Stability of production rather than violent or radical changes should be the guiding principle in making a farm program. While changes in agricultural production come about, they are the result of gradual evolution rather than of sudden revolution. The character of the investment, the nature of the products raised and the limitations on the type of production by soil and climate encourage a stabilized routine of production rather than frequent and radical changes. It is unwise to build a farm program for any year without looking both backward over a period of years and forward as far as possible. Experiences gained in the past are invaluable aids in deciding what it is wise and safe to undertake. Future prospects, as far as they can be determined, will indicate the wisdom of temporary emphasis upon the products which promise to be in demand and which can be produced without disturbing the general farm program.

In making a farm program, an inventory must be taken of all available resources from which to build. Every individual farmer should give consideration to the amount of land available, to the quality of the soil, the limitations of climate in his locality, the supply of power and labor available to him, and the capital at his command. These factors determine what commodities it is possible for him to produce.

What Can Be Sold

Equally important questions are "What will be in demand?" "What will my market take at a profit to me when my goods are ready to sell?" To have something to sell that someone else will want to buy is the objective of the program. Staple food products will always be in demand at some price. The products approaching the luxury class are the first to feel the effects when a business depression occurs. These facts should be kept in mind when the foundation for the program is laid.

Whether or not farm products will command good prices in 1929 depends in part on the quantity of such products raised but to an even greater extent on the ability of those in other industries to buy freely. The statement that "Agriculture is the foundation of business prosperity" has become axiomatic and universally accepted. That "Business prosperity is the foundation of profitable agriculture," is just as axiomatic. It is when industrial workers are fully employed and well paid that they buy most freely of food products and particularly of the finer quality goods. In the final analysis, it must be admitted that food products in one form or another constitute the major offerings from Minnesota farms. Some of the by-products, such as wool, leather and tow or linen, are used in the manufacture of wearing apparel or other manufactured articles but the value of these is relatively insignificant.

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Consumers Have Buying Power

The industries prospered in 1928. Recent estimates indicate that the total income of the United States for 1928 will reach the highest figure on record and that the per capita income also will be record breaking. Financial authorities and Government officials predict that the first half of 1929 will be equally prosperous and that favorable conditions will prevail through the year. There appears to be a slight depression in building construction that may be more than seasonal and higher interest rates may discourage new investments and development, but the production of steel, the manufacture of automobiles, the use of rubber, steel and chemicals in the industries, the agricultural implement output, road building, and industrial development, all promise to continue on a high level. Earnings of factory workers are slightly higher than a year ago and the earnings of corporations are at a high level. It is probable that consumer demands will continue on the same high level as at present and that the public will be able to purchase liberally of food and clothing products during the year to come.

Center the 1929 Farm Program on Livestock

At the present time livestock holds a favorable position in relation to grain and feed crops. Prices for all of the major crops grown in Minnesota are lower than a year ago, and without much promise for improvement. Prices for all livestock and livestock products, except sheep and hogs, are higher than a year ago with good prospects for sustained levels. The indications are that this relationship will continue favorable to livestock production through the year. So far as possible therefore the Minnesota farm program for 1929 should be built around the production of livestock and livestock products. The more economically these can be produced, the greater the profit from production. Attention therefore should be concentrated upon the provision of adequate feed crops produced at the minimum expense. The first step in the program should be to provide ample pasturage of good quality. No other form of feed keeps livestock in such good condition and at so small expense. Two avenues are open for the improvement of pastures, (1) to improve the quality of the pasture already available, (2) to include more land in pasture. Ample pasturage should be supported by an abundant supply of forage and feed crops. When the prices for livestock and livestock products are high good prices may be received for feed and forage crops marketed through these channels, even though prices for cash crops are at low tide. The use of more land for pasture and feed crops also reduces the amount of land that will be left for the production of grain or other crops sold for cash. Such action not only will give better returns from the operations this year but it will tend to bring crop production back into better balance and to build up soils that have been depleted by long cropping to grain. There seems to be nothing in sight to indicate radical changes in the relationship of prices for the various classes of livestock and livestock products for 1929.

The Dairy. The dairy business has continued on an even keel over a considerable period of years. The number of dairy cows in Minnesota has increased slightly during the past three or four years and there has been an increase also in the amount of dairy products produced per cow. For the United States as a whole, however, there has been no increase in number of dairy cows and heifers, though there has been an increase in production per cow. The demand has kept pace with the increase in production per cow and there seems to be no danger of over-doing the dairy market for the year to come. Dairy cows and heifers are in strong demand and buyers are coming into the state from the east and south for any surplus available. Dairy farmers should take advantage of opportunities to make good sales but should be careful not to reduce their own herds beyond the ability of their farms to support.
Another factor that will tend to prevent over production in dairy lines is the favorable prices prevailing for beef. Border line cows that can be milked when beef prices are low and dairy prices are high are quite as likely to support the beef industry in the year to come as they are to support the dairy industry. This will be particularly true where there is a shortage of labor.

**Beef.** It is possible that beef production will continue in a favorable position throughout the year. With abundant pastures and forage crops and with cheap grains it is possible to make good profits from the beef herds. Such production does not call for the expenditures in labor that are involved in dairy production. Those who are in a position to do so may well continue to maintain the foundation for beef production.

**Hogs.** Hog production throughout the past year has been somewhat less than in the year previous. The number of sows farrowed in the fall of 1928 was seven per cent smaller than in 1927, though more pigs were saved per litter. The indications now are that spring farrowed sows will be four to seven per cent less than were farrowed in the spring of 1928. This means that there will be fewer pigs offered on the market in the fall of 1929. An essential point in profitable pork production is to save all of the pigs possible from each litter farrowed. With fewer sows to farrow in the spring this point is of added importance this year. In view of fair prices for hogs and prospects for cheap feed crops it would seem advisable for Minnesota to plan for a generous pig crop in the fall of 1929. The farmers of Minnesota should bear in mind that hogs have been consistent money makers both in seasons of high prices and in seasons when prices were low. So long as feed crops remain low in price farmers do not risk much in increasing the hog crop. Eighty-five per cent of the cost of pork production is in feed. During the larger part of the year hogs are capable of feeding themselves. With cheap feed and but little labor, profit can be made in hog raising in spite of low market prices for hogs. Hogs will continue to be the real mortgage lifters.

**Sheep.** It is probable that the sheep industry has expanded about as far as it can be without serious breaks in prices. This does not mean that there should be any cutting down on sheep production. On many farms a flock of sheep can be kept at almost no cost to the farm and they bring in a considerable item of receipt from the lamb and wool crops. While they may not be a major factor in the income from many farms, a small flock can be made a very profitable side line.

**Poultry.** The American people continue to use poultry. Stocks taken at the present time indicate no significant surplus ahead and a continually steadfast demand for both poultry and eggs. It would seem wise therefore to maintain poultry production on the high level which it has gained and to continue to maintain the poultry enterprise on well organized farms. To make poultry one of the strong supplementary lines will round out the year's business on many farms and add decidedly to the family income.

**Feed Crops**

Corn is the leading feed crop and should be grown in generous quantities. The fact that corn may be low in price cuts but little figure in the problems of the farmer who has a large amount of livestock to feed. So long as prices for livestock and livestock products are high, good prices can be obtained for corn by feeding it. The carry-over from the crop of 1927 was insignificant. While a good crop of corn was grown in 1928 there is a large amount of stock on feed this year which feeders are carrying to good weights. It is probable that the corn supply will be well depleted before another crop is matured. There is nothing in the prospects for corn therefore to discourage the livestock men from growing an abundance for their own
feed. They may also have assurance that if there is a surplus it can be sold at a sufficiently high price to pay for the cost of production. An abundant supply of corn on a livestock farm is good insurance.

Barley stands next to corn in feeding value. Those who are growing livestock on farms where corn cannot be depended upon will do well to replace corn with barley as a feed crop. Between corn and barley we have the best farm grown finishing feeds available in Minnesota.

The oat crop has long been the favorite on most livestock farms. While it is not a particularly profitable crop to grow when sold for cash, it holds a strong place as a conditioning feed and for carrying dry livestock and work stock. In making the farm program therefore provision should be made for all of the oats needed to carry the work stock, the dry stock and the young growing animals. It is better to have a small surplus for sale than to be short of oats.

**Cash Crops**

While the signs favor the production of livestock and livestock products, the fact remains that there are a large number of farmers in Minnesota who must still grow cash crops. Buying into livestock is too expensive to begin at the present time. There are some who have neither buildings nor fences for confining livestock. These must grow something on the land and therefore are under the necessity of reverting to crops even though prices are not particularly favorable. For those having more land than can be profitably used in the production of feeds and forage for livestock the only alternative is to grow cash crops.

**Wheat.** Of the cash crops, wheat still holds first rank, particularly in western and northwestern Minnesota. While the world’s wheat bins are full at the present time and the prospects are for another good crop in competing countries, the fact remains that there is nothing that can be grown on a large scale that can compete with the wheat crop. According to the Federal Report for December, about 9 per cent less winter wheat was sown last fall than a year previously. It is possible that there will be less winter killing this winter than last and that there will be quite as much winter wheat harvested. However, those in spring wheat territory should watch the outcome of the winter wheat crop with a view to increasing their acreage if there is a decided loss of acreage from winter killing. Farmers in Minnesota who lost their winter wheat crop last year should recall that this has happened only once in the last six or seven years and that it may still be advisable to sow winter wheat next fall. If attention is given to well prepared land, to early seeding and to keeping down the expense of handling the crop by the use of modern machinery, profits can still be made at wheat growing. No other crop is so well adapted to the soil, climate and equipment of the farmers of western Minnesota as wheat.

**Flax.** Flax has been the most constantly profitable crop in the Northwest during the past six or seven years. The price of flax still remains favorable. With adequate tariff protection it seems probable that the price will continue favorable in view of the fact that the United States grows only a little over half of the flaxseed needed for crushing. It is true that yields of flax are sometimes discouraging. The low yields are due in large part, however, to the fact that flax is put in late, often on poorly prepared land or on land that has been poorly drained, and the crop is not given a show. By the use of wilt resistant seed sown in good season on clean, well prepared land there is no reason why ten or twelve bushels or even fifteen bushels of flaxseed can not be grown per acre in Minnesota. The average yield on all kinds of land for a number of seasons has been about ten bushels to the acre. That this yield can be increased by fifty per cent through attention to seeding and
cultivation and proper care of the crop is certain. While the acreage of flax on
most farms will not approach the acreage of wheat it seems safe to predict that the
profits on flax this year will be greater than on wheat.

Barley and Oats. In some sections one or both of these crops are favorite
cash crops. Where the soil and climate are especially favorable to high yields and
good quality either barley or oats may take a leading part in the production pro-
gram. On the whole, however, the best market will be found for them by feeding to
livestock on the farms where grown.

Potatoes. It is too early to predict what course should be followed in planting
potatoes. It is probable, however, that a sufficient number of people were
cought last year to reduce the acreage. It is unlikely that in 1929 we will repeat
the combination of 1928 of a large acreage and an extremely favorable season. Those
who have machinery for it, who have land well adapted to potato growing, and who
usually secure yields somewhat above the state average of 100 bushels, should plan
for a reasonable acreage. Those who are in doubtful potato growing territory where
low yields are obtained would better undertake to get their income from some other
source.

Sugar Beets. In the vicinity of sugar beet factories or within shipping
distance, farmers will do well to give consideration to the production of sugar
beets. While the crop involves a large amount of labor, this usually can be con-
tracted for and need not interfere with other farm work. At prices that have pre-
vailed and which are promised for the coming year, it is one of the most profitable
crops adapted to limited acreage.

Special Crops. Farmers should also give attention to the possibilities for
growing canning crops or other special commodities that in their locality promise
to attract good prices. The more land that can be used for these highly special-
ized crops, the less land there will be to devote to crops which must meet world
competition.

Keep the Expenses Down

In laying out the year's program one should give careful consideration to
keeping down demands for labor. Some farmers still complain because wages of farm
help are high. No more favorable indication of good incomes from farming can be
pointed out than high wages for farm labor. This simply means that wages are high
in the industries with which farmers must compete for their help. High wages in
the industries, as has been pointed out, mean that people in the industries can pay
higher prices for what they eat and wear and that they will utilize more and
different types of goods than when wages are low. Since the farmers and their
families perform the major part of the work on the farm they are the ones who re-
cieve good returns when wages for farm labor are high. As a matter of economy in
production, whatever the supply of labor, one should give attention to saving
labor wherever possible. Good pastures for livestock, self-feeders where they can
be used safely, running water available to all classes of livestock and in the
buildings, do much to reduce the labor load and result in economical production.
Machine labor, when there is enough for it to do, may take the place of high priced
human labor. All such possibilities should be considered and built into the program
if possible with a view to securing the greatest net return to the farmer for the
year's work.

Andrew Boss.
PRICE INDEX OF MINNESOTA FARM PRODUCTS

The prices of farm products which change from day to day and month to month do not all move in the same direction at the same time. Since some prices rise while others fall, it is often impossible to state even roughly whether the agricultural price level has moved upward or downward. Hog prices may fall from one month to the next by an amount which is practically equalled by a rise in sheep prices. This can not be taken to mean that one change offsets the other because of the much greater quantities of hogs marketed by Minnesota farmers than of sheep. The change in hog prices must be weighted more heavily than that of sheep in order to represent properly the price situation as it affects Minnesota farmers. Some device is needed which will combine price increases in certain commodities with the price decreases which occur at the same time in other commodities, and make this combination in such a way as to take account of the relative importance of each commodity to the farmers who have them to sell. The price index number has been devised to serve this purpose, and a series of monthly indexes for the price of farm products has been prepared recently for Minnesota. These indexes represent price changes in the sixteen major agricultural products of the state: wheat, corn, oats, barley, rye, flax, hay, potatoes, hogs, cattle, calves, lambs—sheep, chickens, eggs, butterfat and milk. The United States Department of Agriculture has prepared a similar price index number for the whole United States for several years, but since their index included as relatively important the price changes in cotton, it has been of little use as an indicator of the price movement of agricultural products in Minnesota, especially during the months when cotton prices moved in an opposite direction to the bulk of other agricultural products. Each individual state has need of its own agricultural price index if the proper commodities are to be included in the proportions in which they are sold by the local producers.

The Minnesota index has been computed for each month from January 1910 to the present time. Since an index number measures the average change between two periods, it is customary to designate one period as the base, call it 100, and show other changes relative to it. For the Minnesota index, an average of the corresponding months of the years 1924-25-26 has been taken as base, An average of the prices in the three Januarys of 1924-25-26 serves as a base (or 100) from which the price changes of other Januaries are measured. The same system is used for all other months. Thus the price index of 96.1 for November 1928 indicates a decrease of approximately 4 per cent when compared with the average of the November prices of 1924-25-26. Similarly, the December index of 94.9 shows a decrease of approximately 5 per cent as compared with an average of December prices of 1924-25-26.
These monthly indexes for the last five years are as follows:

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<td>106.1</td>
<td>110.1</td>
<td>109.0</td>
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<tr>
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<td>84.8</td>
<td>107.3</td>
<td>107.4</td>
<td>98.2</td>
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<tr>
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<td>104.5</td>
<td>100.5</td>
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<td>September</td>
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<td>102.7</td>
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<td>92.3</td>
<td>104.0</td>
<td>104.3</td>
<td>95.6</td>
<td>94.9</td>
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Average 88.7 104.3 107.6 103.0 101.3

*Preliminary figures from July 1927 to December 1928.

Due to the fact that all the quantity data necessary in the construction of this price index are not yet available for the past year and a half, it is necessary to issue a preliminary figure for the months of this period. These preliminary figures will be changed to final form as soon as possible, but it is not expected that a change of any considerable amount will result.

It is planned to continue the series of price index numbers each month in the Minnesota Farm Business Notes. Ordinarily the preliminary price index of the month preceding the issue will be shown. This will afford an opportunity for comparing the general level of agricultural prices in Minnesota in current months with that which existed in the corresponding month of the base period 1924-25-26.

A. G. Black and D. D. Kittredge