UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
Washington

F.S.
WH-26

September 19, 1928

FOREIGN NEWS ON WHEAT

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WORLD WHEAT CROP AND MARKET PROSPECTS
(Based on reports up to September 13, 1928)

Forecasts and estimates of wheat crops indicate some improvement in the Northern Hemisphere in the past month, but the world's supply for the season still seems likely to be only about 4 per cent larger than the supply available for the 1927-28 season, and this increase in supply will be largely offset by an increase in demand, according to the Foreign Service of the Bureau of Agricultural Economics.

Increases in the production of North America and Europe outside of Russia are offset to some extent by the prospect of a smaller crop in Russia and India, both of which probably will have to import wheat before the end of the season. The increase in stocks of old wheat in exporting countries at the beginning of the new season, July 1, has practically disappeared by larger shipments through the months of July and August to supply deficits in European markets. Prospects for the rye crop outside of Russia have improved and are now about equal to last year, but last year's crop was so short that rye prices were high. Short corn crops in Southern Europe appear likely to result in an increase in the consumption of wheat in Italy and the Balkan countries. Europe may import as much wheat this season as last, even though the wheat crop outside of Russia is larger than last year. The recent drop in prices the world over will tend to encourage feeding of wheat to livestock, increase the consumption of wheat as a substitute for other bread grains, and in some countries discourage seeding for next year.

Prospects for the 1928 crop

Wheat production reported to date in 29 countries outside of Russia totals 3,188 million bushels, an increase of 6 per cent over the 2,987 million bushels produced in those countries in 1927 when they produced 84 per cent of the estimated world total crop outside of Russia and China. Of the remaining 16 per cent about a fifth is included in the crops of minor Northern Hemisphere countries for which indications in condition reports in some countries and indications from neighboring regions in the case of other countries indicate a crop not far different from that of last year. Nearly two-thirds are included in the crops of Argentina and Australia where present indications are for increased total production over last year, but the most critical period has not been reached in Argentina and later conditions may modify the situation materially. A table showing production in reporting countries is given on page 5.

Canada

The wheat crop is forecast at 550 million bushels, according to the first official estimate, an increase of 110 million bushels or 25 per cent over the 440 million bushels officially reported last year. The actual increase may not be quite so large as these figures indicate. Last year's estimate is believed to have been somewhat under-estimated. The Canadian Bureau of Statistics has intimated that this was the case but does not usually revise the January estimate of production until a year later. Receipts in the past year indicate that the 1927 crop was probably nearer 465 than 440 million bushels. Frosts during August in parts of Saskatchewan and Alberta are believed to have lowered grades of the current crop somewhat, and may have lowered the yield. Aside from the frost damage the 1928 crop is reported to be in good condition, remarkably free from disease and with no rust. Weather has been favorable for harvesting.

The large increase in Canadian carryover of old crop is now entirely disposed of, leaving the storage facilities as free as last year for the receipt of new grain. There has been some building of elevators during the year but it is believed that this has not added enough storage space to allow free movement of the grain, and shipment is expected to be retarded by congestion. A brief statement of the relation of various weather factors to the yield of wheat in Canada is given on page 19.

Europe

Estimates have been revised upward during the past month in many European countries and the total reported to date in 20 countries outside of Russia is 1,330 million bushels compared with 1,227 million bushels in the same countries a year ago. Sweden and Denmark are the most important European countries for which no estimate of the crop has been received. For Sweden reports of growing conditions have been poor and the crop has been backward. The quality of early samples of wheat in most European countries is generally good. European rye production estimates outside of Russia are also much better than were indicated by earlier reports. Indications are still for a smaller European potato production, however. Smaller corn crops in the Balkan countries may reduce wheat exports from those countries.

Russian wheat production is officially estimated at 749,564,000 bushels which is about the same as last year's crop. The rye crop which is used for bread in Russia as much as wheat, or more, is considerably below last year and the total production of the two grains is about 11 per cent below 1927. There is propaganda in circulation there for the use of other grains for mixing with wheat and rye in flour milling. It seems probable that Russia will be an importer rather than an exporter this year. She imported wheat heavily at the beginning of the 1928-29 crop year. Furthermore, the regions where the crop has been best this year are at a distance from the centers of consumption and from the ports, thus increasing procuring and transportation difficulties, and this poor distribution may result in further imports for supplying the deficit regions.

North Africa

There has been a reduction in the estimate of wheat production in Algeria and Morocco and the total for the three Northwest African countries, where a large part of the crop is durum, now amounts to 64 million bushels, an increase of only 3 million bushels over last year. Conditions in Egypt are still reported slightly below last year.

Asia

Total production in India, Japan and Chosen, together with a rough estimate for Palestine, Syria, Cyprus and Lebanon is 350 million bushels compared with 395 million last year. The crop in India has been revised downward still further and is now 44 million bushels below last year and that country is expected to be on an import basis this year. Famine conditions are reported in some parts of North China, but in the region back of the Shanghai milling district the wheat crop is expected to be above last year and in Manchuria it is estimated to be about 10 per cent above last year. Manchurian wheat is largely hard and it is expected that there will be a normal market there, or better, for American Club straight flour in spite of the increase in the Manchurian crop. The wheat and flour market situation in China and Japan is covered more fully on page 15.

Southern Hemisphere

The outlook in the Southern Hemisphere is still for a crop somewhat better than last year but the most critical period in Argentina at least, is still to come. In Argentina, where acreage as now reported is 2.8 per cent above last year's final estimate, average yields would give a harvest of 237 to 245 million bushels as compared with last year's 239 million bushels. According to last reports the crop was in excellent condition, but weather conditions appear to have been favorable to a rank growth, which might lead to damage in case of frost, and which may result in a poorer development of heads even if there is no frost. The below normal temperatures the past couple of weeks have probably been favorable to the crop since no frost has been reported. September and October are usually the most critical months from the standpoint of temperature. In Australia the crop in the east has been needing more rain the past couple of weeks, while in western Australia conditions are favorable.

Rye production

Rye production in 19 countries is forecast at 824 million bushels as compared with 770 millions last year. The increase in these countries, however, is offset by the estimate of reduction in Russia from 968 million bushels in 1927 to 783 million bushels in 1928. Germany and Poland appear to be harvesting fairly good rye crops.

Corn production

Reports to date indicate poor corn crops in Southern Europe. Agricultural Commissioner Steere reports heavy drought damage in Southern Italy and private estimates indicate that the Italian crop may be from 15 to 40 per cent less than last year. The Rumanian crop is also likely to be short. Drought has reduced prospects particularly in Hungary and Rumania. Over 20 per cent of the corn area in Rumania is reported to be in poor condition. The latest forecast of the Hungarian crop is nearly 35 per cent below the outturn of last year and Czechoslovakia has a short crop. Since corn is used extensively for food in these countries, a shortage of corn and high prices may result in some increase in consumption of wheat.

WHEAT: Production in specified countries, average 1909-1913, annual 1925-1928

Country	Average 1909-1913 present boundaries	1925	1926	1927	1928 preliminary forecasts and estimates
NORTH AMERICA	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Canada, winter	(21,466)	23,325	21,785	22,266	21,344
spring	(175,653)	372,150	385,351	417,759	529,138
United States, winter	690,108	401,734	627,433	553,288	578,599
spring		274,695	203,607	319,307	322,473
Mexico a/	11,481	9,213	10,333	11,890	11,332
Total countries reporting 1928	898,708	1,081,117	1,248,509	1,324,510	1,462,886
EUROPE					
England and Wales	55,770	50,773	48,683	53,116	44,837
Netherlands	4,976	5,577	5,487	5,096	6,026
Belgium	15,199	14,477	12,801	16,277	17,747
Luxemburg	615	553	622	743	551
France	325,644	330,844	231,767	276,128	b/ (240,000)
Spain	130,446	162,592	146,599	144,825	141,097
Portugal c/	11,850	12,090	8,560	11,459	6,577
Italy	184,393	240,845	220,644	195,809	236,295
Switzerland	3,314	3,516	4,244	4,336	4,592
Germany	131,274	118,213	95,429	120,522	128,381
Austria	12,813	10,671	9,438	11,942	d/ 12,000
Czechoslovakia	37,879	39,309	34,130	40,385	41,446
Hungary	71,493	71,675	74,909	76,935	91,785
Yugoslvaia	62,024	78,646	71,427	56,568	105,380
Greece c/	16,273	11,222	11,171	e/ 13,300	16,534
Malta	196	274	310	294	289
Bulgaria	37,823	41,360	36,544	47,346	51,104
Rumania a/	158,672	104,741	110,883	96,734	130,512
Poland	63,675	57,797	47,080	54,230	53,645
Finland	137	929	924	813	831
Total European countries reporting 1928	1,324,466	1,356,104	1,171,652	1,226,836	1,329,629
Other European countries excluding Russia	23,704	34,734	31,862	34,394	33,000
Total Europe excluding Russia	1,348,170	1,390,838	1,203,514	1,261,230	1,362,629
NORTH AFRICA					
Morocco	(17,000)	23,872	16,174	24,802	22,046
Algeria	35,161	32,724	23,551	28,323	30,313
Tunisia	6,224	11,758	13,044	8,267	11,942
Egypt	33,662	36,248	37,207	44,346	(40,000)
Total	92,047	104,602	89,976	105,738	104,000

Continued -

WHEAT: Production in specified countries, average 1909-1913, annual 1925-1928, cont'd.

Country	Average 1909-1913 present boundaries	1925	1926	1927	1928 preliminary forecasts and estimates
ASIA	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
India	351,841	330,997	324,651	333,797	289,781
Japan	25,088	29,541	28,430	31,336	33,000
Chosen	6,898	10,509	10,517	9,042	8,526
Palestine, Cyprus, Syria and Lebanon	12,519	16,451	19,202	20,513	(18,900)
Total	396,346	387,498	382,800	394,688	350,000
Total 29 countries reporting in 1928	2,665,386	2,876,622	2,836,528	2,986,913	3,188,123
Total above N.Hemisphere countries	2,735,271	2,964,055	2,924,799	3,086,166	3,280,000
Est. N.Hemisphere, excluding Russia amd China ...	2,759,000	3,026,000	2,981,000	3,136,000	
SOUTHERN HEMISPHERE					
Argentina	147,059	191,141	220,827	239,162	f/235-245,000
Australia	90,497	114,504	160,762	109,925	g/ (165,000)
Other Southern Hemisphere	44,000	57,000	58,000	54,000	
Total, estimate	282,000	363,000	440,000	403,000	
Est. world total, excl. Russia and China	3,041,000	3,389,000	3,421,000	3,539,000	
Russia, production	758,941	730,090	819,744	749,197	749,564
Russia, net exports	160,000	27,000	49,000	(7,000)	

Compiled from official sources and International Institute of Agriculture except as otherwise stated.
a/ Four-year average. b/ Forecast on the basis of a correlation of May 1 conditions in past years with final reports of yield per acre and assuming average conditions for balance of season. Conditions are reported to have improved since May 1 so actual yield may be expected to be higher than here indicated. c/ One year only. d/ Official estimate of winter wheat plus unofficial estimate for spring wheat. e/ Report from Consul Plitt estimates 1927 production at 16,428,000 bushels. f/ This indication is made on the basis of the officially reported acreage and a yield equal to the average of the past 5 years. g/ Private estimates of acreage sown mention an increase of 1,500,000 acres in area seeded. This rough estimate is on the basis of that increase, assuming a yield per acre equal to the average for the past five years.

Wheat prices

Wheat prices generally reached low levels in August and then rose slightly. By the middle of August farm prices had dropped to 95 cents per bushel from an average of 118 cents in July and 132 in June. The prices of all classes and grades at six principal markets dropped from an average of 118 cents for the week ending August 3 to 108 the next week, and remained at this level until the last week in August when it rose to 110.

The prices of all classes followed about the same course excepting that of soft red winter which began to recover in the second week of August and by the end of the month had recovered to the level of the beginning of the month. The price of No. 2 red winter wheat at St. Louis for the first week of September averaged two cents above that of the corresponding week last year. This bears out the statement made in June that the supply of soft red winter wheat was so small that the price level for this season was likely to be near to last year's price level.

The September forecast of production in the United States indicates an increase of 10 million bushels in the spring wheat crop. The forecasts of both the durum and hard red spring wheat crops were increased. Reductions in the estimates of the crops of North Africa have slightly improved the outlook for durum. The hard red spring wheat is facing competition from the Canadian spring wheats in the world markets.

It seems likely that wheat prices in general will hold near present levels during the next month. Prices may fluctuate with reports of crop conditions in the Southern Hemisphere and European buying. The strength of the European demand for wheat may not show itself very definitely until later in the season, when it becomes certain that prices have reached lowest levels and the size of the crops has become more definitely determined.

WHEAT: Weighted average cash prices at stated markets

Month	All classes and grades six markets		No. 2 hard winter Kansas City		No. 1 dk. N. spring Minneapolis		No. 2 amber durum Minneapolis		No. 2 red winter St. Louis	
	Year beginning July 1									
	1927	1928	1927	1928	1927	1928	1927	1928	1927	1928
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
July	139	126	136	120	158	147	153	123	141	147
August	136	109	135	106	150	124	140	108	142	138
September	129		131		137		128		142	
October	125		128		134		123		145	
November	126		131		134		128		141	
December	128		132		137		132		144	
January	131		133		143		130		151	
February	132		133		142		129		156	
March	137		138		147		133		169	
April	151		152		163		141		196	
May	151		160		178		140		196	
June	142		147		153		131		179	

Wheat Exports

Exports in surplus producing countries depend not only upon the size of the crop but also upon the foreign demand for wheat. According to the latest estimate of winter wheat and forecast of spring wheat for the United States, the crop for this season is nearly 30 million bushels greater than the 1927 crop. A part of this increase in production will probably be utilized by increased consumption on account of low prices, and part of it may be added to stocks at the end of the year. The net export from last year's crop was 191 million bushels. It is therefore estimated that the export from the United States for the season beginning July 1, 1928 is likely to fall between 200 and 220 million bushels. Canada from a crop of about 465 million bushels exported 305 millions in the season July 1, 1927 to June 30, 1928, and increased stocks. Adding 85 million bushels to the supply according to the August forecast would provide an export surplus of about 390 million bushels without increasing consumption or stocks. Since Canada may consume a larger amount and carry over a larger quantity, exports are estimated between 345 and 390 million bushels. Russia and British India will probably import wheat. The Danube Basin and Balkan countries will have wheat to export, but exports will probably not be increased so much as production has been increased because of relatively low prices for wheat and the prospect of a shortage in the corn crop. Should Argentina and Australia realize average yields, a large amount of wheat would be available from those two countries from January 1 to July 1, 1929. It is assumed, however, that with the large supplies in the United States and Canada and relatively low prices, the Argentine and Australian crops will not move so rapidly as they have moved in the past year. Adding together the estimates of the probable range of exports indicates that the exports of the principal exporting countries in the season July 1, 1928 to June 30, 1929 will amount to about 860 million bushels as compared with a net export from these same countries of 801 million bushels last year.

Wheat Imports

Europe seems likely to import in the season beginning July 1, 1928 about as much wheat as imported in the past season, notwithstanding an increase of about 100 million bushels in the production of wheat. Great Britain will probably take as usual between 200 and 220 million bushels. Better crops in some of the European countries may cause them to reduce their imports below what they were last year, but others may increase their imports. It seems likely that France, for example, will import more wheat than last year. Fairly conservative estimates for each of the more important net importing European countries indicate imports of about 650 million bushels compared with about 630 million bushels imported last year. A review of the takings of non-European countries in the past five years also indicates that they are likely to take more wheat when the prices are low, and the probable imports of these countries are therefore estimated to total between 150 and 165 million bushels of wheat, including flour.

WHEAT, INCLUDING FLOUR: Net exports from principal exporting countries, years beginning July 1, 1923-24 to 1928-29

Country from which exported	1923-24	1924-25	1925-26	1926-27	1927-28	Net exports reported: July 1 to	1927-28	1928-29	Prel. est. 1928-29: Min.	Max.
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.		Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
United States	132	255	92	206	191	Sept. 1	35	20	200	220
Canada	343	194	320	305	297	July 31	9	36	345	390
Russia	21	1	27	49	7	July 28	0	0	-15	0
British India	18	45	7	9	12	Sept. 1	6	1	-20	-5
Hungary	17	15	19	21	22				25	30
Rumania	a/ 6	4	8	9	5				15	20
Bulgaria	a/ 2	a/ b/ -2	4	2	2				5	10
Yugoslavia	a/ 6	9	12	10	1				20	30
Algeria	a/ 9	b/ -1	5	b/ c/ -1	4				2	5
Argentina	170	125	100	140	186	Sept. 1	16	16	125	160
Australia	83	124	77	97	74	Sept. 1	13	11	75	85
Total all coun. listed	807	769	671	847	801		79	84	777	945

a/ Year ended July 31. b/ Net imports. c/ 10 months.

WHEAT, INCLUDING FLOUR: Net imports into European importing countries, 1923-24 to 1927-28 and estimates of probable imports, 1928-29 as indicated by reports to date

Country	Year beginning July 1: 1923-24	1924-25	1925-26	1926-27	1927-28 prel.	Net imports reported: July 1 to	1927-28	1928-29	Prel. est. 1928-29: Min.	Max.
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.		Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
Great Britain	210	216	188	218	194	July 31	17	18	200	220
Italy	70	96	64	87	87				70	80
Germany	30	71	56	94	92				85	95
France	51	41	34	53	55				60	70
Belgium	40	39	39	40	42				39	42
Netherlands	27	26	27	28	31				28	31
Czechoslovakia	19	23	19	21	21				19	24
Greece	19	22	a/ (22)	a/ (22)	a/ (20)				18	20
Irish Fr. State	--	19	18	19	18				18	20
Austria	17	16	15	17	15				16	18
Switzerland	16	14	14	17	18	July 31	1	1	16	18
Sweden	12	11	6	6	9				8	13
Norway	6	5	6	6	6				5	7
Denmark	9	6	6	7	11				9	12
Finland	5	4	5	5	6				5	6
Poland	3	14 b/	2	7	8				6	14
Total above	534	623	517	647	633		18	19	602	690
Other Eur. & non-Eur. coun.									150	165
Total all impg. coun.									752	855

a/ Rough approximation. b/ Net export.

In spite of the steadily declining price of wheat, European markets have registered a relatively good volume of buying during the month of August, according to reports a/ from Agricultural Commissioner Steere at Berlin. Russia has not been a buyer the past month, but practically all the deficit countries have been continually interested for current or future needs, especially whenever the market has given any evidence of stability. This relatively good interest in the face of weakening prices has been engendered, apparently, by the lowness of stocks of imported grain nearly everywhere in trade and consumptive channels and the resultant necessity of buying for current requirements and for the near future. Another factor seems to be some belief that prices have reached, or nearly reached, a bottom level, as European trade circles for the most part now appear to anticipate relative stability of wheat prices around current levels for some time ahead, barring extraordinary developments.

Prospects for the wheat crop in Continental Europe have undergone general improvement during August, as a result of very favorable maturing and harvesting weather. Close to 36,700,000 bushels have been added to ideas of the Continental supply during the month, and the crop will be materially above last year's outturn as well as above the average of the past five years. Reports as to quality are also very satisfactory.

Russian participation as a wheat exporter this season now seems definitely out of the question. The total bread grain crop is no larger than last year - there are numerous indications that it may be considerably smaller - and the supply is very unfavorably located from the standpoint of exports as well as for the principal centers of consumption in Russia. Practical failure of winter grains is reported in parts of the Black Sea region, and the very favorable prospects for spring cereals have recently been dampened by reports of deterioration from general and heavy rains at harvest time. The first two months of the new procuring campaign have also brought unfavorable results.

Increased estimates of yields in Germany, Belgium, Holland, Denmark and Poland are all due to general improvement in crop prospects over the northern half of the Continent during August. Maturing and harvesting weather has been much better than usual and many reports state that threshing results are exceeding expectations from northern France across Germany into Poland. It is, therefore, entirely possible that later estimates for countries in this region will be revised upward, but nevertheless some belief persists that thinning out by winter kill will be revealed in the final results. Private estimates for France around the middle of August indicated the probable production to be somewhat below 257,000,000 bushels, but recent reports on threshing results state that yields in Normandy and northern France are exceeding expectations, so that our last month's estimate of 257,000,000 bushels still stands.

Germany

The German grain market has been characterized generally by an "in and out" attitude of buyers throughout most of August. The steadily weakening tendency of prices under the influence of preponderantly favorable crop reports

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a/ Report dated August 31 brought up to date by cable of September 13.

has caused general reluctance to make extensive commitments, but there has been an underlying readiness to buy whenever less favorable reports have caused the market to assume a steadier tendency. A rather active demand with large transactions has been evident on a number of days, a fact which seems to have been based upon the relatively low stocks of imported grain in the hands of the trade and the milling industry, although there is also considerable belief that prices have now touched bottom. Heavy German buying is very likely once stability in the price level is assured.

Prices of bread grains in Germany have declined steadily throughout August, even to a greater extent than on world markets. This is doubtless due to the fact that the decline during July was much less pronounced than in the primary markets abroad. Domestic wheat at Berlin has decreased from 155.0 cents per bushel on July 25 to 140.7 cents on August 29, and rye has declined from 149.8 cents to 130.7 cents during the same period. The decline in rye has been especially marked and quotations on a weight basis are now below wheat for the first time in many months. This is entirely due to the improved outlook in Germany, as American prices have remained relatively stable for rye. The official estimate of the new German rye crop is 308,000,000 bushels as compared with the final official estimate of 269,000,000 bushels last year and the record crop of 317,000,000 bushels in 1925.

Wheat and Rye Prices in Germany

Date	Wheat			Rye
	Hamburg	Breslau	Berlin	Berlin
	Cents	Cents	Cents	Cents
July 11	163.4	162.1	162.1	164.0
18	160.1	162.1	160.8	156.4
25	156.3	162.1	155.0	149.8
August 1	156.3	162.1	154.6	147.9
8	153.3	162.1	154.3	140.1
15	144.3	152.4	151.4	137.0
22	153.0	145.9	144.9	134.0
29	148.5	145.9	140.7	130.7
September 6	139.4			133.2
12	132.2			125.2

Domestic offers of new crop wheat and rye have so far been small, partly because of the occupation of farmers with harvest work, but the low prices are doubtless a more important factor. A rather active demand for German rye for export purposes is reported from the port markets.

The development of grain movements in Germany during recent weeks has not been out of the ordinary in any important respect. Imports of wheat during July amounted to 7,680,000 bushels as compared with 6,800,000 bushels in June and were, therefore, considerably below last year's July imports of 10,000,000 bushels. Arrivals of imported wheat at German seaports during the first three weeks of August have been about on the level of July figures, possibly somewhat smaller. Visible stocks of wheat and rye at the ports have decreased slightly since July and are now relatively small, especially in the case of rye, as the statistics on the movement of grain toward the interior on inland waterways show some increase during August as compared with July figures, which were very low. The visible stocks of wheat at Berlin, which dropped to 599,500 bushels on July 31 as compared with about 955,000 bushels on June 30, are thought to have declined further during August. German imports of rye in July amounted to 1,882,000 bushels as compared with 1,716,000 bushels in June and 4,141,000 in July 1927. August port arrivals are running smaller, in fact an export movement of German rye has already set in.

Reports on the German bread grain crops have taken a much more optimistic turn in the last half of August as a result of the good weather and unexpectedly satisfactory threshing yields. The rye harvest is now practically finished under relatively favorable conditions. The harvesting of wheat is well under way, but there is still some risk of damage to quality, especially since there has been considerable rain.

France

French wheat markets are reported to have had a rather quiet tone, but, nevertheless, a fairly important turnover of both wheat and wheat flour during the month of August. Marketing of new crop wheat developed rather actively, as ideal harvesting weather enabled a rapid winding up of this work.

Estimates of the French wheat crop still vary considerably, as the outturn is proving to be different than expected in different parts of the country. Yields south of the Loire have been below expectations, but in Normandy and in northern France the outturn has been better than expected, according to latest reports. There is some reason to believe that middle of the month private estimates placing production at around 250,000,000 bushels may be a trifle low, and that the crop may not be far from 257,000,000 bushels. The quality of the French wheat crop is reported to be very satisfactory. Considering estimates that 1,800,000 bushels of last year's crop were unsuitable for milling, it appears that the effective supply this year will not be far below that of 1927. Imports, however, will doubtless be larger than last year because of the much lower prices and apparently somewhat reduced stocks.

Italy

Italian grain markets were relatively active in August with considerable quantities of wheat being turned over. Purchases for import were good, particularly for distant positions. The wheat export prohibition has been prolonged until June 30, 1929.

The Italian wheat crop has now been officially estimated at the figure previously used by the Italian Minister of Economics, viz.

236,000,000 bushels. Rye production is estimated at 6,550,000 bushels, barley 11,000,000 bushels, and oats 50,600,000 bushels. The corn crop has not yet been officially estimated, but private estimates indicate an outturn of 15 to 40 per cent smaller than in 1927. Drought damage has been especially heavy in Southern Italy.

Belgium

The Antwerp grain market reports relatively satisfactory demand for wheat by Belgian flour mills throughout the month of August, considering the extreme weakness of prices. Sales to Germany were also of considerable importance. Stocks of wheat at Antwerp were very light at the close of August. The official estimate for Belgium shows satisfactory crops of both wheat and rye, as well as fodder crops.

Holland

August reports from Rotterdam are generally in line with those from other neighboring countries in that they indicate relatively good inquiry for wheat in spite of the declining tendency of prices throughout the month. Both Dutch and Rhenish mills were at times large takers of Manitoba and Hard Winter wheat. The Dutch official estimate of 6,000,000 bushels for wheat is indicative of very satisfactory prospects, as the average crop for the past five years is only 5,000,000 bushels.

Danube Basin

Grain market reports from the Danube Basin indicate considerable business activity during August, even though local mills were interested only for current needs. The movement of the crop has gotten under way rapidly and in rather large volume, considering the general tendency of prices, reports indicating extensive shipments via the Danube.

The wheat crop in the Balkans and in the Danube Basin this year is undoubtedly one of the most satisfactory on record, from the point of view of both size and quality. This is especially true of Yugoslavia and Hungary, where the crop is one of the largest ever harvested. The latest official estimate for Hungary, as of August 26, places wheat production at 92,000,000 bushels as compared with 76,900,00 bushels last year, when the crop was considered relatively good. Yugoslavia has been officially estimated to have a crop of 105,000,000 bushels as compared with last year's very small yield of 56,568,000 bushels, this year's crop being about the largest in 20 years. Trade opinion, however, considers this figure too high, and in the light of all available information it would seem that 92,000,000 bushels is probably a more reasonable estimate. The recent official Rumanian estimate of 130,512,000 bushels of wheat seems too high in the light of unfavorable conditions reported in some parts of Bessarabia. The official estimate is certainly too high from the standpoint of the amount of grain it would seem to contribute to the general European supply, as there is a distinct limit on the capacity of the Rumanian railroads to move out of the country any large surplus that may exist. An estimate of an even 110,000,000 bushels seems ample.

The grain situation in the Danube Basin and the Balkan countries, however, is somewhat complicated by the apparently unfavorable situation with regard to forage and feed crops. The prolonged drought experienced over most of this region during the past summer set in too late to affect the bread grain and earlier cereal crops, but corn, forage crops and pastures have been seriously damaged and there is even talk of having to make heavy sacrifices of livestock in parts of this region. It is certain that adjacent areas, such as Czechoslovakia, Austria and Germany, which are dependent upon this region for corn and some other feedstuffs, will have to depend much more heavily upon overseas shipments during the coming campaign., In Czechoslovakia, Austria, and Hungary official circles are reported as inclined to facilitate such imports by tariff reductions. The extent of damage to the corn crop is indicated by the fact that Hungary has just estimated production at 45,000,000 bushels as compared with 68,000,000 bushels last year and that Rumanian production is placed at 139,000,000 bushels. Over 20 per cent of the corn area in Rumania, moreover, has been reported in poor condition and about 38 per cent is only medium in condition, with the balance good. Rains have fallen over many parts of the Balkans and the Danube recently, so that some improvement in conditions can be expected, even though rather late.

Denmark

The latest official estimate of the condition of wheat and rye in Denmark outside of Jutland (95 per cent of normal for wheat and 86 per cent for rye as of August 1) points to relatively good prospects, especially since the weather has been fairly favorable in August. An overturn equal to that of last year seems probable.

Russian grain procurings

Russian grain procurements during the second half of August continued to develop slowly, according to a cable of September 5 from Agricultural Commissioner Steere. There are some complaints of wet grain. The development of the procuring campaign this season is expected to be considerably delayed,according to an article in the Russian paper "Economic Life" of August 15, 1928. Winter wheat, which is harvested earlier than other grains in Crimea, North Caucasus and Ukraine, its chief producing region and which constitutes the most important source of commercial supply during the first two months of the campaign, will this year almost entirely disappear from the market due to the poor crop and considerable seed requirements. In the eastern regions where the crops are good, and which will therefore be an important source of bread grain for the rest of Russia, procurements do not usually develop on a large scale until December.

Furthermore, with a larger share of the procurements than usual coming from these regions this year, the less adequate drying, milling, warehousing and transportation facilities in these regions, the wetness of the grain, and the less extensive experience in procuring work, all are likely to cause further difficulties in the procuring situation. This year, for instance, Kazakstan, which is the most difficult of all eastern regions from the standpoint of procuring operations, has a record crop. Difficulties have arisen there in past years when the crops were not so large. Under such circumstances the efficiency with which the recently reorganized procuring machinery operates will probably count for a great deal. It is significant, therefore, that according to the Russian press in August there was observed considerable friction between the state procuring organization, "Soyuzkhleb", and agricultural cooperatives, which are supposed to cooperate in the joint work of procurements. An additional factor which probably will lower the procurements in some regions, Ukraine being especially mentioned, is local private trading by peasants, which usually increases during the years of poor crops. Considerable activity of this kind has been reported in the Russian press.

The recent increase of procuring prices is generally considered a favorable factor to procurements, but greater elasticity of procuring and adaptation to local conditions is urged in the article quoted above. There are also difficulties on the demand side. Smaller crops in the consuming area, including the flax-growing sections, will make for a somewhat increased demand for grain shipped from the producing regions. A complicated situation is presented in Ukraine, according to the article quoted above. The Soviet authorities are faced with three problems in this region: (a) to secure fully the winter seed supply and not to allow the use of winter wheat for consumption; (b) to provide a food grain supply in a number of regions, and (c) to furnish the peasants with feeds in some regions which suffered from poor crops.

Oriental wheat and flour markets

Japan

Decreases in the prices of foreign wheats at Japanese mills, a good export demand for flour and high rice prices have stimulated the milling industry in Japan in spite of a falling off in the domestic demand for flour, according to a cable from Consul Kemper at Tokio. The price of United States western white wheat at mills in Japan on September 1 is quoted as equivalent to 159 cents a bushel, or 12 cents below the corresponding price a month ago. Canadian No. 5 on September 1 sold for 144 cents a bushel, a drop of only 3 cents below the price quoted a month previously. Australian wheat has also fallen, the present price being 165 cents a bushel. No definite price was given a month ago but it was said to be higher than any of the other wheats of which the highest quoted was the United States western white at 171 cents.

Wheat imports into Japan during July included 169,000 bushels from the United States, 436,000 bushels from Canada, and 351,000 bushels from Australia. On August 1 foreign wheats had been in smaller supply than usual. Mill stocks on September 1 were larger than usual for that season.

The wholesale price of standard flour on September 1 was 163 cents a bag of 49 pounds net, showing no change from the price quoted a month earlier. The domestic demand for flour is reported as slightly below normal, but the export demand is good. Flour exports during July are reported as equivalent to 547,000 bags of 49 pounds net. The milling industry is unusually active, according to Mr. Kemper, due to this active export demand and to the high rice prices.

Manchuria

The Manchurian wheat crop is believed by millers and other sources of information to be roughly 10 per cent larger than last year's good crop, but of poorer quality, according to a cable from Agricultural Commissioner Paul O. Nyhus in the Orient. In spite of this large crop, however, there is an active interest in "club straight" flour at Dairen, according to Mr. Nyhus. The increase in production is due to a substantial increase in acreage which is explained by several years of favorable prices together with good yields and to the opening up of new lands. Excessive rains in late July and early August made harvesting difficult and reduced both the yield per acre and the quality below last year. Smut reduced the yield in many localities and there is considerable grain which is poorly filled and discolored. The principal type grown in North Manchuria is hard wheat.

Manchurian mills are anticipating supplies and operations fully as large as for the active season just closing. Throughout the past season mills in Manchuria had enough wheat to operate at practically full capacity, and in addition there were exports in significant volume for the first time since 1922, the exports amounting to about 4,200,000 bushels, bought chiefly by Japan. Efforts were made the past season to market Harbin flour in Tientsin but with little success as it was impossible for Harbin millers to meet the prices of Shanghai and foreign flour in the Tientsin markets.

There is normally an outlet for certain quantities of "club straight" flour at Dairen as distinguished from the high gluten flour of Northern Manchuria, and there is an active interest in club flour there at the present time. Flour importers state that the recent drop in prices of western soft wheat flour has made prices very attractive at Dairen and that contracts for heavy September and October shipments have been made. The low prices, together with demand for flour from soft white wheat are favorable to imports of that class of flour in spite of the large Manchurian crop of hard wheat and importers are predicting that imports will be larger than last season's 245,000 bags of 49 pounds. The wholesale price of Manchurian wheat at Harbin on August 15 for October delivery was $1.04 per bushel.

Tientsin

A small wheat crop in the Tientsin district of China, together with transportation difficulties and reductions in the prices of American and other flours, have resulted in good contracts for September and October delivery at that port, according to a cable from Agricultural Commissioner

Nyhus. The market is well supplied for immediate delivery, but there is considerable interest in January and February shipments.

The wheat crop in the region surrounding Tientsin and supplying the mills of that city is extremely short this season as a result of drought in May which reduced yields materially. The supplies of local wheat at Tientsin are further reduced by seizures by the troops operating in that region and by transportation difficulties, and only small quantities are arriving. As a result, the supplies for local mills this year will have to come almost entirely from outside sources and mill operations for the current year are expected to be difficult and uncertain. The mills are already importing from Shanghai wheat from the big crop of the Yangtze valley. Manchuria, which is also reported to have a large crop, is another possible source of wheat imports. Normally the local mills supply about 30 to 40 per cent of the flour consumed in that district, the rest coming from Shanghai, Japan, the United States, Canada and Australia.

Big flour contracts were made at recent low points in the American and Canadian flour markets for September and October delivery. It is estimated that these orders total about 2,000,000 bags of 49 pounds, of which about half is "Club straight" flour. In addition there are contracts for about 1,000,000 bags of Shanghai flour and about 200,000 bags of Japanese flour, and each is subject to quick gains in the event of an active retail market. There have been heavy receipts of low priced Shanghai flour and stocks are moving somewhat slowly into consuming channels due to poor transportation conditions. It is stated that dealers are well supplied with foreign flour for early delivery, but there is considerable interest in flour for January and February shipments. Last year flour imports into Tientsin for the six months, July to December, totaled 7,608,000 bags, of which 1,155,000 bags came from the United States direct in addition to that sent by way of Shanghai.

The trade is disturbed by an announcement of the Nationalist Government to put into effect a tax equivalent to 4.6 cents, United States currency, per bag of 49 pounds on imports of foreign flour into Tientsin. A similar tax was levied at Shanghai, effective July 1. The consul at that port protested against the tax, but so far no information has been received of any action to withdraw it.

Wholesale flour prices the last of August were 165.6 cents a bag for local flour, 147.2 for "Club straight", 142.6 for Shanghai flour, 138 for Japanese, and 135.7 for Canadian. The locally milled flour is usually considered to be the best flour on the Tientsin market, the wheat usually being of excellent quality, of a higher gluten content than Shanghai wheat, but lower than Manchurian, according to an earlier report from Mr. Nyhus. The native flour has a moderate gluten content, a good white color, and normally sells for about 15 cents a bag above any other flour. American "Club straight" flour, although lowest in gluten content of any of the flours on the Tientsin market, has a firm and popular place because of its superior white color.

Outlook for wheat acreage in 1929

There are as yet practically no reports of probable acreage to be sown this fall for the 1929 wheat crop outside of the United States where farmers' intentions reports indicate a probable decrease of 2 to 6 per cent in winter wheat acreage from last year's area. The large 1928 crop and the fall in prices the past few weeks, just at the time when farmers in the Northern Hemisphere are preparing their land for the new crop, may normally be expected to tend to curtail fall sowing to some extent. Some analogy may be drawn from the situation in 1923 following the record world wheat crop of that year, but there are also important points in which the situation is different. In 1923 world acreage outside of Russia and China reached the high point of 229.6 million acres, and good yields brought the harvest up to 3,551 million bushels, an increase of 10 per cent over that of 1922, and the largest on record up to that date.

The European crop was also good, causing decreased demand for non-European wheat and, furthermore, unfavorable economic and financial conditions in many European countries, discouraged the purchase of foreign goods that year, so there was a poor market for the large crops of non-European exporting countries and prices dropped heavily. Following this situation the wheat acreage outside of Russia for the 1924 harvest dropped to 223.6 million acres, a decrease of 2.6 per cent from that of 1923. Poorer yields reduced the crop in 1924 still further to 3,141 million bushels, a decrease of 11.5 per cent. The acreage decrease in 1924 came practically entirely in the United States and Canada. Europe outside of Russia, taken as a whole, sowed an increased acreage, as did also Argentina, Australia and India.

In the present year, the increase in the size of the crop over that of last year is not nearly so great as it was in 1923, general economic and financial conditions are much better and demand is expected to be fairly good whereas in 1923 it was poor. (See FS-Wh. 24, August 20, 1928, pages 15 and 16). In 1923 Europe was still noticeably below the prewar normal in bread grain production. Wheat acreage was 10 per cent below the 1909-13 average in the same territory and production 7 per cent below prewar. The 1928 European wheat acreage, judged by preliminary reports, is only about 3 per cent below prewar, while production is indicated to be above prewar. There will still be some tendency to increase wheat acreage because Europe is turning to wheat consumption away from rye, but this pressure is not as acute as in 1923. The rye crop in Europe, although larger than last year, is still below prewar, so the total European bread grain production outside of Russia is still slightly below prewar, while population is larger. According to a report of the League of Nations the European population outside of Russia in 1925 was 4 per cent greater than in 1913.

Argentine and Australian acreage have shown a generally rising tendency for many years regardless of the size of the world crop, and a continuance of this movement seems probable.

In Canada wheat acreage has remained about stationary the past six years, showing no tendency to increase since the large war expansion until the present year. The size of the present world crop and the price of wheat during the coming months is likely to have more weight in determining next year's Canadian acreage than that of Europe or the Southern Hemisphere. See pages 22 and 23 for tables on wheat acreage and yield per acre.

Canadian Wheat Crop as Indicated by Weather Conditions

An analysis of temperature and rainfall data from April through July in its relation to wheat yields in the three western prairie provinces of Canada - Manitoba, Saskatchewan, and Alberta - indicated a probable crop between 476 and 552 million bushels for 1928 in those provinces or averaging the two extremes about 515 million. This is based on a multiple correlation measuring the effect of temperatures for April, May, June and July and rainfall for the period April to July upon the yields of wheat from 1905 - 1927. Table here

The following table shows a comparison between final official reported production for the three western provinces and production obtained by multiplying the yield indicated by the weather relationship and the final official acreage. The third column is obtained by multiplying the government yield indication on August 1 by the revised acreage in order to compare our production indications from the weather with the government report as of August 1 as well as the final official revised production report for wheat in western Canada. It will be noted that in the past 20 years the indications of yield as determined from the weather data have come as near as or nearer to final official estimate of yield than the August forecast made on the basis of statements of crop reporters, in every year but three.

Canada: Estimates of wheat production, in three Prairie Provinces, 1905-1927

Year	Final official estimate of production	Estimate on basis of weather data and official revised estimate of acreage	Estimate on basis of August 1 official estimate of yield and official revised estimate of acreage
	Million bushels	Million bushels	Million bushels
1905	80	69	
1906	104	104	
1907	72	62	
1908	107	129	95
1909	146	131	109
1910	116	113	99
1911	207	206	196
1912	200	201	206
1913	200	201	216
1914	156	184	140
1915	351	345	336
1916	242	246	255
1917	212	191	233
1918	164	197	233
1919	166	192	240
1920	234	259	255
1921	280	326	334
1922	375	323	295
1923	425	490	355
1924	236	230	226
1925	372	367	335
1926	361	360	300
1927	415	431	351
1928	---	a/ (515)	---

a/ On the basis of acreage in those provinces as reported in July.

WHEAT: United States production by classes, 1923-1928

Year	Total	Hard red spring	Soft red winter	Hard red winter	Durum a/	White
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
1923	797	126	272	242	56	102
1924	864	192	189	365	66	52
1925	676	156	170	206	65	80
1926	831	121	229	360	48	73
1927	872	199	181	318	80	94
1928						
(July)	800	155	122	368	82	74
(August)	891	195	139	386	89	82
(September)	901	201	139	386	90	95

These production estimates are based upon percentages of area, by classes, in 1924, supplemented by percentages in 1923.

a/ Crop estimates of four states plus 1924 indications in other states.

United States Exports of Wheat and Flour by Customs Districts

During the year ended June 30, 1928, when total United States exports of wheat amounted to 145,956,000 bushels, more wheat left the country by way of the Oregon customs district, mainly Portland, than any other customs district, foreign purchases amounting to 38,897,000 bushels, a new record for exports from that port. Duluth and Superior ranked second with exports of 35,954,000 bushels, also a record figure, the two groups together thus handling more than 50 per cent of our surplus. Galveston which has frequently held first rank as an export center dropped to third place with an export of only 13,074,000 bushels as compared with 51,223,000 bushels during 1927.

Total exports of wheat flour reached 12,916,000 barrels of which 39 per cent went out through the port of New York. Washington, consisting mainly of Seattle and Tacoma took second rank in the export of flour thus supplanting New Orleans which had held second place during the 3 preceding years.

Wheat flour: Exports from the United States by Customs Districts, 1927-1928

Customs districts	Year ended June 30	
	1927	1928
	Barrels	Barrels
Maine and New Hampshire.......	601	0
Massachusetts................	24,504	50,338
Buffalo......................	4,787	2,986
New York.....................	5,051,597	4,944,842
Philadelphia.................	270,975	149,543
Maryland.....................	535,300	333,603
Virginia.....................	198,137	134,151
New Orleans..................	2,232,829	1,913,982
Sabine.......................	58,737	40,832
Galveston....................	1,926,184	1,352,067
San Antonio..................	27,220	10,900
Los Angeles..................	7,721	7,087
San Francisco................	305,649	419,626
Oregon.......................	763,302	1,079,018
Washington...................	1,729,347	2,267,726
Alaska.......................	565	556
Duluth and Superior..........	79	115
Wisconsin....................	1,071	210
Chicago......................	0	0
Ohio.........................	0	0
Other districts..............	246,420	208,358
Total............	13,385,025	12,915,940

Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of Foreign and Domestic Commerce.

WHEAT: World acreage and yield per acre by major divisions, average 1909-1913, annual 1921-1928

Classification and year	Est. world total excl. R. & C.	North America (3)	Europe excl. Russia	Northern Hemisphere	Southern Hemisphere	United States	Canada	Argentina	Australia	India
AREA	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres
All Wheat -										
Av. 1909-13	204.2	59.2	72.8	177.5	26.7	47.1	9.9	16.1	7.6	29.2
1921	223.4	89.3	63.8	195.4	28.0	63.7	23.3	14.2	9.7	25.8
1922	226.8	87.4	64.6	196.9	29.9	62.3	22.4	16.3	9.8	28.2
1923	229.6	85.6	65.6	198.8	30.8	59.7	22.9	17.2	9.5	30.9
1924	223.6	76.0	66.7	191.0	32.6	52.5	22.1	17.8	10.8	31.2
1925	227.7	75.4	68.8	193.9	33.8	52.3	22.0	19.2	10.2	31.8
1926	231.0	80.5	69.0	197.1	33.9	56.3	22.9	19.3	11.7	30.5
1927	234.6	82.3	70.2	199.2	35.4	58.6	22.5	19.7	11.8	31.3
1928, prel.	a/(239.3)	83.1	a/(70.7)	a/(201.7)	a/(37.4)	57.8	24.1	b/20.3	c/(13.3)	32.2
Winter wheat only -			d/	e/						
Av. 1909-13	--	31.6	--	--	26.7	28.4	1.0	16.1	7.6	29.2
1921	174.6	46.4	57.9	146.6	28.0	43.4	.7	14.2	9.7	25.8
1922	178.9	45.9	58.3	149.0	29.9	42.4	.9	16.3	9.8	28.2
1923	181.3	43.4	59.4	150.5	30.8	39.5	.8	17.2	9.5	30.9
1924	179.7	37.8	61.1	147.1	32.6	35.7	.8	17.8	10.8	31.2
1925	180.2	33.2	63.5	146.4	33.8	31.2	.8	19.2	10.2	31.8
1926	184.7	39.1	63.9	150.8	33.9	37.0	.9	19.3	11.7	30.5
1927	185.7	40.0	63.8	150.3	35.4	37.9	.9	19.7	11.8	31.3
1928, prel.	f/(186.8)	38.2	f/(63.5)	f/(149.4)	f/(37.4)	36.1	.8	b/20.3	c/(13.3)	32.2
Yield per acre of all wheat	Bus.	Bus.	Bus.	Bus.	Bus.	Bus.	Bus.	Bus.	Bus.	Bus.
Av. 1909-13	14.9	15.2	18.6	15.5	10.6	14.7	19.7	9.1	12.0	12.0
1921	14.2	12.6	19.0	14.3	13.6	12.8	12.9	13.4	13.3	9.7
1922	14.2	14.7	16.1	14.6	12.0	13.9	17.8	12.0	11.2	13.0
1923	15.5	15.0	19.2	15.7	14.0	13.4	21.7	14.4	13.1	12.1
1924	14.0	15.0	15.8	14.3	12.6	16.5	11.9	10.7	15.2	11.6
1925	14.9	14.6	20.3	15.6	10.7	12.9	(19.0)	10.0	11.2	10.4
1926	14.8	15.5	17.6	15.1	13.0	14.8	17.8	11.5	13.8	10.7
1927	15.1	16.1	18.0	15.8	11.5	14.9	(19.5)	12.1	9.3	10.7
1928, prel.	--	--	--	--		15.4	(22.8)			9.0

a/ Assuming that countries not reporting have an acreage equal to last year. For Europe outside of Russia about 5 per cent of the total wheat area has not yet been reported. In the total Northern Hemisphere 5 per cent has not yet reported. For the Southern Hemisphere Argentina is the only country actually reporting acreage for 1928. See notes b/ and c/. b/ August forecast. In the past 5 years this forecast has ranged from 98 to 99 per cent of the final estimate. c/ No official estimate. Private estimates place the probable acreage 1.5 million acres above last year. d/ Excludes minor countries for which total area is not divided between winter and spring sown crop. e/ Assuming total Asiatic area excl. R. and C. and total North African crops to be winter wheat. f/ Assuming that countries not reporting have an acreage equal to last year.

WHEAT: Yield per acre in specified countries, 1904 to 1928

Year	United States	Canada	Argentina	Australia	India	France	Germany	Italy	Hungary	Rumania
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
1904	12.5	--	12.4	8.7	12.7	18.6	29.5	13.9	16.1	12.6
1905	14.7	--	9.6	11.2	9.9	20.8	28.5	13.5	18.5	21.4
1906	15.8	--	11.1	11.1	12.1	20.4	30.3	15.3	21.8	22.8
1907	14.1	--	13.5	8.3	11.9	23.5	29.6	15.1	14.9	10.0
1908	14.0	--	10.4	11.9	10.0	19.5	29.7	--	17.5	12.3
Average	14.2	--	11.4	10.2	11.3	20.6	29.5	a/14.5	17.8	15.8
1909	15.8	21.5	9.1	13.7	10.9	22.0	30.5	16.4	14.2	12.8
1910	13.9	14.9	9.4	12.9	12.8	15.6	29.6	13.0	19.3	20.1
1911	12.5	20.8	9.8	9.6	12.3	20.3	30.7	16.4	20.7	17.6
1912	15.9	20.4	11.0	12.5	11.9	20.6	33.7	14.1	19.3	15.9
1913	15.2	21.0	6.4	11.1	12.2	19.8	35.1	18.3	19.6	--
Average	14.7	19.7	9.1	12.0	12.0	19.7	31.9	15.6	18.6	a/16.6
1914	16.6	15.7	10.9	2.6	11.0	18.9	29.6	14.4	13.3	9.4
1915	17.0	26.0	10.3	14.3	11.7	16.4	28.6	13.6	17.8	19.0
1916	12.2	17.1	5.2	13.2	10.7	16.5	27.3	15.2	14.9	16.2
1917	14.1	15.8	13.1	11.7	11.6	13.0	22.5	13.3	16.3	--
1918	15.6	10.9	10.6	9.5	10.4	20.5	25.4	17.0	12.6	3.8
Average	15.1	17.1	10.0	10.3	11.1	17.1	26.7	14.7	15.0	a/12.1
1919	12.8	10.1	12.5	7.2	11.8	16.0	24.8	16.0	--	15.5
1920	13.6	14.4	10.4	16.1	12.6	18.8	24.3	12.5	14.2	12.3
1921	12.8	12.9	13.4	13.3	9.7	24.3	30.3	16.4	18.3	12.8
1922	13.9	17.8	12.0	11.2	13.0	18.6	21.2	14.2	15.5	14.1
1923	13.4	21.7	14.4	13.1	12.1	20.2	29.1	19.6	20.6	15.4
Average	13.3	15.4	12.5	12.2	11.8	19.6	25.9	15.7	a/17.2	14.0
1924	16.5	11.9	10.7	15.2	11.6	20.6	24.6	15.1	14.8	9.0
1925	12.9	19.0	10.0	11.2	10.4	23.8	30.8	20.6	20.3	12.8
1926	14.8	17.8	11.5	13.8	10.7	17.9	24.1	18.2	20.2	13.5
1927	14.9	19.5	12.1	9.3	10.7	21.1	27.6	15.9	19.1	12.6
1928, prel.	15.4	22.8	--	--	9.0	(18.7)	--	19.0	--	16.5
Average	14.9	18.2	a/11.1	a/12.4	10.5	a/20.9	a/26.8	17.8	a/18.6	12.9

a/ Four year average.

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