

The Exportation of Flour, With
Special Reference to Kansas.

by

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~~1927~~
B. S., Kansas Wesleyan University, 1927.

Submitted to the Department
of Economics and the Faculty
of the Graduate School of
the University of Kansas
in partial fulfillment of
the requirements for the
degree of Master of Arts.

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_____, 1930

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Chapter 1

The Development of the Wheat and Flour Milling Industries in Kansas.

Early History of Wheat and Flour.

"The story of a grain of wheat tells the story of man's long continued struggle for plenty; the response of nature to her children asking for food; the emergence of mankind from savagery, when, regardless of anything save the pangs of hunger, the first miller plucked the berry from the stalk and, using his teeth for millstones, ground grist for a customer who would not be denied--his stomach. (1)

Wheat has been used for flour, even though in crude form, for centuries. The geographical origin of wheat has never been definitely determined. Such evidence as does exist seems to point to Mesopotamia, but this is largely a matter of opinion. Although wheat has been found growing apparently wild, the doubt has always remained that it may have simply escaped from cultivation. However, the belief that wheat once grew wild in the Euphrates and Tigris valleys, and spread from there to the rest of the world has wider acceptance than has any other.

1. William C. Edgar, The Story of a Grain of Wheat. p. 10

The Chinese state that wheat was grown in China some 2,700 years before the beginning of the Christian era. Undoubtedly wheat has undergone important changes since that time, but the fact that it has been used for food for nearly 5,000 years is sufficient evidence of its wonderful qualities.

The botanist calls wheat a grass. The evolutionist has gone a step farther, and calls it a degenerate and degraded lily, using these terms in an evolutionary sense. He assumes a great group of plants of a primitive type from which sprang first the brilliantly colored lilies, then the degraded rushes and sedges, and lastly the still more degenerate grasses. From these grasses man developed the cereals and among them wheat. (2)

Regardless of its exact origin, it is definitely known that wheat has been cultivated and used as food for many centuries and by people in all lands. As man explored and settled new regions, he took wheat with him. As the tide of emigration moved on, the extension of the wheat growing region followed it. Wheat is a favorite crop of the pioneer; he can always use readily for his own purposes, and it always commands money or other goods in exchange.

2. Peter T. Dodlinger, The Book of Wheat. p. 3

In early times the methods of preparing wheat for food purposes were naturally crude and awkward. It is even probable that in earliest times man did not change its form until he consumed it. However we know that stones were utilized in cracking and crushing the grain centuries ago. For centuries improvements in methods of preparing the grain for food consisted merely in changes made in the shape of the stone used, and the way in which the upper stone was applied to the lower.

The first implement used in preparing wheat for food was a hollowed out stone in which another stone worked to crush and break the berry. Stones of this nature were used by the Indians in America. The grain was broken down by pounding. Next came the saddle stone which varied slightly from the old method in that it involved a rubbing instead of a pounding process. Here we find a truly grinding method, which reached its most perfected state, so far as the use of stone was concerned, in the stone burr mill which has only recently been discarded, and with which many people living today are familiar. It has been said that flour milling began with the introduction of the saddle stone. It is evident that only flour of a very coarse grade could be made in this way, yet backward tribes continue to employ the primitive methods to this day.

The next step in flour milling was the introduction of the revolving quern. The lower stone of the quern was stationary, but the upper stone was revolved on the lower, thus grinding the grain that was allowed to run between the two burrs. This method allowed several people to work as a unit, the number of people required to run the quern depending on the size of the upper stone. The rate of milling was thus increased. Further development in milling consisted largely in changing the shape of the stones and the method of applying the power.

Flour milling as a business waited for the development of waterpower. The use of water for power purposes seems to have been known not long before 100 years B. C. The Romans were the first to successfully adapt the water wheel to the turning of millstones. Water power mills dominated in the field of milling for centuries and improvements were slow. It was not until the invention of the steam engine, that the development of transportation systems that milling emerged as one of the greatest of industries. (3)

3. Vernon O. Johns, The Development of the Flour Milling Industry in Kansas: M. A. thesis, University of Kansas. pp. 1-8

As man continued his exploration and settlement of Western Europe, wheat and the methods of converting it into flour were carried with him. Later, when population overflowed Europe and settlements were made in America, wheat went with the explorer and pioneer as an indispensable aid.

The first wheat sown in the United States was by Gosnold in 1602 on the Elizabeth Islands off the southern coast of Massachusetts. It was first cultivated in Virginia in 1611, and in New Netherlands before 1622. By 1648, there were several hundred acres planted in the Virginia Colony.

The first flour mill in the United States was built between 1620 and 1630. By the middle of the century, mills were quite numerous in the Colonies. Since they produced an excess of grain beyond their requirements, they had even begun to export wheat and flour. As time went on the wheat raising area was pushed westward and, as the movement progressed, new milling centers sprang up. It is interesting to know that George Washington was an extensive wheat grower as well as a miller, and that he gave much time to overseeing both.

As the pioneer pushed on westward, exploring and developing new lands as he went, he finally came to Kansas. With him he brought wheat, and because he

needed food badly, he used what means he had in providing for mills with which to grind his grain. And so, in the early nineteenth century, we find meagre attempts being made by the early settlers to establish the wheat growing and flour milling industries in Kansas, a state that was destined to become an important bread basket of the world.

Wheat and Flour Production in Kansas Prior to 1870.

With one exception, all mills built in Kansas prior to its organization as a territory in 1854 were built by the government or by the various missions for the Indians. The government mills were built as payment for land which the Indian had given up farther east in order to make way for the white man. Probably the first government mill was built not later than 1835. It is not known to what extent the various church organizations entered into the building of mills, but it is known that the Shawnee Mission built at least one mill for the Indians, and it is likely that other missions did likewise. None of these mills were established as commercial enterprises, and so do not mark the beginning of the milling industry proper. In 1852, Mathias Splitlog, an Indian, built the first commercial mill in what later became Kansas, near

Kansas City, Kansas. This mill was run by horse power and was a very primitive affair. (4)

The early mills in Kansas were usually built on the banks of some small stream where timber was available. A rude dam was constructed to furnish a head of water with which to run the water wheel furnishing power to the mill. The existence of these early mills, as well as their operation, was very uncertain. Streams were likely to dry up and shut off the source of power or, worse yet, to become swollen during heavy rains and wash the mill completely away.

A large percentage of the mills were combination grist and saw mills. There were a few steam mills in the state quite early but their general introduction into the state was dependent upon the development of transportation facilities. The early mills ground more corn than wheat. Corn was more easily produced and fewer implements were required. It was also thought at the time that the limits of the region adapted to wheat growing ended with Ohio. It is interesting to note that in 1901 Kansas produced more wheat than the United States produced in 1850. Yet in 1850 people thought that Kansas

4. L. A. Fitz, Quarterly Report of the Kansas State Board of Agriculture, Sept., 1920, p. 203.

was unsuited for wheat raising, and as late as 1860 its possibilities were not generally recognized.

In 1858 John McAlpine and James Washington erected in Wyandotte County the first Kansas steam flour and saw mill. A mill was built at Palermo in 1855. A pioneer mill of Doniphan County was built in 1856-57 by J. W. Farmer on Spring Creek. In 1859 H. R. Soden built a flour mill on the Cottonwood River near Emporia. A mill was built at Atchison in 1859, and the first mill in Leavenworth was erected in 1857. The first Topeka mill was built in 1856 in connection with a saw mill. A second mill was built here in 1861, and a second mill was built in Atchison in the same year. The first mill in Douglas County was built in 1857 at Blue Mound, seven miles south-east of Lawrence, and here was manufactured the first bolted flour to be made in Kansas. A windmill was built in Lawrence in 1863. (5) This is not a complete list of all the mills in Kansas at the time, but it includes most of the mills on which we have definite information.

The first census of Kansas Territory was in 1860 and showed 36 flour and grist mills to be in existence.

5. Vernon O. Johns-Development of the Flour Milling Industry in Kansas, pp. 21-25.

The average capital given was a little over three thousand dollars, and the value of the total products was over three hundred thousand dollars. Small as the amount seems to be, considering that it was the sum of all the flour industry in forty-one counties, it showed a larger total than did any other single industry.

The first shipment of flour out of Kansas territory was made in September, 1859, from Palermo, Doniphan County, to St. Joseph, Missouri. The shipment was carried on the steamship Minnehaha. (6) Too great emphasis should not be placed on this event, however, since the shipment moved such a short distance. A shipment of flour from one point to another within the territory would have been of equal significance. Kansas was not yet producing a surplus of flour, and exporting to other states was not undertaken for some time. When the supply of wheat in the state was not sufficient to meet the demands of the state for flour, corn was substituted.

The importance of these early mills can hardly be over-emphasized. One of the first needs of the settlers in this new country was the means of grinding their wheat into flour for family consumption. This necessity caused the building of small grist mills in almost every community.

G. F. A. Fitz-Quarterly Report of the Kansas State Board of Agriculture, Sept., 1920, p. 203.

Home consumption furnished the whole of the demand for flour, so milling was hardly looked upon as a manufacturing enterprise as a source of wealth and profit, but rather as a social necessity. Many of the early millers followed the business as a sort of side issue to their regular employment. (7)

In the ten years from 1860 to 1870 the number of flour and grist mills had practically trebled and the industry was assuming stable proportions. The amount of capital had increased nearly nine times and the product had grown in volume accordingly. The population of the State had trebled and the wheat acreage had increased from less than 200,000 acres to two and one third million acres. Soft winter wheat was the sole product at this time and, as the weather conditions were such as to make wheat growing uncertain in a considerable portion of the section, the milling industry still represented only the needs of the settlers for bread.

Mills were gradually being established farther west in Kansas. As early as 1867 a mill at Marysville had a daily capacity of 125 barrels. A mill was put into operation at Milford in 1866. C. Hoffman built a mill at Enterprise in 1868-69, which was the farthest west of any in the 7. Richard L. Douglas, A History of Manufactures in the Kansas Fuel District. pp.68-69.

state at the time. This mill was operated by water power furnished by a dam in the Smoky Hill River and had a daily capacity of forty barrels.

There was little development in the industry from 1860-65, due to the war, but toward 1870 activity in mill construction increased. After 1870 immigration to Kansas increased rapidly and with it came increased wheat production. However, the real development of the milling industry was dependent upon transportation facilities. The first railroad in the state, which was only a few miles in length, was built in 1860. The real beginning of railroad construction came after the war and by 1872 there were 2,063 miles of road in operation.

Before the construction of railroads removed the severe handicap caused by lack of transportation facilities, mills could be only small establishments dependent upon the local community for both the supply of raw materials and the demand for its products. Railway development gradually removed these limitations. Nevertheless for many years the small local establishment held its own, for a great majority of the settlers were still removed from transportation facilities, and mills built in communities not yet served by railroads were not affected by their construction. Consequently, at the

very time when railroad construction was removing the handicap of lack of transportation facilities, the number of small mills was increasing very rapidly.

It was not until about 1870 that the production of flour in the state assumed its normal relationship to the demand. An establishment which was one of the first, if not the earliest, to ship flour out of the state, was the pioneer firm of C. Hoffman and Sons of Enterprise. They shipped three carloads of flour, consigned to a broker in Sherman, Texas, in 1873.

Whether or not this shipment of flour from the Hoffman mill in 1873 was the first to be made from Kansas after its becoming a state is not so important. The fact to be emphasized is that Kansas by 1870, or thereabouts, was producing enough flour to meet the demands of Kansas people and to have a surplus for shipping to neighboring states.

Importance of the Period from 1870 to 1890.

The introduction of hard winter wheat into Kansas marked such a change in the state's possibilities as a milling center and its subsequent position as an exporting state that the period deserves special consideration.

Certainly had hard winter wheat never been introduced into Kansas, its remarkable position as a source of wheat and flour would never have been reached. The Kansas milling industry, in other words, has progressed not so much because of the quantity of wheat grown within the state, but rather because of the quality of the wheat.

The Mennonite settlers have generally been credited with introducing hard Russian or Turkey wheat into Kansas. However at least one authority, while giving the Mennonites credit for being largely instrumental in introducing the variety into the state as well as being the greatest factor in its early development, claims that a small colony of French settlers in Marion County were raising hard winter wheat on a small scale before the Mennonites came to Kansas. (3) Nevertheless to the Mennonites belongs the distinction of introducing the growing of hard winter wheat on a large scale as well as of its subsequent development.

The coming of the Mennonites to Kansas was largely accidental. Prior to their emigration the Mennonites lived in the Milk River Colonies of Russia. They had

8. Hugh P. Coultis, Quarterly Report of the Kansas State Board of Agriculture, Sept., 1920, p. 217.

come from Prussia almost a hundred years previous; their home was originally in the Netherlands. In 1783 the Russian government had made many concessions in order to get the Mennonites to migrate to their colonies, but the privileges were gradually withdrawn and the Russian government became intolerable. Consequently the independent, peace-loving Mennonites began looking for a new home.

About this same time (1872) the Atchison, Topeka and Santa Fe Railroad Company had completed its line through Kansas, thus earning the three million acres of land granted by the National Government to the State of Kansas to aid in the construction of a railroad from Atchison in a southwesterly direction to the west line of the state. The company had organized a land department for selling the land. This department, knowing of conditions in Russia, was anxious to turn the tide of immigration toward Kansas. C. B. Schmidt, immigration agent of the company, was sent to Russia to encourage the Mennonites to come to Kansas, where they could carry on their pursuits in much the same manner as they were doing in Russia.

Prior to Mr. Schmidt's departure for Russia, however, in August of 1873, five Mennonite leaders visited the United States with the purpose of finding the most suitable location for their followers. They visited several

states in this country as well as Canada, and finally decided upon the counties of Harvey, Sedgwick, Reno, Marion, and McPherson as those best suited to their agricultural pursuits. The soil and climatic conditions of these counties were more nearly like those to which they were accustomed in Russia. The Mennonites bought 100,000 acres of this land in 1874. Their flow of immigration continued and by 1876 it was estimated that over 6,000 of these people had located in the Arkansas Valley or adjacent territory. They were an intelligent group and most of them had the purchase price of the land which they bought.

The Mennonites had raised as their major crop, wheat, in Russia. At first they had grown only soft varieties, but by 1860 they had introduced the hard variety from Crimea. This introduction was made largely through the efforts of Mr. Warkentin, father of Bernard Warkentin, the pioneer miller of Harvey County, Kansas. The first party of settlers in Kansas brought some twenty or thirty bushels of this hard Turkey wheat with them. Conditions in Kansas were ideal for its introduction because the grain did not have to become acclimated. Because of this adaptability the colonists soon had all the seed wheat they needed. At this same time the milling industry of

the state was changing from the burr to the roller system, and with this change the problem of grinding the hard wheat was solved.

Some of the Mennonite immigrants knew how to mill the hard Turkey wheat and thus assisted in promoting its production. The late Bernard Warkentin started a mill at Halstead, Kansas, in the early 70's. That wheat was scarce in this region during certain seasons is shown by the fact that Mr. Warkentin occasionally had to bring in wheat from Atchison to keep his mill running. As late as 1900 Bernard Warkentin, Christian Hoffman, and Thomas Page, three noted Kansas millers, imported hard red Turkey wheat from the Crimea for good seed purposes.(9)

Wheat raising on a large scale went on rapidly after 1874. A writer of the time, describing those counties along the Smoky Hill River, calls the region the "Golden Belt," containing some of the best wheat land in America. "Editors, farmers, economists, and capitalists," so says the writer, "come a thousand miles to see the country which has been transformed from a wilderness to a matchless wheat field in half a decade." (10) The same writer states that T. G. Henby of Abilene had 3,000 acres of

9. The Southwestern Miller, Sept., 7, 1926, p. 24.

10. L. D. Burch, Kansas As It Is. p. 37.

wheat in 1877, while Hunter and Baldwin of Solomon harvested 2,040 acres in the same year. He likewise states that in these central Kansas counties scores of men were growing from 200 to 300 acres of wheat annually. A writer about 1900 stated that the Russian Mennonites, in particular, always grew wheat quite extensively and with very few failures. During 1895-96, when the wheat crop generally was a failure, these farmers continued to have good yields. (11)

The decade following 1875 saw a practical revolution of the milling industry of Kansas. Prior to 1870 the state produced only enough flour to meet the demand of the population. The mills were small, none of them being above 150 barrels capacity, and the average was much less. Exportation was out of the question. However several influences were working about 1870 that were to make for the reorganization of the milling industry on an industrial basis and that would make the product important in the commerce of the world. The first, and perhaps the most important factor, was the introduction of hard winter wheat which has already been discussed. Many of the old millers of the state, who have watched the development of

11. Mark A. Carleton, Yearbook, Department of Agriculture, 1900. pp. 530-531.

the milling industry since early days, credit the introduction of hard winter wheat with the growth of the exportation of flour from the state.

Although the hard variety of wheat quickly proved its superiority as a producer, it was not favorably received by millers of the state for some time. For many years the hard wheat was discriminated against. Farmers continued to grow it, however, even though it did not bring so high a price. Improved weather conditions had made the growing of soft wheat profitable, and while the total output of hard wheat was increasing, so was the total output of soft wheat. Hard wheat gradually won out, however, and after 1890 was definitely established over the greater part of the state.

Another influence making for a revolution in milling development was the introduction of the gradual reduction process. This process was first used in Kansas in 1881-82. It was brought into the United States from France about 1870, but the old burr process persisted in a great many of the Kansas mills until almost 1890. The successful milling of hard winter wheat was dependent upon the new process, especially so far as the export market was concerned, because the old burr process made a very in-

ferior flour out of hard wheat.

With the introduction of the new process and the resultant reorganization of the milling industry, many of the old time water power mills disappeared. These influences culminated about 1890, the time when practically every line of industry was experiencing a period of expansion and centralization. From 1880-1890 the number of mills in Kansas increased 8 per cent, while the capital invested increased 130 per cent.

The production of a surplus of wheat which was well assured after 1870 made possible the development of larger mills and the growth of a few rather well defined milling centers. The towns taking the lead were Topeka, Emporia, Lawrence, Leavenworth, Atchison, and Ft. Scott. By 1890 the product of Kansas flour mills was reaching most of the neighboring states that were not self-supplying. Not only at home was Kansas flour meeting with favor, but it soon secured a market in foreign countries. Probably the first shipment of flour to a foreign country was one made by C. Hoffman of Enterprize in 1882. The shipment was consigned to a firm in Antwerp, Belgium. By 1890 there was a fairly well developed trade with certain European countries. (12)

12. B. C. Kuhlman, The Development of the Flour Milling Industry. p. 194.

The early settlers of Kansas were familiar only with soft wheats. When millers began attempts at grinding the hard wheat on the stone burrs, they encountered difficulties. As a result, most millers rejected the wheat as unfit for milling purposes, but a few continued their efforts at making a satisfactory flour from it. There were two reasons why a few millers continued to grind the hard wheat. First, hard wheat could be bought for less than the soft varieties and, secondly, chemical analysis indicated that it made a flour of higher gluten content. This quality caused a great demand for Kansas flour for export. The introduction of hard wheat had, therefore, given an impetus to the industry which resulted in a surplus of wheat for the mills which could be ground into the kind of flour in greatest demand.

Today Kansas is the greatest hard wheat producing area in the world. From 80 to 90 percent of the total Kansas crop is of this variety. The Kansas soft wheat producing area is tributary to mills which ship their product to southern markets where soft wheat flour is preferred. Because of its blending qualities, Kansas hard wheat usually commands a premium in the terminal markets.

Tendencies After 1890.

The depression following 1888 had its effect on the milling industry as well as on other lines of manufacturing. There was little change in milling conditions from 1890 to 1900, when there was a large increase in the number of mills, accompanied however by only a slight increase in the investment of capital. Many mills were built in the western part of the state to do a local custom business, thus increasing the number materially. From 1898 to 1903 milling capacity was increased, mainly through mill enlargements, to an extent that capacity was much greater than the demand for Kansas flour would keep busy. In 1902 the capacity of the state reached over eleven million barrels annually which was double the amount actually produced.

After a considerable period the real merit of hard wheat and flour made from it became recognized. Bakers who originally would not use the Kansas flour at less than a dollar a barrel discount, came to prefer it. Supply being responsive to demand, Kansas mills began to find their place in the sun. Millers elsewhere took interest in the wheat of growing popularity, and the product of Kansas fields was soon finding its way to every part of the country where flour mills were operated.

Even in the Northwest, millers, long secure in their leadership of the industry, began to concede the value of hard winter wheat. At first, timidly, millers there drew a part of their milling wheat supplies from the Southwest, keeping from their flour customers the fact that other than soft varieties entered their product. As time went on and hard winter wheat flour became better known, millers in other states reversed their former practice by advertising the fact that Kansas wheat was used in connection with home grown wheat as proof of the good quality of their flour. Today spring wheat millers look upon Kansas as a standard source of supply. Millers in other states are as much interested in the prosperity of the Kansas wheat crop as are the Kansas millers.

Although, in general, conditions just prior to 1900 were not so favorable toward the development of the milling industry, it was about this time that the flour of the state was gaining favor in other states and abroad. Prior to this time the wheat crop had been more or less uncertain. However crops became more regular about 1900 and with the general return of prosperity, exporting was put on a more stable basis. By 1900 Kansas hard wheat flour was being marketed in Belgium, France, Sweden, Great

Britain, South America and Cuba. (13)

Of later years there has been a marked tendency for the small mill in Kansas to disappear. The early mills were all very small but, beginning with this century, mills began to be enlarged. New mills are always of rather large capacity. This has resulted in the number of mills being reduced while the total capacity has been increased. With the exception of the war period, when small mills which had been practically idle were called into operation, the total number of mills has gradually been reduced. Indications are that the small mill has served its purpose, a very valuable one and will now have to disappear.

For several years Kansas mills have been increasing their storage capacity either by building more storage elevators near the mill site, or by owning and operating a line of country elevators in the near vicinity. With the more orderly marketing of wheat by the farmers, the mills are able to maintain a stock of milling wheat at all times without having to go to the extra expense of

13. Vernon O. Johns, The Development of the Flour Milling Industry in Kansas, p. 98.

bringing it from the large terminal centers. This situation, combined with the "milling in transit" privilege, has accounted for mills being widely scattered over the state rather than concentrated in a few centers.

The different markets for Kansas flour will be discussed in later chapters. Conditions are quite different in the various markets and a complete analysis demands that each market be taken up separately. To be general, it can be said that the European market was the most important for Kansas flour for many years after Kansas became an exporting state. Certain circumstances have arisen of late years to seriously restrict the European market for Kansas flour. An account of these circumstances will follow later. At the same time new markets are being found for the Kansas product, so that there is never a lack of demand.

Chapter 11

Transportation and Handling Facilities for Kansas Flour.

The industrial development of a state necessarily waits on the development of transportation facilities. Heavy milling machinery could not be imported, nor could flour be exported to any great degree prior to the establishment of transportation means within the state of Kansas. The Missouri River was used in early days, but this stream touches only the northern border of the state. The Kansas River was likewise used between 1854 and 1866, but the route was hazardous and the boats seldom attempted to go beyond Lawrence. Wagons were the only means of transporting to the vast interior of Kansas, and this method was undertaken by both individuals and express companies.

Agitation for railroad building began about 1855. The first rails in Kansas were laid in 1860. Five miles of rail were put down in that year between Elwood and Wathena. (14) The next few years, and especially after the Civil War, railroad building was encouraged by government land grants and subsidy bonds. In 1874 there were

14. F. E. Wolf, *Railway Development in Kansas*, p.5

M. A. Thesis, University of Kansas.

2,150 miles of track in the state. It will be remembered that at about this same time the state was producing a surplus of wheat and was already exporting both wheat and flour to neighboring states.

The period of 1875-1890 was one of rapid building and development. By 1887 all but a few Kansas counties were reached by one or more railroads. The period was one of consolidation as well, there being 35 different roads in 1880 and only 14 in 1890. Railroad development continued after 1890, but the state was soon to realize that its railroad mileage was sufficient to take care of the needs of the state. There really was over-development as was shown by the abandonment of many miles of road during the period. Shortly after 1900, however, the commerce of the state seems to have caught up, for railroad building went on from that time at a moderate rate.

Today flour can be shipped by rail from every town of importance in the state, so the Kansas flour miller does not lack transportation for his flour. Since railroads were developed to the east of the state before development within Kansas took place, the roads of this state had merely to connect with the network of roads

already in existence.

The bulk of flour exported from Kansas moves through the Gulf ports of Houston, Galveston, Mobile, New Orleans, and occasionally through Beaumont and Pensacola. Kansas flour intended for export may move through the Atlantic ports of New York, Philadelphia, and Baltimore, but this usually is done only when the flour is destined for some out-of-the-way place which affords no communicating steamship service with the Gulf.

The railroad lines carrying most of the Kansas export flour are the Santa Fe, Rock Island, Missouri Pacific, Union Pacific and the Frisco. Some flour, of course, is carried by all the roads. Few of these roads figure in on the haul to Atlantic ports, but they do deliver to eastern carriers at the larger terminals of Kansas City, St. Louis, and Chicago.

Owing to readjustments in trade routes due to the increase in freight rates during and since the war, Kansas flour almost always clears for export at Gulf of Mexico ports, although previous to that time the Atlantic seaboard was the main outlet. Kansas flour reaches the Gulf more quickly by rail, but this advantage is more than offset by the time which the flour is delayed by the additional

water voyage for the full export trip. This is particularly true of the trade with Europe.

The mills of the Northwest have always had a lower freight rate to the east than have Kansas mills and others in the Southwest territory. The railroads maintain that they must meet the competition of water transportation by way of the Great Lakes. This advantage, enjoyed by mills of the Northwest, has varied from time to time. Before the World War the Minneapolis-Chicago rate was only two cents per hundred pounds lower than the Kansas City-Chicago rate. The Northwest has enjoyed a greater advantage since the war, however.

The Southwestern Miller states that the Northwest is enjoying a preferential rate on flour to Central Freight Association territory of from one-half to five cents per hundred pounds, although the distance favors Missouri River points from a few miles up to 250 miles.(15) "The short line distance from Minneapolis to New York is 1,317 miles. From Kansas City to New York the short line distance is 1,325 miles. Nevertheless, the Northwest now enjoys a freight advantage on flour to the east and

15. The Southwestern Miller, March 19, 1929, p. 26.

is seeking to bring about a sharp increase in that advantage. It is trying to get rates 21 cents a barrel under those of the Southwest. Ignoring the mileage and the competitive conditions involved, one spokesman of the Northwest is even seeking to justify the attempts to add to the rate discriminations in its favor by alleging that it is laboring under handicaps and that it is only endeavoring to obtain equitable treatment. The Southwest rightfully maintains that the Northwest is not entitled to a discriminatory advantage of as much as 21 cents a barrel, but that a parity of rates should prevail out of the Northwest and the Southwest to the East." (16)

Due to the enormous holdover of wheat in the United States from 1928, with prospects for a large crop in 1929, President Hoover went before the Interstate Commerce Commission and asked for an emergency rate on wheat and flour for export. The railroads agreed to a reduction in rates in order to aid in moving the surplus. However the emergency rate terminates in September, 1929, and at that date the old rate automatically comes back into effect unless action is taken by the Interstate Commerce Commission in the meantime.

16. Ibid, November 30, 1926, p. 25.

Rates on flour for export from leading Kansas mill-
ing centers are listed below.

(Cents per 100 pounds of flour)

Shipping point	Emergency rate to Gulf.	Old rate to N. Y. to Gulf.	
Atchison	19	29 $\frac{1}{2}$	41
Dodge City	35 $\frac{1}{2}$	50	61 $\frac{1}{2}$
Enterprise	33 $\frac{1}{2}$	45	58 $\frac{1}{2}$
Hutchinson	33	48 $\frac{1}{2}$	60
Leavenworth	19	29 $\frac{1}{2}$	41
Kansas City	19	29 $\frac{1}{2}$	41
Topeka	31	41 $\frac{1}{2}$	53
Wellington	30 $\frac{1}{2}$	47 $\frac{1}{2}$	59
Wichita	32 $\frac{1}{2}$	47 $\frac{1}{2}$	59
Salina	33 $\frac{1}{2}$	47 $\frac{1}{2}$	59
Ellsworth	33 $\frac{1}{2}$	48 $\frac{1}{2}$	60
Hays	36 $\frac{1}{2}$	49	61
Lawrence	38	38 $\frac{1}{2}$	50
McPherson	33 $\frac{1}{2}$	48 $\frac{1}{2}$	59
Marysville	32	42 $\frac{1}{2}$	58 $\frac{1}{2}$
Clay Center	34 $\frac{1}{2}$	43	60
Abilene	33 $\frac{1}{2}$	47	59

(17)

17. These statistics were given by the rate clerks of the Rock Island, Union Pacific and Santa Fe railroad companies at Topeka, Kansas, on August 5, 1929.

All points on the Missouri River have the same rate as does Kansas City, while inland points in Nebraska have a higher one, and inland points in Oklahoma and Texas have a lower rate than do inland Kansas points. At the same time Minneapolis millers have the advantage of a low emergency rate of only 25 cents per 100 pounds of flour shipped to all Gulf ports as well as to the port of New York. The rate to Baltimore is still lower, being only 23 cents. These comparisons only prove that Minneapolis millers have the lowest freight rates of all interior millers when the distance to seaboard is taken into consideration.

The railroads have been criticized for discriminating against flour in favor of wheat. The flour trade of Kansas to the Pacific Coast has been practically ruined by this condition. Soft wheat is grown on the Pacific Coast and the miller there uses Kansas wheat for blending purposes. He takes Kansas wheat, mixes it with the native variety, and mills flour. Formerly the Pacific Coast miller would take flour instead of wheat for blending purposes. Kansas millers have not only lost a market for their product on the Pacific Coast, but in foreign markets as well, particularly in the Orient, where the Pacific Coast miller now has the upper hand.

The steamship companies have also offered lower rates on wheat than on flour. This is unfortunate because it would certainly be better for the country in general to be able to export flour. American millers and American laborers would be better off, the miller could build up a regular and valuable trade, and valuable feed products would be retained within the country which would be an aid to stock raising and would tend to build up the soil. It is regrettable that the carriers have hindered rather than aided the exportation of flour. They may be justly accused of taking a rather unsympathetic attitude toward the milling industry. (18)

The importance of freight rates in the export trade can scarcely be over emphasized. Milling costs are practically the same all over the country, although the millers of the Northwest likely have higher operating costs than do millers of the Southwest due to the fact that their equipment is older. In the final analysis, the factor which determines whether the mills of one particular area or those of some other area will dominate a certain market, is freight rates. Competition has become

18. B. C. Kuhlman, The Development of the Flour Milling Industry. p. 314.

so keen, and the miller's margin or spread has been lowered so much that the matter of a few cents in freight may either exclude him from a market, or open the market to him, dependent upon whether he enjoys a preferential, or is suffering from a discrimination.

The milling in transit privilege has been responsible for the diversified location of mills in Kansas. By means of this rate, the miller is allowed to stop wheat at the mill, grind it, and ship out an equal tonnage of flour and other products on the through rate. This places the miller in the interior on a footing of equality with the Kansas City miller. The only disadvantage that might arise for the interior miller would be occasioned by a wheat shortage in his part of the state. In this case he would be out an additional charge for transportation from a terminal market. However orderly marketing of wheat by farmers and the building of large storage capacity by elevators and milling companies has practically eliminated the danger of the interior miller being short of a stock of milling wheat.

The following account gives an idea of the scale on

which flour is transported out of the state. It also gives a good indication of the facilities available for exporting. "A new achievement in flour merchandising was recorded in a trainload shipment of unprecedented size, an aggregate of 206 cars that moved from the plant of the Rea-Patterson Milling Company for distribution in the South and for clearance through the Gulf to European importers. The trainload designated as 'Dixie Special No. 4' was made up of 173 cars of flour and feed, and 33 cars of grain, mostly corn, the grain having been sold for export. Four of the largest locomotives of the Missouri Pacific Railroad were used to move the shipment. The previous record for a single trainload from a mill in the United States was established by the Rea-Patterson organization a year ago, when 'Dixie Special No. 3' numbered 145 cars." (19)

The greatest achievement in facilitating transportation seems to have been made quite recently in handling the export flour trade with Cuba. Since December, 1928, it has been possible for millers to ship flour to Cuba

19. The Southwestern Miller, March 6, 1928, p.29.

without the flour ever being removed from the railway car until it is on the track alongside the property of the buyer in Havana. This feat has been accomplished by a new type of vessel capable of carrying 95 loaded cars. The cars are lifted into the hold of the ship by a huge crane. When the ship reaches Havana, another crane swings the car from the hold of the ship and lowers it to the railroad track. Weekly sailings prevail between New Orleans and Havana.

Speed in transit is the main aim of such a service. After the railway car is loaded and has arrived at the exporting point, time is required for unloading, transferring to the steamship wharf, holding the wharf until the ship is ready to load, and then loading the ship. Upon the arrival of the vessel at the point of destination the same routine is duplicated in making delivery of the goods from the ship to the wharf or warehouse. This new method does away with all this and will surely reduce handling charges, reduce risk, and speed up the service. It seems to illustrate the possibilities of the transportation system. (20)

20. The Northwestern Miller, September 19, 1928, p.1125.

Usually there is sufficient steamship space available at the Gulf, but "in a season when the absence of a large export demand for flour has stood out as a great disappointment to the flour trade, it is surprising to find complaints of a shortage of steamer space at the Gulf. The shortage has been serious enough to actually hold export workings of flour, Fortunately The U. S. Shipping Board has promised relief." (21)

Some of the principal steamship lines carrying Kansas flour are the Southern States Line and the Waterman Steamship Company, which are American lines, and the Holland American Line, the North-German-Lloyd, and Hamburg American Lines. There are also tramp steamers which occasionally carry flour. The better vessels are modern steel ships given an A1 rating by Lloyds Registry. (22)

A large percentage of the Kansas export flour is carried in the ships of foreign nations. The foreigher

21. The Southwestern Miller, October 30, 1928, p.29.

22. Letter from J. E. Novak, Export Sales Manager of the Kansas Milling Company.

can compete successfully with the American in the water carrying trade because all of his expenses are lower. In the first place the vessels cost less to build because foreign labor costs less. The American uses three shifts of men during the day while the foreigner will use only two. The sailors and officers of American vessels receive a much higher wage than do those on foreign vessels. The captain of an American ship probably receives double the salary received by the captain of a German ship.

Ocean freight rates are governed by the number of vessels available and the demand for ocean space. Rates have fluctuated widely in the past, but are comparatively stable at present. The rate is almost always two cents per one hundred pounds higher from Gulf ports than from Atlantic ports as concerns the trade with Europe. (23) Since the water rate on flour is greater from Gulf ports than from Atlantic ports, the question arises as to whether or not this increased rate is sufficient to counterbalance the extra land freight rate existing between Kansas mills and Atlantic ports, as compared with the cheaper rate by

23. Interview with Nick Morcillo, Export Sales Manager,
Larabee Flour Mills.

land to the Gulf. The fact of the matter is that the rail-water rate through Atlantic ports is much higher than the rail-water rate through Gulf ports. The explanation lies in the cheapness of water transportation. A simple illustration will make this point clear.

At present the rate on flour from Kansas City to the Gulf is $30\frac{1}{2}$ cents per 100 pounds. The rate from the Gulf to Europe is approximately 25 cents per 100 pounds. This makes a total freight charge of $55\frac{1}{2}$ cents per 100 pounds of flour shipped to Europe from Kansas City by way of Gulf ports. The rate from Kansas City to New York is 41 cents per 100 pounds of flour. The rate from New York to Europe is approximately 23 cents per 100 pounds. This makes a total freight charge of 64 cents per 100 pounds on flour shipped from Kansas City to Europe by way of Atlantic ports. The difference here in favor of the Gulf is $8\frac{1}{2}$ cents per 100 pounds, or nearly 17 cents per barrel. The difference is still greater when flour is shipped from Kansas inland points, as indicated by the table on page 30. With competition as keen as it is in the milling industry, it is obvious why most Kansas flour intended for export moves through Gulf ports.

The Mississippi-Missouri River project is of interest to millers of Kansas. The millers would like to see the project completed and successful. There is plenty of water in these rivers to make navigation possible and there seems to be no good reason why the project will not succeed. However, millers seem to doubt very much if the new means of transportation will actually reduce freight rates to the Gulf for most Kansas millers. It will nevertheless be a source of potential competition with the railroads, which may eventually cause rates to lower. It is doubtful if the rate to New Orleans will ever be lower than the rate direct to Galveston. It will also take longer for flour to reach the Gulf by way of New Orleans. Occasionally, however, this may be looked upon by the miller as an advantage, in case he is not pressed with an order and desires to get the shipment underway. Any improvement in, or addition to, transportation facilities adds just one more link to the miller's means of marketing his product. (24)

After Kansas flour reaches the seaboard it is loaded into vessels and carried out to the high seas. Practically

24. Ibid.

all the important ports of the world receive Kansas flour regularly or at certain seasons of the year, After the flour has been unloaded in foreign ports it will, in most cases, be carried to the interior. This is ordinarily accomplished by railroads, but may be done with river boats or pack animals, as is the case in Bolivia where the only means of transporting the flour into the mountains is by the use of donkeys.

The transportation and handling facilities for flour in the more advanced countries are just as modern and efficient as are those of the United States. However this is not true in many of the more backward nations. Often the harbors are too shallow to admit large vessels and lighters must be used for conveying the flour from the steamship to the wharf. This adds expense and causes delay. Warehousing facilities are often lacking or inadequate. As a result flour may have to remain on the open wharf exposed to the elements. Such conditions often give rise to disputes between exporter and importer.

The ports of export for Kansas flour serve as a connecting link in the transportation system between the land and water carriers. These ports, particularly those

of the Gulf, are important to the Kansas exporter for various reasons. An account of the accommodations which they offer the flour exporter will best emphasize their importance.

All ports along the Gulf are bidding for the export flour trade. They are fighting for more trackage, better river service, more port facilities, greater elevator capacity, improved harbors and canals, and are spending millions to prove their worth to millers. They base their confidence upon their belief that the shortness of the trip to Latin America from the Gulf will prove more attractive to millers developing business in these republics than the long one from Atlantic and Pacific ports. (25)

Mobile has just opened her new state docks which were built at a cost of ten million dollars. In building the docks two considerations were met, one being that they should be accessible to the railroads and the other that they should provide safe anchorage for ships during tropical storms. The extensive warehouses at the port, which are licensed and bonded by the United States Warehouse Act, were built with the expectation that industries selling to Cuba, Mexico, Central America, and Pacific

25. The Northwestern Miller, September 15, 1926, p. 1055.

coast points would keep stock on hand there to meet urgent needs. A complete flour handling plant has been erected in Pier B. This compartment contains 28,000 square feet of floor space giving ample room for both machinery and storage facilities. This structure is of concrete with galvanized iron roofing, fireproof in every respect and free from any condition that might be detrimental to flour. A modern laboratory is maintained in connection with the plant. Flour can be loaded or unloaded directly into or from the steamer, railroad cars, or trucks, eliminating all waste motion. The State has installed fumigating machinery for any flour arriving in bad condition. The facilities for handling flour through this port are as complete as will be found anywhere, and port authorities are hopeful of an increase in flour exports in the near future.

Mobile is served by the following railroads: the Alabama, Tennessee and Northern, the Gulf, Mobile and Northern, the Southern, Mobile and Ohio, and the Louisville and Nashville. The docks commission operates a terminal railway with 33 miles of trackage and a classification yard with an initial capacity of one thousand cars, where freight is classified for particular ship berths. Approximately 32 steamship companies are now

using the port, giving it excellent connections with most of the world, particularly with South America, the United Kingdom, and European markets. Eighteen ships can be handled at one time at the new docks without interfering with one another.

New Orleans is the most important of the Gulf ports so far as volume of business is concerned, and is the second port in the United States so far as foreign exports are concerned. The port's facilities provide contact between the Mississippi valley territory and the markets of the world. Facilities for handling flour are of the most modern type. Wharves and warehouses are of modern fireproof structure, and a large volume of flour is handled here each year. Some warehouses take particular care to provide storage space in keeping with the needs of this product, and strenuous efforts are constantly made to keep them clean and free from any type of infestation.

New Orleans has four railroad terminals, disregarding other lines running into the city. The Illinois Central System and the Southern Railroad are located on one bank of the river, and the Southern Pacific railroad and the Texas Pacific-Missouri Pacific are on the other.

All lines are connected by the Public Belt Railroad in the development of which the City has spent five million dollars in recent years. This supplies switching service to all wharves, rail lines, and shippers located on its own and connecting lines, and along the wharves and industrial sites on the inner harbor navigation canal.

The flour men of New Orleans recently organized a Flour Club, which has become affiliated with the National Federated Flour Clubs. This organization has accomplished a great deal for the benefit of the trade. Many flour firms in New Orleans operate over an extensive area, using a number of salesmen and enjoying a volume of flour business each year commensurate with brokers and jobbers in any other market in the country. Many of them do an export business. (26)

Houston is probably the newest of the Gulf ports. When the port is fully developed it will provide berthing space for about 1,500 vessels, with necessary sheds, warehouses, and railroad connections. Eighteen railroads meet sixty three steamship lines here, the vessels

26. The Northwestern Miller, August 15, 1928, p. 623.

of which reach all ports of the world. The activity of the port centers around the harbor and turning basin, with their publicly owned wharves, railway and port handling equipment, supplemented by a number of privately owned wharves.

The facilities of Houston are probably newer than are those of any other Gulf port. However there are many obstacles yet to overcome. That it has met its difficulties well and offers the exporter today a port well equipped and efficiently operated is indicated by its constantly growing volume business. (27)

Because of its natural location directly on the Gulf of Mexico, and because of the fertile areas of land running back from the port, Galveston was destined from the start to become one of the leading ports of the Gulf. Quick access to the steamship lanes has been an important factor in advancing the port to its present position. The port has one of the best systems of terminals in the country. Facilities have been built with the idea always in mind of delivering commodities from railway car to ship most efficiently and with the least possible wasted effort. Each dock has been so arranged that it is served with its own individual rail connection. The port is capable of handling 500 cars daily without

27. Ibid, August 29, 1928, p. 845.

congestion, which is entirely due to the arrangement of the wharves and the connecting rail lines.

Freight rates from most Kansas milling points favor Galveston, and grain and flour follow a natural pathway to it from this territory. The port has an excellent territory from which to draw its trade, Galveston has, in certain years, stood first among the ports of the country in grain exports. The port can easily take care of any increase in export business. Both ships and railway cars have ample facilities for loading and unloading, reducing congestion to a minimum, enabling cargoes to be handled both speedily and economically. Its wharves, warehouses, and elevators are among the most modern in the country.(28)

Galveston and New Orleans have about the same amount of the Kansas export flour business at the present time. Mobile and Houston are important outlets, but do not handle the amount of flour that goes through the other two ports. Millers seem to agree that Galveston is the coming port for Kansas flour. Its harbor is excellent, being right on the open water. The ship is clear for sailing as soon as anchor is pulled. New Orleans, on the other hand, is located up the Mississippi River a

28. The Northwestern Miller. September 5, 1928. pp.931-932.

great distance, necessitating much delay to ships before open water is reached. This should not prove a great inconvenience, however, unless the shipment is being rushed. Galveston is making the strongest bid for the business through more extensive advertising and this adds to the port's popularity.

From a questionnaire filled out by Kansas millers, it was learned that Kansas flour is seldom shipped through Atlantic ports. The reasons given by these millers for shipping through Gulf rather than Atlantic ports, contained without exception, lower freight rates. A second reason given in a majority of cases was better facilities and accommodations. Several millers added that they preferred Galveston and other Gulf ports because the flour reached seaboard in less time. This might be an important factor in regard to Latin American trade. A few millers stated that Kansas millers should patronize the ports nearer home, especially when those ports had provided such excellent facilities and had made such a strong bid for the Kansas export flour trade.

Chapter 111

The Importance of Kansas City in the Export Trade.

One incident of the increase of the milling capacity about 1900 was the rise of the milling center at Kansas City, which today has become one of the leading milling centers of the United States. At one time this milling center was next to the largest in this country. Today it has dropped to third place due to the rise of Buffalo.

The exportation of a large share of the wheat produced in this section of the country had years ago made Kansas City the market for millions of bushels of the Kansas wheat crop every year. Today the city occupies an important position among the great primary wheat markets. The center is decidedly a hard wheat market, and occupies the same position for the Southwest as does Minneapolis for the Northwest.

It is this celebrated hard winter wheat that has built up the Kansas City market, and it now has all the necessary factors to cause it to increase in importance, namely, the location, the wheat supply, demand, local

consumption, and an export outlet. (29) The Board of Trade has some very aggressive members, who do a direct business with mills in the East, and with Europe, instead of letting the business be drawn elsewhere. This center is a distributing point, not only for the Kansas crop of wheat, but also for the entire hard wheat region. Wheat is sent to mills and other terminals all over the country as well as to foreign countries.

Kansas City is also a consuming center for hard wheat. Thousands of barrels of flour are milled here annually. Realizing the importance of locating mills in conjunction with a good market, the milling capacity of Kansas City began to increase at an early date.

Although there are really two parts to Kansas City, divided by the state boundary, economically they form one industrial unit, and in speaking of Kansas City as it pertains to the grain and flour trade, they will be so considered. The Northwestern Miller, in compiling its statistics in regard to mills of the various states, makes a separate compilation for the mills of Kansas City, including the mills on both sides of the boundary line separating Kansas from Missouri.

29. Smith, Rollin E., *Wheat Fields and Markets of the World*. p. 331.

Kansas City is more important as a grain center today than as a flour center. This is evident when one considers that of the wheat crop exported, more of it goes in the form of grain than in the form of flour. The grain trade had its beginning about 1871, a time when the Kansas wheat crop reached such proportions as to more than supply the demands of the state for bread.

Seldom is more than half of the Kansas wheat crop milled within the state. Part of the balance may be shipped direct to foreign countries where it is milled into flour. A greater percentage, however, will be milled alone or mixed with other varieties for domestic or export purposes. Although Kansas wheat milled in other states is exported as flour of those states in which it was milled, it is Kansas flour, nevertheless, because it was made from Kansas wheat. When this fact is taken into consideration, it will be seen that a much greater percentage of Kansas wheat ultimately reaches foreign countries in the form of flour than the estimates would indicate. Kansas City acts as the great reservoir and distributing center for states other than Kansas and for foreign countries.

By 1877 there were four flour mills in Kansas City

producing 60,000 barrels of flour annually. Another was added in 1879, and a second in 1882, bringing the total daily capacity up to about 1,200 barrels. The city was becoming a market for surrounding mills about this time, having established a system of flour grades and inspection in 1880. Country millers resisted these efforts as shown by their persistency in sending flour to the market in sacks even though the southern trade demanded barrels. As a result, middlemen began the practice of repacking and blending.

The antagonism of the railroads retarded the growth of the city as a milling and marketing center. Restrictive legislation on the part of the Missouri Legislature caused most of the early elevators to be located on the Kansas side, though the grain exchange and many of the mills were located on the Missouri side. As late as 1890 the milling capacity of the city was only 1,500 barrels a day. Soon after 1890 a 2,500 barrel mill was built. About this time John Kelley, a Leavenworth miller, went to Kansas City and built a 1,800 barrel mill. Another 1,800 barrel mill was added in 1904. In 1906 the Standard Milling Company through its subsidiary, the Southwestern Milling Co., erected a 1,500

barrel mill which was destroyed by fire in 1913. However, it was replaced by a 3,600 barrel unit to which a second unit of 2,200 barrels was added in 1919. This was a distinct recognition of the growing importance of the new milling center. About 1910 the Ismert-Hincke Company built a mill of 2,500 barrels capacity which was followed shortly by a 1,700 barrel mill built by Shane Brothers. In 1920 two mills were completed. In 1921 a 1,500 barrel mill was added. Washburn-Crosby added a 3,000 barrel mill in 1923, bringing the total milling capacity of the city up to 22,150 barrels daily.

Due to concentration of ownership, many of the interior mills of Kansas have been brought under Kansas City leadership. The Kansas Flour Mills Company operates nine mills in the Kansas area. The Larabee Flour Mills Corporation has five mills in Kansas and Missouri. The Ismert-Hincke Company operates mills at Topeka and Bonner Springs besides the mill in Kansas City. The Warkentin interests control the Midland mill at Kansas City as well as three other mills in Kansas and Oklahoma. There are, also, many wholesaling, jobbing, and brokerage firms in Kansas City, as well as a blending plant, all of

which add to the city's importance as a flour marketing center. (30) The concentration of ownership places the control of a large amount of the states milling capacity in Kansas City.

The following table will show how the flour production of Kansas City has increased.

Kansas City—Flour Mills		Kansas City—Flour Output			
Flour mills at Kansas City, with capacity in barrels per day:		Total flour output of Kansas City, by calendar years, in barrels, as reported to the Board of Trade:			
Ismert-Hincke Milling Co.	2,600	1929.....	7,986,450	1915.....	2,865,460
Kansas Flour Mills Corporation (two mills)	4,850	1928.....	7,235,498	1914.....	2,376,840
Midland Flour Milling Co.	1,800	1927.....	7,381,501	1913.....	2,294,617
Monarch Milling Co.	5,500	1926.....	6,179,234	1912.....	2,080,268
Moore-Lowry Flour Mills Co.	1,500	1925.....	5,410,714	1911.....	1,822,257
Rodney Milling Co.	1,500	1924.....	5,218,021	1910.....	2,226,266
Southwestern Milling Co., Inc.	6,000	1923.....	4,886,775	1909.....	2,427,376
Washburn Crosby Co.	6,500	1922.....	4,707,964	1908.....	2,577,577
Total	30,250	1921.....	3,965,769	1907.....	1,974,949
Waggoner-Gates Milling Co. (Independence)	1,200	1920.....	3,597,246	1906.....	1,989,000
Grand total	31,450	1919.....	3,628,151	1905.....	2,053,000
		1918.....	2,469,777	1904.....	1,596,100
		1917.....	3,365,200	1903.....	1,535,000
		1916.....	3,146,332		

(31)

Apparently the larger interior mills of Kansas have experienced no bad effects from the rapid growth of the Kansas City milling capacity. Perhaps some of the larger interior milling centers have grown more rapidly in proportion than has the Kansas City center. These mills en-

30. B. C. Kuhlman, Development of the Flour Milling Industry. p. 199.

31. The Northwestern Miller Almanack and Yearbook, April 2, 1930. p. 43.

joy the same milling in transit rates as does Kansas City. They rarely buy grain on the Kansas City exchange but depend on their source of supply from large storage facilities, usually in the form of a line of country elevators.

Since the hard wheat raising area is more or less restricted and the demand for flour made of hard wheat seems to be increasing, it is probable that the greatest future expansion of the milling industry will come in the hard wheat area. Whether Kansas City is to be the leading milling center of the country is doubtful. Certainly Kansas City is not likely ever to attain the prominence held by Minneapolis during the past and at present. The smaller milling centers of Kansas are holding their own, and the tendency seems to be to build up a series of smaller milling centers rather than to concentrate on one. (32)

The total capacity of Kansas City Mills is 31,750 barrels daily. Buffalo has a daily capacity of 40,900 barrels, while Minneapolis leads with a milling capacity of 77,650 barrels. (33) This places Kansas City in third place so far as capacity is concerned.

32. B. C. Kuhlman, Development of Flour Milling Industry, p. 204.

33. The Northwestern Miller Almanack and Yearbook, April 3, 1929, p. 56.

Kansas City is also in third place as a milling center so far as actual output is concerned.

FLOUR OUTPUT AT CENTERS

Wheat flour output of mills which reported to The Northwestern Miller, at leading centers, by calendar years, in barrels (000's omitted):

	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920
Minneapolis	10,797	12,244	11,540	11,793	12,060	11,679	13,488	15,643	14,872	15,003
Buffalo	10,133	10,060	10,032	9,672	9,458	6,989	6,463	6,709	6,693	5,243
Kansas City	7,986	7,235	7,382	6,179	5,411	5,218	4,887	4,708	3,966	3,597
New York	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,825	1,500	1,690
St. Louis	1,968	1,643	1,404	1,441	1,246	1,275	1,757	1,518	1,506	1,441
Chicago	1,528	1,765	1,851	1,867	1,781	1,858	1,342	1,477	820	955
Milwaukee .....	...	...	...	106	373	193	218	245	359	418
Duluth	1,152	1,101	894	916	1,015	937	1,016	1,004	769	822
Omaha	1,152	1,268	1,161	1,108	1,118	1,103	1,014	948	823	632
St. Paul	384	436	520	576	492	505	672	533	499	389
Indianapolis	553	430	...	391	440	516	499	472	356	408
Cleveland	270	315	299	293	252	248	269	247	268	275
St. Joseph	1,771	1,691	1,870	1,929	1,733	1,837	1,365	1,603	1,391	...
Tacoma	2,249	2,021	1,723	1,483	1,159	1,290	1,553	1,456	1,481	1,392
Seattle	1,474	1,530	1,318	1,170	1,205	1,460	1,686	1,471	1,067	1,352
Portland	1,315	1,181	1,278	1,271	1,316	2,023	2,115	1,976	1,624	1,400
Toledo	2,310	1,950	2,110	2,001	1,750	1,819	1,620	1,350	1,162	930
Salina	1,997	1,936	1,622	1,459	1,318	1,128	975	1,734	1,672	...
Philadelphia	142	124	147	187	243	199	365	510	...	...
Wichita	1,843	1,830	1,993	2,026	1,624	2,059	1,865	1,917	...	...

(34)

The following table shows the percentage of output to capacity for Kansas City mills over a period of seven years.

	Yearly capacity	Flour made	Pct. of activity
1929.....	9,435,000	7,908,865	83.8
1928.....	9,612,000	7,450,739	77.5
1927.....	8,985,000	7,217,840	80
1926.....	7,878,000	5,455,430	69
1925.....	7,727,400	5,783,214	74.8
1924.....	7,786,800	5,406,800	69
1923.....	6,703,800	5,080,144	75

(35)

34. Ibid. April 2, 1930. p. 45.

35. Ibid. p. 42.

The Northwestern Miller collects statistics on the milling industry from all parts of the United States. It has two sets of statistics for Kansas: one set of statistics covers all mills in Kansas outside of Kansas City, the other covers the industry in Kansas City, combining the mills of both Kansas and Missouri. The reason why the Northwestern Miller makes this distinction is because the Kansas City mills draw their wheat supplies from the terminal wheat market, while for the most part mills in the interior draw their supply from the immediate vicinity. It is safe to say that most of the wheat ground in Kansas City comes from Kansas, even though a large part of the milling capacity is located across the Missouri line.

The percentage of flour exported by these mills varies widely. It has run as high as thirty percent. (36) At the present time the percentage is quite low. The Livingston Economic Service collects figures on this aspect of the milling industry. Their survey covers the entire Southwest instead of Kansas alone. Statistics gathered from 44 representative mills in the district, all engaged in exporting, show the following percentages. For

36. Interview with Nick Morcillo, Export Sales Mgr.,
Larabee Flour Mills.

November 1928, 9 percent of the output of these mills was exported. In December the percentage had fallen to 7 percent, and in February had fallen to 6 percent. These figures are representative of the mills of Kansas doing an export business and it is doubtful if the percentage for the mills in Kansas City is very much higher. (37) The past year has been a poor one for the export trade. Perhaps the two extremes have been given above, and a reasonable estimate of the percentage of flour exported would be between 5 or 6 percent and 25 or 30 percent, dependent entirely upon the condition of the market. The Kansas City mills handle a good share of the export business of the state.

The mills of 500 barrels capacity can take part in the export trade just as well as can the larger mills. A few of them do so, but the majority of the mills of even 1,000 barrel capacity are more interested in the domestic trade. A few of the larger mills are doing the bulk of the export business. The smaller miller is too busy running his mill to take the time to investigate the possibilities in foreign markets for his product,

37. Interview with Mr. Fleckenstein, Livingston Economic Service.

a thing that he absolutely must do if he is planning to enter the foreign field. As a result the larger mills really have the advantage in this respect, although it is not because of their greater capacity, but rather because they have the time and resources necessary to investigate and develop their trade with foreign markets.

Kansas City is important to the milling industry of the state for various reasons. A great amount of the flour passes through the city from interior mills, a large output is produced by the city itself, it is the reservoir for hard winter wheat on which interior millers may draw occasionally, and the hedging service of the Grain Exchange is used by practically all millers. Many millers finance through Kansas City. A great amount of the insurance on export shipment is handled here. The Southwestern Miller is published in Kansas City, and the editor of the Northwestern Miller has his office there also. These trade publications aid millers both in their domestic and foreign trade. It would be difficult to enumerate all the various accommodations that Kansas City gives the millers of the state, but it can be said that almost every phase of flour export-

ing from interior Kansas mills will be influenced either directly or indirectly by this great milling and grain center.

Chapter IV

The European Market for Flour.

Kansas flour has always found favor in the European markets. A large share of the export business of this state has, in the past, been carried on with Great Britain and the Continent. The trade in that quarter is now declining and promises to decline even more. The volume of trade is, however, still very important to the Kansas flour miller. Some facts will be given in the pages that follow of the Kansas flour trade with the important markets of Europe.

Great Britain.

The Northwest mills entered this field at an early date, probably about 1878. Kansas had an established trade with Great Britain and certain European countries by 1890, the first shipment of flour being sent to Antwerp in 1882, as already stated. In pre-war days Great Britain was our best flour customer, but the trade with this nation has fallen off considerably since 1900. The

mills of the Northwest suffered more in this respect than did the Kansas mills. During the war our trade with Great Britain increased enormously and all Kansas mills of any size began milling flour for export to this and other European markets. Since the war, however, shipments of flour to Great Britain have again gradually decreased.

Scores of small interior mills have been displaced by large port mills in the last few years in Great Britain. These mills are well equipped and are now furnishing half of the domestic demand for flour. The rapid growth of Canadian flour exports has been to a large extent at the expense of American flour. Even the British millers are complaining that Canadian flour is being sold far below the price for which they can mill flour. (38) The Canadian miller has the advantage over the American miller in that he has a large supply of cheap wheat.

The "milling in bond" privilege enjoyed by the mills at Buffalo has injured the Kansas flour export trade with Great Britain as well as with other markets to a great extent. It has been estimated that 30,000,000 bushels of Canadian wheat will be ground in these mills during

38. B. C. Kuhlman, Development of the Flour Milling Industry, pp. 295-299.

the crop year ending July 1, 1929. (39) This flour must all be exported. The offal feed obtained is retained within the United States. Kansas millers have repeatedly protested against this privilege as being against the interest of both the miller and the farmer.

The United States Tariff Act permits Canadian wheat to come into the United States to be milled without paying the duty of 42 cents, provided the flour is exported. This gives the Buffalo mills an advantage over all other millers, even over the Canadian. In Canada more flour can be milled only by building more mills, because the mills in existence are running at capacity. However mills in the United States cannot ordinarily run at full capacity. By milling cheap wheat the Buffalo mills can increase their output, thus greatly reducing fixed charges, without expending additional capital for fixed plant and machinery. The result has been that Buffalo has passed Kansas City in importance as a milling center and is treading on the heels of Minneapolis for first place. The "milling in bond" privilege has been beneficial for Buffalo but destructive to the mills of Kansas and to those of other states as well.

39. The Northwestern Miller, December 5, 1928.

Kansas flour, once highly favored in Scotland, was practically off the market in 1928. This year was a trying one for Scottish importers as well as for the flour trade in general. (40) As far back as 1924 Kansas flour was entering Scotland in gradually reduced amounts. The Kansas product was also out of favor in England at that time but was maintaining its popularity on the Continent. (41) The irregularity of the Kansas flour trade with England can be shown by the following quotation from the Northwestern Miller.

"A notable feature of the flour trade has been the reintroduction of Kansas flour during 1924. Kansas flours, which had not been sold in London in any quantities for at least three years, were offered at competitive prices and considerable business was done, but this trade has now fallen away and is probably finished for this crop, unless the flour is offered on a much lower basis than present prices. The same is true at Liverpool." (42) Kansas flour was practically off the market in the British Isles during the past year.

40. The Northwestern Miller, January 2, 1929, p.43.

41. Ibid January 14, 1925, p.129.

42. Ibid January 14, 1925, p. 129

The markets for flour in the British Isles usually call for a good grade. Glasgow is a good market for winter wheat flour of good grade. Liverpool is a good market for winter wheat flour also. London affords an outlet for almost any kind of flour, although it is specially suited for good spring wheat or Kansas hard wheat flour, including first and second clears. (43)

The prospect for Kansas flour in the British Isles for the future is not very bright. Canadian and Australian flours are given a preference in this market. Also, as previously noted, Great Britain is milling a large percentage of her flour within the country at the port mills. Water and rail rates are favorable to the shipping of wheat rather than of flour from the United States. Therefore Great Britain prefers to take wheat and do the milling herself. While Kansas millers may do some business there in the future, they cannot look forward to any great volume. The only time they can hope to ship flour to this market is when they can offer their flour at a lower price than the Canadian, Australian, or English miller, a thing which is rarely possible. Of course

43. Hints on Exporting (Published by the Northwestern Miller) pp. 7-8.

a few Kansas millers have a limited trade with an established brand which persists regardless of the price.(44)

The Netherlands.

Kansas flour has always been demanded in this market. The country is almost entirely dependent on imported flour or wheat for milling purposes. Years ago the northwestern millers dominated the market. Today the southwestern millers have the upper hand. The Dutch bakers are said to prefer Kansas flour to Canadian, although higher in price, because it requires a shorter fermentation period. This market originally took the lower grades of flour, but in recent years better grades have been demanded.

For thirty years Holland flour merchants have been the most valued customers of southwestern exporting millers, and business has been carried on in large volume without the slightest suggestion of difficulty or disagreement. Both buyers and sellers have held each other in the highest commercial and individual esteem. Some difficulty has occurred in the past two or three years,

44. Letter from Kent Barber, Manager, Kansas Mill & Elevator Company.

however, in regard to the grain weevil being imported along with flour. Dutch millers have recently claimed that their used sacks are returned from bakeries, carrying imported weevils into their mills. A Netherlands baking paper not long ago carried a special warning against the use of imported flour.

The Southwestern millers claim that they have taken all possible care to remedy the situation. Meanwhile the importers maintain that their risk on flour has greatly increased and that steamers from the Gulf turn out far too large a percent of damaged flour. The evil is likely magnified by certain agents and importers. The millers, and perhaps the greater number of importers, are trying to settle the affair and reestablish the good will that has always existed. (45)

Holland mills enough flour to supply her population and would not be such an important flour market for the product from Kansas mills were it not for the fact that Holland flour importers sell in Germany and Central Europe. For this reason the Holland flour market is largely dependent on conditions in Central Europe and not so much on conditions at home.

45. The Northwestern Miller, November 28, 1928.

Practically every Kansas mill engaged in exporting is sending flour to Holland at the present time. Even mills of under 500 barrels capacity that are not exporting to any other country find it possible to export to this market. One Kansas mill of 2,000 barrels capacity reports that its only export business is an occasional lot of flour to Holland whenever the wheat basis comes in line. Another 1,800 barrel mill reports similarly, although it has exported to England, Denmark, Egypt, and Latin America in the past. This mill's export flour consists of clears and cut straights and is sold largely to importers. A 2,500 barrel mill in central Kansas, exporting 26 percent of its total output of flour to Holland, Porto Rica, Cuba, Venezuela, Finland, and Scotland, reports that of this amount 75 percent goes to Holland. (46)

The Holland market seems to be particularly attractive to the small miller who wishes to enter exporting in only a modest way. The market absorbs a large volume of low grade flour, and at times the Kansas miller is

46. These figures were taken from questionnaires filled out by Kansas exporting millers. The writer promised not to disclose the name of the mill.

Germany.

Germany became the best market for American flour following the World War. Her imports of 1,248,000 barrels in 1923 and of 657,000 barrels in 1926 were much larger than her pre-war imports, which averaged only about 200,000 barrels annually. The high development of the milling industry in Germany is a barrier to future exports to that country. The Germans eat large quantities of rye bread and, although there has been a demand for good grades of flour, the income of the masses forces them to use flour of low grade, which may be used alone or as a mixture with rye flour.

Even the low grade flour will likely be milled in Germany as soon as wheat from Russia is again available in large quantities. Shortly after the World War the inflow of foreign flour was facilitated by the suspension of the high import duty on flour. However the duty has been replaced and is now \$2.74 per 100 kilos. The German millers, furthermore, enjoy a subsidy which, in addition to the protection offered by the tariff, has enabled them to build up an increasing export trade. Many Kansas mills are exporting to this market at present.

Every indication points to a gradual elimination of the foreign miller of flour.

The Scandinavian Countries.

Denmark imports large amounts of flour for domestic use and Copenhagen is a great distributing center for northern Europe. There are some mills within the country that buy hard wheat from America to mix with their domestic soft wheat. The business done by these mills, especially in the export field, has suffered of late years from foreign competition. Kansas millers have found a good market in the past for their flour in this country and are doing considerable business here at present. Of recent years, however, they have lost ground to Canadian mills.

The Northwestern hard wheat mills dominated the flour market in Norway prior to the World War. During the war import duties on flour were suspended under government control of flour importation. Argentina and Australian flours gained the market due to their cheapness, but have not been so popular as were the American brands. It is doubtful if this market offers any great possibilities for the Kansas exporter, there being a strong tendency toward government ownership of the milling

industry which probably will result in prohibitive duties against foreign flours.

Sweden is the least important flour market of the three Scandinavian countries. It has large modern mills which grind domestic grain mixed with American hard wheat in quantities almost sufficient to meet the demand. There is very little call for high grade flour and the high duty practically prohibits the import of low grades. Kansas flours have found their way into all Scandinavian markets in the past and are still doing so but in decreasing volume.

Finland.

This market is relatively important, considering Finland's population of two and one half million. About 400,000 barrels of American flour reach this market annually. Since the war the American miller has had to face competition from German and Canadian mills. Trade has been disrupted due to the fluctuation in the Finnish Mark as well as the American's reluctance to grant credit. Purchases are made largely through middlemen in neighboring countries, although some American mills have resident agents.

The import duty on flour entering Finland is quite high, being 120 marks per 100 kilos. The exchange value of the Finnish mark is now 2.5 cents making the duty \$3.00 on slightly over a barrel of flour. One 2,500 barrel flour mill in Kansas reports that four percent of its total output goes to this market.

France.

It is not likely that any country will be able to do a flour business in France. The duty on imported flour is flexible and can be changed on short notice. The French mills have the situation well in hand, being assured of ample protection from the government, which enables them to purchase foreign wheat when necessary and hold their flour trade against competition of foreign flours.

A 7,000 barrel mill in Paris is one of the largest in the world. It is efficiently equipped with modern labor-saving devices. This mill has a good export trade. There is a School of Milling in Paris and the French are employing the best scientific methods available. In many ways their mills are superior to ours, especially in cleanliness.

Other Markets of Europe.

The remaining markets of Europe are of little importance to the flour exporter of Kansas. Italy and other Latin countries will continue to demand some durum products but will import wheat rather than flour. The tariff of Italy is favorable to the importation of wheat, but flour below a certain extraction is positively prohibited. Latvia, Poland, Esthonia, and Lithuania are more than self-sufficing. Furthermore the millers are secured by high tariff duties. German and Hungarian millers control the market in Czecho-Slovakia.

The Mediterranean Flour Market.

This market consists of Gibraltar, Morocco, Malta, Palestine, Egypt, and Greece. The volume of flour business in any one of these countries is small, but collectively the trade is of considerable importance and full of possibilities. Gibraltar, with a population of 22,000, constitutes a small market. The mills at Buffalo furnish most of the American flour used. Morocco, with a population of 6,000,000, does not use a great deal of foreign

flour. France dominates the market, but Canadian and American mills do a limited amount of business there.

Malta, with a population of 230,000, uses considerable American flour and promises to continue using a uniform volume. There are flour mills in the country, however, and with the millers of other nations competing for the trade, the market is necessarily small.

Egypt, with a population of 15,000,000 and with little milling capacity, depends largely on imported flour. American mills have done a big business with Egypt in the past but are suffering from Canadian competition at present. Kansas flour is out of line just now and Kansas millers are doing but little business in that market at present. However they do a large volume of business there at certain times. (48)

Due to changing tariffs and restrictions on flour imports, the flour trade of Greece has been changeable during the past few years. The government is bent on protecting home millers. Many small mills have sprung up and, with the favorable tariff have practically shut out foreign competition. Several Kansas mills report a trade with one or more of the Mediterranean markets at present. Many of them report a trade in past years.

48. The Northwestern Miller, May 2, 1928, p. 436.

The European market for Kansas flour seems to be decidedly on the decline. The flour mills of Great Britain, Belgium, Holland, Germany, France, and other countries are on an export basis. These mills have been enlarged and brought up to date. They are well equipped and ably managed. Our flour, traveling a thousand miles by land and three thousand miles by water, is subject to physical handicaps hard to overcome. Besides the competition of these countries, there is that from Canadian, Argentina, and Australian millers. The protective tariff of most European countries acts as a further and greater barrier.

"Even our friends, the English millers, are circularizing the flour trade on the Continent that has grown to like Kansas flour, offering to sell flour made from Kansas wheat and stressing the fact that they (the English mills) can furnish it cheaper than mills located in Kansas. Naturally not all the importers on the Continent know the class of wheat that is offered for export in the country nor do they know of the percentage of Kansas wheat used by English mills in their Kansas flour." (49)

49. The Northwestern Miller, Feb. 18, 1925, p. 662.

A calamity such as the World War will always create an enormous demand in Europe for Kansas flour. A partial world wheat failure with abundant crops in Kansas will have the same result. In the absence of some such event, however, the flour trade of Kansas in this market promises to continually decline. Millers are not at all optimistic about the future, in view of the fact that Kansas flour rarely entered the European market during the past year.

Chapter V

The Flour Markets of Central America, Mexico, the West Indies, and Others.

The West Indies.

While the islands known as the West Indies are quite large numerically, only a few are of importance as a market for Kansas flour. With the exception of Porto Rico, Cuba, and Haiti, the islands are either owned or controlled by other nations and, consequently, preferential arrangements particularly advantageous to the owning or controlling countries or their colonies work against the importation of flour from American mills.

Fortunately Cuba, Porto Rico, and Haiti constitute by far the largest flour buying power. Cuba takes approximately 1,250,000 barrels per year, Porto Rico takes between 350,000 and 400,000, and Haiti takes between 150,000 and 200,000 barrels annually. This makes a total annual flour intake for the group of 2,000,000 barrels. Kansas flour must have entered this market about 1900. The following appeared in the Northwestern Miller in 1902.

"What is watched with most interest by those millers who have an established flour trade in Cuba, is the re-

ception given to Kansas hard wheat flours. Heretofore the miller of soft wheat considered his hold on the trade paramount." (50)

Cuba at one time imported 1,000,000 barrels of flour annually from the United States. Sixty percent of this was supplied by southwestern millers. The percentage is not so high at present, but the millers are gamely fighting to win back the lost trade. (51)

Perhaps too many American mills are trying to do business in Cuba for the good of the trade. Several, through lack of knowledge of the market and occasional carelessness in credits, have lost money while at the same time they have demoralized the market. Some mills are capable of engaging in trade far from home, others are not and should not try. Fortunately for the Kansas millers, bakers in Cuba have shifted from soft to hard wheat flour and the demand promises to increase.

The Kansas miller must meet competition in this market from Canadian mills and the mills at Buffalo. A treaty between the United States and Cuba in 1903 permits flour of the United States to enter Cuba at a preference. The preference is now 30 percent. The United

50. Ibid, March 19, 1902, p. 589.

51. The Southwestern Miller, November 22, 1927, p. 46.

States Tariff Act of 1922 allows Canadian wheat to be milled in Buffalo without paying duty, provided it is exported. The Buffalo miller can now buy the cheap Canadian wheat and export it to Cuba, enjoying the preference. It is very evident that this gives the mills at Buffalo a decided advantage. In reality this deprives the average American miller of the benefit of the Cuban preferential tariff.

There is a possibility of the Cuban duty being reduced or eliminated so far as flour from the United States is concerned. The Cuban proposal, which has been made to obtain a more liberal tariff policy on the part of this government toward Cuban sugar importations, would place the differential rate allowed on American flour at 40 percent instead of at 30 percent. The present Cuban flour tariff is \$1.30 per 100 kilos. The discount under a preferential of 40 percent would amount to 52 cents. (52)

The following list of mills in Kansas, including Kansas City, are listed in a trade journal, published in Havana, Cuba, as having sent flour into that particular port during April, 1928. The list was taken

from a group of southwestern and northwestern mills, and is of no particular significance except that it shows the size of shipments made, and likewise shows that many Kansas mills are working the field. It does not show the number of Kansas mills in the field, however, because an entirely new group of mills may be exporting in the following month. The writer was unable to secure more than this one sample copy of the publication.

Mill	Importer	Bags	
The Goodlander Mills.....	Pinan & Co.	666	
	Pardo & Huos	100	
	Zolio Murias	2	768
Southwestern Milling Co.....	Marcelino Gonzalez	300	
	F. Ezquerro	300	
	Pinon & Co.	250	850
Wm. Kelly Milling Co.....	Blanco & Co.	275	
	Rosete & Huos	50	325
Lindsborg Milling Co.....	Fernandez & Fernan-		
	dez.		250
Wichita Flour Mills.....	Siarez & Tous		250
Topeka Flour Mills.....	Jose Garcia		120
Consolidated Flour Mills Co.	Paulina Pernia		100

(53)

The general situation in Porto Rico is worse than in Cuba. In their anxiety to get a share of the trade, millers are selling direct to small bakers all over the island instead of through reliable distributing houses.

53. Boletin Commercial De Cuba, April, 1928, pp.1-4.

W. Quackenbush made a study of the situation in 1927 and found that fifty mill representatives were offering for sale flour made by about 60 mills in a market which uses only 350,000 barrels of flour a year. (54)

Almost all the flour used in Porto Rico is milled in Kansas, Missouri, Oklahoma, and Texas. The flour moves through the Gulf. Of a weekly shipment of 10,000 barrels, 3,000 is likely to go through Houston, 3,000 through Galveston, 3,300 through New Orleans, and possibly 700 barrels through an Atlantic port.

Haiti, the only other island of the group of any size to which American flour goes, is a dismal place. The people are very poor, dirty, and altogether wretched. The white population is very small. This deplorable condition on the island accounts for the fact that the miller catering to this market must pack the flour in small quantities. Flour is usually demanded in cotton sacks of 20 pounds each, six sacks being placed in a jute bag.

Mexico.

The Mexican Government has placed an import duty

54. The Northwestern Miller, May 9, 1928, p.526.

on flour of \$4.50 per 100 kilos in an effort to stimulate domestic milling. Mexico produces more than half enough wheat to meet the demands of her people for flour. Of the wheat imported, Kansas furnished (1925) ninety percent, which was shipped by the all rail route via Laredo, Texas.

In spite of a high tariff and the existence of a large milling capacity, Mexico is a large importer of flour. Her imports increased from 25,738 barrels in 1910 to 435,203 barrels in 1923, and there has been a further increase since. Canada entered the field in 1923 and furnished about four percent of the flour imports.

Consignments of flour from the United States, mostly from the Southwest, are usually in car-load lots and are shipped by rail through Laredo and other border points. The flour business in Mexico is in the hands of importers and manufacturers' representatives who sell on commission. Very few bakers are able to purchase carload lots. For this reason large stocks of flour are kept in Mexico City and other trade centers. (55)

Central America.

In Central America our trade grows steadily with no

55. Trade Information Bulletin No. 306, pp. 14-15.

serious rival to be feared. Central America has a population of 6,000,000. Consumption of flour in these countries, except in Guatemala, is limited to the amount imported. The United States shipped an average of 509,000 barrels of flour to this market prior to the war, which was 99 percent of the total imports. In 1924, 594,000 barrels entered Central America of which Canada supplied 5 percent. Canada and the United States have the market to themselves. (56)

British Honduras uses about 28,000 barrels of flour a year. This is equal to about 110 pounds of flour per capita which is greater than that of any other Central American country. Most of the flour imported is of low grade, perhaps 15 percent being high grade. Canadian flour enjoys the advantage of coming in free if shipped direct from Canada. The import duty on American flour is one dollar per barrel.

Costa Rica imports 100,000 barrels of flour annually. Per capita consumption is only 38 pounds. The principal method of selling flour here is from miller direct to importer. Sixty percent of the flour entering Costa Rica, which has been milled in the United States, comes from

56, Trade Information Bulletin No. 279: Markets for Flour in Central America. pp. 1-2.

Gulf ports, 35 percent from Atlantic ports, and 5 percent from Pacific ports. The governments' warehouse at Port Limon is built of concrete and is in good condition. Flour imports to this market are fairly uniform throughout the year. The import duty is \$3.50 per 100 kilos. In addition, custom surtaxes are 5 percent of duty at the port of Limon and 2 percent of duty at all other ports. The market demands a medium to a high grade flour made from hard wheat.

Guatemala raises some wheat but the milling industry is not on a commercial basis. The per capita imports are somewhat over 10 pounds a year. Flour produced in native mills from domestic wheat is of inferior quality and must be mixed with American flour. Most flour from the Southwest that enters this market goes through New Orleans. The tariff duties are arbitrarily fixed and are based on gross weight. Duties are payable, part in United States currency and the remainder in Guatemalan money, which fluctuates widely. Flour is never imported in barrels or in jute bags without the cotton inner bag. The formality of examining imported flour has been discontinued.

The average postwar imports of Honduras have been 66,000 barrels a year. Per capita consumption is 19

pounds per year, which is a decided increase over pre-war times. All flour imports come from the United States. Some houses order their flour direct from the mills, but most of the flour is bought through jobbing houses.

Nicaragua imports about 63,000 barrels of flour a year, all from the United States. The per capita consumption is about 20 pounds. Flour is usually sold direct to the importer. There is little opportunity to increase consumption in Nicaragua. Pacific Coast flour is very popular in this market.

Panama's flour imports average 100,000 barrels a year. The per capita consumption is about 50 pounds annually. Canada exports more flour to Panama than to all the other Central American countries combined. However, she handles a small percentage of the trade, even in Panama. Flour is usually sold direct to importers by the mills. Eighty-five percent of this flour comes through Gulf ports. Warehouses in Panama are very good. The insurance rate in warehouses is one percent. The volume of flour importation is about the same throughout the year. The usual basis for quoting prices between the flour miller and the flour importer is in carloads, c. i. f. Panama. The import duty is 40 cents per 46 kilos, (slightly over 100 pounds).

Salvador imports about 100,000 barrels of flour annually, all from the United States. This is only about 12 pounds per capita. There are no mills in the country. La Union has an up to date wharf and land locked harbor where steamers can unload directly on the wharf. Flour is stored in a modern warehouse. Other ports must use lighters for unloading. Some firms buy flour direct; others buy through commission agents and traveling representatives. Salvador is the only republic in Central America requiring a pure food law certificate besides the bill of lading, invoices, and insurance certificates.

The Southwest is in a position which enables it to enjoy leadership in selling flour in Latin American countries. The mills of Kansas and neighboring states sell more flour in this market than do the mills of any other district in the United States. The character of the wheat, the type of the mills, and the nearness of the industry combine to maintain this trade which has been difficult to establish. (57)

The extension of four months' credit on exported flour is almost beyond the bounds of safety. The bread product of the flour is sold and eaten weeks before the

bakers' bill for supplies comes due. This very situation existed between southwestern millers and Central American importing bakers in 1928. This really amounts to financing the foreign bakery. It allows the foreign baker to buy, bake, and sell on the miller's capital.

It seems that millers will be unable to reach an agreement for a common basis of terms to apply to Latin America. The trade of this market is valuable and anything that an individual mill can safely do to hold or increase the trade is worth trying, provided the miller, in his eagerness, does not resort to unsound ruinous methods.

Kansas flour finds a ready market in South America and those markets will be discussed in the next chapter. It is possible, but doubtful, if Kansas flour is reaching any markets other than the ones which have been mentioned, including those of South America. Granting that Kansas flour does occasionally reach the principal markets of Asia and Africa, it does not go in great volume and a description of the trade in those markets will not be given.

The South American Markets.

Argentina, Chile, and Uruguay in normal years produce a surplus of wheat. Normally, the flour output of these countries is sufficient to meet domestic demand as well as to furnish a good percentage of the flour required in the other Republics. Flour exports from the United States to South America now exceed the shipments of Canada and Argentina, combined. Exports of flour from the United States to this market in 1921 were 574,000 barrels; in 1922, 837,000 barrels; in 1923, 886,000 barrels; in 1924, 1,097,000 barrels; in 1925, 1,312,000 barrels; in 1926, 1,671,000 barrels; and in 1927, 1,575,000 barrels.

Of the total amount of wheat consumed in those countries whose domestic production is inadequate, about one fourth is grown locally, one half is imported as wheat for milling, and about one fourth is imported as flour. Per capita consumption averages but 35 pounds of flour as compared with 210 pounds of flour per capita for the three Republics producing a wheat surplus.

This is accounted for by the low purchasing power of the

masses. Should the purchasing power of these people be increased greatly, the market for flour will be considerably enlarged. The market possibilities of South America are potentially great, depending on the prosperity of the several countries and on the increased purchasing power of the masses. As more and more flour is consumed, the increased requirements will be met largely by importation since these countries are not climatically adapted to producing large quantities of wheat, (except, of course, Argentina, Chile, and Uruguay, which produce 95 percent of South America's total wheat crop.) If the people in these wheat-deficient countries are ever able financially to purchase half as much flour for consumption as is consumed in the three wheat-surplus countries, it will necessitate the annual importation of some 10,000,000 barrels of flour besides 100,000,000 bushels of wheat. (58)

Argentina.

This Republic is our strongest competitor in the flour trade of South America. The Republic is also in third place as an international exporter of flour. In

58. Trade Information Bulletin, No. 570, Flour Markets of South America, p. 9.

1926 there were 186 active mills in the country with capacity of 98,000 barrels per day. However the mills do not average over 40 or 50 percent of capacity. This country offers no market for Kansas flour in that the demands of the people for flour are more than met by native millers.

Chile.

This country normally exports four times as much wheat and six times as much flour as it imports. Large quantities of wheat are grown and the country has a good milling industry. In years of crop failure flour is imported. Argentina furnishes most of Chile's import flour. Flour imported into Chile from the United States comes largely from the Pacific Coast. Hence, the market for flour in Chile is of no importance so far as Kansas Millers are concerned.

Uruguay.

Uruguay produces enough wheat to have large quantities for export. In years of partial crop failure the millers import from Argentina wheat for grinding pur-

poses. The milling capacity of the Republic is sufficiently large to meet the domestic demand for flour. Normally some flour is exported, principally to Brazil.

Bolivia.

The wheat produced in Bolivia is far from sufficient to meet the demands of the people for bread. Flour rather than wheat is imported, there being no modern mills in the country. Half of the country's needs for flour are satisfied by importation. The Pacific Coast region furnishes the bulk of American flour imported into Bolivia. The Bolivian flour market is largely in the hands of large importing houses which hold agencies for established brands.

A medium grade flour is preferred in this market. Strong outer bags are required for the flour due to the rough treatment they receive as a result of poor unloading facilities. Bolivia has no seaport, so flour must come in through Chile and Peru. Transportation is continued from these ports by railroad, boat, or pack mule. (59)

59. The Northwestern Miller, November 7, 1928, p. 552.

Brazil.

Brazil is one of the best flour markets for the United States, ranking fifth in 1926. The country produces very little wheat. Large quantities are imported from Argentina and Uruguay. Brazil has many small custom mills and a few modern mills. A mill at Rio is of 4,500 barrels capacity. The total annual output of Brazilian mills equals about 75 percent of the total flour requirements of the country. From 1922 to 1926 Brazil imported enough flour to meet the remaining 25 percent of her requirements as follows: 50 percent from Argentina, 40 percent from America, 3 percent from Canada, and the remainder from Uruguay and Paraguay. American flour is at a disadvantage south of Santos on account of lower freight rates from the River Plate ports.

American flour is not likely to be shut out of this market for some time. Flour from the United States will continue to be imported for blending purposes. American quotations have been low enough to make disadvantageous for local mills to cut prices in order to keep American flour out. Imports of American flour into Brazil are rising steadily. The greater part of this flour originates in the Middle West and is ex-

ported through Gulf ports. Most of the American flour goes to northern ports where American millers practically control the flour trade.

The present Brazilian import duty on flour is about 80 cents per barrel. In addition, port taxes, except at Santos, amount to $24\frac{1}{2}$ cents per barrel. All charges bring the total to about \$1.11 per barrel. There are certain charges such as storage, stamps, and cartage which have to be met. The duty is levied on gross weight where flour is sacked, but a tare of 20 percent is allowed on flour in barrels.

Generally, the flour imported is of a lower grade than that sold by local millers, who specialize on blends of the first and second grades of Argentine wheat. American flour is sold to the bakers from 10 to 20 cents per bag cheaper than the locally milled product. The millers and importers have a very poor knowledge of the types and grades of American flour. Their usual basis for comparison is the trade mark. Although imported American flour is of a low grade, it is a stronger flour and for this reason is prized for blending.

The 98 pound bag is in widest use in Brazil. Heavy cotton and regular cotton bags are used, but the former has the preference because of its greater security. Double sacks are not the rule, nor are the cotton sacks enclosed in burlap because the Brazilian

import duty is on gross weight. Sacks should be made of strong material, due to the damage likely to occur in transportation to inland points. Out of a shipment of 2,400 bags of flour from a United States port recently 182 bags were found to be damaged.

Terms of sale vary widely. Unless a flour is considerably lower in price than that on the market, it cannot be introduced by any other means than by showing favors to the importers. Several American mills have lost money in Rio and Sao Paulo during recent years. There has been a severe depression in this market. Among the failures have been a number of flour importers who did not hesitate in a falling market to find all manner of excuses to avoid having to accept flour they had ordered or to secure a discount from the shipper. To avoid disputes between exporter and agents the trademark of flour is usually registered in Brazil. Instances are known where agents have registered trademarks in their own name, in such cases difficulties have ensued later when the exporter, due to dissatisfaction, attempted to change agents.

Columbia.

Columbia has several flour mills, but the demand

for flour is far in excess of domestic output. The country imports about 50,000 barrels of flour a year. Columbia is essentially an American flour market. Practically all the flour imported enters the port of Cartagena, although Barranquilla is growing in importance as a distributing point for Columbian imported flour. Only the best quality hard wheat flour is sold in these markets. Lower grades will not stand heat and dampness so well. Another factor may be that the import duty is the same on low grade flour as on high grade, being based on weight. The duty, plus surtaxes, amounts to \$4.07 per barrel. There is no demand for low grade flour, a peculiar situation in the view of the low purchasing power of the inhabitants.

The 25 pound sack of flour is usually demanded. Five of these whin cotton bags are enclosed in a heavy bag of burlap. The outer covering is necessary to protect the flour during unloading and transportation inland. Rubberized bags holding 125 pounds have been introduced very recently and metal containers are sometimes used. The flour may be exposed to rain after being discharged from the ship. Often it is carried inland on the backs of donkeys. It is necessary to have a package that can be strapped on the pack saddle and

that will protect the contents against the elements.(60)

The importation of flour is largely in the hands of importers or wholesalers, many of whom have branch houses or agencies in the United States. Some American exporters sell only through exclusive agencies; others sell to any firm wishing to buy. The appointment of a resident agent, usually an American, who will make sales and collections is the common method. Local consumers are slow to change, and the trade is so well organized and the brands of flour so well known that introducing a new brand is quite difficult. Much time and effort, as well as attractive prices, are necessary. Business by correspondence has been the cause for heavy losses to American millers.

Steamer service between United States ports and Columbian ports is quite regular. Unloading facilities at the main ports are adequate. Cartagena has an excellent natural harbor and its equipment includes a single covered wharf alongside which steamers may berth to unload their cargo. Fees for wharf service are paid by the consignee.

60. Letter from J. C. Novak, Export Sales Manager,
Kansas Milling Co.

Ecuador.

Prior to 1916 American millers monopolized the import flour trade of this market. At present they retain about 90 percent of the business. Several small interior mills supply a part of the demands of the country for flour. However about 125,000 barrels of flour are imported annually. Ecuador imports practically no wheat. Per capita consumption is only 18 pounds annually. The import duty on flour is extremely high, being equivalent to \$6.49 per barrel when the money is at par.

Ecuador imports three grades of flour - patent, made from hard wheat, a Pacific Coast flour of lower grade, and a very cheap grade flour used for macaroni. Domestic flour is so inferior as not to compete with the imported on a quality basis.

The Guianas.

Very little wheat is grown here. The milling industry is not developed, consequently very little wheat is imported. Demands of the people for flour are met almost entirely by importation. Canadian millers practically control the market in British Guiana where they

enjoy a preferential duty of 60 cents a barrel less than Americans must pay. The imports of flour into Surinam are almost entirely of American origin. American millers also enjoy considerable trade in French Guiana.

Paraguay.

This country supplies 35 percent of her wheat requirements. Large quantities of wheat are brought in from Argentina. Importations of flour are from 95,000 to 100,000 barrels annually, chiefly from Argentine mills. Very little American flour reaches the market. American millers encounter the difficulties of long freight hauls, question of terms, and the inconvenience of making arrangements at Buenos Aires or Montevideo for transportation to the interior.

Peru.

Peru grows about one half the wheat she consumes. Large quantities of wheat are imported from the United States, Canada, Argentina, Australia, and Chile. Peruvian millers are enabled to meet foreign competition in the milled product even when using foreign grain due to

the high import duty on flour. The duty on flour is over three times as high as is the duty on wheat. Peruvian millers probably supply 90 percent of the flour of the country. The United States furnishes most of the remainder. Chile furnishes an occasional lot, but Canada and Argentina figure little in the business. A preference is shown in this market for Pacific Coast flour milled from soft wheat. However considerable hard-wheat flour is demanded, which clears from both Atlantic and Gulf ports.

Venezuela.

Many small flour mills are scattered throughout the grain region of this country, supplying about one fourth of the country's demand for flour. Domestic flour is very inferior, dark, and low grade. All demand for better grades is met by imports. Venezuela statistics would indicate that the United States supplies practically all the imported flour. Canadian millers share in the trade to a large extent, but Canadian shipments lose their identity for statistical purposes when shipped by a New York broker. (61)

61. The Northwestern Miller, November 7, 1928, p. 553.

Flour enters Venezuela chiefly through La Guaira, the port of Caracas. One fifth of these imports come through New Orleans and a far greater percentage through New York, due to the flour furnished by Canada. The import duty is equivalent to \$4.29 per barrel, plus a surcharge of 56.55 percent of the duty. This makes the import duty and surcharge equal to as much or more than the price received by the miller for his flour.

A very white flour of high grade is demanded. Often a 95 percent patent is taken and there is practically no demand for low grades. Selling conditions vary greatly and all the conditions imaginable will be encountered. Flour is in steady demand in Venezuela and never remains in the storehouse for long periods of time. For this reason the credit terms are shortened. (62)

Summary for South America.

The South American countries furnish a market for the flour of many Kansas mills. If there is to be a future export market for Kansas flour, it is apparent that it must be in this direction. Whenever the pur-

62. Trade Information Bulletin, No. 570: Flour Markets of South America. pp. 52-54.

chasing power of a large percentage of the people be-
comes high enough to enable them to consume as much
flour as is consumed per capita in the United States
and some other countries, the market will be increased
many times. Here lies the hope of the Kansas export
miller.

Methods and Practices in Exporting Flour.

The miller about to undertake exporting must first learn something about the methods used. He must study the various markets for flour. Perhaps he has an over-supply of one particular grade of flour of which he wishes to dispose abroad. If he has "low grades" for sale, a market which absorbs "patents" should not interest him. He will study the market where "low grades" predominate, and he will attempt to establish a trade at this point.

The exporting millers of Kansas report that they export every grade of flour that can be made from hard wheat. This does not mean that all millers export all of the various grades. Some mills may be exporting only one or two grades. Collectively the mills export every grade of hard wheat flour known. The replies of the millers of Kansas in answer to a questionnaire as to what grades of flour they export include; short patent, standard patent, straights, cut straights, stuffed straights, first clear, second clear, and low grade.

When wheat is ground in a modern flour mill, 70 to 75 percent of the total weight of the berry is obtained

as flour. The remainder consists of feed. This 70 or 75 percent is known as 100 percent flour. This straight flour may be separated into several different "extractions." The best 60 to 75 percent constitutes short patent. The remainder constitutes a first clear. If the separation is such that the best 80 or 90 percent is obtained, the result is a second patent flour. The residue is second clear. Similarly, a 95 percent extraction flour, or standard patent, may be made.

Some mills separate an especially fine 40 percent short patent flour and call the balance straight. A straight grade flour may be mixed with a clear flour to get a "stuffed" straight. The exact definition of flour grades has always been unsettled and is largely a matter determined by individual practice.

In the past Kansas millers have looked upon the foreign markets as merely a place to sell the cheaper or offal grades of flour. The domestic trade has always demanded the better grades. However millers now are selling more straights and clears and even patent flour abroad. The lower grades still dominate but apparently are losing ground. An export manager of a large Kansas mill has the following comment to make:

"I recently returned from a trip to the West Indies and a part of South America and found that some of the trade used just as good flour as our better bakers in this country." (63)

A successful Kansas miller, in commenting on the changes in the market for lower grades, tells of being forced unwillingly into the export trade in past years as his only means of disposing of first and second clears. Even the foreign buyers were hesitant in purchasing. Sales could be made only by sharp price concessions. The problem was not so much to get a favorable price as it was to dispose of the surplus. Today this same miller is selling a large percentage of his clear flour to the domestic trade. The export market, especially that of Europe, is taking better grades. The tendency promises to remain permanent and is looked upon by millers as a favorable development. (64)

As soon as the miller has decided upon the best market in which to sell his product, he will seek means of making sales abroad. Generally he will get into communication with foreign importers of flour. Most flour for export is sold direct from the mill to the importer.

63. Letter from John Novak, Export Sales Mgr. Kansas Milling Co.

64. The Southwestern Miller, September 14, 1926, p. 24.

abroad. Usually the importing firms are reliable and well established. The exporter and foreign importer, if they reach an agreement, will enter into a contract which specifies the terms under which they are to work. The importer buys on the basis of samples of flour furnished by the miller. The importer will sell the flour to jobbers and bakers. The jobber, in turn, will distribute to the retail trade.

Some importers prefer to buy flour under mill brands, while others will buy only under their own brands. Others will not handle flour of a particular mill unless they can have the exclusive agency for the mill within a prescribed territory. Still other importers buy under the private brands of their customers. Some dealers can take only a small quantity of flour, but can pay a relatively high price, while others buy large stocks, but must buy cheaply in order to resell advantageously. Some importers buy on their own account. Others act only as agents, either financing the transaction, or having the miller draw direct on the buyer. Where the miller does not sell direct to importers, it is apparent that he cannot send a sales force into foreign markets. He must depend on a representative abroad who will

attempt to sell the product for a commission. It would cost the miller about five hundred dollars a month to maintain a salesman in a foreign market. This price is prohibitive. Sometimes it is months before a sale is made in a certain area. The salesman's salary would soon eat up the profits and the principal as well.

Therefore the export miller looks toward marketing mechanism already in existence as a means of selling his product abroad. The agent abroad will receive his commission only in case a sale is made. If the importer is buying on his own account, the miller looks directly to the importer for payment. However if the miller must look to the ultimate purchaser for payment, the agent, who has arranged the sale gets his commission only when the payment for the flour is made. This protects the mill from having its products sold on credit indiscriminately to purchasers whose credit is poor.

In this way the mill is relieved of excessive selling expenses. The foreign representative usually gets a percentage commission which varies between two and three percent of the invoice price of the flour. He may, however, receive a flat rate per barrel. The agent sells on credit, of course, but is paid at the end of each month only

on those sales for which payment has been made to the miller. Credit sales are carried forward and the agent waits for his commission on them until payment is finally made.

In practically every market the bulk of export flour is sold directly from the mill to the importer who buys for his own account. However agents working on commission handle a large amount of export flour. Of the two the importer plays the most important part. He is usually in the larger flour importing center, while the agent or representative is more likely to be found in smaller centers.

The number of foreign representatives which any mill will have depends largely on the size of the mill and the extent to which they enter into the export business. Some larger mills have an agent in practically every large flour importing center. Others may have an agent for each country who, in turn, has sub-agents. Usually some business will be done by each agent for each month in the year. However the trade fluctuates widely. If the agent's contract calls for a minimum of business and he fails to produce, he may be discharged and another employed, depending whether or not the mill in this

country considers that he is making an honest effort to sell its product.

After the miller has established his representatives abroad and orders begin coming in, he will keep his agents in the foreign market informed regularly as to prices by cable. Practically all foreign business is done by cable. The wheat market fluctuates almost daily and an offer sent by mail would be of little value by the time it was received. After the agent has secured the order, based on the price which he has had cabled to him, he cables the order to the mill. The order is now confirmed by cablegram as soon as received. A confirmation is also mailed which closes the transaction up to the point of shipment. (65) The shipment may be prompt, 30 days, 60 days, or longer if desired.

Some Kansas flour is sold through export jobbers. Formerly the amount sold in this way was probably large, especially when the smaller mills were engaged in exporting every time there was a large crop of wheat with a good demand for flour abroad. Now that only a few of the larger mills are engaging in export trade, the export jobber is not very important. This state-

65. Letter from John Novak, Export Sales Mgr., Kansas Milling Co.

ment may not be true of the mills in other districts, but it is true in Kansas. (66) A recapitulation of the export business of 44 mills in the Kansas area during March, 1929, will serve to show in a general way how important the export jobber is in the sale of export flour.

For statistical purposes the markets for flour from this region are divided into seven zones. The United Kingdom took 714 barrels, Scandinavia and Russia took 2,248 barrels, Continental Europe took 12,870 barrels, the Mediterranean Countries (including Africa) took 953 barrels, the Orient took no flour at all, the West Indies, the East Coast of Central America, Mexico, Columbia, and Venezuela took 16,309 barrels, while the west coast of Central American countries took 2,249 barrels. An additional column in the recapitulation contains the amount of flour from the area handled by export jobbers. This figure for March, 1929, was 1,176 barrels. (67) The above shows in a general way the importance of the export jobber. Furthermore, the figures given indicate the relative importance of the various markets for Kansas flour.

66. Interview with Nick Morcillo, Export Sales Mgr., Larabee Flour Mills.

67. Interview with Mr. Fleckenstein, Livingston Economic Service.

In addition, many Kansas millers sell to flour wholesalers. These wholesalers quite often buy flour in bulk. They do a great deal of blending of the flours of different regions. They then pack the flour and sell it under their brands both in the domestic market and abroad. There is no way of estimating the amount of Kansas flour that ultimately goes for export when sold in this manner. The flour loses its identity in being blended and even the miller who milled it has no way of knowing how much of his product sold to the flour wholesaler ultimately goes abroad. It is safe to say that a large amount of Kansas flour is exported in this manner although probably not so much as at an earlier date. Occasionally a large mill will send a salesman direct to a foreign country to study flour conditions and to attempt to establish trade.

Once in awhile the miller will ship flour on consignment, especially where he is anxious to introduce his product into a new market. This is bad business, however, after trade has been established. The practice of consigning flour is a most pernicious one and has proved the ruin of many millers. After a regular trade has been established flour is rarely, if ever, consigned.

Terms of sale are varied, depending on which country the trade is with and on the financial standing of the buyer. Kansas millers report the following terms; 10 days sight, 3 days sight, 30 days sight, 60 days acceptance, 60 days sight, and numerous other terms. It is plainly evident that there is no standard rule to be laid down in this matter.

In Europe the common basis of making payment for export flour sales is the sight draft. The draft is payable immediately upon the arrival of the flour at destination. (68) All shipping documents are attached to the sight draft which is passed through to the bank at the buyer's address for collection. The buyer pays the draft on presentation, and is given the documents which will give him possession of the flour. The above terms are almost universal in European markets.

However, in the United Kingdom and some other markets considerable business is done on 60 days sight documentary drafts. When the customer is of good standing in the trade, which is usually the case, the draft is drawn directly upon the buyer and the

68. Letter from Glen Fretzs, Export Manager, Red Star Milling Co.

documents are surrendered upon his acceptance of the draft. In other cases the drafts are accepted by foreign banks with which the importers have established credits.

A less common practice is for importers to instruct a foreign bank to establish dollar credits for them with New York banks. In this case the exporter may have his drafts accepted by the New York bank. The documents accompanying drafts are the invoice, the bill of lading, the insurance certificate, and the letter of hypothecation. Other documents may also be necessary. The draft and the documents are made out in duplicate, a set going forward by different steamers. Fluctuations in the rate of exchange are one of the material hazards in the export business, and for this reason the exporter usually sells his exchange to a banker at the time a sale is made, rather than at the time of shipment. (69) Some business is done by irrevocable letter of credit and by bank guarantee.

In Latin American markets some business is done on a sight draft basis while other business is done on a 30 days, 60 days, 90 day, or even 120 day acceptance basis. In the case of these terms a bill of lading,

69. Theodore Hammatt. Quarterly Report. Kansas St. Bd. of Agriculture, September, 1920, p. 180.

usually a through bill of lading, along with other, documents, is attached to the draft and sent through to the importers' bank with instructions to present for acceptance. The buyer will accept the draft on the due date.

A through bill of lading differs from an ocean bill of lading in that it is issued by the railroad company at the point of shipment and covers the flour from that point to point of destination and is accepted by the steamship company in lieu of their own bill of lading. This practice eliminates a good deal of bother, but is by no means universally used. Quite often the ocean bill of lading is not secured until the time when the flour is loaded aboard the steamship.

Thus the terms of sale of export flour vary a great deal, depending largely on established custom as between mill and importer, as between countries, and always being influenced more or less by financial conditions in each country, as well as by the financial rating of each importer.

In an established trade the sale of export flour is largely a wholesale proposition. The contract usually calls for relatively large quantities and may cover shipments for weeks and months ahead. Orders for ten, twenty,

and thirty thousand bags are often taken by Kansas mills. However, where the trade is only intermittent, shipments of only a few bags are not at all uncommon.

The time of shipment is usually designated as during a given month or during the first half or the last half of a given month. Orders may be booked for designated quantities for shipment at designated intervals. "Immediate" means shipment within three days from the date of the receipt of the shipping instructions, including the day the instructions are received. "Quick" means shipment within seven days, and "prompt" means shipment within fourteen days.

When the miller contracts to deliver weeks or even months in advance at the current price for flour, he may protect himself through a hedge by immediately buying wheat at the prevailing price and store it, or mill the flour and store this product. However he may not wish to do either. First, he may not have the storage capacity for the wheat and, secondly, he may not desire to mill flour either because of limited warehouse facilities or of the danger of the flour deteriorating.

The miller can also protect himself by buying wheat for future delivery at a time when he will be called upon

to mill the contracted flour. Millers limit losses and protect profits by placing a buying hedge for wheat where they have contracted to deliver large quantities of flour. As the cash wheat is acquired and milled to meet the contract flour sales, the buying hedge in the futures is closed out. Where the miller acquires a large stock of wheat for grinding into flour to be sold in the future, he places a selling hedge on the wheat in the futures. Without hedging, the banks will not furnish the miller the required capital. Without the hedging service offered by future trading, the millers would employ a different form of hedging, namely, operation on a large margin of gross profit. They would endeavor to buy the grain for less or to sell the flour for more. (70)

Flour is not insured while in transit in the domestic trade, but in the export trade it is universally insured against damage in transit and against war risk. The insurance against damage in transit is under the "all risk" clause which compensates the insured for loss from any cause whatever. It is customary to insure flour for from 5 to 10 percent in excess of the invoice value to compensate the importer for the loss

70. Interview with Frank Stoll, Grain Belt News Bureau.

of profit through his inability to make delivery to his customer.

There are perhaps, on the average, ten claims for damage out of every shipload of flour exported. The insurance companies have agents in all important ports who adjust the claims under the insurance contracts. In many ports the flour must be unloaded in the rain and perhaps there are no warehouses. The use of lighters is another cause of frequent damage. All chances for damage can be and are usually covered by insurance. Insurance rates per 100 pounds may be said to vary from 10 cents to over one dollar, depending on the risks involved and the number of hazards insured against.

Flour is almost always sold on a basis known as c. i. f., which means the cost of the flour, the insurance, and the freight paid through to port of destination. The freight is booked either direct with the steamship companies or through their interior agents and the insurance is handled direct with some marine underwriter or its agent in Kansas City, Chicago, or any other point. The rates of freight, both inland and ocean, as well as the rates of insurance fluctuates at times, At present they are more or less stable.

Other terms of shipment which may be used at times include the following :

F. o. b. -----free on board.
F. a. s. -----free alongside.
C. & F. -----cost and freight.
C. a. f. -----cost, assurance, freight.
C. i. f. & w. ----adds to c. i. f. the element of exchange.
F. a. q. -----fair, average quality.
F. o. r. -----free on rail.
L. c. l. -----less than carload lot.

Interpretations of the term f. o. b. have given rise to serious controversies in the past. Cases have developed where there was a big difference in the cost depending on whether the shipment was simply to arrive in a port or was to be delivered on board steamer. When this term is used in telegrams or letters involving export shipments, it is usually designated whether the term means f. o. b. steamer, cars, or dock.

When the miller receives an offer he has 24 hours in which to accept. Bids and offers are made in the currency of the buyer. Weights are also quoted in terms of the buyer's country.

On the following page is a list of standard export quotations and practices.

EXPORT QUOTATIONS AND PRACTICES

The following definitions of export quotations and general recommendations for a standard American export practice were adopted by the National Foreign Trade Council, Chamber of Commerce of the United States of America, National Association of Manufacturers, American Manufacturers' Export Association, Philadelphia Commercial Museum, American Exporters' and Importers' Association, Chamber of Commerce of the State of New York, New York Produce Exchange, and New York Merchants' Association, at a conference held in India House, New York, on Dec. 16, 1919:

1. When the price quoted applies only at inland shipping point and the seller merely undertakes to load the goods on or in cars or lighters furnished by the railroad company serving the industry or most conveniently located to the industry, without other designation as to routing, the proper term is "f.o.b. (named point)."

Under this quotation, the seller must place goods on or in cars or lighters; secure railroad bill of lading, and be responsible for loss and/or damage until goods have been placed in or on cars or lighters at forwarding point, and clean bill of lading has been furnished by the railroad company.

The buyer must be responsible for loss and/or damage incurred thereafter; pay all transportation charges, including taxes, if any, and handle all subsequent movement of the goods.

2. When the seller quotes a price including transportation charges to the port of exportation without assuming responsibility for the goods after obtaining a clean bill of lading at point of origin, the proper term is "f.o.b. (named point), freight prepaid to (named point on the seaboard)."

Under this quotation, the seller must place goods on or in cars or lighters; secure railroad bill of lading; pay freight to named port, and be responsible for loss and/or damage until goods have been placed in or on cars or lighters at forwarding point, and clean bill of lading has been furnished by the railroad company.

The buyer must be responsible for loss and/or damage incurred thereafter; handle all subsequent movement of the goods; unload goods from cars; transport goods to vessels; pay all demurrage and/or storage charges, and arrange for storage in warehouse or on wharf where necessary.

3. Where the seller wishes to quote a price, from which the buyer may deduct the cost of transportation to a given point on the seaboard, without the seller assuming responsibility for the goods after obtaining a clean bill of lading at point of origin, the proper term is "f.o.b. (named point), freight allowed to (named point on the seaboard)."

Under this quotation, the seller must place goods on or in cars or lighters; secure railroad bill of lading, and be responsible for loss and/or damage until goods have been placed in or on cars or lighters at forwarding point, and clean bill of lading has been furnished by the railroad company.

The buyer must be responsible for loss and/or damage incurred thereafter; pay all transportation charges (buyer is then entitled to deduct from the amount of the invoice the freight paid from primary point to named port); handle all subsequent movement of the goods; unload goods from cars; transport goods to vessel; pay all demurrage and/or storage charges, and arrange for storage in warehouse or on wharf where necessary.

4. The seller may desire to quote a price covering the transportation of the goods to seaboard, assuming responsibility for loss and/or damage up to that point. In this case, the proper term is "f.o.b. cars (named point on seaboard)."

Under this quotation, the seller must place goods on or in cars; secure railroad bill of lading; pay all freight charges from forwarding point to port on seaboard, and be responsible for loss and/or damage until goods have arrived in or on cars at the named port.

The buyer must be responsible for loss and/or damage incurred thereafter; unload goods from cars; handle all subsequent movement of the goods; transport goods to vessel; pay all demurrage and/or storage charges, and arrange for storage in warehouse or on wharf where necessary.

5. It may be that the goods, on which a price is quoted covering the transportation of the goods to the seaboard, constitute less than a carload lot. In this case, the proper term is "f.o.b. cars (named port), l.c.l."

Under this quotation, the seller must deliver goods to the initial carrier; secure railroad bill of lading; pay all freight charges from forwarding point to port on seaboard, and be responsible for loss and/or damage until goods have arrived on cars at the named port.

The buyer must be responsible for loss and/or damage incurred thereafter; handle all subsequent movement of the goods; accept goods from the carrier; transport goods to vessel; pay all storage charges, and arrange for storage in warehouse or on wharf where necessary.

6. Seller may quote a price which will include the expense of transportation of the goods by rail to the seaboard, including lighterage. In this case, the proper term is "f.o.b. cars (named port), lighterage free."

Under this quotation, the seller must place goods on or in cars; secure railroad bill of lading; pay all transportation charges to, including lighterage at, the port named, and be responsible for loss and/or damage until goods have arrived on cars at the named port.

The buyer must be responsible for loss and/or damage incurred thereafter; handle all subsequent movement of the goods; take out the insurance necessary to the safety of the goods after arrival on the cars; pay the cost of hoisting goods into vessel where weight of goods is too great for ship's tackle, and pay all demurrage and other charges, except lighterage charges.

7. The seller may desire to quote a price covering delivery of the goods alongside over-sea vessel and within reach of its loading tackle. In this case, the proper term is "f.a.s. vessel (named port)."

Under this quotation, the seller must transport goods to seaboard; store goods in warehouse or on wharf if necessary, unless buyer's obligation includes provision of shipping facilities; place goods alongside vessel either in a lighter or on the wharf, provide the usual dock or ship's receipt, and be responsible for loss and/or damage until goods have been delivered alongside the ship or on wharf.

The buyer must be responsible for loss and/or damage thereafter, and for insurance; handle all subsequent movement of the goods, and pay cost of hoisting goods into vessel where weight of goods is too great for ship's tackle.

8. The seller may desire to quote a price covering all expenses up to and including delivery of the goods upon the over-sea vessel at a named port. In this case, the proper term is "f.o.b. vessel (named port)."

Under this quotation, the seller must meet all charges incurred in placing goods actually on board the vessel, provide the usual dock or ship's receipt, and be responsible for all loss and/or damage until goods have been placed on board the vessel.

The buyer must be responsible for loss and/or damage thereafter, and handle all subsequent movement of the goods.

9. The seller may be ready to go farther than the delivery of his goods upon the over-sea vessel and be willing to pay transportation to a foreign point of delivery. In this case, the proper term is "C. & F. (named foreign port)."

Under this quotation, the seller must make freight contract and pay transportation charges sufficient to carry goods to agreed destination; deliver to buyer or his agent clean bills of lading to the agreed destination, and be responsible for loss and/or damage until goods have been delivered alongside the ship and clean ocean bill of lading obtained (seller is not responsible for delivery of goods at destination).

The buyer must be responsible for loss and/or damage thereafter and must take out all necessary insurance; handle all subsequent movement of the goods; take delivery and pay costs of discharge, lighterage and landing at foreign port of destination in accordance with bill of lading clauses, and pay foreign customs duties and wharfage charges, if any.

10. The seller may desire to quote a price covering the cost of the goods, the marine insurance on the goods, and all transportation charges to the foreign point of delivery. In this case, the proper term is "c.i.f. (named foreign port)."

Under this quotation, the seller must make freight contract and pay freight charges sufficient to carry goods to agreed destination; take out and pay for necessary marine insurance; deliver to buyer or his agent clean bills of lading to the agreed destination, and insurance policy and/or negotiable insurance certificate; be responsible for loss and/or damage until goods have been delivered alongside the ship, and clean ocean bill of lading and insurance policy and/or negotiable insurance certificate have been delivered to the buyer, or his agent (seller is not responsible for the delivery of goods at destination, nor for payment by the underwriters of insurance claims), and provide war risk insurance, where necessary, for buyer's account.

GENERAL RECOMMENDATIONS

Exporters are urged to bear in mind that the confusion and controversies which have arisen have sprung in part from the use of an excessive number of abbreviated forms with substantially similar meanings, as well as from the use of abbreviations in a sense different from their original meanings, or in an application not originally given them and different from the sense or application understood by foreign buyers.

In simplified and standardized practice lies the best hope of reducing confusion and avoiding controversy.

The conference urges upon exporters the very great importance at all times of making their intention in whatever quotations they employ so thoroughly clear as to be impossible of misunderstanding or misinterpretation. It is much better to take the time and space at the outset to make the quotation clearly understood, than to be compelled in the end to go through vexatious controversy or litigation, which costs not only time and expense, but customers as well.

Misunderstandings can best be avoided if the seller will formulate a written statement of the general conditions under which his sales are to be made, and will see that the foreign buyer possesses these terms of sale when considering a quotation. The items which may be included in such a statement deal with: delivery, delays, partial shipments, shipping instructions, inspection, claims, damage, and payment. If all contingencies are thus covered by carefully considered conditions of sale, disputes will largely be prevented.

QUOTING "F.O.B."

The quotation "f.o.b. (named port)," as "f.o.b. New York," "f.o.b. New Orleans," "f.o.b. San Francisco," is often used by inland producers and distributors to mean merely delivery of the goods at railway terminal at the port named. This abbreviation originated as an export quotation, and had no application to inland shipments. It was used only to mean delivery of the goods upon an over-sea vessel at the port named. That, in fact, is the meaning universally given to the phrase among foreigners, and is the meaning which the best practice among exporters requires it invariably to have.

But because of the confusion which has arisen through the use of that term with a different meaning by inland producers and distributors, and in the interest of unmistakable clarity, the conference most strongly urges the invariable use by American manufacturers and exporters of the form "f.o.b. vessel (named port)." This adds only one word to the abbreviated form and has the great advantage that it cannot be misunderstood. It also avoids the difficulty which might arise among foreigners not always well versed in American geography, through confusing an inland forwarding point with a shipping port at seaboard.

The conference calls attention to the fact that in selling "f.a.s. vessel" manufacturers and exporters should be careful to have their agreements with buyers cover explicitly the question of responsibility for loss after goods have been delivered on the wharf or alongside the vessel and before they are actually loaded on the ship. There is no generally established practice on this point. The recommendation of the conference in the definitions of responsibility under section 7 sets up a rule which it is hoped will lead to a standard practice.

It is understood that the provision of lighterage covered in several of these recommendations is only within the usual free lighterage limits of the port, and that where lighterage outside such limits is required, it is for buyer's account.

The conference points out that in quoting "C.&F." or "c.i.f.," exporters moving large quantities of material by one vessel should be careful to ascertain in advance the buyer's capacity to take delivery. This is because, under these terms and as a condition of making the freight rate, transportation companies may require a certain rate of discharge per day, and that rate of discharge might be in excess of the buyer's capacity to take delivery. In such event an adjustment with the transportation company would be necessary, which might affect the freight rate and, consequently, the price to be quoted.

MAKING WEIGHT QUOTATIONS

In order to avoid confusion in another particular, attention is called to the care which must be exercised in all cases in making weight quotations. The net ton, the gross ton and the metric ton, all differ in weight. Similarly there is a variation in the use of the term "hundredweight" to mean either 100 or 112 lbs. It is, therefore, not sufficient to quote a price per "ton" or per "hundredweight." Instead the conference recommends the use of the terms "ton of 2,000 lbs.," "ton of 2,240 lbs.," or "ton of 2,204 lbs.," etc., whichever is intended.

It is also important to note that a carload lot in the United States varies according to the commodity and in different parts of the country. The load required may range anywhere from 12,000 to 90,000 lbs. Consequently it is important, when quoting prices applicable to carload lots, to specify the minimum weight necessary to make a carload lot of the particular commodity.

(71)

71. The Northwestern Miller Almanack and Yearbook, April 2, 1930, p. 20.

Flour is often sold in bulk, with the buyer having the right to specify prior to shipment the size bag that the flour is to be packed in. Frequently a buyer will contract for flour in bulk and object to the charges for packing in small bags.

Years ago flour was put up in comparatively few sizes of packages. The wood barrel of 196 pounds was used extensively and became the basis for price quotations. The buyer had the privilege of ordering any part of his contract put up in other packages to suit the requirements of his trade. The buyer and seller would reach an agreement as to what the differential should be on other packages, as obviously the cost of smaller packages might be either higher or lower than the wooden barrel.

The lack of definite agreement as to the differentials to be applied led to frequent annoying disputes between the miller and his customers which created a demand for uniform package differentials. When the U. S. Food Administration assumed control of the flour mills, the 98 pound cotton package was made the basis for flour differentials in place of the wooden barrel, which has become almost obsolete. This size package

has been continued ever since as a basis for package differentials. As a protection for the buyer, the Food Administration at the same time established a schedule of charges for packing flour in buyer's sacks.

The smaller the package, the higher the cost of packing will be and the greater the loss in weight of flour as compared with packing the 98 pound and larger sizes. For this reason millers usually incorporate into their sales contract forms the provision that the "Millers National Federation" package differentials in effect on date of sale shall apply. (72)

A listing of the Federation's flour package differentials on the following page will show most of the sizes of flour packages used, as well as the added cost incurred by packing flour in small quantities.

The schedule is prepared by listing the current list price of each kind of package beginning with the 98 pound cotton bag. The next step is to extend the cost of the required number of each size of package for a barrel. To this is added a carefully worked out schedule of additional labor required to pack packages smaller than 98 pound cottons and an allowance to cover the loss of flour which occurs in packing small packages. It is

72. The Southwestern Miller, November 8, 1927, p. 25.

Federation Package Differentials

The following schedule of package differentials, effective Feb. 15, 1930, has been issued by the Millers' National Federation:

BASIS 98-LB COTTON

Weight, lbs	Kind	Differential	No. to bbl	*Buyer's sacks
196	Wood	\$.30 over		
98	Wood	1.50 over		
140	Jute	.05 under		
98	Jute	Same as basis.....	2	
98	Cotton	Basis	2	
98	Bleached muslin	.10 over		
96	Cotton	.10 under.....	2	
49	Cotton	.20 over.....	4	\$.10
48	Cotton	.10 over.....	4	.10
24½	Cotton	.40 over.....	8	.10
24	Cotton	.30 over.....	8	.10
12¾	Cotton	.70 over.....	16	.15
12	Cotton	.60 over.....	16	.15
10	Cotton	1.00 over.....	20	.20
9.8	Cotton	.90 over.....	20	.20
8	Cotton	.90 over.....	24	.25
7	Cotton	1.20 over.....	28	.30
6	Cotton	1.20 over.....	32	.30
5	Cotton	1.60 over.....	40	.40
4.9	Cotton	1.50 over.....	40	.40
4	Cotton	1.60 over.....	48	.45
3½	Cotton	1.80 over.....	56	.50
3	Cotton	1.90 over.....	64	.55
2	Cotton	2.80 over.....	96	.70
1½	Cotton	3.20 over.....	128	1.00
49	Paper	.10 over.....	4	.10
48	Paper	Same as basis.....	4	.10
24½	Paper	.20 over.....	8	.15
24	Paper	.10 over.....	8	.15
12¾	Paper	.40 over.....	16	.20
12	Paper	.30 over.....	16	.20
10	Paper	.70 over.....	20	.25
9.8	Paper	.60 over.....	20	.25
8	Paper	.60 over.....	24	.30
7	Paper	.80 over.....	28	.30
6	Paper	.80 over.....	32	.35
5	Paper	1.20 over.....	40	.50
4.9	Paper	1.10 over.....	40	.50
4	Paper	1.20 over.....	48	.50
3½	Paper	1.50 over.....	56	.55
3	Paper	1.50 over.....	64	.55
2	Paper	2.30 over.....	96	.80
1½	Paper	2.90 over.....	128	1.00
5	Cartons	2.80 over.....	†40	

*Charge over bulk price for packing in buyer's sacks.

†Including shipping containers.

Additional charge per barrel for outside envelopes: jute (1 to bbl), 25c; jute (2 to bbl), 30c; cotton (2 to bbl), 30c; paper (4 to bbl), 30c.

All sales to be made basis 98-lb cotton.

A reduction of 20c per bbl from the half cotton basing price shall be made where the flour is packed in buyer's 98-lb bags, and a reduction of 15c per bbl from the 140-lb jute price where the flour is packed in buyer's 140-lb jute bags. Where sales are made in bulk, a charge of 5c bbl shall be made for cleaning, handling and storing buyers' second-hand bags.

Seller or buyer may not have option of shipping flour in cotton or jute sacks where either may have been specified at time of sale, except as may be agreed to by buyer and seller at time of shipment.

(73)

evident that a miller cannot quote prices per barrel as low in a market demanding 8 pound bags as in a market demanding 98 pound bags.

73. The Northwestern Miller Almanack and Yearbook, April 2, 1930, p. 40.

In determining the cost of flour packages the scientific miller included : interest on investment in packages, breakage in packing, obsolete brands, rental value of storage space required for bags, and the loss in weight in packing small bags. These differentials afford the miller a safe and fair schedule for all kinds of packages. Each package carries its own burden of the labor cost of packing and handling. Furthermore, the buyers generally appreciate the convenience and protection they derive from uniform package differentials. It places them all on the same footing.

The miller would rather use his own new sacks and bags at the same price for flour than to employ the used sacks of customers. In the long run it really is cheaper because of cartage costs from freight station to mill, cleaning of second-hand bags, risk of introducing weevil and moths, storage space, and the endless round of disputes that are likely to arise. For these reasons the miller will usually not make any great reduction in his packing charges where the customer furnishes used sacks.

After the miller has made sales abroad and is notified as to when he should ship the flour, he makes

preparation for getting his product started on its journey. Fast freight lines quote rates through to foreign destination, relieving the shipper of any care as to ocean rates. The miller makes arrangements with line agents in Kansas City and other centers. The shipper should maintain, however, that his flour be sent by a first-class steamship line. Formerly the average shipper of flour from interior points knew little and cared less about ocean lines or how his flour went abroad. Owing to this indifference great abuses arose. For instance, the freight lines sometimes issued through bills of lading for flour without having engaged any ocean space, and would then hold the flour for a favorable opportunity of contracting ocean freight. Delays and damage often resulted.

Millers and steamship lines are cooperating much better now. The leading steamship companies have representatives in Kansas City, St. Louis, Chicago, and other centers. Where possible, the miller should get into direct communication with the steamship company. Thus the flour exporter can have his freight engagements confirmed and can learn when and by what steamers his flour goes forward. (74) Freight should be contracted

74. Hints on Exporting, Published by The Northwestern Miller, p. 19.

as soon as a flour sale is made to insure against fluctuating rates.

Millers rarely patronize tramp steamers which may be put on a route for a few months, and which may be removed from service at any time leaving the flour lying on the wharf to remain for sometime before it is finally transferred to some other port for shipment. First class ships sailing on regular schedule are preferable.

Some mills attach "hypothecation papers" to their foreign bills of exchange, while others sign a blanket form of hypothecation for their bankers, covering all their foreign shipments. Marine insurance can be affected by the miller or by the line agent. This certificate shows the amount of insurance, the number and brand of sacks, number of bill of lading, and the route and name of the steamship line by which the flour is to be forwarded. Formerly the insurance company did not pay losses under \$75.00. However if the miller insists on the "all-risk clause" in his contract, the insurance company is now liable for all loss regardless of the amount.

The line agent is instructed to issue the shipper a bill of lading; also to insure, unless this has been

attended to. Any number of carloads can be covered by a through bill. The line agent returns the documents to the shipper. The shipper indorses the original and duplicate bills of lading and insurance certificates in blank, that is, signs his firm name across the back without specifying to whom to deliver the flour.

The next document is the invoice for the flour covered by the bill of lading. Two of these are made out corresponding to the date on the bill of lading. The hypothecation papers, if used, are attached for a safeguard to both shipper and bank. Bills of exchange are also drawn in duplicate. They may be for most any length of time, as 60 days sight. Values are expressed in the money of the country to which the shipment goes.

The miller now has his shipment of flour on the way and is relieved of that part of the operation. Next he makes up two sets of documents by pinning one each of the hypothecation paper, bill of lading, certificate of insurance, and draft together. He will discount these drafts at his bank, or perhaps will have his bank forward them to New York for discount. As soon as the proceeds are credited to his account the transaction is completed so far as the miller is concerned. The collection on the drafts by the New York and foreign

banks has been referred to previously.

After the miller loads his export flour into the railway car, it makes its way in most cases, to a Gulf port. Assuming, for illustration, that the flour goes to Galveston, it will be inspected by qualified government entomologists before being unloaded by the wharf company employees. If the flour shows any infestation whatever it will not be unloaded on the docks. The shipper of the flour will then be notified of the infestation. In all cases up to date, where such infestations have occurred, the Galveston Wharf Company has been authorized to recondition the flour in a plant built especially for this purpose. This plant was built to assist the flour millers in exporting flour. It was approved by Dr. Dean of the Kansas State Agriculture College, and all flour reconditioned up to date has been under the supervision of Dr. Swanson of the same institution.

This was one of the first reconditioning plants put into operation. It was built in order to save flour millers the expense incidental to the rehandling of this flour possibly to their plants, or the forwarding of it to Europe or the other markets infested.

Very little infested flour is received, however, the plant receiving only three infested shipments in two years. This has been largely due to the activities of millers in cleaning and fumigating their own mills.

The flour when unloaded, is inspected for damage to sacks and should there be any damage the sacks are immediately repaired before any flour is lost. If the damage is such that the sack cannot be repaired the flour is immediately resacked to prevent loss.

The docks are regularly inspected to see that they are clean and free from infestation. The flour remains in these specially constructed docks until the steamship arrives. The steamship docks at the berth where the flour is stored and the steamship agents move the flour to the steamer by truck. The flour on the truck rests on a canvas sling. The hoisting tackle of the ship connects with the sling by means of special fasteners and the flour is lifted into the hold of the ship. As soon as the ship pulls anchor, the flour is on its way to one of many possible destinations. (75)

Flour for export is packed gross weight. When packed, it usually carries around $12\frac{1}{2}$ percent moisture and gains

75. Letter from F. W. Parker, General Mgr., Galveston Wharf Co.

weight during the voyage by absorbing moisture, so disputes over weight are not common. Occasionally a miller may make the error of packing short depending on the moisture absorbed to make up the difference. However it would be unfair and unjust to accuse the miller of deliberately engaging in this practice. He knows that no good could result and that such practice would eventually hurt his export business as well as that of the trade in general.

Export business in flour to England and to some continental countries is conducted under the terms of the London Flour Trade Association. For the purpose of legal proceedings and the settlement of disputes arising concerning the fulfillment of contracts, the trades are considered to have been made in England and subject to English law.

Arbitration in Scotland and Ireland is also according to the rules set forth in the London Trade Associations American flour contract. Arbitration in Holland is according to the rules of the Amsterdam and Rotterdam flour trade associations. In Denmark and Norway disputes are settled by the buyer and the mill's agent, each choosing an arbitrator. Flour importers in Germany are attempting to draw up a contract similar to the

London flour contract. (76)

Although the London flour contract is more widely used than any other, there are many different contracts in use today, all varying in some degree. This situation tends to confuse the miller who is exporting to several markets using different contracts. The adoption of a uniform flour contract through international agreement would greatly simplify exporting.

The ultimate consumer of Kansas flour often pays double the price received by the Kansas miller. In addition to freight and insurance charges, heavy import duties must be paid to the government of the importer. In Venezuela the duty on flour is equal to about half the selling price of the flour in that country. A shipment of flour invoiced at seven dollars c. i. f. La Guaira will cost the importer in Caracas fifteen dollars by the time he receives it at that point.

A sample flour contract as well as the more common terms of sale in exportmarkets will be found on the following page.

76. The Northwestern Miller Almanack and Yearbook, April 4, 1928, p. 21.

(77)

77. The Northwestern Miller Almanack and Yearbook,
April 2, 1930, p. 28.

THE FLOUR CONTRACT OF THE LONDON FLOUR TRADE ASSOCIATION

CANADIAN AND UNITED STATES OF AMERICA FLOUR CONTRACT

SOLD TO/BOUGHT OF..... London.....19...
on the printed rules endorsed on this Contract..... say
bags
(2 per cent. more or less) of Flour, weighing at time of despatch.....lbs. gross
branded.....to be equal at time of despatch to
*fair average quality of the season's shipments of.....
*sealed sample in possession of.....

Due allowance to be made for bleaching and time out of bulk.
The Flour is not warranted free from defect rendering same unmerchantable, which would not be apparent on reasonable examination, any statute or rule of law to the contrary notwithstanding.

Despatched or to be despatched from.....
per rail and/or Lake or River steamer or steamers, as per Bill or Bills of Lading dated or to be dated.....and to be shipped.....
from any safe Atlantic port or ports between Hampton Roads and the St. Lawrence and/or Gulf port or ports inclusive, per first-class Ocean steamer or steamers and/or motor-vessel or motor-vessels.....classed not lower than 90 A1, or British Corporation B.S. or equal classification in American, French, Italian, Norwegian or other equal Register, at the price of.....shillings and.....pence per 280 lbs. gross including freight and insurance to.....direct or indirect.

Each shipment shall be deemed a separate Contract, and in case the above forms part of a larger shipment of the same brand, any loss arising from damaged or ullaged packages, or any excess or deficiency shall be shared pro rata by the receivers of the various parcels.

Bill or Bills of Lading to be final as to quantity, weight and date of shipment in the absence of evidence to the contrary.

Payment by cash in London in exchange for shipping documents, on or before arrival of first vessel, less discount for the unexpired term of.....days from date of arrival of Bill or Bills of Lading in London, at the rate of one-half of one per cent. per annum above the advertised rate of interest for short deposits allowed by the leading Joint Stock Banks in London, or at Seller's option by Buyer's acceptance of Shipper's or Seller's drafts, domiciled in London, at.....days' sight from date of arrival of Bill or Bills of Lading in London, with documents attached, but payment is in no case to be later than the prompt. Should, however, the shipment or any portion thereof be included in a Bill or Bills of Lading, for a larger quantity, payment to be made against an approved delivery order or orders, but payment shall not in such case be demanded before the arrival of the vessel, and in case of loss Seller to recover the Insurance from the Underwriters, and hold such amount or amounts as may be due to the Buyer at his disposal. If shipping documents have not been sighted at time of vessel's arrival at port of discharge, Seller shall provide documents entitling Buyer to obtain delivery of the Flour, and payment must be made in exchange for same, such payment to be made without prejudice to Buyer's rights under the Contract.

Seller to give Policies and/or Certificates of Insurance, free of war risk, for not less than two per cent. over the gross amount of Invoice, the excess (if any) remaining for Seller's account, in case of total loss only. Insurance to be effected at Seller's option with approved Underwriters and/or Companies paying losses (if any) on gold basis in London, but for whose solvency Seller is not to be responsible. Insurance shall, however, only be effected with Underwriters and/or Companies carrying on business in London or who for the purpose of any legal proceedings agree to a British Domicile and provide an address for service of process in London.

Should shipment be prevented by prohibition of export, blockade or war, this Contract, or the then unfulfilled part thereof, to be cancelled.

Seller shall not be answerable for loss, damage, or delay, caused by strikes or by combinations of workmen.

Buyer and Seller agree that, for the purpose of proceedings, either legal or by arbitration, this Contract shall be deemed to have been made in England, and to be performed there, any correspondence in reference to the offer, the acceptance, the place of payment or otherwise notwithstanding, and the Courts of England or Arbitrators appointed in England, as the case may be, shall, except for the purpose of enforcing any award made in pursuance of the arbitration clause hereof, have exclusive jurisdiction over all disputes which may arise under this Contract. Such disputes shall be settled according to the law of England whatever the domicile, residence, or place of business of the parties to this Contract may be or become. Any party to this Contract residing or carrying on business elsewhere than in England or Wales, shall, for the purposes of proceedings at law or in Arbitration, be considered as ordinarily resident or carrying on business at the office of the Secretary for the time being of the London Flour Trade Association, and if in Scotland, he shall be held to have prorogated jurisdiction against himself to the English Courts, or if in Northern Ireland to have submitted to the jurisdiction, and to be bound by the decision of the English Courts. The service of proceedings upon any such party by leaving the same at the office of the Secretary for the time being of the London Flour Trade Association, together with the posting of a copy of such proceedings to his address abroad, or in Scotland or Northern Ireland, shall be deemed good service, any rule of law or equity to the contrary notwithstanding.

All disputes arising from time to time out of this Contract shall be referred to Arbitration, according to the printed rules endorsed on this Contract, and neither Buyer nor Seller shall bring any action against the other of them in respect of any such dispute until such dispute has been settled by Arbitrators, or by the Committee of Appeal, as the case may be, and it is expressly agreed that the obtaining an award from either tribunal, as the case may be, shall be a condition precedent to the right of either contracting party to sue the other in respect of any claim arising out of this Contract. All costs of or connected with the stating and argument of any Special Case for the opinion of the Court on any question of law arising in the course of the reference shall be borne and paid by the party requiring the same to be stated unless or except so far as otherwise determined by the award to be made in the reference.

RULES

- 1.—SELLING SAMPLE.—Either Seller or Buyer may require same to be deposited with the Association within seven business days of the date of Contract. The person requiring the deposit shall pay a fee of 10s 6d for custody.
- 2.—PROVISIONAL INVOICE stating date of Bill or Bills of Lading shall be handed by the original Seller to his Buyer or Buyer's Agent domiciled in London within seven days after the arrival of the documents in London, but in no case later than twenty-eight days from date of Bill of Lading (unless arrival of mail steamer be delayed by unforeseen circumstances), and by subsequent Sellers in due course. If the documents are tendered within the time stipulated but after arrival of steamer to which the tender refers, landing charges if incurred shall be borne by Seller. Seller shall render a separate invoice for each set of documents, and Buyer shall have the right to inspect documents during the usual banking hours.
- 3.—NOTICE TO RETIRE DOCUMENTS shall be given by the Buyer to the Seller before 11.30 a.m. on the day of payment. If documents are required on a Saturday notice shall be given before 4 p.m. on the business day prior to day of payment.
- 4.—IN DEFAULT of fulfilment of contract, either party after giving notice shall have the right of re-sale or re-purchase either publicly or privately, or assessment of difference in value by arbitration, as the case may be, and the defaulter shall make good on demand the loss, if any, by such re-sale or re-purchase or assessment. Such notice, or notice of any claim for non-fulfilment of Contract, shall be given within seven business days of the act of default. In case either party shall suspend payment, or convene or hold a meeting of creditors, or commit an act of bankruptcy, or (being a company) shall have a Receiver appointed by the Court or Debenture holders, or convene a meeting for or go into liquidation whether voluntary or otherwise, he shall be deemed to be in default, and the other party shall, after giving notice by letter or telegram to the defaulting party, and notwithstanding any bankruptcy or liquidation, immediately have the right of re-sale or re-purchase or assessment by arbitration, as the case may be, and shall also be entitled to be paid, or to prove in any bankruptcy, liquidation or otherwise, for the loss, if any, or shall account for the profit, if any, occasioned by such re-sale or re-purchase or assessment.
- 5.—DESCRIPTION AND QUALITY.—Should it be decided by arbitration that the Flour shipped is of a distinctly different description, or 10 per cent. inferior in quality to that guaranteed in this contract, Seller shall, if required, receive back the Flour at the cost, freight and insurance market value on the day on which the claim for arbitration is made, of the description or quality guaranteed, or should the Buyer keep the Flour, the Seller shall pay such an allowance for difference in description or inferiority in quality as may be awarded by arbitration in London, but it shall be in the discretion of the Arbitrators to give, in either case, damages over and above the difference in value, according to the special circumstances of the case.
- 6.—SAMPLING FOR ARBITRATION.—Three packages in every hundred shall be sampled. Should either party require more than three packages in every hundred to be sampled, the extra expense must be borne by him.
Should the Buyer not land the Flour at a dock or public wharf, no claim for difference in description or inferiority in quality of deliveries ex ship can be made unless samples are drawn and sealed conjointly by the Buyer and Seller or by the Dock Company in whose Dock the ship discharges before the Flour leaves the ship's side or Dock. Should the ship

not discharge in a Dock and either party fail to make arrangements for sampling on arrival of the ship, the other party may forthwith appoint one of the Official Samplers of the London Flour Trade Association to draw and seal samples and such samples shall be taken as correct and final in the case of arbitration.

Should the Flour be landed at a Dock or Public Wharf and should samples not have been drawn and sealed as provided in the previous paragraph, no claim for difference in description or inferiority in quality can be made unless samples are drawn and sealed conjointly by the Buyer and Seller or by the Dock Company or Wharfinger on whose premises the Flour is stored, within seven business days from date of final landing.

7.—NOTICE OF ARBITRATION shall be given and Arbitrator nominated within seven business days of the parcel being available for proper sampling, if the Flour is landed at a Dock or Public Wharf, or within seven business days of drawing samples if the Buyer does not land the Flour at a Dock or Public Wharf.

8.—FINALITY RULE.—Arbitration on quality having been claimed in accordance with the terms of this Contract, the parties claiming must proceed with the arbitration within twenty-eight days from date of final landing if landed at a Dock or Public Wharf, otherwise within twenty-eight days from date of final discharge of steamer. After the expiration of these limits, claims for quality to be void unless the delay is, in the opinion of the Arbitrators, considered justifiable.

9.—NON-BUSINESS DAYS.—Sundays, Good Friday, Easter Monday, Whit Monday, the first Monday in August, Christmas Day, Boxing Day, and any other legal Bank Holiday.

10.—ARBITRATION.—All disputes arising from time to time out of this Contract shall be referred to two Arbitrators, one to be appointed by each party in difference, the two Arbitrators having power to appoint a third in case they deem it necessary. In the event, however, of one of the parties appointing an Arbitrator and the other refusing, or for seven days after notice of the appointment neglecting to appoint, then providing the Applicant pays to the Association one guinea, the questions in dispute shall stand referred to an Arbitrator to be appointed by the Executive Committee of the London Flour Trade Association, to meet the Arbitrator already appointed. In case the Arbitrators do not within fourteen days after their appointment agree to an award or appoint a third Arbitrator, or in case of the death, refusal to act, or incapacity of any one or more of the Arbitrators; then, upon the application to the Association of either of the disputing parties, and providing the Applicant pays to the Association one guinea, the questions in dispute shall stand referred to two Arbitrators appointed by the Executive Committee of the London Flour Trade Association at a meeting convened by notice for the purpose. In case the two Arbitrators appointed as aforesaid do not, within fourteen days after their appointment, agree to an award or appoint a third Arbitrator, then the said Executive Committee, at a meeting constituted as hereinbefore provided, shall appoint a third Arbitrator. In case of death, refusal to act, or incapacity of any such Arbitrator, the said Executive Committee shall substitute a new Arbitrator or Arbitrators in the place of the Arbitrator or Arbitrators so dying, refusing, or incapacitated; or should the disputing parties both agree to refer the question to the London Flour Trade Association, then, providing the Applicants pay to the Association two guineas, the Executive Committee shall appoint two Arbitrators, giving them power to call a third, if necessary, to settle the dispute. Only members (or their nominated representatives) of the London Flour Trade Association shall be Arbitrators.

All awards, except in appeal cases, made under an Association Contract shall be subject to the following fees for each individual engaged:—

Not exceeding 500 sacks of 280 lbs. each, or its equivalent, 12 2s.
And every additional 500 sacks (or part thereof) of 280 lbs. each, 11 1s.

All awards issued under an Association Contract must be written upon the Association "Form of Award," stamped with the stamp of the Association, which can only be obtained of the Hon. Treasurer at a cost of 5s each if both parties concerned are Members, and 20s each if either or both are Non-Members, the extra 15s being paid by the Non-Member.

The award of any two Arbitrators in writing (subject only to the right of appeal hereinafter mentioned) shall be conclusive and binding upon all disputing parties, both with respect to the matter in dispute and all expenses of and incidental to the reference and award.

No Member of the Executive Committee having an interest in the matter in dispute shall vote on the question of the appointment of Arbitrators.

In case either party shall be dissatisfied with the award, a right of appeal shall lie to the Committee of Appeal elected for that purpose, and subject to their regulations, provided notice be given to the Secretary of the London Flour Trade Association, before 4 o'clock p.m. on the fourth business day after that on which the objecting party shall have notice of the award, and provided also the Appellant do pay to the Association, on giving notice of appeal, fees upon the following scale:—

Members, 14 guineas; Non-Members, 20 guineas.

The cost of Award Forms to be paid together with the above fees.
Cost of Award Forms for Members 5s each, and Non-Members 20s each. Should either of the disputants be a Non-Member an Award Form costing 20s must be used, the extra 15s being paid by the Non-Member.

The Committee of Appeal shall confirm the award appealed from, unless four of the five Members appointed to hear such appeal decide to vary such award. They shall also award by whom all fees shall be borne.

The award of the Committee of Appeal, whether confirming the original award or varying such award, shall be signed by the Chairman of the day, and, when signed, shall become the award of the Committee, and shall be in all cases final.

Notices given under any of the above Rules must be in writing, and sent by post to or left at the usual place of business of the person or firm to whom addressed.

TERMS OF SALE IN EXPORT MARKETS

Export methods have changed considerably during the last few years. It is now the general rule for mills to ship on "guaranteed seaboard shipment" terms, as "shipment from mill" handicaps business. In view of the severe competition from home mills which importers have to contend with in practically every importing country, it is very important that they should be able to give their buyers a definite date of seaboard shipment instead of subjecting their sales to the indefiniteness of the old method of "specified mill shipment," which is so liable to serious delays in transit. The majority of the mills in the United States and Canada do business on seaboard shipment terms only, forwarding agents being able to arrange this without difficulty.

COMMISSION

Great Britain and Ireland.—Practically all the buying is done by importers for their own account, net, c.i.f.
Holland.—Two per cent commission and 1 per cent discount. The importer retains the 2 per cent commission for himself and pays the 1 per cent discount to his customer, making 3 per cent in all, which is usually deducted from the invoice. On sales to Germany and central Europe, Holland importers charge 3 and 4 per cent commission.
Germany, Denmark, Norway, Sweden, Finland, Greece.—The usual commission is 2½ per cent, but some agents are willing to work for 2.
Gibraltar, Malta.—A few firms buy for their own account, but the business is mostly on a commission basis, the usual commission being 2@2½ per cent.
In cases where a Scandinavian agent represents a mill for the whole of Scandinavia, or for two or more countries, his commission is 3½ per cent. The commission is invariably figured on the gross amount of the invoice.

PACKAGES

Great Britain and Ireland.—The 140-lb bag, usually jute.
Germany, Denmark, Norway, Sweden, Finland.—Mostly the 50-kilo bag, cotton or jute, as specified.

Italy.—The 140-lb bag and the 50-kilo bag, jute or cotton, as specified.
Gibraltar.—Mostly the 140-lb bag, but occasionally the 50-kilo bag.
Malta.—Almost entirely in bags of 112 lbs.
Greece.—The 140-lb bag and the 50-kilo bag, jute or cotton, as specified.
Egypt.—Mostly the 140-lb bag.

TERMS OF SALE

Great Britain and Ireland.—Quotations are made in sterling per sack of 280 lbs. Drafts are drawn in sterling at seven or sixty days' sight.
Holland, Germany, Denmark, Norway, Sweden, Finland.—Quotations in all these countries are in dollars per 100 kilos, and terms of payment are seven days' sight draft, payable against documents in dollars.
Italy.—Quotations are made in dollars per 280 lbs or 100 kilos. Payment is made by opening an irrevocable credit in New York within 24 hours of the sale, and drafts are drawn in dollars on the bank where the credit has been established.
Gibraltar, Malta.—Quotations are made in dollars per 280 lbs or 100 kilos. Payment is made by the opening of an irrevocable credit in New York, except in a few instances.
Greece.—Quotations are made in dollars per 100 kilos or 230 lbs. In most cases payment is made by the opening of an irrevocable credit in New York within 24 hours of the sale, and drafts are drawn in dollars on the bank where the credit has been established.
Egypt.—Quotations are made in dollars per 280 lbs or 100 kilos. Payment is made by the opening of an irrevocable credit in New York within 24 hours of the sale, and drafts are drawn in dollars on the bank where the credit has been established.

DIFFERENTIAL ON BAGS

Mills include the difference in cost between 50-kilo and 100-kilo bags in their quotations. For instance, if a 100-kilo bag of flour costs \$7 a further 5c or 10c—as the case may be—must be added to allow for shipment in 50-kilo bags.

Chapter VIII

Statistics and Estimates.

Many conclusions may be drawn from a glance at the statistics listed in the following pages. In the first place, it appears that the small mill is doomed. In 1918 there were 96 active mills in Kansas with capacity of less than 200 barrels. Today there are only 29 such mills. The small miller is hanging on tenaciously, but he realizes his fate. A few, due to cheap water power and favorable local trade, are able to operate their mills successfully a good share of the time.

One mill of 140 barrels capacity in central Kansas manages to operate at 50 percent capacity, which is unusual. The manager of the mill attributes his success to cheap power derived from the water of the Saline River, and to personal management. In most cases the manager of a small mill should be the owner, otherwise the mill will likely cease operations. The manager mentioned above stated that his milling "spread" today was only 40 to 50 cents per barrel, where formerly it was often above one dollar. Whenever the spread falls below 32 cents, this mill operates at a

loss. A good domestic trade has been established and carload lots of flour are often sent to neighboring states. Exporting is entirely out of the question. Most mills of this size are not so fortunate. Another 150 barrel mill in Kansas, visited recently by this writer, was not faring so well. The mill appeared to be in good state of repair, and its small business perhaps can be explained by lack of interest on the part of the management. The mill flourished until after the World War. Now it operates only periodically to satisfy a decreasing home demand. Community loyalty to a home institution seems largely responsible for what little trade it has. It seems to be only a matter of time until the mill will cease all grinding of flour.

Occasionally a mill burns or is destroyed in some way and is not restored to use. Other small mills are merely closed down. The whole process appears to be one of elimination. New mills are always of considerable size and it seems reasonable that in the near future the milling capacity of the state will be located in less than 100 mills. At one time there were over 300.

The following table shows in detail the number of flour mills in Kansas (outside of Kansas City), together

with the capacity ratings and the amount of flour produced and wheat ground in the crop year ended June 30, 1929, with previous year's records for comparison:

Daily				Wheat
No. mills rating, bbls	Capacity	capacity, Flour	capacity, Flour	ground, bus
30	1,000 and over	50,400	11,073,847	50,492,899
34	500 to 1,000.	21,580	4,183,407	19,023,306
19	200 to 500.	5,930	865,353	4,406,774
16	100 to 200.	2,145	160,260	742,978
13	Less than 100	665	41,331	201,668
112		80,720	16,424,198	74,867,625

Note: Nonreporting Kansas mills of 200 bbls and less capacity estimated at same rate of activity as reporting mills of like size. All mills not operated for past two years eliminated from active list.

Year ending June 30, 1928:				
No. mills rating, bbls	Capacity	capacity, Flour	Wheat ground, bus	
29	1,000 and over	48,000	9,079,538	41,284,035
40	500 to 1,000.	25,145	4,241,821	19,173,129
30	200 to 500.	9,190	1,285,423	5,920,515
27	100 to 200.	3,420	344,848	1,589,822
33	Less than 100	1,530	105,301	483,537
159		87,285	15,057,031	68,473,038

Year ending June 30, 1924:				
No. mills rating, bbls	Capacity	capacity, Flour	Wheat ground, bus	
28	1,000 and over	47,170	8,241,558	37,444,297
43	500 to 1,000.	26,560	3,869,093	17,659,395
31	200 to 500....	9,095	1,193,163	5,314,540
28	100 to 200....	3,675	348,188	1,619,718
32	Less than 100	1,574	125,312	580,043
162		88,074	13,777,814	62,617,993

Year ending June 30, 1923:				
No. mills rating, bbls	Capacity	capacity, Flour	Wheat ground, bus	
29	1,000 and over	48,705	8,802,019	40,704,155
43	500 to 1,000.	26,705	4,512,336	20,517,489
41	200 to 500....	12,135	1,688,122	7,643,434
22	100 to 200....	2,820	274,252	1,276,622
44	Less than 100	2,129	165,984	760,786
179		92,494	15,442,713	70,902,485

Year ending June 30, 1927:				
No. mills rating, bbls	Capacity	capacity, Flour	Wheat ground, bus	
31	1,000 and over	52,800	10,833,694	48,793,927
38	500 to 1,000.	24,025	4,149,549	18,700,806
25	200 to 500.	7,705	1,196,421	5,407,066
20	100 to 200.	2,670	265,753	1,213,192
21	Less than 100	1,005	66,729	316,280
135		88,205	16,512,146	74,431,271

Year ending June 30, 1926:				
No. mills rating, bbls	Capacity	capacity, Flour	Wheat ground, bus	
30	1,000 and over	49,950	8,019,895	36,523,094
41	500 to 1,000.	25,435	3,099,832	14,222,265
26	200 to 500.	7,905	899,314	4,054,755
26	100 to 200.	3,385	253,175	1,172,359
27	Less than 100	1,265	76,877	362,057
160		87,940	12,349,093	56,339,530

(78)

The milling capacity of the state seems to be at a standstill. Ten years ago the capacity of the mills was 85,694 barrels, while today the capacity is 80,720. New milling capacity is added largely at the expense of

78. The Northwestern Miller Almanack and Yearbook, April 2, 1930, p. 42.

the smaller mill, for in 1919 there were 206 mills, while today there are only 125, yet total milling capacity has changed but slightly.

A glance at the tables shows the relative importance of the different sized mills in regard to the amount of their output. In the year ending June 30, 1928, the 33 largest mills of the state ground about 65 percent of the flour, yet they constituted only slightly over one fourth of the total number of mills. The 72 larger mills, or approximately 58 percent of the total number, ground almost 93 percent of the total output. (79)

It is also seen that the Kansas mills never run, as a whole, at full capacity. In fact, the average percentage for the years 1908-1928 has been only 56.1. In other words, Kansas mills grind only slightly over half the wheat they are capable of milling, should they run at full capacity throughout the year. A further glance at the table shows conclusively that a mill's percentage of capacity used depends on its size. The smallest mills average only 25 percent of capacity, while the mills of over 1000 barrels average over 60 percent.

79. These figures are on the basis of all Kansas Mills, except those in Kansas City, which have been discussed in a previous chapter.

PERCENTAGE OF CAPACITY OPERATED

Percentage of output to full capacity based on 300 running days of mills of all sizes in Kansas, by years ending June 30:

Year	1,000 and over	500 to 1,000	200 to 500	100 to 200	Less than 100	Average
1929..	73.2	64.6	54.2	24.9	20.7	67.8
1928..	56.4	52.3	43.3	17.9	17.2	53.2
1927..	68.0	57.0	51.0	33.0	21.0	62.0
1926..	53.0	40.0	37.0	25.0	20.0	46.0
1925..	63.0	56.0	46.0	33.0	23.0	57.0
1924..	58.0	49.0	43.0	31.0	26.0	53.0
1923..	53.0	56.0	46.0	32.0	26.0	55.0
1922..	62.0	64.0	47.0	34.0	21.0	59.0
1921..	54.7	50.2	40.3	24.5	15.7	48.3
1920..	65.2	65.1	55.5	32.2	23.5	60.6
1919..	59.3	57.0	48.6	32.4	22.3	54.3
1918..	53.5	53.0	48.9	30.2	18.1	49.9
1917..	64.0	63.0	58.0	36.0	26.0	61.0
1916..	63.0	64.7	62.3	38.5	30.5	62.8
1915..	70.5	71.8	62.6	39.3	23.6	67.0
1914..	69.6	61.0	64.4	38.6	28.0	62.7
1913..	67.5	64.0	60.7	30.5	32.2	59.8
1912..	55.3	59.3	53.4	28.0	27.2	51.4
1911..	57.2	63.8	52.0	30.1	27.2	53.2
1910..	53.0	63.0	59.0	44.0	29.0	54.5
1909..	50.0	68.5	62.1	41.0	36.1	56.1
1908..	62.5	64.0	60.0	42.6	26.7	51.1
Average	60.8	59.7	52.6	32.8	24.8	56.6

CAPACITY BY YEARS

The following table shows the number of mills of over 200 bbls capacity and of mills of less than 200 bbls, with total capacity of mills of each class and total capacity of all mills:

Year	Over 200 bbls		Less than 200 bbls		All mills	
	No.	Cap.	No.	Cap.	No.	Cap.
1928-29..	83	77,910	29	2,810	112	80,720
1927-28..	94	86,305	31	2,380	125	88,685
1926-27..	94	84,530	41	3,675	135	88,205
1925-26..	97	83,290	53	4,650	150	87,940
1924-25..	99	82,335	60	4,950	159	87,285
1923-24..	102	82,825	60	5,249	162	88,074
1922-23..	113	87,645	66	4,949	179	92,494
1921-22..	107	84,995	68	5,520	175	90,515
1920-21..	112	78,050	93	7,324	205	85,374
1919-20..	110	78,140	96	7,554	206	85,694
1918-19..	110	74,020	96	7,399	203	81,419
1917-18..	112	65,690	96	7,355	198	73,045
1916-17..	94	59,500	62	5,852	156	65,352
1915-16..	90	58,560	69	5,247	169	64,807
1914-15..	99	55,380	78	7,240	177	62,620
1913-14..	98	53,835	66	6,500	164	60,335
1912-13..	102	51,635	80	7,865	182	59,500
1911-12..	104	53,760	87	8,380	191	61,140
1910-11..	108	54,625	103	9,245	211	63,870
1909-10..	107	51,725	118	10,640	225	62,375
1908-9..	104	49,935	135	11,740	239	61,675

CONSOLIDATED BY YEARS

The number of active flour mills in Kansas, the number of barrels of flour produced and the number of bushels of wheat ground, by years ending June 30:

Year	All mills No.	Cap.	Flour produced	Wheat consumed
1928-29..	112	80,720	16,424,198	74,867,625
1927-28..	125	89,165	14,230,332	64,835,126
1926-27..	135	88,205	16,512,146	74,431,271
1925-26..	150	87,940	12,349,093	56,339,530
1924-25..	159	87,285	15,057,031	68,473,048
1923-24..	162	88,074	13,777,314	62,617,993
1922-23..	179	92,494	15,442,713	70,902,485
1921-22..	175	90,515	16,065,371	73,036,650
1920-21..	205	85,374	12,375,216	56,434,592
1919-20..	206	86,694	15,577,549	72,024,340
1918-19..	203	81,419	13,271,193	59,142,807
1917-18..	198	73,045	11,992,186	55,222,279
1916-17..	166	65,352	12,213,447	56,074,464
1915-16..	169	64,807	12,599,151	56,417,605
1914-15..	177	62,620	12,599,151	56,417,605
1913-14..	164	60,335	11,303,289	51,487,092
1912-13..	182	59,500	10,688,566	49,406,226
1911-12..	191	61,140	9,440,921	42,736,504
1910-11..	211	63,870	10,207,358	46,215,005
1909-10..	225	62,375	10,197,152	46,134,812

(80)

Kansas—Wheat Crop

Record of wheat production in Kansas, as recorded by the secretary of the Kansas department of agriculture (000's omitted except as to yield in bushels per acre):

Year	Acres sown	Crop bus	Yield per acre
1929.....	11,516	138,060	12.0
1928.....	13,041	177,361	13.64
1927.....	11,962	111,406	9.4
1926.....	11,892	149,983	13.16
1925.....	10,602	74,265	8.7
1924.....	9,815	163,628	16.30
1923.....	11,657	76,172	9.70
1922.....	12,290	116,864	9.50
1921.....	10,351	128,131	12.40
1920.....	8,983	140,842	15.70
1919.....	11,541	145,795	12.56
1918.....	9,482	93,135	13.73
1917.....	8,887	41,563	4.67
1916.....	8,454	99,384	11.19
1915.....	9,449	95,768	12.50
1914.....	9,116	180,924	19.85
1913.....	7,693	72,458	9.30
1912.....	6,195	85,889	14.24
1911.....	7,303	60,809	10.90
1910.....	6,686	61,017	9.11
1909.....	6,400	80,959	13.89
1908.....	6,939	76,809	11.06
1907.....	7,235	74,056	10.24
1906.....	6,436	93,293	14.49
1905.....	5,925	77,178	13.02
1904.....	5,862	65,142	11.11
1903.....	5,964	94,042	15.76
1902.....	6,301	54,649	8.67
1901.....	5,316	90,333	16.99
1900.....	4,379	77,339	17.66
1899.....	4,989	43,687	8.76
1898.....	4,625	60,791	13.14
1897.....	3,444	51,027	14.81
1896.....	3,358	27,775	8.27
1895.....	4,172	16,001	3.84
1894.....	4,541	23,206	5.82

(81)

80. The Northwestern Miller Almanack and Yearbook, April 2, 1930, p. 42.

81. Ibid, p. 102.

There has been much wailing among millers in recent years over the overcapacity of the milling industry. But where is there an industry which does not have considerable fluctuation in its volume of business, and which does not have to contend with peak loads? Millers who endeavor to operate their mills at 100 percent capacity without regard to cost or demand for the product conduct their business without profit and often at a great loss. Millers are realizing that they cannot operate at full capacity continuously and are adopting a reasonable average of about 60 percent. The sooner the miller bases his sales on the cost of 60 percent time operation plus a reasonable margin of profit, the nearer safety he will be. (82)

Even though the Kansas flour mills average only 56.1 percent of capacity, they must still be operating more efficiently than the average mill in the United States. Edward Brown, in a recent report to the Federal Trade Commission, estimated the production capacity of the nation's flour mills at two and one half times the greatest production. (83)

During the past twenty years the Kansas mills have ground about 50 percent of the Kansas wheat crop into flour. It is unfortunate that the percentage is not

82. The Southwestern Miller, Nov. 23, 1926, p. 23.

83. Simonds and Thompson, The American Way to Prosperity, p.84.

higher. Practically all this wheat is milled somewhere, and the Kansas mills might profitably mill a greater percent of it. It is true that the capacity of the state for the past twenty years has been almost sufficient to grind the entire wheat crop provided, of course, the mills ran at 100 percent capacity continuously.

In the year 1917 Kansas produced only 41,563,000 bushels of wheat. It is interesting to note how the flour production for the year ending June 30, 1918, fell down. This was the only year in the last twenty when the mills consumed more wheat than the state produced. The illustration shows that it would be unwise for the milling capacity of the state to be sufficient to always consume the total output of wheat. Just what the margin should be, in order to insure against poor years, is hard to say. Perhaps the milling capacity of the state right now is in about the right proportion to the normal wheat production of the state. If so, we will not witness a great addition to the total milling capacity.

If there is yet room for further milling expansion, it may be assumed that the day is not far distant when the state will have a total (including Kansas City) of well over 100,000 barrels capacity, and that the greater

bulk of Kansas wheat will go out, not as Kansas wheat, but as Kansas flour, already established as the equal if not the superior of any flour in the world. (84)

The per capita consumption of flour in Kansas is .968 barrels. Therefore, the state consumes less than 2,000,000 barrels of flour a year. With an output of from $9\frac{1}{2}$ million to $16\frac{1}{2}$ million barrels during the last twenty years, it is very evident that only a small percent of the total is consumed within the state, the remainder of $7\frac{1}{2}$ to $14\frac{1}{2}$ million barrels having been exported to neighboring states and to foreign countries.

From 16 to 20 percent of Kansas flour is consumed within the state each year. Of this the greater proportionate share is furnished by the small mill. The smaller mills sell to only the local community and most of the mills under 200 barrels sell within the state. The total output of the mills under 200 barrels will not nearly supply domestic consumption. Some of the larger mills report that their percentage of sales in Kansas is only one fourth of one percent of the total. Several report their Kansas sales at 2 percent, which is very unusual. This shows that the larger mills are more active in ex-

84. Quarterly Report, Kan., St. Bd. of Agri., Sept. 1920, p. 179.

porting to other states and foreign countries.

Unfortunately, statistics are not available giving the percentage of Kansas flour going to foreign countries. However, a very close estimate can be made by those engaged in the export business. The Kansas export trade is a very unstable affair, fluctuating widely from year to year. An estimate of the percentage of Kansas flour going for export has been given in a previous chapter and rests on good authority.

What effect the concentration of the Kansas flour industry will have on its export trade is hard to foretell. Off-hand, it would seem reasonable that the export trade might increase as a result of these larger milling units. The larger mill should be better able to meet foreign competition than is a small mill. It should likewise have the necessary finances and managerial ability to develop foreign markets.

The experience of the mills at Minneapolis shows that the direct opposite result may obtain, however. Fortunately, statistics on the export business of the Minneapolis mills are available.

In 1929 these mills exported less than $\frac{1}{4}$ of one percent of their total flour, and certainly they are not

Minneapolis—Flour Output and Exports				1908-9.....			
Flour output and direct foreign shipments				1907-8.....			
of Minneapolis mills by crop years (Sept. 1				1906-7.....			
to Aug. 31):				1905-6.....			
	Output	Exports	*Per				
	bbis	cent	cent				
1928-29.....	11,165,930	26,806	.24	1904-5.....	12,747,325	1,675,785	13.15
1927-28.....	12,902,419	74,291	.58	1903-4.....	14,213,085	2,284,755	16.07
1926-27.....	11,184,865	101,464	.97	1902-3.....	16,505,645	3,331,805	20.02
1925-26.....	12,509,057	99,994	.80	1901-2.....	15,802,270	3,160,160	19.19
1924-25.....	10,969,152	248,211	2.26	1900-1.....	14,863,395	3,973,179	26.73
1923-24.....	12,191,411	107,022	.88	1899-1900.....	15,308,160	4,847,600	31.66
1922-23.....	15,730,865	82,160	.52	1898-9.....	15,318,415	4,593,140	29.98
1921-22.....	14,785,650	870,265	5.88	1897-8.....	13,299,180	3,569,225	26.84
1920-21.....	14,524,845	971,840	6.69	1896-7.....	13,473,160	3,618,555	26.85
1919-20.....	17,117,610	736,730	4.30	1895-6.....	12,577,120	4,044,790	32.15
1918-19.....	16,543,630	1,451,135	8.77	1894-5.....	9,428,225	2,377,090	25.21
1917-18.....	15,255,310	888,240	5.82	1893-4.....	9,321,630	2,362,550	25.34
1916-17.....	16,235,330	1,166,850	7.18	1892-3.....	9,349,615	3,038,692	32.50
1915-16.....	20,443,185	1,628,195	7.87	1891-2.....	9,500,554	3,668,380	38.61
1914-15.....	16,182,250	1,768,715	10.92	1890-1.....	7,434,098	2,576,540	34.65
1913-14.....	18,146,530	1,699,580	9.31	1889-90.....	6,863,015	2,091,215	30.47
1912-13.....	18,230,160	1,761,935	9.66	1888-9.....	6,740,380	1,557,575	27.13
1911-12.....	15,708,075	739,500	4.70	1887-8.....	7,244,930	2,617,795	36.19
1910-11.....	15,813,190	1,341,995	8.49	1886-7.....	6,375,250	2,523,030	39.59
1909-10.....	16,075,155	1,609,135	10.01	1885-6.....	5,953,200	2,288,500	38.46

*Per cent of flour output exported direct by mills to foreign countries.

(85)

kept from the export market because of lack in size. Possibly they might have made way against the forces that were cutting in on their foreign trade had they found it necessary. However, as the population grew after 1900, they found the domestic field more and more attractive, with the result that they gave less and less attention to the export field. (86) Today they are practically out of the export markets.

The concentration of the milling industry in Kansas into large modern efficient mills will, therefore, not serve as any index to the future of Kansas flour export trade. Neither will the superiority of Kansas wheat, necessarily give the millers of the state a firm hold on exports markets. A forecast of the future can

85. The Northwestern Miller, Almanack and Yearbook, April 2, 1930, p. 46.

86. B. C. Kuhlman, Development of the Flour Milling Industry. p. 296.

be made only after analyzing many forces operative in the export field. This analysis will be the purpose of the next chapter.

Chapter 1X

The Future for Kansas Export Flour.

Every indication points to a gradual reduction in the amount of Kansas flour that will be exported.(87) It appears that mills nearer the seaboard have an advantage over interior mills in the export trade. Thus the foreign trade of the mills at Minneapolis has been lost to the mills at Buffalo and to Canadian millers. It is possible and even probable that the Kansas export trade will be absorbed largely by mills in the Southwest nearer the Gulf. Whether or not the Kansas mills are following a similar path followed by the Minneapolis mills remains to be seen. Certain indications would tend to cause one to conclude that such is the case.

The general trend of thought of Kansas millers in regard to the export business can best be shown by quoting from them. It seems that a mill of 1,000 barrels capacity should be of sufficient size to engage in exporting, yet the sales manager of a mill of

87. Interview. Robert E. Sterling.

this size in Kansas has the following to say; "We do very little export business as we feel that a mill of this size should confine their efforts to domestic business." (88) Another mill of 1,200 barrels capacity reports no export trade whatever.

The export manager of a 4,400 barrel mill in Kansas makes the following comments in regard to the future: "For years we have been handling export business direct with importers abroad and are continuing to export although we find the export trade gradually decreasing in volume, especially with Europe. Our trade with Latin America has remained practically the same for the past five or six years. Our business is confined to Central Europe, the United Kingdom, Scandinavian countries, West Indies, Central America, and the north coast of South America. The larger part of our business is with Latin America.

As previously stated, export of flour is decreasing. This is caused by large crops harvested in Canada, Argentine, and other large wheat-growing countries, where they are able to produce wheat more cheaply than is possible in the States. No new field has been opened to Southwestern flour recently. However the Orient

88. Letter, M. E. Schulz.

is rapidly becoming a large user of wheat flour and promises to give a larger outlet for Canadian and Pacific Coast flour. Other countries, of course, may have temporary demands owing to a poor harvest, but should they be more fortunate on the next crop, we are then forced from the market.

No export fields have been entirely abandoned recently, however. British possessions in the West Indies are very difficult to sell with present duties in favor of Canada. Europe is protecting her industries with heavy duties on flour over wheat. This particularly applies to Germany, but we feel others will gradually take more or less the same attitude. From the above we can realize that our export trade in flour is to the south of us. If we continue exporting on a satisfactory basis, we must combine a good part of our efforts to Latin America." (89).

The manager of a 1,200 barrel mill, which is exporting 5 percent of its output to England, Holland, and Porto Rico, has the following comment to make: "As far as export business is concerned, we feel that with the increasing acreage in Canada which is going

89. Letter from Glen B. Fretzs, Export Mgr., Red Star Milling Co.

into wheat, that it is only a question of time until we will be doing very little or no business outside of this country." (90) Until 15 years ago this mill exported 50 percent of its product. The amount going for export has decreased continually.

One 1,800 barrel mill reports its exports of flour as being confined to Holland, and no effort is being made to expand into other fields. A mill of 2,000 barrels capacity confines its exports to Scotland, Germany, and Holland. The amount of export business done with these countries fluctuates from year to year due to competition with Canada, but it is normally about 2 percent. The Latin American markets have not been entered due to unsatisfactory financial conditions in these countries.

A 550 barrel mill in Kansas with the enviable record of running 100 percent of capacity for the past year reports 5 percent of its output as being sold in Germany, Holland, and Mexico. The volume of business is steady due to an established trade in standard brands not subject to the price fluctuations arising in world wheat prices. However the mill is not making a strong bid for export business and prefers domestic

90. Letter from E. B. Sewell.

trade. A 1,000 barrel mill reports no direct export business. Two or three cars of flour are sold each year to exporters, but the percentage is only a fraction of one percent of the mill's total output. Another mill of 1,500 barrels capacity reports no export business whatever, although it has exported in the past.

A 2,000 barrel mill in central Kansas reports about 2 percent of its sales with Latin America. From 1900-1909 this mill exported 80 percent of its output, mostly to the United Kingdom. Since that time the domestic trade has been given most attention with the result that the export business has been practically neglected.

The manager of another 2,000 barrel mill has this remark to make: "Years ago before the large Canadian wheat fields were opened Kansas was on a competitive export basis most of the year. Of later years, however, American mills have been gradually driven from the export markets, with the exception of those mills at Buffalo and others around the Great Lakes, which are milling cheap Canadian wheat.

It is very evident that the United States is gradually going to a domestic basis, unless there should be a big acreage opened up in Texas where wheat can be grown on a large scale, which would enable millers

located near the Texas wheat fields to grind flour for export. Export business, in our opinion, is a thing of the past for mills which are not located either along the Great Lakes or in Oklahoma and Texas." (91)

An 800 barrel mill selling 10 percent of its output abroad reports its export business on the decline. The reasons given are: strong competition from Canada, and the presence of a large milling capacity abroad. The foreign trade of this mill fluctuates widely from year to year, depending on world wheat crop conditions. When the United States has a large crop and foreign countries do not, export trade in flour improves. Last year, there being a wheat surplus all over the world, Kansas flour was in little demand in the export markets.

A small mill of only 400 barrels, which sells its export flour through export jobbers, reports its export sales at from 2 to 20 percent of output depending entirely on the market. Another 1,000 barrel mill reports a heavy export of flour from 1915 to 1920. Since that time, however, its export business has steadily declined until at present only 10 percent of output goes for export.

91. Letter from E. B. Hackney.

A 2,500 barrel mill reports that 26 percent of its output went for export during the past year. This is very unusual. For several years the mill has exported from 25 to 35 percent of its output. The percentage of its export trade is on the decline, however. The cause given for this is that Canadian mills can sell at lower prices. A 600 barrel mill reports its annual exports at about 15 percent. The percentage for the past year was 5 percent, due to a world over supply.

A good illustration of what is being done by millers in regard to the export trade is shown by the policy of the management of the 1,500 barrel mill in Lawrence. This mill is comparatively new, has excellent transportation facilities, and is afforded ample and cheap power from its dam in the Kansas River. The mill has done an export business in the past, but 1925 has been the only year since the war when any great amount of flour has been exported. Today the mill is entirely on a domestic basis. The mill has built up a splendid domestic trade, operating at 95 percent capacity during the past year. This is exceptional, being far above the average for all mills. (92)

92. Interview with R. C. Jackman.

The variation in the export trade of the mills is due to various reasons. The causes include changed in wheat production and prices in this and exporting countries, and changes in their capacity to mill flour for themselves. The abnormal war demand, accompanied by Russian absence in the field of competition, gave us temporarily a larger share of the trade than in pre-war times. Exports are at a lower ebb now than before the war, and a state of decline seems to be operative.

The export trade of Kansas flour will be influenced to some extent by whether or not the United States continues to produce a surplus of wheat. If the time ever comes when the country as a whole fails to grow enough wheat to meet the country's demand for flour, the export of Kansas flour will cease. The entire output of the state will be consumed domestically in view of the fact that the Government will likely protect home industry with high duties, which will make it advantageous to the Kansas miller to sell his product at home. If this condition ever arises, only those mills near the Canadian border milling wheat in bond will continue to export.

Provided the per capita consumption of flour remains the same, and population continues to increase,

the exportable surplus may disappear.

If the United States has reached a point where crop rotation and diversified agriculture are substituted for frontier methods of producing wheat, there may be a decreasing wheat acreage. Wheat acreage increased from 15,000,000 acres in 1866 to 52,000,000 in 1899 and to 75,000,000 in 1919, due largely to the stimulus of war needs. The acreage declined to 58,000,000 acres in 1923. Nevertheless lands which have gone out of use for growing wheat can always be brought back into such use if the demand for wheat is great enough.

Furthermore, yields can be increased by intensive methods, crop rotation, and the use of fertilizer. However this would mean higher costs and higher prices. American millers could not likely compete in foreign markets under this handicap. If the quality of wheat were improved, sufficiently American millers may have a great enough advantage to place them on a competitive basis with Canadian millers, as well as the millers of other countries.

Even with a surplus of wheat our export of flour may cease since the milling capacity of Europe is large. As soon as the industry completes its recovery from the war, millers in Europe will supply the demands of European people for flour and have some to export. The

market in Europe for Kansas flour is declining and promises to cease entirely. Due to high import duties, European countries absorb wheat rather than flour.

A removal of the American protective duties on flour may cause a decline in the milling industry in this country in the face of Canadian competition. A removal of the protective duty on wheat with a retention of the duty on flour might increase our exports tremendously due to a large supply of cheap wheat for milling purposes. Present exports consist mainly of three types of flour: clear flour exported because of a lack in markets at home, medium grade straight flour from wheats whose qualities do not meet American requirements, and high grade flours made from hard wheat. The exportation of the first two classes promises to end very shortly. The last may continue, provided a supply of high grade hard wheat is available. (93)

Unquestionably the future market for Kansas flour, if there be one, is in Latin America. There is no indication that Kansas millers will be able to hold this market. Canadian competition is becoming severe. Many South American countries produce large quantities of wheat.

93. B. C. Kuhlman, Development of the Flour Milling Industry.

With the development of a large milling industry in these countries, it is likely that the demand for flour will be met from within.

This narrows the field down to a very small market composed of Central America, the West Indies and part of South America, at least for the present. With several countries competing for this small trade, the outlook for Kansas export flour is not promising. Then, too, should a large milling capacity spring up at Texas seaports, it appears that the Latin American demand for flour will be met largely from this source of supply, especially that part of the demand which is now being met by Kansas mills.

That Kansas mills are losing ground, there can be no doubt. Too many handicaps are being encountered. Briefly they consist of preferential freight rates favorable to wheat, both by rail and by water, competition from Canada, Argentina, and Australia, the presence of a growing milling industry in countries which have usually imported flour, competition from the Great Lakes mills which have a supply of cheap wheat due to "milling in bond" privileges, distance from markets, the rising industry in Oklahoma and Texas, and high protective tariffs in foreign coun-

tries which drain wheat rather than flour from Kansas.

In the face of all these discouragements it is not surprising that only a few Kansas mills are exporting large quantities of flour at the present time. No wonder the millers are more interested in establishing a good domestic business. The miller must save his own skin and the future market for his product seems to be right here at home.

This situation is not necessarily a cause for discouragement on the part of the millers. If they can continue to sell on satisfactory terms in the domestic market, why lament over the loss of the export trade? The area for raising hard winter wheat is more or less limited. At present Kansas furnishes about one half of the total stock produced in this country. With the great demand for flour milled from hard wheat it seems likely that Kansas millers will be able to meet home competition. Located in the midst of the hard wheat area and always sure of a supply of good milling wheat, Kansas millers are rightly developing their domestic trade and have no great cause for alarm because their export market is being restricted.

Perhaps the importance of the Kansas flour export trade at the present time has been underestimated in this

work. It is true that the larger mills of the state, for the most part, are doing a considerable amount of business. Some of them are exporting a large percentage of their total output, but the prevailing tendency is a decreasing foreign business in every case. One 4,000 barrel mill in Kansas, averaging 70 percent of capacity for the past year, exported 40 percent of its flour output. This mill reports sales to the United Kingdom, Belgium, Holland, Denmark, Norway, Sweden, Finland, Germany, Czecho-Slovakia, Austria, Italy, Palestine, Egypt, Greece, Malta, Iceland, the Guianas, Venezuela, Columbia, Ecuador, Panama, Costa Rica, Guatamala, Honduras, Cuba, Porto Rico, Guadelaupe, Martinique, Jamaica, Trinidad, Barbadoes, and Curacao. In other words, this mill exported to practically every market where Kansas flour goes.

The mill has built up its wonderful trade by really getting out and making an effort to establish its product abroad. The export manager of the mill returned from the South American market only a few weeks ago and today (April 24, 1929) he is sailing for Europe to visit all the markets with which his mill does a business. The mill's export business has actually increased since the World War. The

amount of business increased steadily until about two years ago. Unfortunately, there has been no increase in volume of foreign sales lately and export sales promise to decline, due to the establishment of high import duties in European markets as well as the preferential duties in British possessions.

There is probably not another mill in the state that enjoys so large an export business. Several of the larger mills, no doubt, are exporting around 20 percent of their output. Many of the larger mills are making little effort to build up their export trade. Perhaps if they were required to do so, they would be able to make a more favorable showing in disposing of flour abroad. In general, the conclusion to be drawn is that the amount of Kansas export flour is tending to decrease and that Kansas millers are, for the time being at least, seemingly more interested in the domestic trade.

Bibliography.

Public Documents.

- Kansas State Board of Agriculture Quarterly Reports, September, 1920; March, 1914.
U. S. Department of Agriculture, 1900 Yearbook.
Douglas, Richard L., A History of Manufactures in the Kansas Fuel District.
Kansas Historical Collections, Volume XI, June, 1910.
Commerce Reports. Trade Information Bulletin No. 306.
Mexico as a Market for United States Goods. 1925.
Trade Information Bulletin No. 279: Markets for Flour in Central America. 1924.
Trade Information Bulletin No. 570: Flour Markets of South America. 1928.

Books.

- Edgar, William C., The Story of a Grain of Wheat. 1925
Dodlinger, Peter T., The Book of Wheat. 1912
Burch, Lawrence D., Kansas As It Is. 1878
Smith, Rollin E., Wheat Fields and Markets of the World. 1908
Kuhlman, Charles Byron, The Development of the Flour Milling Industry. 1929
Hints on Exporting, The Miller Publishing Company: 1910

Periodicals.

The Southwestern Miller.
The Northwestern Miller.
Boletin Commercial De Cuba.
The Northwestern Miller. Almanack and Year Book of
the Breadstuffs Industries.

Thesis;

Johns, Vernon O., The Development of the Flour Milling Industry in Kansas. 1926
Wolf, F. E., Railway Development in Kansas. 1917

Other Sources of Material Used in This Thesis.

Questionnaires filled out by the principal millers of the state.

Personal letters from mill owners, managers, and export sales managers.

Interviews with millers, export sales managers, trade publication editors, and others interested in the grain and flour trade.