the wholesale produce market of Minneapolis there were increases in the price of butter, eggs, veal, green beans, and lemons. Decreases occurred in seasonable vegetables, principally in tomatoes, green onions, new beets, celery, and lettuce, and in oranges, cantaloupes, and watermelons of the fruit group.

Cost of Living

The cost of living in the Ninth Federal Reserve District (Table No. 13) as indicated by the weighted index number for 6 cities has risen .3 per cent in June. There were increases in the cities of St. Paul and Grand Forks and slight decreases in the cities of Minneapolis, Duluth, Billings, and Helena. When the cost of living on July 1st is compared with the cost of living on January 1st, it appears that there has been a decrease in this interval of 7.6 per cent, which was shared by all of the 6 cities.

Table No. 13
Cost of Living

	July 1, 1921	June 1, 1921	Jan. 1, 1921
Minneapolis	2,507.84	2,509.25	2,730.46
St. Paul	2,462.25	2,419.23	2,582.81
Duluth	2,332.85	2,336.17	2,650.35
Billings	2,190.19	2,300.68	2,505.31
Grand Forks	2,430.79	2,410.08	2,690.19
Miles City			
Helena	2,396.54	2,429.20	2,630.69
District	2,463.11	2,452.54	2,667.61

The cost of food in the Ninth Federal Reserve District (Table No. 14) rose 3.8 per cent between June 1st and July 1st. There were increases at Minneapolis, St. Paul and Duluth. On July 1st the cost of food was 11 per cent less than on January 1st.

Table No. 14
Cost of Food

	July 1, 1921	June 1, 1921	Jan. 1, 1921
Minneapolis	717.00	712.56	783.84
St. Paul	666.60	600.48	748.80
Duluth	726.12	718.80	864.60
Billings	665.64	669.60	870.00
Grand Forks	670.92	671.76	803.76
Helena	696.24	701.40	893.62
District	700.26	676.26	786.39

Care must be exercised in interpreting the changes for the different cities. Possibly some of the differences may be due to variations in the quality of goods quoted in the different cities, although the article quoted has been the same in each succeeding month in the city where used.

The index number was conceived as the actual yearly cost of living for a family of three. Quotations have been secured for the price of twenty food articles, fifteen items of clothing for the winter six months, and thirteen for the summer six months, and the cost of housing, heat, light and gas. The items have been weighted according to their importance in the average family budget and weights have been included for furniture, and miscellaneous expense to cover such costs as insurance, medical treatment, amusement, and savings. These latter costs do not fluctuate and have been included merely to prevent the variations in the cost of food and clothing from affecting the index number in too great a degree. The percentages of each item of expense correspond closely with the experience of about 100 families to whose budgets we have had access.

Employment

The employment situation did not improve during June. There appears to be an abundant supply of farm labor throughout the district available at \$3.50 per day, although I. W. W. agitators are making appeals to the laborers to place their minimum wage at \$7.00. In the woods, lumber manufacturers were employing one per cent fewer men in June than in May and 34 per cent less than in June of last year. The number of men employed in the copper and iron mines in June was a very small fraction of the number employed last year. The Department of Labor reports a decrease in employment of 3.3 per cent in the firms employing over 500 men in 1920.

In the cities of St. Paul, Minneapolis, and Duluth the applications for men at the Department of Labor employment bureaus decreased 31 per cent between May and June and 80 per cent between June this year and June a year ago. The number of applications for women's services declined 6 per cent between June and May and 48 per cent in the year's interval. Combined applications for the services of men and women declined 17 per cent between May and June, and 67 per cent as compared with a year ago. At the same time the number of applicants placed in positions by the United States Employment offices in the three cities declined 17 per cent in June from the May figure, due entirely to a decline in the number of men placed and the number of positions filled in June was 58 per cent less than in June of last year, with declines of 74 per cent in the number of men placed and 39 per cent in the number of women placed in positions.

An analysis of want ads in a Minneapolis daily newspaper shows a decrease between May and

June of 20 per cent in the number of advertisements for "help wanted" and a decrease of 12 per cent in the number of "Situations wanted." The comparison is very significant between the number of ads for these purposes between June of this year and June, 1920. The number of ads applying for help was down 48 per cent this year and the number of ads asking for situations was up 73 per cent.

The Associated Charities of Minneapolis report an unusual condition existing in the number of persons given relief this year. Last year the number of resident families who received donations in May on account of not having work was only three and in June only two. This year in May 142 such families and in June 117 families received assistance. The same condition has existed in the case of transient men. In May and June last year no homeless men received assistance on account of unemployment. This year 66 unemployed transients were cared for in May and 56 in June. The numbers quoted above do not necessarily mean that the families or individuals were carried by the Associated Charities for a whole month in every case, but merely that at some time during the month they were without funds and received donations. Nor do these applications for aid connote that unemployment took place recently for the intensity of unemployment and its effects, all of the applicants. They do indicate, however, the intensity of unemployment and its effects, rather than the extensiveness.

Retail Trade

During the month of June eleven stores in the Ninth Federal Reserve District reported a falling off in sales of nearly 17 per cent from the figure for June a year ago. For the first half year of 1921 sales have been nearly 16 per cent lower than during the corresponding period in 1920. Stocks on hand on June 30th were down 6 per cent from stocks at the end of May and 27 per cent from stocks at the end of June of last year. The fact that both sales and stocks in dollar values are lower this year than last must be interpreted to mean both that the buyers' strike which commenced last year is still on and that prices have declined to some extent in the retail trade, making dollar amounts less this year than last for the same physical volume of trade. Moreover, last year retailers were overstocked while this year stocks have been pared to the quick.

The turnover of the reporting stores was lower in June than in May as indicated by the fact that the index of turnover, which is an inverse, has risen from 325.0 to 383.3. Outstanding orders at the end of June were less than 10 per cent of total purchases during the year 1920.

Volume of Business

Payments through banks in 12 clearing house cities of the Ninth Federal Reserve District (Table

NINTH FEDERAL RESERVE DISTRICT

9

No. 15) showed an increase of 10 per cent in June over May, but there was a decline of 19 per cent from the figure for June, 1920. The increase in payments in June over May was shared by all of the cities but Billings and Fargo, which showed declines of 1 per cent or less. As compared with June of a year ago, all the cities showed declines. Comparisons of increases or decreases in payments

through banks between consecutive months in 1921 and in 1920 are and will be valueless for the next few months, because in this district the peak of business activity and of prices occurred in the spring of 1920; and from that time readjustment has taken place, causing declining prices and a lessened volume of business, which has obscured the seasonal trend of business activity.

Table No. 15

Payments Through Banks (000's omitted)	4 weeks ending June 29, 1921	4 weeks ending June 1, 1921	% June, 1921, of May	4 weeks ending June 30, 1920	% June, 1921, of June, 1920	4 weeks ending June 2, 1920	% June, 1921, of May, 1920
Aberdeen	\$5,445	\$5,280	103.1	\$7,106	76.7	\$7,163	99.3
Billings	6,674	6,698	99.6	8,320	80.3	9,118	91.3
Duluth	69,541	64,597	107.8	84,960	81.9	94,775	89.6
Fargo	9,972	10,080	99.0	13,976	72.5	13,547	103.1
Grand Forks	4,372	4,152	105.2	7,027	62.2	7,267	96.8
Great Falls	7,501	6,606	113.9	8,330	90.0	7,615	109.4
Helena	9,755	7,342	132.9	9,760	99.9	9,424	103.4
Minneapolis	283,459	252,960	112.0	341,501	82.9	343,566	99.5
St. Paul	113,094	105,790	106.9	143,006	79.0	131,001	109.0
Sioux Falls	17,121	15,362	111.5	27,231	62.8	27,355	99.6
Superior	7,554	7,487	100.9	8,368	90.3	8,121	103.0
Winona	4,022	3,877	103.7	4,763	84.4	4,614	103.2
Total	\$538,510	\$490,231	109.9	\$664,448	81.0	\$663,566	100.1

Credit Conditions in the Northwest

The total accommodation extended to Ninth District member banks by this Federal Reserve Bank increased more than 7 million dollars between June 1 and June 29. This extension of loans was accomplished by borrowing from other Federal Reserve banks more than 3 million dollars, by the redemption of three million dollars of certificates of indebtedness purchased from the United States Government under the Pittman Act, and by a reduction in our reserves. Member bank deposits with this Federal Reserve Bank increased nearly 3 million dollars, while our notes in circulation declined more than 3 million dollars. The increase in total accommodation during June was considerably greater than a year ago as the four weeks ending June 25, 1920, recorded an increase of but one million dollars. The demand for credit accommodation was considerably relieved during the month of June by the extraordinary movement of grain which took place far in excess of a normal year's shipments for the month. This is more fully described on another page in the discussion of the grain movement.

In the three weeks from June 29 to July 20 the reserve Bank decreased 2 million dollars whereas a reduction of 8 millions took place during the three weeks ending July 16 a year ago. Our rediscounts with other Federal Reserve banks were reduced 2½ millions, our reserves declined about 2½ millions, while our net redemptions of notes amounted to 1½ millions, and our member bank deposits were practically unchanged.

Thirty-five selected member banks in the larger cities in this district during the 28 day period end-

ing June 29, extended their accommodation to their customers to the extent of more than 6 million dollars, which was accomplished by borrowing and rediscounting at the Federal Reserve Bank less than 4 million dollars. Their net demand deposits declined more than 4 millions while time deposits increased one million, and government deposits increased 4 millions. The demand for loans to carry city real estate has not abated as shown by the fact that the foreclosures in Minneapolis alone were greater in number and amount during the month of June than during the preceding month of May or in the month of June in the preceding year, which is more fully discussed in a separate paragraph.

The customary interest rates prevailing in the local market remained unchanged between June 15 and July 15 except for a reduction of one-half per cent to a rate of 7½ per cent on three to six months collateral-secured time paper. There were increases of one-half per cent in the highest and lowest quotations for various kinds of paper evidencing a greater variation in quality rather than a change in the customary rate during the month. For instance, there was an increase to 8 per cent on the highest rates charged on notes secured by stock exchange collateral or by warehouse receipts, and increases to 7½ per cent on the lowest rates charged on 3 months collateral-secured paper, and on stock exchange collateral-secured notes. There was a slight increase to 8 per cent in the highest rate charged on 4 to 6 months commercial paper and a slight decrease to 6¾ per cent as the lowest quotation on 30 to 90 day commercial paper.

Treasury Certificates of Indebtedness and United States 5 $\frac{3}{4}$ per cent Three-Year Treasury Notes were allotted to and purchased by this district to the extent of \$10,763,600 on June 15. Within the next 30 days the Federal Reserve Bank acted as intermediary for resales outside of this district of nearly half of the Treasury Notes and for a larger quantity of Treasury Certificates of Indebtedness than the amount sold here on June 15. The total resales of such notes and certificates during the 30 days ending July 15 were \$9,124,900, of which \$1,001,900 were sold within this district. These resales have been a great accommodation to our member banks and to individuals in this district when circumstances would not permit them to hold such investments to maturity. It has also assisted others to secure desirable investments of a high quality.

Credit conditions in the Ninth District are in contrast with those prevailing in the whole Federal Reserve System. Between June 1 and June 29, the twelve Federal Reserve Banks experienced a reduction in earning assets of 200 million dollars, which consisted of payments of collateral notes secured by United States bonds to the extent of 126 millions, of a reduction in acceptances held of 45 millions, and a reduction of bills discounted of about 29 millions. At the same time there was a decrease in member bank deposits of 15 millions, and a decline in total note circulation of 128 millions, and an increase in gold reserves of 53 millions. Only in the reduction in note circulation has the tendency been the same in the Ninth District as for the United States as a whole. The fact that the reduction in earning assets has been brought about largely by the increase in gold reserves from imports of gold and the payment of notes secured by United States bonds, indicates possibly that commercial liquidation has not been as great for the month as is commonly believed.

Relief for Live Stock Borrowers

In order to meet the pressing demands of stock-growers throughout the United States for funds to invest in their industry, the Stock Growers' Finance Corporation was formed in the past month with a capital of \$50,000,000, one-half of which is to be subscribed by eastern banks and the other half by western banks. The plan is to loan the capital of this corporation for periods of six months or less to stock growers who are able to give paper eligible for rediscount at Federal Reserve Banks. To be eligible, the paper must be secured by a mortgage on live stock, showing a substantial equity of the amount advanced, and must be accompanied by live stock inspector's certificates, copies of the chattel mortgage, and a financial statement of the maker of the paper. Loans, if found satisfactory, may be renewed for periods of six months or less, not exceeding a total duration of thirty months from the date of the loan, at which time payment will be required.

For further information regarding the procedure of securing loans through this corporation, the prospective borrower should address:

Mr. M. L. McClure, President, Stock Growers' Finance Corporation, 1054 Continental & Commercial Bank Building, Chicago, Ill.

It is expected that this expression of renewed confidence in live stock paper as a banker's investment will encourage those bankers, who are not so close to the industry as those bankers who subscribe, to select more of such paper for short time investments. In this way the benefits of this fund will far exceed the subscribed amount.

Savings and Investments

Savings and time deposits in 23 Minneapolis and St. Paul banks totaled 101 million dollars at the end of June as compared with 100 millions at the end of May and about 87 millions at the end of June a year ago.

From the reports of 16 companies selling securities in Minneapolis and St. Paul, it appears that the amount of securities bought by investors during June was 64 per cent of the amount purchased in May. Sales of municipal bonds increased 2 per cent between these two months, farm mortgage sales increased 9 per cent, city mortgage sales increased 20 per cent and stocks more than 200 per cent. On the other hand, sales of corporation bonds, into which a large fraction of investment funds is going, decreased 63 per cent between May and June, foreign securities sales decreased 3 per cent and there was a decrease of 48 per cent in the sales of miscellaneous securities.

As compared with last year, 160 per cent more corporation bonds were sold this year and 230 per cent more stocks, while municipal bonds and foreign securities were down about 40 per cent from last year's figures. Total sales of securities in June of this year appear to have been slightly larger in volume than sales in June, 1920.

Purchases of securities by bankers in June were only 58 per cent of purchases by bankers in May, and 98 per cent of purchases in June a year ago. The volume of securities bought by the general public in June was 71 per cent of the volume in May but was 120 per cent of the volume in June last year. The sentiment of bond houses in regard to the volume of sales in the near future is indicated by the fact that holdings of securities in June were smaller than in May and on the basis of a limited number of reports, apparently slightly smaller than a year ago.

Foreclosures

The number of mortgage foreclosure sales in Minneapolis as recorded at the sheriff's office was 26 in June as compared with 18 in May, or an increase of 44 per cent. The dollar amount of these sales increased 35 per cent between May

and June but the average amount of individual sales was 6 per cent smaller. When the foreclosure sales in June are compared with sales in June a year ago, it appears that the number this year was 86 per cent larger and the amount 108 per cent larger. There was also an increase in the amount of the average foreclosure of 13 per cent. The number of foreclosures of city mortgages for Minneapolis for the first half of the year of 1921 was 30 per cent more than in the corresponding period in 1920, but 35 per cent less than in the first six months of 1919.

Upper Lake Traffic

Freight traffic through the Soo Canals (Table No. 16) increased 31 per cent in June over May, owing to the fact that the lake fleets did not begin to operate at their full capacity in May. There was, however, a decrease in tonnage passing through the canals of 24 per cent between June of this year and June a year ago. West-bound traffic increased 131 per cent in June of this year over June, 1920, but east-bound traffic declined 50 per cent. This indicates that while the volume of goods coming into the northwest has increased, the extractive industries of this district which use the lake route for shipping out their products have been operating at a very small percentage of their capacity. Iron ore passing through the canals to the east, while exhibiting a 47 per cent increase in June over May, was 55 per cent less than in June a year ago. Wheat and other grains shipped through the canals in June showed declines from the May totals, but the volume of grain shipped was more than twice as large as the amount shipped through the canals in June a year ago.

Table No. 16

	June 1921	May, 1921	June, 1920
Soo Canal Traffic			
East Bound (Sh.T.)	4,628,067	3,407,827	9,153,884
West Bound (Sh.T.)	3,451,409	2,747,236	1,493,935
Total (Sh.T.)	8,079,476	6,155,063	10,647,819

Freight Tonnage Analyzed by Items—East Bound.

Flour, Bbl.	1,150,240	890,330	1,082,521
Wheat, Bu.	10,418,433	12,609,469	5,976,125
Grain, Bu.	11,358,929	12,431,592	3,076,986
Copper, Sh.T.	3,450	3,215	3,063
Iron Ore, Sh.T.	3,892,791	2,652,033	8,725,046

At the Duluth-Superior Harbor receipts of coal during June (Table No. 17) were 35 per cent larger than receipts during May, and 154 per cent larger than receipts in June, 1920. Both hard and soft coal showed increases in June over May, but hard coal receipts declined 21 per cent as compared with June of last year. If the present volume of coal receipts continues, there will be ample coal shipped into this district to supply the needs of householders for anthracite, and of industrial consumers for bituminous coal, provided it is taken from the docks and congestion thereby avoided.

Rail shipments from the dock are not as large now as they should be, but the consuming public is hesitating in making purchase of an article that has not shared in the post-war-reduction prices. From the opening of navigation to June 30th, receipts of hard coal have been 6 per cent larger than during the same period of last year and receipts of soft coal have shown an increase of nearly 300 per cent.

Table No. 17

Duluth-Superior Coal Receipts

	June, 1921	May, 1921	June 1920
Soft Coal (tons)	2,124,453	1,548,880	668,404
Hard Coal (tons)	192,830	173,190	242,807
Total (tons)	2,318,283	1,722,070	911,211

Cumulative Receipts From the Opening of Navigation to June 30, 1921.

Soft Coal (tons)	3,794,545	964,737	393.3
Hard Coal (tons)	449,078	423,280	106.2
Total (tons)	4,243,623	1,388,017	305.7

Copper Mining

The estimated number of pounds of refined copper produced in this district (Table No. 18) was 2 per cent less in June than in May and 77 per cent less than in June, 1920. These figures represent reports from companies mining 75 per cent of the copper produced in this territory.

Table No. 18

Copper Production

	June, 1921	May, 1921	June, 1920
Pounds of refined copper produced in the Ninth Federal Reserve District	5,790,145	5,927,881	25,640,828

Iron Ore Shipments

Thirty-nine per cent more iron ore was shipped from Upper Lake ports during June than during May (Table No. 19) but the amount shipped was less than 40 per cent of last year's shipments in June; and cumulative shipments from the opening of navigation to the end of June in 1921 were only 38.8 per cent of shipments in the corresponding period of last year.

Table No. 19

	June, 1921	May, 1921	June, 1920
Iron Ore Shipments (Sh.T.)	3,600,989	2,594,027	9,233,566

Latest Reports on Crop and Range Conditions

Harvesting of rye, barley, and oats is general throughout our whole territory. Harvesting of wheat is commencing in the southern part of the district. In the northern part of North Dakota and Montana the wheat harvest is expected to begin in the week of July 25. It is too early to estimate the exact yield for this district.

The prolonged period of excessively hot weather which has been general throughout this district has left the small grain crops, especially wheat, oats, and barley in a spotted condition. Crop prospects are for a yield not greater than the average in spite of the excellent prospects of a month ago.

Small grains in southern and central Minnesota promise an average yield, but in the northwestern section little damage was done by the hot weather and the prospective yield is large.

The crop has been materially damaged in South Dakota. With the exception of the southeastern corner in which small grains are not the large crop, the yield for the state will be considerably less than average. In the northeast section of South Dakota, especially in Brown, Day, Spink, and Clark Counties, the small grain crop is almost a total failure.

The northern two tiers of counties in North Dakota promise excellent yields of small grains. In the northwestern counties, especially along the Soo Line from Kenmare to Ambrose, conditions are reported to be the best ever known. It is interesting to note that these excellent crop prospects prevail in the counties which have had crop failures for the last four years. The southern and central portions of North Dakota have a spotted crop. Along the Missouri River from Garrison south to the South Dakota line, on the Soo and Great Northern railroads from Foxholm and Berthold to Anamoose and Clifton, along the Northern Pacific from Medina to Belfield, and on the Mott Branch crops are almost a total failure. In the southeastern section of North Dakota with the exception of the vicinities of Wheatland and Enderlin, which are poor, there will be an average crop.

The northeastern counties of Montana as far west as Blaine County and south to Wibaux will have excellent crops. In the southeastern section crops will be light but no crop failures are expected. Along the Northern Pacific from Billings to Bozeman and on the Yellowstone and Wilsall Branches, crop prospects are excellent. In Teton, Pondera, Toole, Hill, and Chouteau Counties, crop prospects are below the average, notably in the quadrangle bounded by Shelby, Inverness, Fort Benton, and Power. In western Montana excellent crops are promised at Eureka, Kalispell, Ronan, Missoula, and Dillon.

There has been little damage in the crops from other causes than heat. There have been scattered hail reports, notably on the Great Northern in Williams County, North Dakota, from Grenora to Wildrose and at Jamestown and Kildeer, North Dakota, and Sidney, Montana. Some black rust, especially in eastern North Dakota, has been reported, but its effect on the crop is expected to be slight. An encouraging feature of the crop situation this year has been the improvement in farming methods which has appeared. Where grasshoppers have threatened to damage the crops, the farmers, with the aid of county agents, have conducted strenuous campaigns against them, and as a result there has been no serious damage from hoppers this year. In the dry farming sections improvements in methods of cultivation have preserved moisture to an extent which has largely offset the excessive and prolonged hot spell and has provided sufficient moisture to mature the crops without the customary summer rains. The resulting crops which will be harvested in most of the dry farming area will be ample reward to the farmers for their diligence.

In the four principal states of the Ninth District, corn is in excellent condition. Prospects are for a larger crop than last year on account of increased acreage and the excellent stand. The hot weather which has been detrimental to other crops has been beneficial for corn. Recent rains which have been general throughout the district have further improved the corn prospects. If no unfavorable conditions develop from now until harvest the corn crop should be the largest that this district has ever produced.

Potatoes show an increased acreage in the four states of the district. The increase in Minnesota was 7 per cent over last year; in North Dakota, 5 per cent; in South Dakota, 5 per cent; and in Montana, 7 per cent. Crop prospects on July 1, according to the Federal reports, were good. Since that date there has been some damage from the hot weather, especially to the early plantings.

The ranges throughout the district are in excellent condition, although a few dry spots are showing in Montana and there is only a fair hay crop in southwestern North Dakota. Live stock conditions are very good with a large quantity of fat stock on the ranges.

The wool clipped in this district promises to be above the average. In every state but South Dakota, the weight per fleece has run higher than last year and higher than the 10-year average.

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Farm Ownership, Tenancy and Debt in the Northwestern States

Supplement to the 78th Report of the Federal Reserve Agent at Minneapolis, July 29, 1921

FARM TENANCY

There has been a substantial increase in the number of farms in the four important states of this district during the last ten years, but unfortunately the number of tenants has shown a much greater proportionate increase during the same period. According to figures recently published by the Federal Bureau of the Census for the states of Minnesota, North Dakota, South Dakota, and Montana, there were 389,500 farms in 1920, or an increase of more than 16 per cent over 1910. The number of farms in Montana doubled in the ten-year period while Minnesota had a 14 per cent increase, North Dakota a 4 per cent increase, and South Dakota a decrease of 3 per cent. In each of the four states there has been a decrease in the percentage of farms operated by their owners; and for the total of the four states the percentage declined from 79.7 to 73.8 per cent. The number of farms operated by managers is about one per cent in each state and the proportion of farms operated by tenants has risen from 19.5 in 1910 to 25.1 per cent of the total in 1920. In other words, the proportion of farms operated by tenants has increased 28 per cent from 1910 to 1920. This increase is largest in North Dakota (79 per cent) and smallest in Minnesota (18 per cent).

Upon consulting Table A many interesting developments may be discovered in addition to the foregoing comment. For instance, the number of

new farms added during the ten-year period totaled 55,000, whereas the increase in farms operated by their owners was 21,000 and the increase in farms operated by tenants was 33,000. This is merely another way of stating that there has been a significant increase in tenancy in these four states.

From a recent investigation made by this bank, it appears that the great majority of rented farms are rented on a grain-share basis. In North Dakota 94 per cent of the rented farms are on this basis; in Montana, 88 per cent; in South Dakota, 85 per cent; and in Minnesota, 71 per cent. The farmer who has been renting on a cash basis has experienced a reduction of rents between 1920 and 1921 in Minnesota, South Dakota and Montana, but in North Dakota the average rent paid increased this year over last. In the states where the average cash rent has decreased, the rentals charged are still about 40 per cent higher than in 1914. The experience of the farmers with declining values of farm products during the past year has caused a large proportion of farmers who had been renting on a cash basis to change, when permitted, to a grain-share basis, but few farmers have grown discouraged to the extent that they have given up their farms entirely.

Farms and Farm Tenancy in the Ninth Federal Reserve District.

Table A		Total No. of Farms	% 1920 of 1910	Farms Operated by Owners	% of All Farms Operated by Owners	Farms Operated by Tenants	% of All Farms Operated by Tenants
Minnesota	1920	178,478	114.1	132,744	74.4	44,138	24.7
	1910	156,137		122,104	78.2	32,811	21.0
Montana	1920	57,677	219.8	50,271	87.1	6,507	11.3
	1910	26,214		23,365	89.2	2,344	8.9
North Dakota	1920	77,690	104.5	56,917	73.3	19,918	25.6
	1910	74,360		63,212	85.1	10,664	14.3
South Dakota	1920	75,655	97.4	47,931	63.3	27,042	35.7
	1910	77,644		57,984	74.5	19,231	24.8
Total	1920	389,500	116.4	287,763	73.8	97,605	25.1
	1910	334,355		266,665	79.7	65,050	19.5

FARM DEBT

The states in the Northwest excel all others in the United States in their ability and willingness to borrow upon the pledge of their lands as security. The recent release of statistics covering farm mortgage debts for the State of South Dakota, together with figures for other states, prepared by the Federal Bureau of the Census, yield some interesting results. The states in the United States having the highest percentage of farms mortgaged in 1920 were:

	Per cent		Per cent
North Dakota	76	Wisconsin	62
Montana	65	Iowa	59
South Dakota	63	Nebraska	almost 57
Idaho	nearly 63	Minnesota	more than 56

There were in the four states of North Dakota, Montana, South Dakota, and Minnesota in 1910 more than 150,000 farms operated by owners free

of mortgage and at the same time only about 116,000 operated by their owners under the burden of a mortgage debt. By 1920 this situation was completely reversed so that there were but 107,000 owners operating their own farms free from mortgages and more than 180,000 owners operating under the burden of a mortgage. This more recent preponderance of the debt-owing owners is very significant in connection with local political ideas and the financial situation. The detailed figures for the several states are shown in Table B which contains reports only for those farms which are run by their owners, and does not include figures for farms which are operated by tenants or managers, although it is reasonably safe to assume that the situation in the latter group would not be far different from the figures here stated.

Table B Farms Mortgaged in the Northwest.
(These figures include a statistical distribution of farms for which mortgage status was not reported.)

Per Cent of Owned Farms Mortgaged	North Dakota	Montana	South Dakota	Minnesota	Total	All U. S. A.
1920	75.9	64.6	63.1	56.3	62.8	41.3
1910	50.9	21.1	38.2	46.3	43.4	33.6
No. of Owners Mortgaged						
No. in 1920	43,212	32,488	30,170	74,671	180,541	
No. in 1910	82,152	4,932	22,146	56,571	115,801	
No. of Owners Free from Mortgage						
No. in 1920	13,705	17,783	17,661	58,073	107,222	
No. in 1910	31,060	18,433	35,838	65,533	150,864	

The situation by states follows:

North Dakota, in the ten-year period, had an increase in the number of farms of 3,330 but at the same time there was an increase in the mortgaged farms of 11,070, showing that nearly 8,000 farms were mortgaged by their owners in addition to a number equal to the new farms added. In this state in 1910 the number of mortgaged farms was about equal to the number of farms free from mortgage, whereas in 1920 the number of mortgaged farms was more than three times as great as the number of unmortgaged farms operated by their owners.

South Dakota lost more than 2,000 farms while the number of mortgaged farms increased 8,000 in number.

In the State of Montana there was an increase in the number of farms of 31,463 and an increase simultaneously in the number of farms mortgaged and operated by their owners of but 27,556.

Minnesota gained 22,341 farms while the number of mortgaged farms operated by their owners increased but 18,100.

This extension of farm mortgage borrowing has increased the total debt in these four states from \$169,000,000 in 1910, to \$531,000,000 in 1920 for owners operating their own farms. This is an increase of 314 per cent, whereas for the United States as a whole in the same period there was an increase of but 233 per cent.

This increase in farm mortgage-debt is doubtless due very largely to the high prices and low interest rates that prevailed during the war, and the fictitious prosperity based thereon. Such conditions always encourage the purchase of more land with credit, the renewal of old mortgages for larger sums based on the increased valuations, and the easy postponement of mortgage payments at maturity in order to purchase unessential things which may be popular in such times of general excitement and extravagance. This increase

in mortgage debt therefore does not represent necessitous borrowings; but rather a suspension of good judgment as to what burdens can be carried easily in subsequent periods of necessary economy in a competitive market.

The total farm mortgage debt of owners operating their own farms for each of the four states, and for the United States as a whole follows:

	1920	1910
Minnesota	\$254,475,222	\$77,866,283
North Dakota	108,284,682	48,841,587
South Dakota	90,082,346	32,771,359
Montana	77,949,679	10,741,280
Total—four states	\$530,791,929	\$169,220,509
Total—all United States....	4,012,700,000	1,726,200,000

From the foregoing it is evident that successful farming is becoming more and more a problem of

successful financing. And as free land is no longer available for more extensive agriculture, the period of intensive agriculture has begun. This means that management is more important than heretofore. A competition between those who wish to farm is taking place. Farm ownership will therefore shift to those who are more capable in utilizing the land and arranging for the financing. That such competition is now present is doubtless the important reason for the increase shown in tenancy. Efficiency under competition will determine the ownership of land rather than the mere desire to farm coupled with a considerable quantity of free land as heretofore. All agencies which will develop and spread correct information concerning agricultural methods and farm finance should be encouraged so that every prospective farmer may have an equal opportunity in this competition.