Does Iowa "Dump" Its Grain?

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Does Iowa "Dump" Its Grain?

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AMES, IOWA
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SUMMARY

Do the farmers of Iowa dump their cash corn and oats on the market at harvest time, or are their sales well spread out thru the year? Do they sell their grain when prices are high, or do they hit the low price spots rather than the high ones?

For corn, the answer is different for different parts of the state.

In the Eastern Central Meat Area, they do not dump their corn. In fact their manner of selling is the reverse of dumping. The farmers in that area sell only 40 percent of their cash corn in the winter half of the year, and carry 60 percent of it over for summer prices.

In the Cash Grain Area, however, corn sales are distributed fifty-fifty between the winter and summer halves of the year.

In the Western Meat Area, the two western tiers of counties, farmers do dump their corn to some extent, selling 60 percent of their cash corn in the winter half of the year, and only 40 percent in the summer.

The reason for these differences appears to trace back to the different types of farming in the three areas. Apparently, the more important cash corn is as a source of income, the more likely is it to be sold when the owner needs the money in the winter, regardless of the price outlook.

Oats are dumped on the market heavily at harvest time all over the state. But this does not involve much loss, since the price of oats is more stable than the price of corn and on the average rises after harvest little more than enough to cover the costs of storage.
Does Iowa "Dump" Its Grain?

By GEOFFREY S. SHEPHERD

The price of corn seems to be always on the move. It goes up one day and down the next; it simply will not stay put. And it has been getting worse since the war.

It may be resting quietly at a normal level and then suddenly jump up 30 cents a bushel in two months, as it did in 1926 and again in 1927. On the other hand, it may tumble 20 cents in three months, or 30 cents in four, as it did in 1925. Sometimes it rises thru the season, sometimes it falls—and falls hard.

Now the farmers of Iowa sell more than 50 million dollars worth of corn a year as cash grain. The question is, do they sell it at the right times? Do they hit the high spots in the market, or do they sell at the wrong times, when the price is low? Farm sales of corn fluctuate widely from month to month, perhaps as much as prices do. It makes a lot of difference to the pocketbook whether the fluctuations of sales and of prices hit or miss each other.

Most people think that farmers dump their corn on the market in the winter when the price is low as a result of that dumping; then when summer comes and the price goes up, they have no corn left to sell.

The question is, do they? The records for the last few years will tell us. On the one hand we have a record of the price of corn by months; on the other we have the data showing for each month for the last five years the amount of corn shipped out of every town in Iowa. Let us put these two series together and see whether our farmers sell their corn at the right time or not.

The simplest thing to do would be to compare the state total of these shipments of corn with the movements of corn prices. But Iowa includes several different types of farming areas, and these areas differ in the amounts of corn they sell and the times of year at which they sell it.

We have therefore mapped out the three separate areas in the state which sell their corn differently, the eastern central, the cash grain and the western livestock. These areas are shown in fig. 1, the location of the borders being based upon type of

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1 Prepared under the general supervision of P. L. Miller, assistant chief, Agricultural Economics Section, Agricultural Experiment Station, to whom the author is much indebted.

The author also wishes to give credit to R. C. Bentley, who carried on the work of systematizing and tabulating the monthly reports on shipments as they came in from the railroads, after the author got them going in 1925. Mr. Bentley has presented and discussed these data in Iowa Agricultural Experiment Station Bulletin 252, "The Movement of Iowa's Commercial Corn and Oats." The shipments information in the present circular is drawn up from the same original monthly county data as those on which Bulletin 252 was based.

The question as to whether it pays to store corn from winter to summer is discussed fully in Iowa Agricultural Experiment Station Circular No. 113, "When Shall We Sell Our Corn?"
farming as well as on corn sales data. The areas are described in Appendix 1 at the end of this circular.

We shall take up the areas one by one and see whether the farmers in each section do dump their grain on the market at inopportune times, or whether they market it wisely and well.

The Eastern Meat Area

The first area which we shall consider is the Eastern Meat Area. This is the smallest area of the three, not only in geographical size but also in sales of cash corn per county.

The first thing we want to know is simple. Do the farmers in this section dump most of their corn on the market in the winter, or do they hold most of it over to the following summer when the price of corn is at its peak?

Figure 2 answers this question for us. (The figures on which all these charts are based are given in the Appendix.)

In the preparation of fig. 2 the corn year November to October was used, rather than the calendar year January to December. This corn year was then cut into halves. The first six months, November to April, are called the first half of the year. This is the winter season. The second six months is called the second or summer half of the corn year.

The chart shows, then, the total amount of corn sold in the first or winter half of the year, compared with the total amount of corn sold in the second or summer half, when prices are usual-
ly higher. The average price of No. 3 yellow corn at Chicago is also shown in the same chart.

It will be seen that this area does not "dump" its corn on the market in the winter. On the contrary, most of its sales are made in the summer. Only 40 percent of its total sales are made in the first half of the year; 60 percent of its cash corn is held over for summer prices and sold in the second half of the year. This is the reverse of the dumping of which farmers are usually accused.

That is the answer to our first question. But we want to know more. How do the average shipments run by months?

Figure 3 will answer this question. It shows the average of the monthly shipments from this area and average prices at Chicago for the last five years. It brings out the fact that the movement from this section is comparatively uniform throughout

![Figure 2. Average shipments of corn, East Central Area.](image)

![Figure 3. Average monthly price of corn compared with average monthly shipments.](image)
the year; except for the low point reached in April, shipments do not fluctuate greatly from month to month.

The gradual increase in shipments which starts in December drops down in March and April to the low point for the year. From then on the shipments rise until they reach their peak in September and October. The price of corn is at its peak in August.

This has shown us the average monthly sales of corn and the average price movement. But the third question still remains. How well did our farmers actually sell their corn, not on the average, but month by month thru the whole period 1924-1928? To answer this question we must turn to the original data on monthly prices and monthly shipments, which are presented in graphic form in fig. 4.

The upper line in the chart shows the price of No. 3 Yellow corn at Chicago; the lower uneven line shows the sales in this section each month. Study of the chart makes clear that this section markets its corn fairly well, month by month, as well as on the average. Let us follow it thru year by year, starting with January 1924 when our data begin.
The data for 1924 show that the price of corn during the first half of the year was below 80 cents a bushel but that for the second half of the year it shot up to about $1.10, reaching the peak in August at $1.17. The chart shows that the heaviest shipments were made in the second half of the year, especially in August and September when the price was at its highest. This was good marketing. The heavy sales hit the high price points pretty well.

In 1925, however, the area was caught. It followed the same practice of marketing more corn in the second half of the year than in the first. (Remember that the ‘year’ to which we refer here means the crop year November to October, not the calendar year January to December.) But this was a year following a very short crop; the 1924 corn crop was 19 percent smaller than average. In such a situation, we know that the price may be expected to fall rather than rise as the season progresses; shipments, therefore, should be made early in the year. The fall in price from the $1.24 peak in January 1925, which actually did occur, caught the heavy shipments made in August, September and October rather badly.

In 1926 the farmers in the Eastern Meat Area did better. The price was high at the beginning and the end of the year, and low in the middle. So were the shipments. Some of them applied the lesson they had learned in 1924—applied it wrongly—and sold early in the year. Others remembered previous average crop price movements and sold late; but the way the price happened to behave that year, both early and late sellers missed the low prices which came in the middle of the year.

In 1927 these farmers sold their corn fairly well. They missed the low point in March and April and sold heavily on the upturn that began in May and carried on to June and July. For the remaining four months of the year they sold most of their corn before the price tumbled in October.

In 1928 they did well also. That year the price rose until the middle of the year and fell thereafter. Their heaviest shipments were made about the middle of the year, hitting the high price peak very nicely.

All things combined, then, the price and shipments data from this Eastern Meat Area disprove the general notion that farmers do not sell their grain at the right times.

First of all, the records show that on the average the farmers of this area sell most of their corn in the second half of the year when the price of corn is high. They do not dump most of their grain on the market right after harvest when the price is at its lowest point. We have to admit that they do let a good deal of their corn go then; they could do much better than they actual-
ly do; but considering their lack of market information, they make out pretty well.

Further, the original monthly data show that these farmers market their corn wisely, not only on the average but also year by year and month by month. They disprove the charge that farmers hold back their corn when prices are rising and hold on to it until prices break and eventually force them to sell at a loss—and the similar charge that they sell when prices are falling and thereby cause them to fall farther.

On the contrary, the charts show that the farmers in this area have to a considerable extent sold most of their corn when prices were rising or were high and have refrained from selling when they were low and were expected to recover later on.

The Cash Grain Area

The next area we shall consider is the Cash Grain Area in the northwest central part of the state.

Figure 5 shows the shipments from this area in the first half of the year compared with those made in the second half. Curiously enough, they are exactly fifty-fifty. That is, half of the corn is sold from this area in the first half of the year and half in the second. This may be contrasted with the shipments made from the first area; there, only 40 percent of the corn was sold in the first half of the year and 60 percent in the second.

But this is not enough. We want to know how evenly the sales run month by month. This information is given in fig. 6, which shows the average monthly shipments and prices for this area in the same way that fig. 3 showed it for the eastern central area. The price curve is the same for both charts, but the sales by months for this second area are evidently quite different from those for the first.

Altho the shipments are equally divided between the first and second halves of the year, they are differently spread thru each half. Within the first half, we see, they are pretty much bunched up in the three winter months, December, January and February.

What is the reason for the heavy winter shipments, and why are they ‘bunched’ as they are?

There are several reasons for this. First, the percentage of tenancy here is the highest in the state. Nearly 54 percent of the

Fig. 5. Average shipments of corn, Cash Grain Area.
farms in this section are rented; and of this 54 percent, two-thirds are on a share rent basis, and nearly one-third is rented for cash.

Now cash renters have to meet their rent payments on January 1 or March 1. Share renters too have to pay cash for their hay and pasture rent, usually in January. Since cash corn is a bigger source of income here than anywhere else in the state, farmers in this area meeting these cash rent payments to a great extent from the proceeds of their cash corn would be likely to sell a lot of their corn in December, January and February, the months during which the movement from this area is in fact the greatest.

Another important fact must also be taken into account. Nearly three-quarters of the leases are one year contracts. About one-fourth of our renters move to new farms on March 1, as anyone who has driven about the state on that date can testify. The corn that they own generally has to be sold before they move, no matter whether they wish to sell it then or not. Again, the contract usually stipulates that the tenant must haul the landlord’s cash corn to market free of charge. In cases where the tenant is moving, the landlord therefore usually prefers to sell his corn before March 1 in order to get it hauled to town for nothing.
But the reasons can not all be laid at the door of the tenant. Nearly half the farms in this region are run by their owners. Are they under any compulsion to sell their corn in the winter?

Most of them are to some extent. Mortgage payments usually fall due in January or March, for one thing; and another thing that affects owners and tenants alike is that proper cribs for storing corn on the farm are usually scarce in the Cash Grain Area. Farmers have a tendency to provide properly for the grain which they are storing for feeding purposes but tend to dump the "surplus" corn, which is going to be sold for cash, outside, or in any kind of rough crib. Such corn has to be shelled and sold in the winter.

Altho a great many of the farmers in this section do hold their corn over for high summer prices, it seems that a lot of them sell theirs in the winter for reasons not connected with price considerations at all.

Let us now see how the area marketed its corn month by month and year by year. The original monthly data are presented in fig. 7.

This chart is the most difficult of the whole series to follow.

![Diagram](image-url)
because the monthly fluctuations in shipments are so erratic. We shall not follow it thru year by year in detail. The reader may do that for himself on the same general plan that was carried out in the preceding section.

All that we shall take space to point out here is the rather strong tendency for heavy sales to be made in the three winter months December, January and February each year without regard to the price outlook, and sometimes in defiance of it.

In 1925, for instance, winter shipments (in the first few months of 1925) were more moderate than usual. But that was the year when they should have been heavy.

Again, the shipments made in the winter of the first part of 1927 were the heaviest for the entire five years. But the price then was at its lowest for the whole period. They did respond well, however, to the great rise in price later in that year.

Finally, in 1928, perhaps as a result of their 1927 experience, these farmers stopped their habit of heavy winter sales and got the benefit of the higher prices which came later in the season.

On the face of it, then, it looks as if this heavy cash grain area does not market its cash corn as wisely as the Eastern Central Area, which we considered first. What are the reasons for this?

There is no reason for supposing that there is any difference in the "market mindedness" of the farmers in the two sections; if anything, we would expect that the farmers in the Cash Grain Area would know more about marketing corn than those in the Livestock Area. Cash corn is a major enterprise in the Cash Grain Section; a third of the corn produced there is sold for cash. We would naturally expect to find the farmers there better posted on grain market conditions than those in the Eastern Central Area, where only 10 percent of the corn produced is sold for cash; because the sale of their cash grain means so much more to them in dollars and cents. Yet the reverse of this is true. The farmers in the Cash Grain Area, where cash corn is a major source of income, do not appear to market their corn as wisely as do the farmers in the Eastern Central Area where cash corn is only a side line.

The reason for this may well be that the more important cash grain is as a source of income, the more likely it is to be sold when the owners need the money, rather than when the price is at its peak. That is, the need for money at a certain time may be a much more important influence than the price outlook in determining when corn is sold. Perhaps the farmers in the Eastern Central Area sell their corn at the right times precisely because they are not relying upon the proceeds from the sale of their cash corn to meet certain payments, because the cash
received doesn't amount to much. They can therefore sell their corn whenever the price prospects are best.

Another consideration also enters in. Many of these eastern livestock farmers hold over a small surplus of corn until summer, not because they expect a higher price for it then, but simply because they want to be sure to have enough corn to supply their feeding needs should the next corn crop be unusually small; when the next corn crop is safely in sight by July or August, they can then let the rest of their old corn go. If this is true, it appears that they are simply lucky in that the time of year when it is best for them to sell their corn happens to be the time when the price is at its highest.

This explanation seems to be borne out by the charts for the Eastern Central Area for the year 1924, in which the corn crop was exceedingly small. In that year we find that corn sales in July, August and September were much smaller than usual, even tho the size of the preceding corn crop was as large as or larger than average.

Let us turn to the third and last area. Perhaps it will throw further light on this question.

**Western Meat Area**

The last section which we shall consider is the Western Meat Producing Area. It consists of the two western tiers of counties bordering the Missouri, running the length of the state from north to south. This is the heaviest beef cattle and hog producing region in the state.

By reference to fig. 8 we see that this area differs in one important respect from both the other areas we have studied. It ships more corn in the first half of the year, that is, in the winter, than it does in the second half. The first area we discussed (the Eastern Central Area) sold 40 percent of its cash corn in the first half of the year and 60 percent in the second; but this Western Meat Area reverses those proportions and sells 60 percent in the first half and 40 percent in the second.

The next chart, fig. 9, goes a little farther into the data and shows the average movement by months, compared with the average price at Chicago, also by months.
It is apparent that this area, even more than the Cash Grain Area, sells most of its corn in December, January and February. From March on, however, the shipments fall off to about half the January and February figures and, except for a drop in April, maintain that level steadily for the rest of the year. As far as price alone is concerned this area therefore appears to sell most of its corn at the wrong time.

This opinion is still further brought out by fig. 10, which shows the original monthly data on sales and prices together.

The shipments in this chart show a regular cycle, high in winter and low in summer, with apparently no attention to price movements at all. The price goes up at some times and down at others; but the regular cycle of heavy winter sales and light summer sales persists regardless of price changes.

The reasons for this apparently are similar to those we found in the case of the Cash Grain Area. The amount of cash tenancy in this third area along the Missouri is the highest in the state; 22.4 percent of all these farms are rented for cash. It looks much as if the farmers of this area sell their corn when they have to meet their cash rent or when they move off their farms on March 1 rather than when the price is right. This characteristic shows up even more markedly here than in the case of the two other areas we studied.
Fig. 10. Monthly prices of corn compared with monthly shipments, Western Meat Area.

Apparently, the more important cash corn is as a source of income, and the more urgent the payments are which have to be met, the more do we find corn sold in response to the need for money and in defiance of the outlook for the price.

Selling Our Oats

So far we have dealt only with corn. A similar study of the way Iowa farmers sell their oats will be useful not only in itself but for the added light it may shed on the corn situation. Let us study the records for oats sales and prices as we did those for corn.

We find important differences between the two crops.

In the first place, examination of the original monthly county data shows that no division of the state into different areas is necessary. The seasonal movement of oats is much the same all over the state. We shall therefore simply use state totals for shipments.

Oats are sold heavily at harvest time. That is indicated by fig. 11, in which the shipments made in the first half of the year
(August to January) are compared with those made in the second. The percentages are 66 and 34 respectively.

The average monthly shipments and the price movements are shown in fig. 12. The seasonal nature of the movement of oats is evident. The shipments made in August outweigh the total for any other two months, and if we exclude September and October they easily outweigh those for any other three. It should be remembered, too, that many country elevator men make a practice of filling their houses with oats soon after the harvest, hedging the grain and storing it for months to earn the carrying charge. Sales of oats from the farm therefore are even heavier in August, September and October than the chart shows.

Now why do farmers sell so much of their oats in the first half of the oats year when the price is at its lowest? There are several reasons for this.

In the first place, the price of oats rises only about 6 cents on
the average from August to the next June. We have found in a previous study, Circular 113, "When Shall We Sell Our Corn?," that the net costs of storing corn on the farm amount to a cent a bushel a month. The figure for oats, owing to their lower value and lesser weight per bushel, would be only about half this figure—about half a cent a bushel a month.

This, however, would make the cost of storing oats from August to June roughly 5 cents a bushel, which is almost as great as the normal price rise. It is therefore evident that one does not gain much by holding his oats for higher prices later in the season. And if by selling straight from the threshing machine the cost of a bin can be entirely avoided, heavy sales in August may be wise.

Study of the original monthly data in fig. 13 bears out this opinion. The price of oats appears to be much more stable than the price of corn, except for the year 1928. In 1928 the price rose before harvest and fell immediately afterwards because of an unusual combination of short farm supplies from the old crop on the one hand and plentiful supplies from the new bumper crop on the other. The data for the other years show that the

![Figure 13](image-url)
price of oats generally runs along evenly from one month to another.

As a matter of fact, in some respects the question of marketing oats at the right time is different from marketing corn. The prices of the two grains behave differently. For one thing, corn and oats are different in the way they have to be handled.

As far as the grain trade is concerned, oats are a finished product as soon as they are harvested. They can be bought direct from the separator and stored in volume in the local and terminal elevators of the grain trade, whenever they are in excess of the current demand, without risk of loss. On the physical side of the matter there is ordinarily no question of their going out of condition; they are very imperishable, as farm products go. On the price side, the oats are usually not merely carried along in the hope of higher prices, as they would be on the farm, but are hedged, on the basis of more or less full knowledge of the different inter-market and inter-option spreads. The grain trade can utilize such advantages as these to the full in handling a crop like oats.

But corn is different. Until summer comes, it is not an imperishable product like oats. It is only a half finished product when it is harvested; it generally contains so much moisture then that it runs the danger of going out of condition in the shelled state in which the grain trade has to handle it, if the weather warms up much above freezing. Winter-shelled corn cannot be shipped to Gulf ports, nor stored in local and terminal elevators in the Corn Belt except at the owner's risk, unless it has first been artificially dried; and this drying spoils it for many commercial uses and besides is rather an expensive process.

Corn shelled and sent to market in the winter in excess of current trade demand, therefore, has to be handled under difficulties. A commercial "surplus" of wet winter-shelled corn on the market is a troublesome thing to take care of. The trade can't store a seasonal surplus as cheaply and efficiently as the farmer can, because corn is still on the cob while the farmer holds it but is shelled when the trade gets it.

Now while shelled corn in the channels of trade is often a perishable product, corn on the cob in the crib on the farm is as imperishable as oats. As long as it is mature and sound to begin with, it does not go out of condition like shelled corn does; on the contrary, ear corn cures up naturally and improves in grade.

It is therefore up to the farmer to "orderly market" his corn himself; he can't dump it on the grain trade and let the trade handle it for him as he can with his oats. The trade can "feed the market" with his oats without much danger of loss, perhaps in some cases as cheaply and efficiently as the farmer can...
fact that the average seasonal price rise of oats is only just about great enough to cover farm storage costs would seem to indicate that.

But it is clear that the trade can’t ‘‘feed the market’’ with corn as cheaply as the farmer can; the average seasonal price rise for corn since the war has been 15 cents—twice the farm cost of storing it from December or January to August. The reason is that the farmer can keep his corn in good condition on the cob in his crib, easier and about half as cheaply as the grain trade can keep it shelled. The point at which the flow of corn should be controlled therefore is not located somewhere along the channels of the grain trade but is right at the source, at the crib on the farm. And the man to do the controlling is the farmer.

Conclusion

Well, what of it? This has perhaps been interesting to read, and it is worth something to know how Iowa farmers actually do market their grain in different parts of the state; it adds to our general knowledge. But does it also mean something directly useful to you as a farmer, in terms of dollars and cents? Does it mean something to your pocket book?

It does. If you live in either the Western Meat or the Cash Grain Area, it means that you have been selling a good deal of your corn at times for less money than you could have sold it for at other times. The question is, can we do any better in the future?

We probably can make some improvement. We have more
market information now than we used to have. We know more about the costs of storing corn and the reasons for the behavior of corn prices. These things help in deciding the best time to sell corn. On the one hand, we can work out about how much it costs to hold corn on the farm; and on the other, we can get some light on when the price is likely to rise more than enough to cover those costs and when it is not.

Some information on these points may be obtained from a publication recently issued by the Iowa State College, Circular 113, "When Shall We Sell Our Corn?". It is shown there that the "shrink" of corn held in the crib is offset by the resulting improvement in grade, so that the net cost of storing corn runs at a constant figure of about 1 cent a bushel a month. It is further shown that, on the average since the war, the price of corn has risen 15 cents from December to August, which is 7 cents more than it costs to store it.

One might suppose from this that it would pay every year to hold corn from winter to summer. Obviously this is not true. The price does not always rise enough to cover the costs of storage. Sometimes it falls, as it did in 1925, instead of rising thru the season.

One of the main reasons for this seems to be the size of the corn and oats crops. The bigger the crop, the lower is the price depressed in the winter, because farmers in general sell a larger percentage of such crops than they do of smaller ones. The price rise from then to the following August is therefore usually greater than it is after a short crop.

One would therefore feel reasonably safe in holding corn from winter to summer when the crop is large; conversely, in most cases of small crops he would do as well to sell at once in the winter; especially is this true if the crop is very small. These practices will usually be profitable so long as the general seasonal marketing of the crop remains as at present.

Many other factors besides the size of the crop affect the seasonal price rise, but the size of the crop is probably the most important single guide to follow.

With the basic information given in Circular 113, and the situation shown in the present publication, one more step is necessary. That is, to keep in touch with the current market information now published regularly by the United States Department of Agriculture, the trade papers and other agencies. With help from these sources, some progress can be made toward selling our corn at the right time; this will not only bring in higher immediate money returns but will also pave the way for somewhat greater stability of corn prices.
APPENDIX NO. 1

Our Eastern Central Area does not correspond with the Eastern Meat Area which Dr. C. L. Holmes outlined on a production basis on page 132 of his bulletin, Agricultural Experiment Station Bulletin No. 256, "Types of Farming in Iowa." It was outlined more for the homogeneous nature of its corn movement than of its production characteristics. But the other areas, the Cash Grain Area and the Western Livestock Area, do coincide roughly with those outlined under the same names by Dr. Holmes.

The Eastern Central Area comprises eight counties: Franklin, Butler, Hardin, Grundy, Black Hawk, Marshall, Tama and Benton. This section has characteristics of its own, in that its eight counties all ship out about 10 percent of the corn they produce, feeding the rest mainly to hogs and cattle. The sale of cash grain is only a sideline compared with livestock production.

The second area, the Cash Grain Section in the northwest central part of the state, is of course the region of heavy grain production. Dr. Holmes in his bulletin says of this area . . . . "Note the outstanding importance of the two intensive grain crops, corn and oats. Corn occupies nearly 40 percent of the farm area in this region and oats is within 25 percent as important in terms of acres. These two crops together occupy between 65 and 70 percent of the total farm area. Pasture acreage, on the other hand, is at a minimum as compared to the other areas of the state. It occupies only 20 percent, while hay occupies but about 7 percent.

"In view of the high yields of the two leading grain crops, it is easy to see that the region included in these particular boundaries is characterized by an especially heavy production of grain. We call it the Cash Grain Area, not because the most of this grain is sold immediately from the farm, but because a higher percentage of it is disposed of in this way than in any other part of the state. In certain counties fully one-half of the grain is sold off the farm. In other portions of the area livestock is more important and a smaller proportion of the grain is sold."

The third area is the western meat producing region, comprising the two western tiers of counties which run the length of the state from north to south along the Missouri River.

This section is the heaviest beef cattle and hog producer in the state. It leads in number of head of beef cattle and hogs per hundred acres of farm land. In this section, also, corn outranks oats in the proportion of two and one-half to one. That is, the acreage of corn is two and a half times as great as the
acreage of oats. A fairly high percentage of its corn is shipped out as cash grain, cash corn constituting almost a major enterprise, especially in the southern counties.

It should be borne in mind that corn is sold by farmers one or two weeks before it is shipped by the elevator man who bought it. Sales, therefore, come a little ahead of the shipments shown, but only a little, since corn is seldom stored for any length of time in the local elevator. In this respect corn differs from oats which are often stored in the elevator for months before being sold.

The Chicago price is used as the basis because in the absence of strictly local prices it is the most representative price for the different areas considered. Studies conducted by B. H. Frame, at the University of Chicago, show that Chicago draws corn not simply from the eastern sections, but from all over the state. Its price must therefore be roughly representative of more local prices. Short time fluctuations occur in the relation between interior and Chicago but on the whole the general movement up and down is pretty well correlated.

Further studies of the behavior of local prices and their relation to the movement of corn will shortly be undertaken by the Agricultural Economics Section. Study of the shifts in the movement of corn and oats, the changes in the flow of grain from one group of destinations to another, is already in progress. These researches will throw more light on the whole question of efficient grain marketing. The present circular simply opens up one or two preliminary angles of approach.

APPENDIX NO. 2

The figures showing the proportions in which corn is shipped in the two halves of the crop year are given in the table below.

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2 These figures on tenancy come from unpublished data prepared by J. P. Himmel of the Agricultural Economics Department.
### PRICE NO. 3 YELLOW CORN WEIGHTED AVERAGE PER BUSHEL—CHICAGO
#### 1924-1928 INCLUSIVE

Data from United States Department of Agriculture Reports

#### SHIPMENTS OF CORN BY DIFFERENT AREAS FOR YEARS 1924-1928
#### IN CARLOADS

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### OATS—NO. 3 WHITE: WEIGHTED AVERAGE PRICE PER BUSHEL
#### 1924-1928 INCLUSIVE

United States Department of Agriculture Data

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### SHIPMENTS OF OATS 1924-1928—IN CARLOADS, STATE TOTALS

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