

**AGRICULTURAL OUTLOOK
FOR MICHIGAN
1931**

MICHIGAN STATE COLLEGE
Of Agriculture and Applied Science

EXTENSION DIVISION

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FOREWORD*

For the past nine years, the Bureau of Agricultural Economics of the United States Department of Agriculture has issued an annual national Agricultural Outlook. These Outlook reports have brought together facts relating to prospective world-wide and nation-wide supply and demand conditions under which farm products are likely to be marketed during the coming year. All available price and market information concerning the important farm products has been carefully studied, and the Outlook has been based on conclusions drawn from these facts.

The purpose of this Agricultural Outlook is to aid farmers to adjust their production programs to the prospective market demands. It is intended to assist farmers to make better decisions concerning what and how much crops and livestock to produce and to discourage radical and frequent changes in their farming program. Furthermore, it is not intended that these suggestions should be followed by every individual farmer. The adoption of these suggestions is affected by so many local factors and conditions that safe generalizations may not apply to the individual farm. The individual farmer must consider not only general production and price prospects, but also the situation affecting his own farm such as local markets, labor supply, soil and climatic conditions, insect pests, size of the farm, and supply of capital. Since he must take the risk of future production and prices, he should also take the responsibility of deciding what should or should not be done on his particular farm.

It is not intended to discuss production practices in this bulletin. Suggestions and information of this character may be obtained by writing directly to the particular department of the College concerned.

As the generalized statements in the national Agricultural Outlook cannot fit all local conditions, this publication is designed to present information as applicable to Michigan conditions. It also includes information of a national character which has a direct influence upon the demand for Michigan products.

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*This report was prepared by a joint committee of the Michigan State College Departments of Economics and Farm Management, and the Michigan State Agricultural Statistician, including R. V. Gunn, H. A. Berg, V. H. Church, and O. Ulrey, in cooperation with Prof. G. A. Brown, Prof. C. G. Card, Prof. H. C. Rather, Prof. V. R. Gardner, and Prof. E. L. Anthony, heads of the five production departments, Dr. H. S. Patton, head of the Economics Department, and Prof. E. B. Hill, head of the Farm Management Department. Liberal use was made of the 1931 Agricultural Outlook report for the United States prepared by the Bureau of Agricultural Economics of the United States Department of Agriculture, also of the annual summary of the 1930 Crop Report for Michigan.

Additional copies of this Outlook Bulletin may be obtained by addressing the Extension Service, Michigan State College, East Lansing, Michigan.

FOREWORD

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AGRICULTURAL OUTLOOK FOR MICHIGAN

1931

GENERAL OUTLOOK

Farmers may reasonably expect somewhat lower production costs, a probable tendency toward improvement in market demand, and a greater degree of stability in general commodity prices during 1931. The situation at present is clouded by an unusual combination of circumstances, chief among them being the general business depression and the disturbed domestic demand for farm products, the large supplies of wheat, cotton, wool and sheep, the disturbed conditions in various producing areas resulting from the drought, unusually severe import restrictions imposed by foreign countries against agricultural products, and the maladjustment of price relationships accompanying the recent world-wide decline in the commodity prices.

Although farm price and the demand conditions for farm products are uncertain in the near future, there are certain favorable aspects. The livestock industries have such advantages as go with relatively cheap grain. Wages of farm labor are the lowest in a decade. Fertilizer prices have declined. Agriculture stands to gain by the gradual stabilizing of business and prices through the increase in the purchasing power of its products.

The application of such farm management practices as will decrease production costs and increase the volume of business per agricultural worker is the principal method by which the individual farmer may increase his income. These farm practices include an increase in the size of the farm business, a better utilization of land, labor, buildings and equipment, increased crop yields, better feeding practices and efficiency per animal, better labor distribution, and the selection of the most profitable enterprises.

The advantage of Michigan farmers in being near to consumers and of having a low transportation cost to market is of little value unless they produce and pack a high quality, graded and standardized product which can successfully compete with the high quality and graded products shipped in from distant states.

The outlook for Michigan's agriculture in 1931 depends upon a number of demand factors which are beyond the control of the farmers. Any increase in the consumption and price of Michigan farm products depends primarily upon an improvement in the domestic and foreign business situation. In order to understand the present agricultural and business situation and the possibility of improvement in the near future, one must study the changes in the general price level and the changes in the business cycle.

Business and Commodity Price Situation

The chart of the indexes of wholesale prices shows that prices are continually changing, are moving either up or down. Prices fell for a long period after the war of 1812 and after the Civil War, and prices have been falling irregularly since 1920. Sometimes, prices fall rapidly as in 1920 and 1921, and 1930, and at other times prices fall slowly as from 1924 to 1929. Sometimes, prices rise slowly as from 1896 to 1912, and at other times prices rise rapidly as from 1914 to 1920. The difficulties of changing prices are that all types of prices do not change uniformly and that debts are paid with money of less or greater purchasing power. Consequently, all people are affected by price changes, some favorably when prices are rising, and unfavorably when prices are falling, while others are favored when prices fall and are affected adversely when prices rise.

United States Wholesale Prices of All Commodities
(1910-14=100)

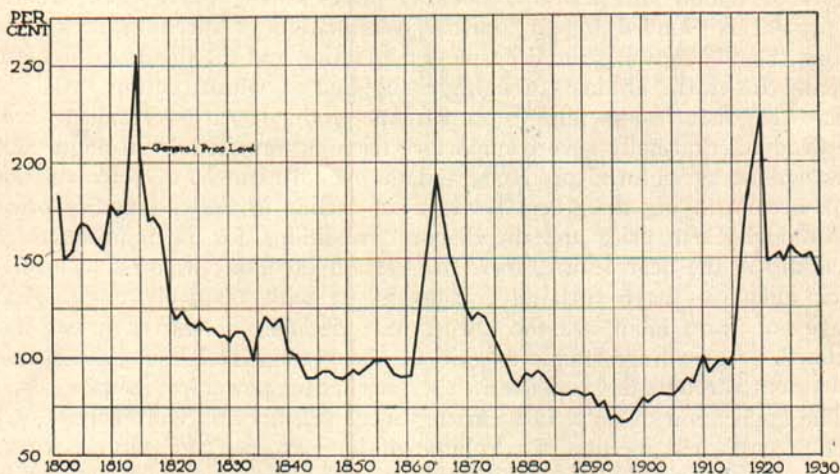


Fig. I.—During the War of 1812, the Civil War, and the World War, prices rose rapidly. The decline in prices following the World War appears to be taking the same general trend as that which followed the two previous wars.

The chart of the prices received by Michigan farmers for their products and paid by Michigan farmers for commodities purchased for the farm and for the home shows that during a period of rising prices, farm prices rise more rapidly than prices of commodities which farmers buy, and that during a period of falling prices, farm prices fall more rapidly than commodities which farmers buy. In 1920 and 1921, and again in 1929 and 1930, all prices fell, and since farm prices fell more than prices of commodities which farmers buy, farmers found themselves in an adverse price position in 1920 and 1921 and again in 1929 and 1930. Michigan farm prices dropped from an index number of 227 for 1920 to 136 for 1921, and from 167 for 1929 to 145 for 1930, or a drop from 174 in December, 1929, to 121 in December, 1930. The prices of commodities which farmers buy dropped from 206 in 1920 to 156 in 1921, and from 155 in 1929 to 150 in

Indexes of Prices Received by Michigan Farmers and Prices Paid by Farmers for Commodities Used in Living and Production

(1910-14=100)

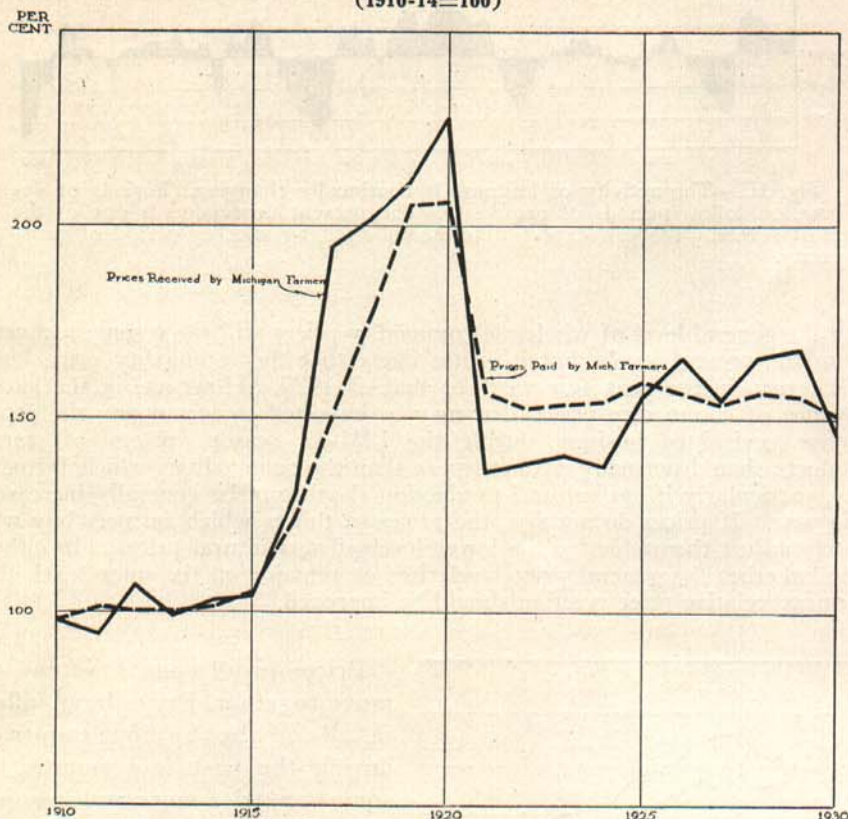


Fig. II.—During the War, farm prices rose more rapidly than prices of commodities which farmers purchased. Farm prices fell the most in 1920 and 1921, and again in 1930.

1930. During each decline, therefore, farm prices dropped considerably more than prices of commodities which farmers buy.

The chart of the indexes of business activity shows that the activity or the volume of business is continually changing. A few months or years of business prosperity has always been followed by a few months or a few years of business depression. The business depression which started in July, 1929, has been one of the most severe in the history of the United States. During a business depression, business activity generally decreases for about a year to 18 months, remains at a low level for a few months and rises slowly during a period of one or two years until a new period of business prosperity is reached. Many business leaders state that they believe we have reached the bottom of the present business cycle and are ready to climb toward another period of prosperity.

During the course of the prospective business revival, it may be expected

Business Activity in the United States—1905-1930.

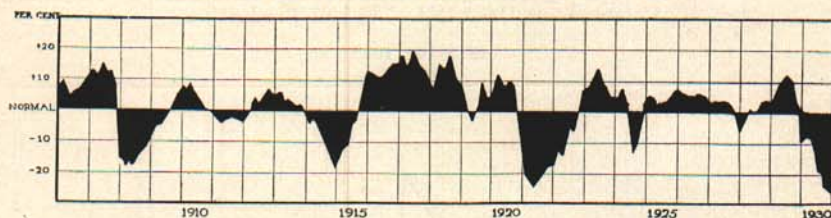


Fig. III.—The activity of business is continually changing. Periods of depression follow periods of prosperity. The present depression is one of the most severe. We can expect it to be followed by another period of prosperity.

that the general level of wholesale commodity prices will show some recovery from the present levels, but it is not likely that the commodity price level will return in the next few years to that of 1929. However, in the small advance of commodity prices that may be expected to accompany the prospective revival of business during the 1931-32 season, prices of farm products should normally advance more than the commodities which farmers buy, particularly if agricultural production should not be generally increased this year. If prices do not rise, the prices of things which farmers buy will slowly adjust themselves to the lower level of agricultural prices. In either case, whether the general price level rises or remains on the same level, the farmers' relative price position should be improved.

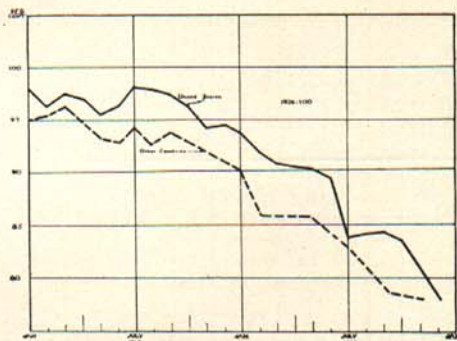


Fig. IV.—Index numbers of Wholesale Prices in the U. S. (solid line) and countries to which we export 75% of our agricultural products (dotted line), 1929-1930.

Prices in all countries tend to move together. Prices have fallen in all of the foreign countries during the past few months, in some countries more and in some countries less than in the United States. The business depression is present in all of the countries of the world and in most countries the depression is worse than in the United States.

Industrial production in the United States has declined from an index of 127 in June, 1929, to

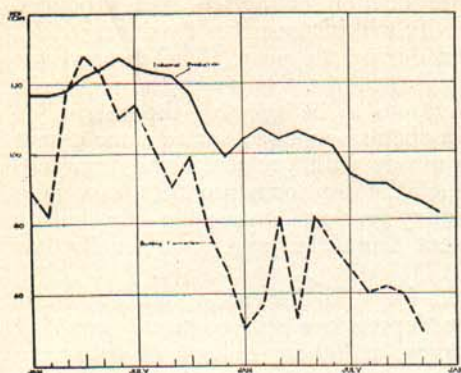


Fig. V.—Index numbers of Industrial Production (solid line), and Building Contracts in the U. S. (dotted line), 1929-1930. (1923-25=100)

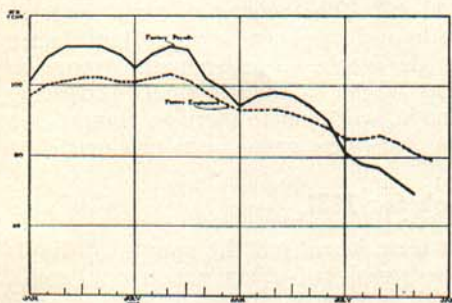


Fig. VI.—Index numbers of Factory Payrolls (solid line) and Factory Employment in the U. S. (dotted line), 1929-30.

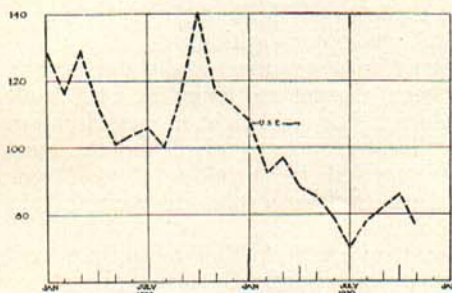


Fig. VII.—Index numbers of Exports from the U. S., 1929-30. (1923-25=100)

84 in November, 1930. The value of building contracts in the United States declined from 128 in April, 1929, to 50 in November, 1930.

Employment in factories in the United States declined from an index of 103 in September, 1929, to 81 in November, 1930, while the factory payrolls declined from an index of 111 in September, 1929, to 69 in November, 1930. Payrolls have declined more than employment because industrial wages have been reduced and many factory workers are hired only a part of the time. A survey made in Michigan by the Metropolitan Life Insurance Company in early December found that 33.4 per cent of the workers in Detroit were employed full time; 36.4 per cent employed part time; and 30.2 per cent unemployed. In Grand Rapids, 45.8 per cent of the workers were employed full time; 30 per cent employed part time; and 24.2 per cent unemployed. This situation of unemployment means a great decrease in demand for Michigan farm products.

The value of United States products exported has declined from an index of 140 in October, 1929, to 76 in November, 1930. This decrease in foreign demand has left more of the United States production to be consumed in the domestic market.

Domestic and Foreign Demand for 1931

Any increase in Michigan farm income during 1931 will be largely dependent upon two factors: (1) improved demand conditions in the domestic

and foreign markets, and (2) total production of agricultural products. It does not seem likely that business activity will increase rapidly during 1931, although some improvement is expected during the year. The demand for food products in Michigan will be increased as the activity in the industrial centers increases, and there are some reasons to believe that the volume of manufacturing, especially automobile production, will recover to some extent in 1931, and that the recovery will continue with greater momentum into 1932. Consequently, the demand in Michigan for farm products, especially for fruits, vegetables and dairy and poultry products during the crop season 1931-32 should show some improvement from the present unusually low levels.

The foreign demand for farm products for 1931 does not appear any more favorable than during 1930. Business depressions still continue in all of the foreign countries with which we trade, and there is hope of only very gradual improvement for 1931. We cannot expect to increase our exports of agricultural products during 1931 above 1930. Disturbed political conditions in some foreign countries and increases in tariff duties by practically all the countries of the world are restricting the exporting of a number of our farm products. For example, Italy has a tariff of \$0.87 per bushel on wheat; France, \$0.86; and Germany, \$1.62. The raising of tariff rates in many countries has reduced foreign trade and has been an important factor in causing the fall of prices throughout the world. Furthermore, expansion of production in certain commodities, as wheat in such low-cost producing countries as Russia, Argentine, and Canada, will tend to increase competition in foreign markets to which we have previously exported farm products.

Credit Outlook for 1931

Although the interest rates for short term loans and the supply of funds is plentiful in the financial centers, the supply of farm production credit available during the crop season of 1931 will be considerably less, in most sections, than in 1930 or in other recent years. Despite efforts to produce crops with a minimum cash outlay in 1931, the need for credit in many sections of Michigan will be materially increased. A portion of this increased need will be met through emergency advances from the drought and seed loan fund which Congress has made available, and through further expansion in the activities of agricultural credit corporations.

Local bankers have become more strict in extending credit during the past several months because there has been a great reduction in local bank deposits and a decrease in local farm values. The local tight money situation will be materially improved when larger local crops are raised and the local bank deposits increased by the money received from selling these larger crops. In the meantime, bankers should use every effort to aid their farmer customers through the present crisis.

The ability of country merchants to extend credit to their customers will be adversely affected, in many sections, by an abnormally large carry-over of last year's accounts, and by difficulties in obtaining new loans from the local banks.

The outlook for farm mortgage credit is about the same as for 1930. Whereas ample funds are available for adequately secured loans in most localities, lending agencies are extremely cautious in extending credit. The decline in land values and the poor income returns in 1930 are making it difficult for borrowers to obtain renewals upon favorable terms. How-

ever, funds are available from the Federal Land Bank through local loaning associations for loans up to 50 per cent of the value of the farm land and 20 per cent of the value of the improvements at an interest rate at present of 5.5 per cent.

The supply of credit for marketing the 1931 crops in Michigan seems likely to be ample. Marketing paper is rediscountable by the local banks at the Federal Reserve Banks where there is an abundance of credit available. The funds made available by Congress through the Agricultural Marketing Act and administered by the Farm Board will continue to be employed by cooperative associations in marketing farm products.

Farmers should make more use of the facilities of the agricultural credit corporations, the Federal intermediate credit banks, the Federal land banks, and the funds made available to cooperatives by the Agricultural Marketing Act by joining a local cooperative during the coming year.

Farm Labor and Wages

Farm wages in Michigan declined during the last year to a point considerably below the level existing during the past few years as shown by the following table comparing the average wages in January, 1931, and January, 1930:

	January 1931	January 1930
Farm wages per month with board.....	\$25.00	\$38.50
Farm wages per month with out board.....	43.25	56.50
Farm wages per day with board.....	1.60	2.45
Farm wages per day without board.....	2.25	3.15

During the early part of 1931, the supply of labor for farm work should be abundant and farm wages will probably not increase above the present level. As the year advances, changes in the farm labor supply will be governed largely by changes in the volume of industrial activity; but, even should industrial employment increase markedly from the present low levels, the supply of farm labor ought to be plentiful. The long period of declining industrial employment has added to the supply of labor for farm work and, in some localities, laborers were willing to work for their bed and board during the winter.

Farm Machinery, Building Materials, and Fertilizer

The wholesale price of farm machinery declined 4 per cent during 1930, building materials declined 12 per cent, lumber declined 16 per cent, and many fertilizers declined from 5 to 10 per cent. However, the retail prices of these commodities fell but little in 1930. Farmers should be able to purchase all of these products at lower price levels as retail prices become adjusted to the lower level of wholesale prices.

Land Values

The decrease in farm prices in 1930 in Michigan and the low farm income which was a result of a combination of low farm prices and a drought has caused the price of farm lands to fall to a lower level than one year ago. The latest available estimates (March 1, 1930) indicated that farm real estate values for Michigan average 21 per cent above pre-war, or approxi-

mately 33 per cent below the peak of 1920. Since land prices fall more slowly than prices of farm products, any improvement in land prices in Michigan during the next two or three years can not be expected unless the general commodity price level be raised.

Mechanization

The development and use of new types of farm equipment and mechanical power during the last few years has increased the capacity of the individual farm worker, reduced the unit cost of production, and has resulted in an increased output for those regions where such mechanization is both possible and economical. This increase in output and lower unit costs of production has tended to reduce prices and make changes necessary in the agriculture of the areas where the more efficient practices are not applicable. Mechanization is particularly applicable to the level and dry regions of the Central West and the Southwest, but it is extremely doubtful whether mechanization will ever reach anything like the degree of development in most sections of Michigan which seems likely in the West. This is particularly true where livestock must be kept to utilize pastures and roughages and to furnish products for the nearby markets, and where, on account of uneven topography, the fields are small and of irregular shape. However, much can be done on the farms in Michigan to reduce production costs by more careful selection of equipment, horses, tractors, and electrical power to meet the needs of the individual farms, so that Michigan can continue to compete successfully with those areas where mechanization is more effective in reducing costs.

LIVESTOCK AND LIVESTOCK PRODUCTS

Dairy Products

The demand for dairy products during the past year and a half has been distinctly reduced by the business depression. Consumption of fluid milk in our larger cities is down 15 to 20 per cent from a year ago. In spite of the considerably lower prices there has been no appreciable increase in butter consumption. A return to normal (1928-29) consumption will be slow even though the business situation improves.

With the number of milk cows on farms 2.5 per cent larger than a year ago, the number of yearling heifers about 10 per cent above the number normally needed for replacement, and, with milk production per cow 2 per cent heavier than a year ago an increase in the production of dairy products for 1931 must be expected. The number of dairy calves on hand January 1, 1931, however, was 8 per cent smaller than on January 1, 1930, and will consequently be further reduced during 1931. The number of heifer calves saved varies with the price of cows. On December 15, 1930, the average farm price of cows in Michigan was \$65 per head compared with \$104 a year ago. This situation will probably result in a smaller number of heifers coming into production about two years from now.

Prices for butter, fluid milk, and other dairy products averaged above the general agricultural price level during 1930. Although they are now about 25 per cent below a year ago, they are still in a favorable position with reference to grain prices. The outlook is for continued low prices

Daily Sales Fluid Milk, Detroit, by Four Large Companies*

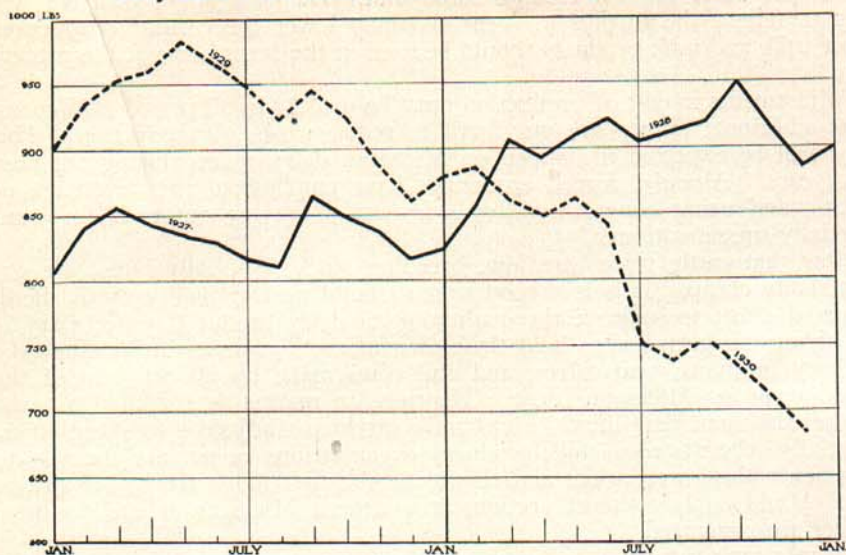


Fig. VIII.—Consumption of milk as indicated by four large distributing companies increased from 800,000 lbs. daily in January 1927 to 950,000 lbs. daily in October 1928. However, from May 1929 to December 1930 the daily consumption dropped from 975,000 lbs. to 675,000 lbs. This dropping off in demand has been a serious factor in causing lower prices for dairy products.

during 1931 on account of the expected increase in production and probably but little or no increase in demand. However, as the great bulk of cost elements are home-grown feeds and family labor, and as the cash outlay for these is low, the relationship between prices received and prices paid should put the dairy enterprise on a little more favorable basis than some other farm enterprises will have.

The past season has been a peculiar one for the dairy industry in many respects. With the consumption of fluid milk in our industrial cities curtailed, surpluses had to be made into manufactured products. Stocks of storage butter were large compared to the past five-year average. The mild weather during the past few months and cheap grain favored winter milk production. In Detroit during December, milk receipts were 13 per cent larger than for the same month a year ago. Due to low livestock prices and the desire on the part of dairymen to augment their declining cash income, the culling of dairy herds failed to materialize. As a result of all these factors, we have experienced the lowest butter prices since 1921. On February 1, butter prices were about 10 cents below prices prevailing during the same period one year ago.

Dairymen face a period of lower price levels. Reorganization of the entire dairy enterprise needs to occur in order to insure profits under conditions of this kind. Whole milk producers can help out the fluid milk prices by sending less surplus milk to the city. Feeding of skim milk to calves, hogs, and poultry will reduce the surplus supply of market milk and may be

*Data secured from Dairy Research Council, Detroit.

found profitable from a feeding standpoint. Disposing of poor cows will help to relieve the surplus problem and may lower the cost of production. More milk and milk products should be used in the farm home at the present time.

Adjustments in cost of production must be made. In all periods of depression, additional efforts are put forth to reduce costs of production. This may well be expected to happen on Michigan dairy farms during the next few years. Already, forced economies have emphasized the advantage of mixing and using home-raised feeds instead of paying out cash for commercially mixed rations.

Now that cattle prices are low, breeding stock, especially bulls, are exceptionally cheap. This is a good time to build up the quality of the herd. Unusual effort to improve the quality of all dairy products is necessary if Michigan dairymen are to hold their own markets against outside interests.

Dairy products, veal calves, and cull cows make up 36 per cent of the cash income on Michigan farms. Nearness to market is a factor in favor of the Michigan dairymen. Fluid milk producers adjacent to large cities, especially where strong milk producer organizations occur, are the last to experience the lower prices and should be the first to secure higher prices. This should apply to most sections in southern Michigan where the producers are organized.

From a long time point of view, dairymen face some readjustments. No quick up-turn in prices of dairy products can be anticipated. Any change in the purchasing power of consumers is eventually reflected in the demand for dairy products, but the return to normal business and industrial conditions is expected to be slow. There is not much evidence that there will be any prompt reduction in supply to meet curtailed demand.

Poultry and Eggs

The poultry enterprise is a relatively important source of income on Michigan farms. For the five-year period, 1924-28, poultry and egg receipts represented 11.6 per cent of the total cash income obtained by Michigan farmers.

National figures show that there was a 3 per cent increase in production of eggs in 1930 over 1929. On account of the restricted purchasing power of consumers and the failure of retail prices to decline as rapidly as wholesale prices, the urban consumption of eggs during the first part of 1930 was about 6 per cent less than during the similar period in 1929. However, in the latter part of the year, the big drop in retail prices resulted in consumption during October, November, and December which was about 8 per cent in excess of the same months for the previous year. This was in spite of the even greater restricted purchasing power of consumers at this time. Eggs were a relatively cheap source of protein food.

Wholesale egg prices in the spring and summer of 1930 were low, due both to diminished consumption and heavy production. Large storage stocks resulted, and, with plentiful supplies of fresh eggs in the fall and winter, prices failed to make the normal seasonal advance during the last half of 1930.

The farm price of eggs for every month of 1930, except during the temporary shortage in February was below the monthly average for the past ten years. The December price was the lowest since 1911. Owing to low feed prices, however, the relation of the price of eggs to the price of

feed for poultry was favorable up to June, but the relation was not so good from June onward. It is probable that this unfavorable relationship will continue, at least during the early part of 1931.

Eggs in cold storage on January 1 amounted to 1,891,000 cases compared with 704,000 cases one year ago and 1,166,000 cases for the past five-year average. This heavy cold storage holding undoubtedly has influenced egg prices considerably during the winter of 1930-31 and increased prices should not be expected until the cold storage supply has been reduced. These cold storage eggs went into storage at prices of about 26 cents a dozen while they have been moving out of warehouses at prices of 10, 12, and 15 cents a dozen during the past few months, resulting in a heavy loss from the 1930-31 cold storage operations. Just what the price situation may be when it comes to the storage season for 1931 eggs is hard to anticipate. However, the cold storage operator, with the 1930 losses freshly in mind, will probably hesitate to make his purchases for storage at a figure as high as in 1930. Lower prices in the spring of 1931 will tend to reduce egg production.

Approximately 8 per cent more poultry was consumed in 1930 by the urban population than in 1929. This substantial increase in consumption was due to a reduction in prices, both wholesale and retail, thus permitting poultry to more nearly compete in price with other meats.

The cold storage holdings of poultry on January 1, 1931, amounted to 105,000,000 pounds as compared with 121,000,000 on the same date in 1930 and a five-year average of 125,000,000 pounds. Considerable encouragement is, therefore, offered poultry producers, because, in the marketing of the 1931 crop, they will not have to compete with as large a carry-over of frozen stocks as they did in 1930. Indications are that a profit will be made on the present stock of stored poultry, so that the demand for storage in the fall of 1931 should be stronger than in 1930.

There seems to be a tendency among farmers in general to be discouraged and hesitate in the buying of chicks for the spring of 1931. This will probably result in fewer pullets in the fall of 1931 than in 1930. This would naturally result in a decrease of 1931-32 laying stock and a probable increase in egg prices for the fall of 1931 and the winter of 1932 as compared to 1930.

Although the number of layers and the production of eggs in 1931 promises to be somewhat less than in 1930, the prices of eggs during the first half of the year will be lower than for the same period in 1930. Also, a decrease in egg requirements from hatcheries may be expected. Improvement in egg prices, to a greater extent than the normal seasonal advance, may be expected, however, for the last half of the year. In view of the prospectively smaller number of pullets which will be raised this year, egg production will probably be lighter next fall and winter. As storage stocks this year will also be lighter than in 1930, egg prices should show at least the normal fall seasonal rise although they will probably not reach the high peaks of recent years.

With a short supply of poultry in storage at the beginning of 1931, and with the likelihood that market receipts of poultry for the coming spring and summer will be less than a year ago, poultry prices for the first half of 1931 should be as high as the first half of 1930. Lighter marketings in the fall of 1931 as a result of a smaller number of chickens which will be raised this year, supported by an increase of egg prices, would lead one to expect higher meat prices in the fall of 1931.

The old idea, "that the plunger who is in this year and out next, seldom, if ever, is in at the right time," is very applicable to the poultry situation for 1931. The average farmer should continue his poultry operations as in years past and not be entirely discouraged by the present outlook. However, during the past few years there has been an attempt on the part of many purchasers of day-old chicks to see how many they could buy instead of attempting the raising of the very finest possible pullets. The greater the number of chicks which are carried in one brooder house, the poorer the final product. It would be better to attempt to raise one good chick where previously two mediocre or poor chicks have been raised, thus, having a much better product for the fall of 1931.

Disease control should be given more careful attention than in past years. Home-mixed feeds are effective and economical. Improved practices will result in the production of a finer pullet at a lower cost. This is also a time when particular effort should be made to secure quality stock in order to obtain greater egg production from a small flock than was previously received from a larger flock.

The 1930 turkey marketing season was very satisfactory, if one considers the prices received for other farm products. The comparatively low Thanksgiving price encouraged consumers to the extent of somewhat depleting the 1930 stock. The increased price for the Christmas market greatly encouraged producers, with the result that they will probably stay in the turkey business and will produce as many or more turkeys in 1931 than were produced in 1930. In general, it appears that if there is any increase in the 1931 crop as compared with 1930, it will be the result of further increases in specialized turkey growing, which has continued to gain in favor. The new method of raising turkeys on a commercial scale has been very successful and since improvements are continually being made, such as improved feeding and an increased number of hatching eggs per hen, it is probable that the present upward trend in production will continue for some years. However, growers should guard against too rapid expansion of production without due consideration being given to the expansion of marketing demand.

Hogs

Since there apparently were more hogs from last year's spring pig crop still on farms January 1, this year than last, slaughter for the first four months of 1931 will probably be somewhat larger, and average weights will be heavier than in 1930. A possible earlier marketing of last fall's pigs on account of the shortage in corn supplies and good winter feeding conditions indicates smaller slaughter from May to September than during the same period last year. Because of heavier marketing prospects during the early part of 1931, and a probable continued weakened demand, prices will probably be lower from now until September 30, the end of the present marketing year than in the corresponding period of the past year.

Breeding intentions as reported on December 1, last, after allowing for average losses, indicate a spring pig crop approximately equal to last year. With lower feed costs and a prospective improvement in both foreign and domestic demand due to increased buying power, prices should tend to strengthen for the marketing year beginning in October.

The number of sows to be bred for farrowing this next fall should be determined by the available feed supply and the prospects for the 1931 corn crop. The number of sows to be kept for breeding this next fall will

The Corn-Hog Ratio Curve (1912-1930)

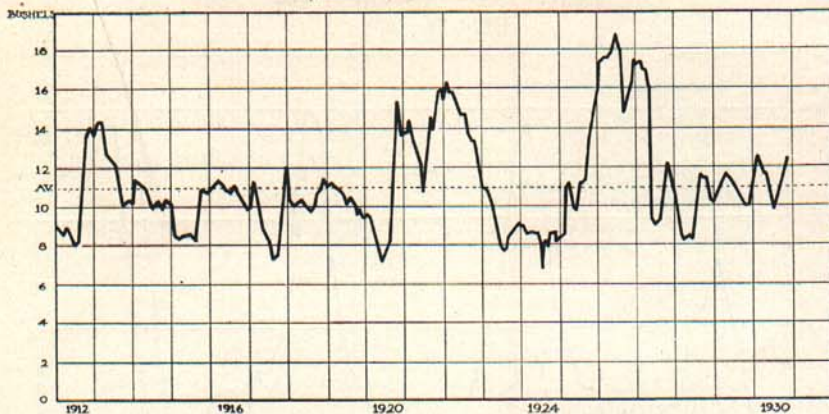


Fig. IX.—The curve shows the number of bushels of corn equal in value to 100 pounds of live hogs at average farm prices. For the last three years the ratio has been near the average for the period, indicating that there has not been much difference in the alternatives of feeding corn to hogs or selling the corn.

depend to some extent on the size of the 1931 corn crop and the relative position of the corn-hog ratio.

Hog production and slaughter for the past four years has fluctuated less from year to year than during any similar length of time in the past 20 years. This has tended to keep prices at a relatively stable level. A continuation of this policy of stability in production seems advisable.

Hog feeders will do well to finish and market their hogs at lighter weights because of the higher costs of gains and the usual lower prices for heavy lard hogs. The marketing of hogs at lighter weights will reduce the supply of surplus lard which must be sold on the foreign markets at a low price by the processor of animal products.

Beef Cattle

According to the National Outlook Report, beef cattle prices for the first half of 1931 are expected to average much lower than the first half of 1930. The reasons advanced for this belief are: (1) continued business depression, (2) supplies held off the market in 1930 must be marketed early in 1931, and (3) prices for top grade steers have been out of line with prices for lower grades, a fact which consumer demand and retail prices reflect.

Some price improvement, however, is anticipated for the latter half of 1931, particularly for the higher grades of corn fed steers. This expectation is based upon a prospective improvement in demand and a scarcity of grain fed steers.

The low point in the cattle production cycle was reached three years ago. Numbers are expected to increase for another four or five years, but the increase is not expected to go as high as in the previous cycle. While this will tend to cause a decline in prices, it is expected that the return from beef cattle will average relatively higher than the average prices of all agricultural products combined.

**Purchasing Power of the Prices of Beef Cattle and Dairy Cows in the U. S.,
1880-1931.**

(1910-14=100)

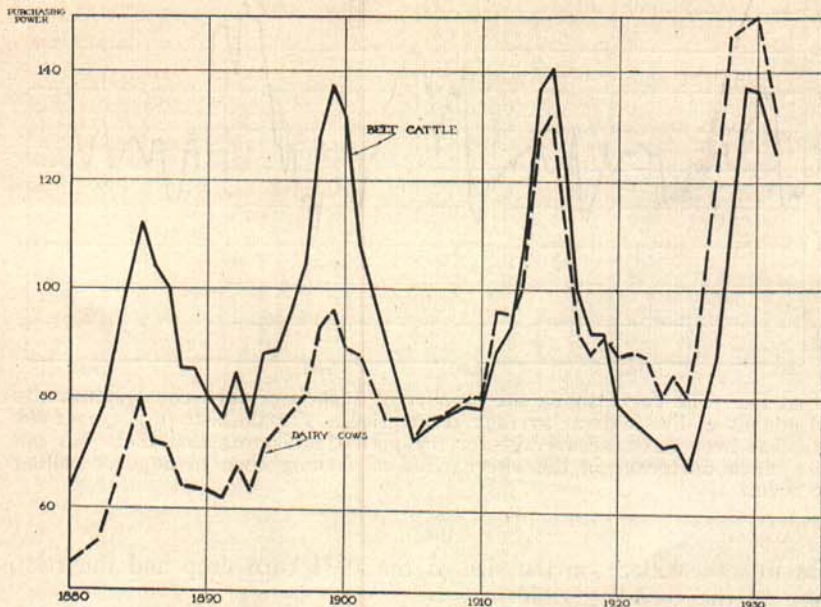


Fig. X.—The major centers of high and low prices of dairy cows and beef cattle occur at the same time. The cycles are usually from six to nine years from high to low. Prices have been moving downward for two years.

Sheep and Wool

Sheep numbers in the United States on January 1, 1931, were the largest in history. They were 43 per cent above January 1, 1922. The increase, during the past year, however, was the smallest for any year since 1925. Marketing of lambs in the past year also reached record levels and are expected to continue relatively large through 1931.

The consumption of lamb and mutton increased materially in 1930 but was accompanied by a marked reduction in prices. In view of the abundant supplies of sheep, lamb prices are apt to remain at approximately their present level until consumer demand has brought about higher prices for beef and pork.

Prices for sheep and lambs reached low levels at the close of 1930. In Michigan, December farm prices for lambs were 45 per cent below a year ago. Unless industrial conditions materially improve, the prospects are for continuation of present prices during 1931.

Sheep raisers are also interested in the wool situation. Wool production during 1930 continued near record levels. World wool production is still near the peak reached in 1928. Consumption of wool in the United States has been on a downward trend and in 1930 was the lowest in several years. The present low levels of prices are expected to curtail production but not to any great extent during 1931.

With increased beef production probable for several years and with an

Purchasing Power of the Farm Prices of Sheep in the U. S., 1880-1931.
(1910-14=100)

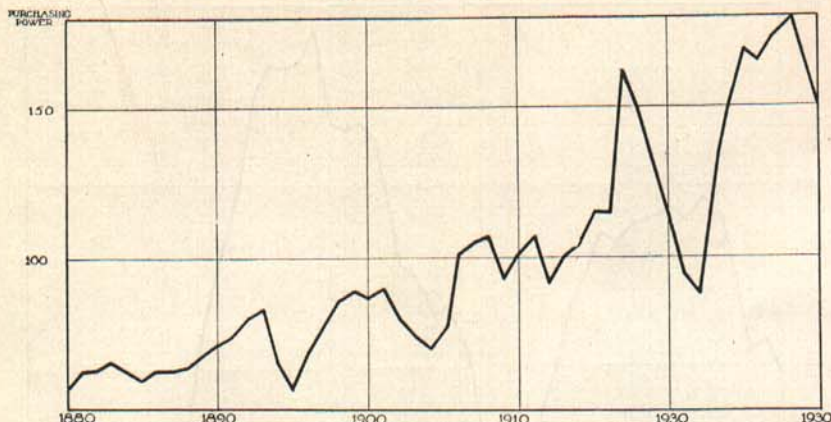


Fig. XI.—The cycles are irregular, but are usually four or five years from high to low. Prices have been moving downward for two years.

upswing in hog production likely within two years, any further increase in production of lamb and mutton for the present does not seem advisable. Flocks should be very closely culled at the present time with the idea of keeping production at a minimum. At the same time, it must be borne in mind by Michigan producers that the desirability of keeping sheep is not only a matter of the price received for the sheep but is also a question of the return which the sheep will give for the pasture and roughages which could not be marketed in any other way. The man who has pasture to utilize or grains and roughages to market will find that the present low prices of breeding ewes offer a favorable opportunity to become established in the business of producing sheep.

Horses

The downward trend of the numbers of horses and mules on farms showed a total decline in the United States during 1930 of over 700,000. On January 1, 1931, the total number of horses and mules on farms was approximately 18,000,000 compared to 25,000,000 in 1920. Prices of horses and mules were lower in 1930 than in 1929. However, the decline was relatively less than the decline in prices of all agricultural commodities. Furthermore, fairly high prices for good horses have been paid at recent auction sales in Michigan.

The price of young horses of good quality is especially high in Michigan. The farmer whose work stock is old will have difficulty in making replacements during the next few years owing to the small number of colts being raised and to the limited supply of desirable western horses. Farmers will undoubtedly find it profitable to raise colts for replacement of their work horses during the next few years. Owing to the limited number of farmers who are in a position to raise colts, any surplus of good draft horses will find ready sale at remunerative prices. The man who is in a position to raise or utilize horse power should give careful consideration to the com-

Purchasing Power of the Price of Horses in the U. S., 1880-1931.
(1910-14=100)

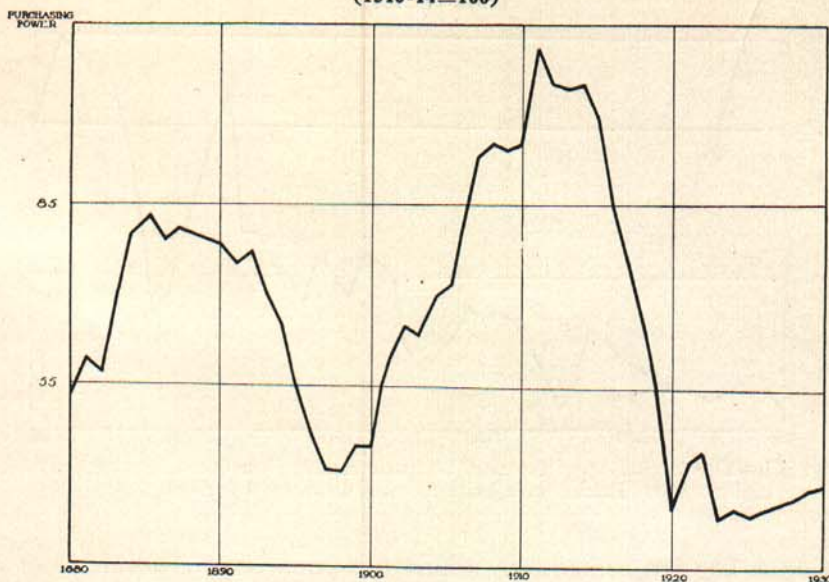


Fig. XII.—Periods of high prices are usually 25 years apart. Since 1920, the period of low prices was prolonged by readjustments to a permanently reduced number of horses. The lowest price was reached in 1924. The next peak is likely to occur about 30 years after the last peak or about 1940. During the past year, the value per head has decreased, but the decrease has been less rapid than the decline in other prices. Therefore, the purchasing power has increased.

parative cost of power in the form of grains and roughages grown on his own farm as compared with purchased fuel, oils, and gasoline.

FARM CROPS

Wheat

The National Agricultural Outlook states that another year of low wheat prices is in prospect for 1931. There seems to be little that would indicate high prices for wheat as a cash crop for several years to come. Due to the operations of the Wheat Stabilization Corporation, wheat prices in the U. S. are now about 25 cents above an export parity. Should the Federal Farm Board's financial support to this program be discontinued, domestic prices would again go back to a normal export basis.

However, Michigan farmers along with other growers of the soft winter wheats are producing a specialized commodity. When the soft wheat crop is large, it sells on a world price basis and may go at something of a discount as compared to the hard wheats which are preferred for bread baking. When supplies in the soft wheat area are low, prices for this commodity are

on a domestic basis and may be substantially higher than the prices for hard wheat, as was the case in 1928.

Apparently, a balance between soft red and soft white wheat has been reached in Michigan. While some mills pay a premium on the white wheat, others are paying a little more for the red and the farmer gets about the same price whether his wheat be red or white. With this in view, growers planting wheat may give first consideration to the type which will give them the greatest yield per acre.

Michigan growers, with relatively small acreages of wheat in their cropping systems, will find that there are other factors besides wheat prices which will have much to do in determining their future policy with reference to wheat production. Of the small grains grown in Michigan, (wheat, oats, rye, and barley), wheat still leads in gross value per acre when used as a cash crop. As a feed crop, wheat has considerable merit and many farmers have realized much more than the market price for their 1930 wheat crop by feeding it to cattle, hogs, or poultry. Finally, wheat fits well into many rotations where the more important crops are the cultivated crops grown prior to the wheat and the leguminous forages seeded with it. These are some of the considerations which will govern Michigan growers in determining their wheat acreage.

Corn

Michigan farmers are interested in the outlook for corn primarily because of its importance as a feed for their livestock. While some farmers produce corn as a cash crop, the State as a whole uses more than it grows. For two seasons the yields of corn have been poor in this State. Farmers may normally expect 10 to 12 bushels to the acre more than the average yields for 1929 and 1930. Plantings in 1930 were somewhat below the 10 year average so some increase in acreage on the better corn lands is warranted, since there is no apparent reason why growers in this State should produce less corn than has been their custom during the past decade.

Oats

Oats have maintained a place in the agriculture of Michigan because of their value in the rotation following cultivated crops such as corn, beans, sugar beets, and potatoes and preceding hay. Their chief rival in this respect is barley. On lighter lands, oats will usually yield more feed per acre than barley, but, on the more fertile soils in Michigan, the reverse is true. Thus far, no satisfactory substitute for these crops has been found and with the need for increased seedings of leguminous forages there seems to be no good reason for decreasing the acreage of spring grains in Michigan.

Barley

Michigan farmers, especially those living in sections of the State where corn growing is not dependable, look upon barley as a desirable substitute or supplemental crop. Excellent yields were obtained in 1930. The Spartan variety of barley, a white, two-rowed, smooth-awned type, is becoming increasingly popular in this State because of greater yield and of convenience in handling. Spartan barley is one of the most satisfactory of all grains for use as a nurse crop in making seedings of clover and alfalfa.

For the northern grower with good land, the production of sufficient

barley to meet his feeding requirements is warranted, the barley replacing corn in the ration.

There is also a limited opportunity for Michigan growers specializing in seed production to take advantage of the demand for oat and barley seed produced under conditions which will insure its quality and purity. The contracting for the production of such seed at prices 25 per cent above the dealer market in Michigan is a possible outlet for a substantial quantity of high grade oats and barley.

Clover and Alfalfa Seed

The following extract from the National Agricultural Outlook gives an idea as to the general condition on red clover and alfalfa seed: "Supplies of clover and alfalfa seed are expected to be ample for spring sowing requirements, as the large carry-over of these seeds offsets the marked decrease in the 1930 production of red, alsike, and sweetclover seed. Because of the unusually large percentage of new seedings of clovers, alfalfa and grasses that were killed by the drought, a larger quantity than usual of clover seed will be required if the acreage of the clovers is to be restored. In view of the relatively favorable prices for hay as compared with other crops and the short supplies of hay in many sections, farmers may be expected to bring their clover acreage to be cut for hay in 1932 up to that of 1929.

"Unless unforeseen conditions occur, such as prolonged drought in the spring or early summer that would not permit of sowing clover seed, available supplies will probably be drawn upon heavily and thus leave only a small quantity to be carried over. This, together with the fact that the 1931 acreage of red clover available for seed is indicated to be relatively small, points to a favorable outlook for growers of red and alsike-clover seed."

Michigan produced its largest crop of alfalfa seed in 1930, the amount being estimated at 750,000 pounds. This quantity is not sufficient to take care of our normal demand and there will be a large importation of seed from western producing areas as in previous years.

Alfalfa continued to gain favor with Michigan farmers in the dry year of 1930, proving that it is certainly our most dependable hay crop. If moisture conditions are satisfactory, there will probably be a large acreage of new seedings made this spring and summer.

The unusual success attained by Michigan farmers in producing seed in 1930 may induce others to attempt it in 1931. Those inexperienced in seed production and marketing will do well to secure information regarding the many different factors involved.

Hay

A continued increase in the acreage of legume hays is warranted. Alfalfa, compared to other hays, is gaining in favor because of its higher feeding value, its greater drought resistance, its larger yields, and its greater cash value per acre. There has never before been available as large a quantity of Michigan grown, Hardigan and Grimm alfalfa seed. These two strains are superior for Michigan, and the home-grown seed is proving very popular. The seed cost is moderate since from six to eight pounds of this high quality seed is sufficient for one acre.

The National Outlook for 1931 states, "The outlet for timothy and prairie hay has diminished steadily during the past several years with the substitu-

tion of mechanical for animal power and changes in feeding methods. The increase in price for these kinds of hays this season is probably due to the general shortage of these types of hay and a return to normal production would result in lower price and a draggy market."

This is especially true in Michigan since dairying is increasing. Michigan grown alfalfa hay is meeting with exceptional favor in the eastern dairy sections because of the superior hay curing methods practiced in this State.

The United States Department of Agriculture reports that the 1930 hay crop was the smallest harvested since 1918 and that this small crop, together with the carry-over of old hay on May 1, 1930, made a total supply for the 1930-31 feeding season of only 89 per cent of average while the numbers of livestock to be fed were about 98 per cent of average. The mild winter has eased to some extent the heavy feeding of hay but it was necessary to feed hay unusually early in the drought area so that a relatively small carry-over is expected. In many sections, old meadows as well as new seedings were injured by the severe drought of 1930 which would indicate that the total acreage of hay harvested in 1931 will be below average.

It will be advisable on many farms to supplement in 1931 the injured or destroyed seedings with annual or short season hay crops. A mixture of oats and peas is usually satisfactory when fertile, loamy land is available and the seeding can be made during the early spring. This mixture is especially suited to the Upper Peninsula and the northern part of the Lower Peninsula. Soy beans produce a good yield of high protein hay and need not be sown until late May or early June. They are usually satisfactory where corn can be grown for grain. Millet has about the same feeding value as timothy and is more dependable than most crops for late June sowing.

Sudan grass, an annual crop related to sorghum, is of value as an emergency pasture crop for cattle, horses, and hogs. Rape and oats may be sown for hogs and sheep.

Dry Beans

Michigan has long been in a position of leadership in the production of dry beans in the United States. Usually, the bean crop of this State has been marketed at satisfactory prices. The losses from growing beans more frequently resulted from poor yields due to adverse weather conditions than to poor prices. This was the case in 1930 when the drought reduced the State average yield to 5.8 bushels per acre, or to 50 per cent of the ten-year average, 1919-1928. This outlook makes no attempt to forecast weather conditions, yet it does seem unlikely that Michigan bean growers will be forced to contend with weather adversities as severe as those which prevailed throughout the past two growing seasons.

The relatively short crop of Michigan beans has made it possible for competing varieties to establish themselves in the markets where Michigan beans once dominated. National advertising of some of these varieties has tended to bring them into increasing prominence. If Michigan beans are to continue to hold the position of prominence on the market which they have held for so long, they must meet this competition. This can be accomplished by proper attention to acreage, yield, quality, and marketing methods.

It is not advisable for bean growers to center their attention on the bean crop to the exclusion or unbalancing of other agricultural enterprises. It is also probable that some growers, tempted by the high prices of the past few years, have planted beans in areas or under conditions which offered little chance for profits. There has been a marked increase in bean acreage,

**Trend of Bean Acreage—United States and Michigan
(1914 to Date)**

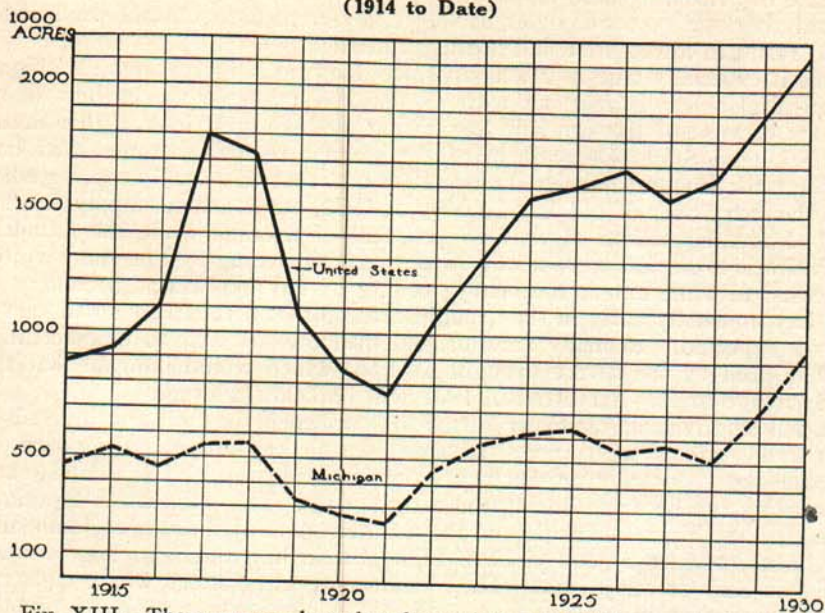


FIG. XIII.—The acreage planted to beans in both Michigan and the United States has increased tremendously during the past nine years. With normal yields production is likely to exceed domestic consumption. Resulting surpluses will tend to reduce domestic prices more and more towards the low levels of foreign markets.

both in Michigan and in competing states, during the past two years. A repetition of the 1930 acreage with normal yields would result in a supply which would be in excess of domestic requirements. Michigan bean growers cannot maintain their place in the industry by abnormally curtailing production only to have the slack taken up by growers in other parts of the world. With this in view, an acreage of beans more in line with the average plantings for the past five years seems well warranted.

From a production standpoint, profits are most likely to accrue to the grower who produces large acre yields of beans of high quality. Barnyard manure, green manure crops, and commercial fertilizers, the latter placed so as not to make direct contact with the seed, are effective in increasing yields. The Robust variety of beans is resistant to disease and is usually more productive than other varieties of white navy beans. The McNaughton system of stacking beans greatly reduces harvest hazards and results in beans of superior quality.

Michigan beans are of superior merit when all of the various uses of beans are considered, if they are well graded. Very little has been done in an organized way to advertise this fact. Therefore, a sales program backed by the cooperative efforts of organized producers and distributors appears to be one of the most progressive steps which may be taken by the Michigan bean industry.

Because of lower yields per acre, the price of red kidney beans must be approximately one-third higher than that of white navy beans if the red

kidney beans are to prove equally profitable. At present, the light red kidneys are about twice and the dark reds nearly three times as high in price as white navy beans. Some increased plantings of the red kidney beans are warranted. However, we should keep in mind that red kidney beans make up a very small percentage of the total bean crop and that much of the present high price is due to low yields per acre rather than to lack of acreage. An extensive increase in acreage, together with a favorable season climatically might easily result in a large enough supply of red kidney beans to put the price as low or lower than that of the white beans. The other adverse factor is that seed costs will be much higher for the red kidney beans than for whites, due to the higher price and the fact that nearly twice the quantity of seed per acre is required.

Potatoes

According to the report of the Bureau of Agricultural Economics, potato acreage in the United States appears likely to be increased by about 6 per cent in 1931. With normal yields the total production would be 421,000,000 bushels or about 33 million bushels more than the five-year average (1926-30) production. A large crop in 1931 will result in lower prices than those generally received in 1930.

In Michigan, the intentions to plant report indicates a 5 per cent increase in acreage over that of 1930, or 276,000 acres. The average potato acreage planted in Michigan for the 10-year period (1918-1927) was 303,000. This is 27,000 more than the intended acreage for 1931.

Little can be done to help the Michigan potato industry by either curtailing or expanding acreage. Michigan needs a normal potato production to supply her own requirements and natural markets. It will be more profitable to the growers to do this through better yields and quality than through acreage increase. The most important problem is to lower production costs per bushel by growing higher yields per acre and to produce and market potatoes of a better grade and quality. During the past 10 years Michigan has ranked second in potato acreage but only tenth in yields per acre. The average yield per acre has increased approximately 18 per cent in Michigan in the past 20 years but the average per cent increase in yield for some other important potato States has been much greater during the same period. For example, yields in Maine increased 36 per cent; in New Jersey 38 per cent; in Pennsylvania 36 per cent; in New York 28 per cent; and in Idaho 22 per cent. Factors that have contributed particularly toward the large gains made by these states have been (1) extensive use of certified seed, (2) judicious use of commercial fertilizers, (3) thorough spraying with Bordeaux mixture, and (4) fertile soils well filled with humus.

Dry weather in the 1930 growing season and severe freezes in October seriously reduced the crop in Michigan and in some sections of the State there may be a shortage of good seed. Growers should examine their seed potatoes early in the spring to determine their fitness for planting.

Production of certified seed potatoes in the United States, amounting to approximately 6,284,000 bushels, was about 25 per cent smaller in 1930 than in 1929 and 40 per cent smaller than in 1928.

The 1930 crop of Michigan certified seed was about one-third of that produced in 1929. At this date (March 10), there are approximately 50,000 bushels of certified seed available for sale. The production of certified seed in 1931 offers good opportunities for growers who are remote from good

table stock markets and who are equipped to comply with the regulations that govern the production of certified seed.

In sections near good markets, the growing of early potatoes should prove satisfactory, providing yields of 150 bushels or more per acre can be obtained. Growers of early potatoes should give special attention to the use of good seed, high analyses fertilizers, and Bordeaux sprays.

Sugar Beets

At this time, it appears likely that several of the sugar beet factories which have operated in Michigan in recent years will be closed in 1931. The situation is a difficult one, so far as the sugar companies are concerned, on account of the prevailing low price of sugar. This is due to a large surplus stock of sugar in the world and to large shipments into this country of duty-free sugar from our island possessions.

"An important recent development," says the United States Department of Agriculture, "has been the negotiation of an agreement between Cuba, Java, and the principal European sugar-producing countries whereby a definite quantity of stocks of sugar would be segregated and, in conjunction with limitation of exports, gradually marketed over a period of five years in an effort to adjust production to demand."

It is hoped that this action will improve sugar prices, thereby allowing sugar companies to operate at a profit while paying growers a satisfactory price for their beets.

Under the circumstances, Michigan farmers will have to determine the possibility of profitable production of sugar beets under the terms of such contracts as may be offered.

The average yield over a ten-year period is higher than the yields secured during the past three years. With favorable growing conditions beet growers on good beet land may expect better acre yields than they have secured for some time. Labor should be readily obtainable and somewhat less expensive than it has been for several years. Beets can follow beans in the rotation without plowing the bean land. Beans make an ideal fore-runner for sugar beets and generally lower the labor cost of cultivating and hoeing. Narrower rows, early planting and thinning, and the use of liberal quantities of complete, high analysis fertilizer all contribute to higher acre yields.

Since the beet acreage, of necessity, will be markedly curtailed in 1931, farmers who have produced this crop in the past will be obliged to seek a substitute. It is suggested that they give careful consideration to the sowing of more alfalfa and the laying down of an additional acreage in pasture.

FRUITS AND VEGETABLES

Apples

A survey of the apple situation indicates that the average commercial production of the last few years will not only be maintained but that a gradual increase in production for the country as a whole may be expected. Approximately 25 per cent of the apple trees in commercial orchards are not yet of bearing age or are producing little fruit and 60 per cent of the trees are under 20 years of age. This relatively large portion of young trees together

with the more general adoption of improved production practices which tend to increase the bearing life and productive capacity per tree points to a continued upward trend in commercial production for several years. From a short-time standpoint, there may be some temporary decrease in production because of economic and weather conditions of the past year. However, at this time there is no definite indication that these conditions will permanently affect, to an important degree, the potential producing capacity of commercial orchards as a whole.

Reports from the apple sections indicate that plantings during recent years have been light and confined largely to replacements and to some new orchards where special advantages in production or marketing prevail. In 1928, only 13 per cent of the trees in the commercial orchards of the principal western apple States, Washington, Oregon, Idaho, and California, were under nine years of age. Plantings since 1928 in the northwest have been light and largely of the Delicious variety. In the barreled apple States in the eastern section of the United States, about one-third of the trees in 1928 were under nine years of age. Consequently, with improved orchard management, production should be maintained and possibly increased. Reports for the last two seasons indicate that only moderate plantings are being made in these States. In the Central States such plantings as are being made are largely Delicious, Jonathan, Grimes, and Stayman. In New England, the McIntosh and Delicious are the leading varieties being planted.

Extensive commercial planting of Delicious trees, 73 per cent of which were under 15 years of age in 1928 points to increasing supplies of this variety for several years. Also the production of McIntosh, Winesap, Jonathan, Grimes, and Stayman may be expected to increase considerably over a period of years, since approximately one-half of the trees of these varieties are under 15 years of age. Only moderate plantings of Baldwin, Northern Spy, and Rhode Island Greening have been reported in the last 10 years.

In general, the present apple situation is such that keen competition among growers may be expected. Also, the apple industry will continue to be confronted with competition from heavy supplies of other fruits. Additional commercial plantings are, therefore, justified only where unusually favorable conditions exist for the production of good quality fruit at low cost. Great losses to apple growers have occurred from setting out trees that were not profitable because of location. New plantings should be confined to soils and sites that are likely to produce a crop in years of generally light production as well as in years of generally heavy production. Care should also be taken to see that new plantings consist of varieties and combinations of varieties that will insure proper pollination. In general, such varieties as McIntosh, Fameuse, Jonathan, Steele Red, Northern Spy, and Rhode Island Greening will be found most satisfactory for planting in Michigan orchards.

Michigan growers will usually find a ready market for well colored, good sized fruit that is free from insect and disease injury. Such fruit will result in satisfactory returns even in years of heavy production for the country as a whole. Owners of well located orchards with good varieties cannot afford to omit any orchard practice that will materially increase the yield or improve the grade. Profits in 1931 are certain to depend largely on the adoption of a spraying schedule that insures pest control, and on soil management and thinning practices that will result in fruit of good merchantable size.

Peaches

In general, the outlook for the season of 1931 appears to be favorable for Michigan peach growers. Regardless of the drought, trees in well cultivated orchards made a moderate growth during the past season and there are good prospects for a fair crop in orchards which are favorably located for peach production.

Reports from the southern peach States indicate that, even with favorable weather conditions, production in these States for the next few years is likely to be somewhat below the average of the last five years. However, the crop will probably be somewhat larger than that of 1929 or 1930. Nearly two-thirds of the trees in the commercial orchards of the five leading southern peach States are now near the age of maximum yield and will soon decline in potential productivity. Plantings in 1930 were relatively light and winter damage to trees has been rather extensive. For the South, as a whole, the number of young trees planted in commercial orchards annually since 1925 has probably averaged under 5 per cent of the present number of commercial trees.

In the North Atlantic States only moderate changes in the bearing acreage are in prospect. The trend in New York and New Jersey appears to be slightly downward. Illinois has become the leading peach State in the middle west. A heavy 1929 crop in this State apparently marked the production peak from trees now planted. Tree mortality in the State is estimated at 8 to 10 per cent during the last season with plantings of about 2 per cent. No pronounced changes in the production trend are reported for other Middle Western States, although there has been some increase in southwestern Michigan.

In Colorado and Utah, the rate of planting during the last five years indicates a considerable increase in acreage. A small increase in acreage is expected in the Pacific Northwest.

Continued heavy production of clingstone peaches in California is expected for the next few years. In 1930, approximately half of the California clingstone crop which is used largely for canning was not harvested on account of market conditions. The number of young freestone trees is not sufficient to replace the loss that will normally occur in the old trees and a continued downward decline of freestone varieties is expected.

Under present conditions, there is no justification for any material increase in the acreage of peach trees in Michigan. However, moderate plantings in favorable locations to maintain the present acreage seems advisable. Extreme care should be exercised in the selection of sites for peach orchards to avoid frosty locations. The varieties should be those that may be marketed soon after the crop from Southern Illinois orchards and that of other States to the south have gone into consumption. Such varieties as Rochester, South Haven, Elberta, and J. H. Hale should receive major consideration. Growers whose orchards show promise of a fair crop should not hesitate to put into operation every practice that will tend to insure a clean crop of good sized fruits.

Cherries

Yields and prices of cherries may be expected to be about normal in 1931. Thus far the trees of both sweet and sour varieties have come through the winter in good condition and average production is anticipated.

A large percentage of the sweet cherry crop of Michigan is consumed

locally and since the crop comes into little competition from sweet cherries brought in from other sections, prices are expected to remain at about the usual level.

A large crop of sour cherries was harvested in 1930, especially from trees in the northern part of the State. However, in orchards where good cultural methods have been employed and the leaf spot disease has been controlled, the trees appear to be in good condition and there are good prospects for a satisfactory crop in 1931. A large number of trees have been planted within the last several years and a gradual increase in production may be expected during the next five or ten years. New plantings are not to be encouraged except where the location and soil are especially favorable.

Plums

Few commercial plum orchards have been planted in Michigan during the past five years. Demand for plums has been decreasing and may be expected to continue to decrease, largely because of greater competition with peaches, with other fruits, and with cantaloupes. Additional plantings are to be discouraged, though established orchards are likely to return a moderate profit if well cared for.

Grapes

The production of grapes in 1930 was considerably in excess of market requirements. Nearly 90 per cent of the total crop was produced in California and most of the remainder in New York, Pennsylvania, Ohio, Michigan, Missouri, and Arkansas. About one-fifth of the entire California crop, or some 430,000 tons, is estimated to have been unharvested, but even with this part of the crop left on the vines, much trouble was encountered in marketing, and low prices prevailed.

In Michigan and the other States east of the Rocky Mountains where the American-type grapes, such as the Concord, are produced, the combined production in 1930 was only slightly larger than in 1929. However, on account of the competition from low-priced California grapes, prices were much lower during the past season than in any recent year.

A survey of the grape situation indicates that there is a probability of continued heavy production and that with favorable seasons, the acreage is still large enough to produce a crop of sufficient size to cause difficult marketing conditions and a continuation of low prices. There are, therefore, no indications of profitable returns from vineyards rather poorly located with respect to site and soil. No increase in the commercial acreage is justified at the present time. New plantings, if made, should be restricted to limited areas near local markets which offer a possible outlet for the crop and probably should be of varieties other than Concord.

Strawberries

According to the National Outlook, the commercial strawberry acreage for harvesting in 1931 will be considerably smaller than the acreage harvested in 1930 and decidedly lower than any year since 1926. The estimated total of 156,300 acres for harvesting in 1931 is 19,400 acres, 11 per cent, less than the acreage harvested in 1930 and is approximately 77 per cent of the large acreages in 1928 and 1929. Most of the reduction in acreage, about 80 per cent, is reported from the second early and intermediate shipping States of the South. In the early shipping States, a 9 per cent reduction

from the acreage of 1930 is indicated, while in the late marketing and western States, as a whole, very little change from the fairly constant acreage of the last three years is expected.

In the eastern late-producing States, including Michigan, New York, Pennsylvania, Indiana, Ohio, and Wisconsin, the acreage for harvesting in 1931 will probably be about 4 per cent less than that of 1930. In 1930, yields were relatively low and production was the lowest since 1921. However, the average 1930 price to growers was 2.8 cents per quart, 18 per cent more than the average price for the preceding four years and, in general, returns were satisfactory.

Reports from Missouri, Kentucky, Delaware, Maryland, and other States indicate that their strawberry fields are in poor condition and that stands have been reduced, which suggests low yields for the coming season. This, together with a large decrease in acreage points to exceptionally low production in many of the important strawberry States in 1931. In view of these facts, it seems probable that prices in 1931 to Michigan growers should be somewhat above the average and that a satisfactory price level will be maintained at least two or three years or until the plantings in the States to the south are brought back to normal production. Certainly, the present commercial acreage should be maintained and, for the present, at least, a considerable increase in production could be handled satisfactorily.

Tomatoes

Growers of tomatoes in Michigan received fairly satisfactory prices for their product in 1930. However, while yields per acre were lower than in 1929, the production, owing to an increase in acreage, was practically the same in the late growing States. Prices were about the same in both years.

If there should be an acreage of equal size planted in 1931 as was planted in 1930, which was 50 per cent increase over 1929, and weather conditions should permit an average yield, it is likely that there may be an overproduction with lower prices. Under present conditions, it would seem wise not to increase the 1931 acreage over that in 1930.

Cabbage

The season of 1930 was very unfavorable to the growth of the late cabbage crop and the yields in tons per acre were comparatively low, but, due to increased plantings in the principal cabbage producing States, the total production was about 8.5 per cent above the 1929 crop. On the average, the price per ton received by the grower in 1930 was much less than in 1929.

The holdings of January 1, 1931, were 12 per cent larger than those of January 1, 1930, but were 6 per cent less than stocks on hand January 1, 1929. The early cabbage acreage which is about one-third greater than a year ago in the southern States, will have a tendency to depress prices on the late crop of 1930 now in storage. In making planting plans for the late States, it must be borne in mind that the reduced production in 1929 and 1930 was due to unfavorable weather conditions. An average yield from an acreage as great as was planted in 1930 must surely result in considerable over-production and consequently low prices. It seems wise to make a good-sized cut in amount of commercial acreage planted in 1931. However, more than one-half of Michigan's cabbage acreage is for kraut manufacturing at a contract price. Therefore, planting for this purpose should be governed by such contract offers.

Celery

The average price obtained by the celery grower in 1930 was very unsatisfactory, due to considerable over-production. The yearly increase in acreage has more than kept pace with consumption. New areas of production are being developed each year and it would seem that the time has arrived for the grower to consider a material reduction in acreage, more especially in the late crop, unless a more efficient method of marketing can be developed. There should be a greater effort toward the production of a high quality product and more attention should be given to providing suitable storage facilities for the late crop.

Onions

The large acreage devoted to the growing of onions in 1930 resulted in great overproduction with a corresponding decrease in price to the grower, the crop being the largest and the prices the lowest on record for the United States. In many sections, the crop was injured by weather conditions.

Under present conditions, it would seem that a reduction of at least 25 per cent in the 1931 acreage below that of 1930 would be profitable to the grower. Growers of this crop should remember that while there have been alternate years of increase and decrease in acreage during the past ten years, the general trend has been upward. A corresponding downward trend in prices indicates that the acreage increase has been by far too rapid.

Cantaloupe

In 1930, the acreage of muskmelons in Michigan and in the group of States marketing at the same time of the year was 3 per cent greater than that of 1929. The acreage increased 17 per cent in Michigan. A yield of 6 per cent below that of 1929 resulted in a decreased total production. The farm price for 1930 was 28 per cent above that of 1929 and 24 per cent above the previous five-year average. The quality of the 1930 Michigan crop, which was much above the average, helped greatly to stimulate consumption.

An increase in acreage in 1931 over that of 1930 will not be justified, but it would seem that the grower who plants his usual acreage and who uses every effort to produce a high quality product will receive a substantial profit from his operations.

Honey

Bees went into winter quarters with more than the usual amount of stores, and winter weather has been favorable. However, the drought has reduced prospects of honey from clovers from 40 to 50 per cent. Ample rains in the spring will be necessary to obtain a crop of clover honey, which is the main source in Michigan.

While prices are the lowest in 20 years, sales have been fairly good and it is probable that the bulk of the 1930 crop will be disposed of before the new crop is ready. Local sales have been increased considerably due to greater publicity and sales effort by both large and small producers.

1630

The first white settlement in Michigan was founded in 1622 by a Frenchman, Sieur de la Potherie, who established a mission at St. Ignace on the western shore of Lake St. Ignace. This mission was the first of a series of missions established by the French in the western part of the continent. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649. The mission was founded by the French Jesuit, Father Ignace de la Potherie, who was the first white settler in Michigan. He was followed by other Frenchmen, including the Sieur de la Riviere, who founded a mission at St. Ignace in 1667. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649.

1660

The first English settlement in Michigan was founded in 1667 by the English, who established a mission at St. Ignace on the western shore of Lake St. Ignace. This mission was the first of a series of missions established by the English in the western part of the continent. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649. The mission was founded by the English Jesuit, Father Ignace de la Potherie, who was the first white settler in Michigan. He was followed by other Englishmen, including the Sieur de la Riviere, who founded a mission at St. Ignace in 1667. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649.

1670

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1680

The first Dutch settlement in Michigan was founded in 1680 by the Dutch, who established a mission at St. Ignace on the western shore of Lake St. Ignace. This mission was the first of a series of missions established by the Dutch in the western part of the continent. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649. The mission was founded by the Dutch Jesuit, Father Ignace de la Potherie, who was the first white settler in Michigan. He was followed by other Dutchmen, including the Sieur de la Riviere, who founded a mission at St. Ignace in 1667. The mission at St. Ignace was the only one that survived for any length of time. It was destroyed by a fire in 1649.