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A

Thesis for the Degree

Master of Science

by

W. J. A. Schaefer, B. S., '93.

State Agricultural College,

Brookings, So. Dak.

1895.

Introduction.

The most prominent food grain of the Caucasian race is wheat. It is an important crop in almost every country under their domination, and, perhaps, has a wider habitat than any other prominent product of the soil. Under diverse climates, differing soils, and varied development of agricultural methods, it is an important resource in almost every portion of the globe. It forms a large item in the foreign trade of every commercial nation, and either in the form of grain or flour appears in the trade of even the most obscure country.

The present discussion has for its purpose, first, an analysis of the market of this prominent cereal; and, second, a glance into

its production and distribution, especially with regard to the United States of America. Furthermore, an investigation of the fluctuations in the price of wheat has been incidentally made.

It is found that the economic changes characteristic of this transition stage of our industrial era have caused an evolution in the wheat industry which has kept pace with that in any other industry. Invention, through its cheapening of man's necessities of life, has lowered nominal wages, and, by putting more useful tools and more capacious machinery into his hands, has greatly increased his productive capacity. Science has shown man the needs of plant-life, the capabilities of the soil, and the way to harmonize these so as to reap the greatest possible reward for his labor.

Our systems of steam transportation and rapid communication have made the whole world practically one great market. These three have been the chief causes in bringing about such a lessened cost of production that the price of wheat now is 50 cents, while only eight decades ago it was \$2.50 and even \$3.50 per bushel. With the westward movement of population in the United States, the more extensive settlement of the fertile plains of Argentine Republic, and the introduction of American machinery into southern Russia, cheaper lands have been brot into cultivation and the cost of production of wheat has been surprisingly lessened in the last decade or two. There is among the producers of this cereal a sanguine expectation, that wheat will again rise in price to \$1.00 and more per bushel, while the consumers are

as constantly expecting to buy flour at prices ranging from two and one-half and three dollars a barrel down. The realization, generally, of the two conditions at the same time is a problem for the economic alchemist. The former condition is hardly, if at all, likely to occur, the latter being manifestly the tendency for some time to come.

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I.

Before this era of rapid transportation and communication, a market was a place to which goods were brought, at stated times, and offered for sale. The territory tributary to such a market-place was small, embracing, perhaps, a few dozen square miles. The prices in each such market were determined, of course, by the demand and supply of the particular commodity in each such district. That the price of an article varied widely from the price of the same article in other markets at any given time, and that the price varied widely in the same market within a comparatively short time, for instance a month, a week, yes even a day, is only to be expected when we consider the slow,

cumbersome means of transportation, the ineffective communication, the undeveloped state of markets. Risks in production were great, as it was difficult, if at all possible, to transport the excessive supply of some districts to others in which there was a scarcity. Only in districts bordering on water-courses was a bare approach to such equalization of supply possible. But with the development of the means of communication and transportation the wants of the different communities were more generally known and more easily satisfied. Through this expansion and promotion of exchange resulted greater division of labor, which in turn reacted favorably upon the development of exchange - all these factors, and numerous others, worked simultaneously and more or less harmoniously - until a market was no longer supplied by

a small section of territory, but has been so expanded and so highly developed that with regard to at least a very great share of marketable goods, it is world-wide.

The word market is still used in a restricted sense to designate places in cities where certain goods are sold at stated hours or days, but the economist understands by the term "the whole of any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly"; or in a general way, "any body of persons who are in intimate business relations and carry on extensive transactions in any commodity"; or, in its broadest sense, the general offer and demand for goods of any given sort.

The trade in wheat presents quite a num-

ber of classes of "general offer and demand" depending each upon the occupations and capacities of the parties. Thus, we may, and generally do, have, in tracing our wheat to a foreign consumer, the following sets of buyers and sellers:- (1) the producer (farmer) and country grain-buyer; (2) the country grain-buyer and the extensive buyer of larger western cities, say, Minneapolis, Milwaukee, Chicago; (3) the buyer of these western cities and the shippers of a large sea-port, e. g., New York; (4) the New York shipper and the extensive importer of a large foreign port, e. g., Liverpool; (5) this importer and a miller; (6) the miller and actual consumer,- this list may be considerably extended. Each of these sets comprises a distinct market with certain peculiarities affecting the price paid. For the purpose of a gen-

eral consideration of the trade in wheat, we will group the above sets of buyers and sellers into three classes of markets; viz., primary, principal or central, and final.

The primary markets are those comprising the farmer as seller, and, as buyer, the grain-dealer, who is now, in this country, for the most part, an individual or corporation, with headquarters in some large commercial city, operating numerous country ware-houses and elevators throughout the whole wheat producing districts, and the man who actually receives the grain from the hands of the farmer is simply representative.

The principal, or central, markets are those in which the great mass or surplus of wheat is sold, and in which the buyers of the primary markets, or those to whom they have

sold, say, exporters, act as sellers, and foreign importers or great milling establishments act as buyers. With regard to location, any of the great centers of wheat distribution, as New York and Liverpool, furnish examples.

The final markets are those in which the actual consumer is the buyer.

Passing through, perhaps, successive buyers and sellers from the primary market to the centers of distribution, where the surplus is stored, enough wheat is left along the way to meet local demands. But it is to these centers of distribution that the large milling establishments and retailers turn to buy the supplies for their several localities - localities in which the production of wheat, if engaged in at all, is insufficient for local consumption.

The surplus over and above the demands of

extensive wheat producing localities and of the route along which it is taken to the centers of distribution, constitutes the available supply in the central market. This supply is increased or diminished, generally speaking, by the greater or less production of the article beyond local demands. The demand in this market, coming from localities whose production of wheat does not meet their local demand, depends upon how nearly these localities approach to meeting their needs for this commodity by their production of it. Now, since the surplus comes from all quarters of the globe to the centers of distribution, and these in turn satisfy a field equally as extensive, the prices offered for this surplus will, by a natural law, control the general prices of wheat in all the markets of the world, the difference in the

price in different localities^{being} due principally to the cost and risk of transportation to the principal markets.

So far the different classes of markets have been considered mainly with a view to the carrying of the wheat toward the localities where it will satisfy the effective demand, only the primary market having been somewhat considered in the light of trade.

From the standpoint of trading, there is a great intermediary market, receiving products from the producer and advancing them on to the consumer, known as "the exchange". An exchange differs from the general markets above described in that it is localized, the traders or dealers of a commercial center meeting at a certain place (building) where they transact business among themselves. The localization makes an

exchange as nearly perfect a market as possible. "A perfect market," says Marshall, "is a district, small or large, in which there are many buyers and many sellers all so keenly on the alert and so well acquainted with one another's affairs that the price of a commodity is always practically the same for the whole of the district". An exchange is, probably, the only thing in the present state of development of markets that, to all practical purposes, answers this definition. It affords an opportunity to put the entire trading body in possession of all the latest intelligence from all other markets and from the entire ^{field} of production and consumption - intelligence of what may in the slightest degree affect supply or demand - and it affords the freest scope for the prompt action of all the forces of competition.

Trained dealers, skilled in estimating from all available information the supply and its relation to the demand, are here brought into direct and sharp competition. Some of these dealers, either agents for the producer or speculators who have bought with a view to sell at an advance, seek to obtain the highest price possible for the commodity and are known in the language of the market as "bulls"; while other dealers, either agents for the producer or speculators who want to buy with a view to sell at an advance, seek to buy at as low a price as possible and are known as "bears". These opposing forces,- one endeavoring to advance the price of wheat, the other to depress it as much as possible; the one represented by the "bulls" allowing the price to "drop" a trifle if intelligence of conditions indicative of an increased

supply relative to the demand is received, or insisting on a "rise" in case of report to the contrary, the other, represented by the "bears," consenting very reluctantly to a little advance upon receipt of information of the latter kind, while otherwise persisting in forcing the price down — keep the price promptly adjusted to existing conditions of demand and supply. This, as can easily be seen, steadies the price by preventing the wide fluctuations and the differences in price in the same neighborhood at the same time, and within comparatively short times, and thus resulting in smaller loss to the less fortunate sellers and buyers, and a more just and equal price to all.

Once, all traders speculated a little; now a small class speculates much. At produce exchanges, speculation has developed into what

is called dealing in "options", or "futures". This sort of speculation attracts the most wide-spread and most earnest attention with regard to wheat, and has called out much opposition in the way of discussion on platform and by the press, leading to the proposal of several legislative measures known as "anti-option" bills; viz., the Butterworth bill of the fifty-first Congress, and the Hatch and Washburn bills of the fifty-second and fifty-third Congresses. The "dealing in futures" is the buying, or contracting to buy, say wheat, on any day within the current or some designated future month on which the seller (generally) may choose to deliver the same; that is, it is at the seller's "option" to chose the particular day within the month designated. Here the "bull" speculates for a "rise", and the "bear" for a "fall".

or, defining the terms and giving the functions of the parties, a "bull" is a speculator who will fix a price at which he will take a given quantity of wheat in a certain month in the future, while a "bear" is a speculator who will fix a price at which he will furnish a given quantity of wheat, to the would-be purchaser, in a certain future month. The commodities sold are only representative goods as are elevator and ware-house receipts, representing, not a particular lot deposited, but merely orders for a certain quantity of a certain grade of the wheat as named in the contract. The forms of contracts are stereotyped with full provisions except as to quantity, price, and time of delivery, and elaborate provision is made for the quickest possible cancellation of debts and settlement of contracts.

The speculator may not be able to distinguish between the grades or qualities of the goods he buys and sells if they were placed before him, nor may he have much or any idea regarding the care, storage, and transportation of the goods; such knowledge belongs essentially to the trader. The speculator fulfills his functions if he studies all knowable circumstances that may cause a rise or fall in price, and after due consideration enters the market to buy if he expects a rise, and to sell if he expects a fall.

In order to establish a future price, an estimate of the future demand and future supply is made, and thus is created a present speculative demand and supply, the relation of which to each other determines the price of "futures"; i. e., the price at which wheat can be bought

and sold for future delivery. " The price of 'futures' is an anticipation of the actual future price". It is the market estimate of what the commodity can be bought and sold for at any given time in the future, and as the present has indications of what the demand and supply of wheat will be at any given future time, the price of "futures" becomes, for the present, practically the real price of wheat to be delivered at a certain future time.

The estimate of future demand and supply is influenced by many and various circumstances. Every piece of news, at all authenticated, affecting the future supply or demand, has its bearing on the price of "futures" and the transactions of the market. Any event that would bring about a rise in price,- as an anticipated partial failure of crops in India, rumor of war

in any wheat-raising or wheat-using country, drought in the Dakotas, chinch-bugs in Minnesota and Wisconsin, grass-hoppers in Kansas, frost in North Dakota, an increased exportation of wheat, scarcity of cars,- increases the speculative demand; while anything that tends towards a fall in price,- as, favorable exportation stipulation between foreign countries thus reducing the U.S. export of wheat, cheapened transportation rates, favorable outlook for India's crop, plenty of rain in the Dakotas, a surprisingly good yield in Minnesota, cheapened transportation rates, and the like — bring about a decreased speculative demand. An increase in the expected future supply causes an increase in the speculative supply, while a decrease in the expected future supply causes an increase in the speculative demand, the price

of "futures" adjusting itself promptly upon the arrival of news producing a change in their relations.

Those who think there will be a rise in the price of wheat, enter the market to buy, while the "bears," who think there will be a fall in price, sell short to the "bulls", and hope to "buy in" again at lower prices in order to fulfill their contracts. This short-selling has the tendency to increase the speculative supply and so to lower the price. It is this short-selling that the proposed "anti-option" legislation was intended to suppress, as well as, according to the report on the Hatch bill in April, '92, by the House Committee on Agriculture, "to relieve the producer of the destructive competition to which he is now subjected by the offering, upon the exchanges, of

illimitable quantities of fiat or fictitious products by those who do not own and have not acquired the right to offer and sell", and also "to restore to the law of supply and ^{demand} that free action which has been destroyed by 'short-selling'".

The assumption all along is, that, since the aggregate of recorded sales amounts to many times the entire crop of wheat, the great majority of these sales are of "fictitious", or "wind", wheat, which enters into competition with the real article, increases the supply offered, and consequently reduces the prices. Now, if, according to prominent anti-optionists, from ten to twenty times as much "fictitious" wheat has been sold as actual wheat during the year, how is it that the price of wheat is not correspondingly reduced (down to a few cents

per bushel), but instead is the same as the average would be if there were no "exchanges"? Because the short-seller, when he comes to cover his contracts, i.e., when he must deliver the actual wheat according to the terms of the contracts, is obliged to buy actual wheat at the actual market price - supposing here that he had been selling "wind". Nothing will bring prices down like a large supply relative to the demand, but nothing will force prices down, in exchanges, like a "stampede of bulls in a rush to liquidate"; and, on the other hand, there is nothing that "will send prices up like a rush of frightened bears to cover their short-contracts". In speculating on the future price, not "wind", but meteorological, political, economic, and other influences determine the relation between the speculative supply and demand.

As to the large excess of recorded sales over the actual supply, the explanation is as follows:-

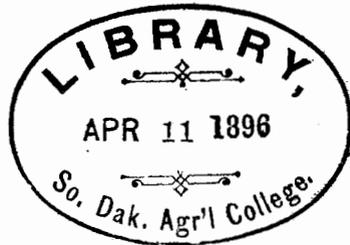
Supposing there are 1,000,000 bushels of actual wheat owned in a given commercial center. The owners enter the market, buy and sell among themselves, "transferable orders" representing actual wheat they own, very similar to warehouse receipts, are passed between them until the time of delivery when the last seller delivers the actual wheat to the last buyer. By this time, the quantity has passed between, say, twenty or thirty different persons, each sale thus recorded, except the last, being noted by the anti-optionist as so much "wind" sold, yet so much addition to the actual supply in the market. If each lot of grain is sold and resold the same number of times, for the one million bushels sold there will be twenty or thirty millions recorded, and so, if during the year the

actual supply in all commercial centers of the United States is 200,000,000 bushels, the sales recorded may aggregate two or three billions of bushels, which would be about five to six times the entire wheat crop of the United States.

The extension of markets involves an increase of risks to the producer unless these can be met with a more or less sufficient safeguard. Whatever may be the popular prejudices, and arguments in legislative committee rooms, against speculation, the fact remains that it is the only real safe-guard against loss to the producer, in the market - the central feature in the economic organization of modern society. Besides providing the machinery for carrying over surplus crops from prolific years to poor ones, speculation provides (1) a continuous open market; (2) a measure as to the value of the com-

modity from day to day; (3) a more steady daily price; (4) a fairly reliable future price; (5) a minimization of risks and losses by preventing unduly wide fluctuations; and (6), on the whole, a more intelligent and developed market resulting in a better utilization of economic forces.

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II.

Having discussed briefly the market and its operations, a consideration of the causes of these operations and of the movement of the surplus of wheat with its influence on the price of all wheat sold, may now follow. In this investigation, the figures given by the statistician of the U. S. Department of Agriculture will be taken as a basis.

"The wheat market of the world,' which is open for the surplus production of producing countries is circumscribed and very small when the general use of wheat as a bread grain is considered. Practically it is all in Europe, and even there limited to the necessities of a few countries." Great Britain, with its small

area yet with a population of nearly forty millions engaged chiefly in manufacture and commerce, populous little Belgium, and Germany, practically furnish the market for which the wheat-growers of the world are striving in competition. Excluding these three countries, Europe is practically self-supporting, the excess in the eastern countries being sufficient to meet the deficiencies in the western lands. To supply the comparatively small amount required to meet the European deficiency, the fields of the United States, Argentine Republic, India, and Australasia are principally relied upon, and the sharp competition between the agriculturists of the rivals for the possession of this "world's market" results in furnishing a cheap food supply for the artisans of the manufacturing nations, and, necessarily, in low margins to the

producer.

The classification of the principal countries into importing and exporting countries may be made as follows, excluding those in which supplies and requirements are closely balanced or nearly so (the figures being the average of the period 1881 to 1890 and in millions):-

Table I.

Importing.		Exporting.	
United Kingdom,	107.5	United States,	83.3
France,	37.4	Russia,	83.2
Italy,	19.9	India,	31.0
Belgium,	19.2	Roumania,	19.2
Germany,	18.8	Australasia,	8.2
Switzerland,	10.9	Austro-Hungary,	5.8
Greece,	9.0	Bulgaria,	5.7
Netherlands,	8.8	Chili,	3.9
Spain,	<u>6.1</u>	Argentina,	<u>3.7</u>
Total,	237.4	Total,	244.0

This table shows that the United Kingdom absorbed, between 1880-90, over 40 per cent of the commercial supply of wheat, and that this country with France, Italy, Belgium, and Germany

furnished a market for 80 per cent, the average of exports for all countries during that period being 250,000,000 bushels. Since then the average annual importation of wheat into the United Kingdom over its production for that period has grown from 30,000,000bushels to 127,000,000 (the average for 1892-4), more than quadrupled, being now about 60 per cent of the "world's surplus" wheat.

To show the changes since 1890 in the three countries absorbing surplus outside of Europe, from data as far as available, the following table is constructed:-

Table II.
(Figures in millions.)

Year.	United Kingd.		Germany.		Belgium.	
	Prod.	Imp.	Prod.	Imp.	Prod.	Imp.
1880-90Av.	77.7	107.0	92.9	18.8	17.9	19.2
1891	77.0	85.8	15.6
1892	63.0	187.5	116.2	47.6	20.7	in
1893	52.5	183.4	110.0	25.8	17.5	creas
1894	62.1	188.3	114.0	42.3	18.5	ing.

It will be seen that the production of the United Kingdom is gradually diminishing, while its imports are increasing; that the importation into Germany increases much faster than its production; and that the importation into Belgium is increasing while its production continues at almost the same figure.

These being then the countries that promise to be the future market for the "world's surplus", let us see from what sources and in what proportions they derive their supplies.

Table III.

(Omitting the less important European countries. Bushels of wheat given in thousands.)

Germany.

<u>Countries.</u>	<u>1892.</u>	<u>1893.</u>	<u>1894.</u>
United States,	23,128	11,545	11,872
Russia,	9,443	793	10,298
Argentina,	2,428	5,556	12,699
Roumania,	3,369	5,270	5,248
Other countries,	9,205	2,696	2,189
Total,	47,573	25,800	42,308

Table III. (cont.)

United Kingdom.

<u>Countries.</u>	<u>1892.</u>	<u>1893.</u>	<u>1894.</u>
United States,	121,657	114,211	93,806
Russia,	8,144	18,782	31,314
Argentina,	6,470	14,645	24,775
India,	23,325	11,566	9,984
Australasia,	3,765	4,833	7,238
British No.Am.,	11,313	9,137	8,866
Other countries,	<u>12,773</u>	<u>10,246</u>	<u>12,338</u>
Total,	187,467	183,420	188,321

(The figures given for the United Kingdom include flour, originally given in long hundred-weight, reduced to bushels of wheat. Under "Germany" only the wheat in the grain is given, as the only available statistics on the importation of flour into this empire are on "flour and meal of all cereals", in the importation of which product Germany depends almost wholly on Austro-Hungary.)

Regarding Belgium there are no statistics on the importation from different countries during 1892-4 available, but it is reported that its importations are increasing and come principally from the United States, Russia, and Argentine Republic.

From table III we find that the United States is the most extensive exporter of wheat and wheat flour and the largest seller of these articles in the "world's market". In 1892, Germany drew from it as much of the commodity as from all other countries combined; in 1893, almost the same proportion; and in 1894, nearly 39 of the quantity per cent, it drew from all other outside sources.

It must here be noted that the importation of rye greatly affected the wheat importation of 1894, as it (the former) amounted to more than 40,000,000 bushels, over $5/6$ of which came from Russia.

The United Kingdom imported from the United States in 1892 nearly twice as much as from all other countries; in 1893, nearly one and $2/3$ times the amount it received from other lands; and in 1894, a little more than the amount it

derived from elsewhere. Yet we notice a steady decline during the last few years. The same is true of the importation of Indian wheat into Great Britain.

The reason for this is found in the increased importations from Russia, Argentina, and Australasia; those from the first-named country having doubled each year for the last three years; regarding those from Argentina, the same is true; while those from Australasia have greatly increased. European and all other foreign markets for wheat indicate that the competition for that cereal is constantly increasing and intensifying, - due, principally, to lessened cost of production, and nearness to the sea-board in these three countries.

wheat

The Argentine Republic, with a ^{wheat} crop of 80,000,000 bushels (1894) and a population of five

millions, is capable of placing 35,000,000 bushels a year on the European market. Its wheat fields average less than 100 miles from deep-water harbors. To reach shipping ports, no appreciable inland freight is thus paid on its wheat. Russia, likewise, has the advantage of a short haul and a speedy transportation. Furthermore, the capabilities of this country as a wheat-producer are beyond computation. American farm implements and machinery are sold to an enormous extent, and permanently established agencies of the great reaping and other manufacturing concerns of the United States are solidly located at Odessa and other important entrepots to the wheat-growing regions. The same may be said of Australasia, with the addition that the farmers, generally, of Victorialand reported, and this during an off year, that they could make a

wheat

margin of profit at raising_A if they received 1s. 6d. (36 cents) a bushel.

The United States has its wheat fields far from the sea-coast, their location and the shifting to cheaper lands being best shown in the following table giving ten year periods:-

Table IV.

(The figures express in millions the number of bushels of wheat produced by each division in the year given.)

Divisions.	Years.				
	1859.	1869.	1879.	1889.	1894.
East of Miss.R.	24.6	25.2	34.2	32.0	27.2
No. Atlantic,	28.7	22.3	28.5	27.4	26.4
So. " "	17.1	14.4	24.3	24.5	28.0
So. Central,	79.8	127.6	204.8	146.7	155.0
No. " "	<u>150.2</u>	<u>199.5</u>	<u>291.8</u>	<u>230.7</u>	<u>236.6</u>
Total,					
West of Miss.R.	15.2	67.3	124.7	174.6	165.5
No. Central,	7.7	20.9	42.9	63.1	58.2
Western,	<u>22.9</u>	<u>88.2</u>	<u>167.7</u>	<u>237.7</u>	<u>223.7</u>
Total,					
Total for U.S.,	173.1	287.7	459.5	468.4	460.3

In general, it may be said, that the second total comprises the product of the new wheat

lands of the West and Northwest, while the first consists mainly of the produce of the older portions of the country. Computation shows that in 1859 the product of these newer lands amounted to only 13.2 per cent of the grand total for the United States. In 1869, it amounted to 30.7 per cent; in 1879, to 36.5 per cent; in 1889, to 50.7 per cent; and in 1894, to 48.6 per cent. That is, up to 1889 there was a continuous and rapid progress in the extension of wheat growing over new territory, in which wheat is produced on cheap land adapted to the largest use of labor-saving machinery.

Now, this section furnished, in the later years at least, nearly all of our country's surplus, and our wheat field has been steadily moving west-ward and so farther away from the coast (Atlantic) nearest to the scene of its consump-

tion, that the aggregate of freight charges has increased, not only in amount, but in proportion to the price of the grain, particularly. In this country the freight rates offered by railroad companies on grain are very low, but, according to U. S. Statistician's reports, on this day the freight on wheat per bushel taken by rail from Topeka, Kan., or from eastern So. Dak. to Chicago is 16 cents, and from there to New York, 13 cents, a total of 29 cents. By utilizing the lake and canal routes from Chicago or Duluth to New York these rates are reduced about 9 cents, leaving them still at 20 cents per bushel. These rates are about the average.

If our competitors, Argentina, Russia, and Australasia, can lay wheat down at the sea-board for 36 or 38 cents a bushel and make a living profit on it, while it costs us on an average 24

cents freight to take it to the sea-board, (of course, it will be remembered that it costs a few cents more per bushel for wheat from Argentina and Australasia to reach its destination, and from Russia a little less, than from the United States wherefrom it is from 2 to 6 cents) how can we expect to compete with them? It would leave the Dakota and the Nebraska farmers 12 to 14 cents, while the lowest reliable estimate of the cost of production of wheat is 28 cents. Such a result is, of course, not expected or immediately threatened, as the surplus of the countries in question is not large enough as yet to alone meet the deficiency. Yet the tendency remains without a doubt, and it will be resisted somewhat by the building of inland waterways and cheapened production.

Recurring for a moment to the operations

of the market described in the first subdivision of this discussion, we have for the wheat-market (of the world) Great Britain, practically, as our dominant central, or principal, market, localized at Liverpool, as is the common conception. The speculations and operations referred to, go on here and prices are determined as already explained. These prices dominate those of all other markets as they are fixed at the place of consumption of the greatest mass of the surplus, where the real needs and actual holdings of that place are better, at least more readily, known than at other places, and reports regarding variations in supply about as quickly received. Other central markets are practically the same, except that allowance for carriage must be made, but have the one disadvantage just mentioned while they have an advantage of less importance;

i. e., regarding their own holdings and outlook in their vicinity. All primary and final markets must conform to the central ones, besides, allowing, of course, for transportation and what peculiarities may be connected with particular ones.

As to the fall in price of wheat, which has been touched upon somewhat in the way of cheapened production, the table of Mr. Sauerbeck, London's eminent statician, may be cited. The fall in price of this cereal is often cited as if it indicated the course of prices in general, but a comparison of the price of this cereal with the prices of a large number of important commodities tends to show that the fall of the former is exceptionally large, far exceeding the average decline in prices. Mr. Sauerbeck takes as a standard of comparison the average prices of 45

commodities for the eleven years from 1867 to 1877, inclusive, and constructs a table of relative prices. He finds that the average price of all these commodities for 1894 is about 63 per cent of the average for 1867-77, and that the average price for 1894 of wheat is 41%, flour 48%, rice 58%, potatoes 60%, maize 61%, barley 63%, and of oats 66% of the general average of 1867-77. This shows the decline in the price of wheat to be 59 per cent as compared with a general decline of only 37 per cent. The fall in wheat is thus seen to be nearly one and $\frac{3}{5}$ times as great as the general fall in prices, as indicated by Mr. Sauerbeck's list of commodities.

The average annual price of wheat in England was for 1890, 94.1 cents; for 1891, \$1.091; for 1892, 89.2 cents; for 1893, 77.6 cents; and

for 1894, 67.6 cents. Deducting freight, about forty to forty-five cents are left for a bushel of Kansas or Dakota wheat in 1894, but with the cost of production estimated at from 25 to 30 cents is helped to explain the fact that in spite of the low prices of wheat it is still supplied in sufficient quantities to meet the requirements. Expansion in regions where it can be produced cheaply, like our own states of the West and North-west, as shown by table IV above and the subjoined comment, or the Argentine Republic, tends to produce some surplus and depress prices, but this depression tends in its turn to cause diminished production in regions where land is more valuable, and costs of cultivation higher; and thus it happens that without any considerable overproduction the price continues to fall as long as improved processes,

cheaper transportation, and access to cheap land progressively lower the cost of producing the grain.

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