

Farming in Alberta.

[Paper read by Geo. Price, at farmers' meeting, Olds, Alta.]

It may be expected that I should speak of agriculture and agricultural societies, of the fertile soil of Alberta, its adaptability for diversified farming, its rich and nutritious natural grasses, and its comparatively mild winters and cool summers, which make it a paradise for the dairyman and rancher. But of these things many of you can claim a much wider and longer experience than I. My opinion, however, is that for stock-raising and dairying, it would be difficult to find a district anywhere on the North American continent where all the conditions are as favorable as we have them here. The past three years have been wet and there has been an abundance of wild hay. What may be raised in the way of tame grasses and forage crops, we hardly yet know; but, with seasons of ordinary moisture, there can be no doubt of the success of such crops.

But when we come to grain raising I know there is, with many of us, some misgivings. We do not feel the same certainty of success in this line as in that of dairying and stock-raising. The last three years have been too wet for grain, and crops have not come up to our expectations, and it is not at all an unusual thing to hear it said that the country is no good for grain raising. Now, with all due respect to authority, grey hairs, age, prediction and prophecy, it may be well to recall to mind that the very same things have been said of more than one new country. In fact, it would be difficult to name a country that in its early history did not disappoint many a pioneer. Our country is yet in its infancy. It is too early to declare grain-raising a failure. The pioneers of every new country have had to do a great deal of experimenting before they have found out what crops best succeeded, and how to raise them.

Again, in the development of nearly every new country, the various industries follow each other in a pretty well defined order. The first to break the solitude of the prairie is the stockman. He needs range upon which his stock can feed unmolested. Then comes the man with the proverbial hoe; the man that transforms the prairie into fields of golden grain, and after him the merchant and manufacturer.

But too often the man with the hoe brings with him notions of farming that he has acquired in the country from which he came, and that are not workable in the new country, and with the first failure he blames the country. There is hardly a new country that has not been a disappointment to many an early pioneer on this account. Of the early settlers of parts of Kansas and Nebraska, how many were forced to return, with nothing left but a prairie schooner and an old tune they printed on their wagon covers? "Good-bye Kansas and Nebraska, we bid you both adieu; we may travel some day to —, but never back to you." I saw the same thing occur in the first settlement of the Dakotas, and yet the very same land that was abandoned a few years ago as being worthless, is now as eagerly bought up, and is being put under cultivation. What we may do here in the line of raising grain we cannot yet tell; but there are some things we can safely foretell. We know that climatic changes follow the settlement of a country. With thousands of farmers breaking up the soil and exposing it to the warm rays of the sun; driving out cold, wet marshes; opening up roads; the climate is most sure to become warmer and crops mature earlier.

For many years to come, agriculture will undoubtedly be the main industry of Alberta, and in view of the large areas of land that are fast coming into the market, both in this and other countries, it behooves our farmers and all those interested in the prosperity of the agriculturist to see that we are abreast of the times. The day of farming with the hoe, sickle and flail has passed away—let us hope never to return again. They were tools cheap enough, but their use would be very costly now alongside of the latest improved farm machinery. But with the introduction of expensive machinery, necessitating as it does larger capital to operate the farm, the chances of success for the small farmer are becoming gradually narrowed. Fortunately, however, for him, and, perhaps, for humanity, those combinations of large capital under a single management, which have now become quite common in many other industries, are not found to be practicable in farming. There is a limit to the area of a farm which can be successfully handled, and that limit seems to be very much below the size of some of the bonanza farms of the Northwest.

There can be no mistaking, however, that the tendency of the times is to crush out the small producer and give advantage to the large producer in agriculture, just as we see the same tendency in other industries, and for very much of this we are indebted to the wonderful inventiveness of the past century. During the nineteenth century humanity made greater material progress than for ten centuries before. In the application of labor-

saving machinery to the production of wealth it caps and crowns, not only the ten centuries before, but all the centuries that we know anything of. The farmer of a century ago cultivated his land, harvested his crops and threshed his grain with tools but little better than those used by the men who farmed when Rome was mistress of the world.

The farmer is often spoken of as the brawn and bulwark of a nation, because his industry is one of producing directly from the soil. He produces the raw material that feeds the world. Labor-saving machinery has enabled him to largely increase the product of the farm; but there are also other agencies worthy of mention which have come to his aid, and not least of these are our agricultural schools and societies. Their work is educational, and one has only to read the bulletins issued from these institutions to appreciate the value of the work they are doing. The farmer is thus saved a great deal of experimenting, with the assurance that the experiments conducted in these schools are under the superintendence of specially trained men. Referring once more to the nineteenth century, it seems to me that its greatest watchword was production; in all branches of industry the power of labor to produce wealth increased many times. On the threshold of the twentieth century there are signs of another watchword, and that word is co-operation, or, more properly, distribution. There are many farmers who feel that of the great gains that are the result of the improved methods of production, they have not shared as they should. With all the increased power to produce wealth, is the farmer of to-day much better off than was his ancestor of a century ago? Of the increased production, is he able to keep more to himself? Important as it is that his fields should be well tilled and his stock of the best, is it not equally important that in the numerous exchange he must make with other producers, that he get good value for his money. But to discuss the question of distribution at this meeting would be, perhaps, what the lawyers would call irrelevant, immaterial, and not at all pertaining to the case.

Growing Flax.

An interesting and valuable bulletin on flax and its cultivation has been prepared by Geo. Harcourt, B.S.A., and T. N. Willing, Territorial Weed Inspector. The principal features of this treatise of value to new settlers at this season are herewith presented.

Experience has shown that any soil capable of producing a good crop of grain is equally good for flax, but a warm, dry situation is most favorable whatever the nature of the soil. The general experience is that it does better on new breaking than any other crop, and that when well put in, a return of from 10 to 20 bushels per acre may be expected.

In preparing the land some break about two inches deep, then cut the sod fine with a disk harrow and sow, rolling immediately after to smooth the ground for harvesting. Others prefer to break three or four inches deep, and some farmers roll immediately after plowing, and then sow with a sharp shoe drill. Flax, however, will respond to a good seed-bed. Instead of using the roller after plowing, use the disk harrow, setting it to cut a little earth, but not enough to tear up the sod. Follow with a short-toothed harrow; then sow with a shoe or disk drill, leaving the land smooth for the binder. New settlers who do not possess a roller may make what is called a "pauker" or "flat," by taking two twelve-foot planks 10 or 12 inches wide. Lap one four or five inches over the other, spike them together and attach irons near the ends to draw by.

In selecting the seed it is very important to avoid weed seeds. Experience goes to show that the best time to sow is from the 15th of May to the 10th of June, the most favorable time being the last week in May. It is important that the early breaking be worked down as soon as possible after plowing, so that it will not dry out, and some growers lay great stress on sowing as quickly as possible after the land is plowed.

The usual amount of seed sown is two to three pecks (28 to 42 pounds) per acre, but on fresh breaking, or when sowing late, some successful growers sow a bushel, placing the seed from one to two inches deep.

A copy of this bulletin may be had by applying to Secretaries of Farmers' Institutes, or to the Department of Agriculture, Regina.

Gasoline Engines.

To the Editor "Farmer's Advocate."

Sir,—Mr. Renton says I take exception to a recent letter signed by him. I take exception to certain parts of that letter. I do not decidedly disagree with his last letter, written on April 6th. He refers to gas as a dangerous general, with which he probably has had some personal experience than myself. One of the main parts of his argument is applicable to the use of gas-

line engines at their present stage of perfection. It must be remembered that the portable gasoline engine is still in its infancy, and like many other classes of machinery it has not yet reached perfection.

That the dealer with whom Mr. Renton conferred handles an engine the horse-power of which is over-rated, is not proof that every or any other engine is so rated. He also claims that he could buy an engine from the manufacturer for half the money he paid the dealer. Did he count the duty, freight and inconvenience of waiting, probably several months, for the engine after it is ordered? Or is he aware that his cash must accompany the order before he has even a chance to examine the engine? I think not. Manufacturers are not in the habit of shipping goods to parties with whom they have had no business dealings, without first having "gilt edge" security. It matters not how well a man's financial standing may be locally established; the manufacturer knows nothing of this, and will not run risks. If Mr. Renton has such low prices from the manufacturer, it would no doubt interest many to read the letters giving quotations, and I for one would be very much pleased to see these letters published. We then would be able to get down to actual figures, and, in addition to this, farmers would have the addresses of these firms, and their prices would be proved beyond a doubt over their own signatures. Awaiting conclusive proof of these low prices,

CLARENCE VERMILYEA.

A Critical Operation.

It may seem a little premature to begin cultivating mangolds or other roots as soon as the seed is sown, but that is practically what needs to be done to insure the best crops. What is required is a fining of the soil just a few days after the seed is sown. The common practice is to leave the roots until they need thinning or weeding. By this time, as everyone knows, on most soils there is a slight crust over the land caused by the evaporation of moisture from the surface. This crust has two retarding effects upon young root crops. In its early stage, and just a few days after the seed is sown, it prevents many of the young plants from breaking through to the surface, and it all the time facilitates the escape of moisture from the land. The first step to be taken to destroy this crust is to roll the drills about five days after the seed is sown if there is good growing weather. A few days later, and just as the plants can be seen, it is a good plan to run a hand cultivator along beside the rows. Then as soon as the plants are large enough, the horse cultivator should be started. The most critical operation, however, and the one that counts for much at a time when the plants need encouragement, is the stirring with the hand cultivator or hoe.

Michigan Beet Sugar.

Michigan, last year, according to Alfred H. White, instructor in chemical technology at the University of Michigan, produced about three-fourths of the sugar it consumed. If the coming season is a favorable one, there will be sugar for export after satisfying the home demands. Michigan now ranks as the second State in the Union in the production of beet sugar; it producing almost 30 per cent. of the total amount manufactured. California stands first, producing about 36 per cent. of the total. However, if the coming season in this State is favorable for sugar beets, California will lose its supremacy.

The sugar industry in the State, which is only five years old, has made wonderful growth. In the fall of 1898 there was only one factory in operation; now there are sixteen. The total output for the season of 1898-99 was less than 6,000,000 pounds, while that for the season of 1902-03 is estimated at 100,000,000 pounds. Its value is given at \$1,500,000.

The following table shows the growth by years of this industry:

Year.	Factories in operation.	Production in pounds.
1898-99	1	5,271,000
1899-00	8	32,737,098
1900-01	10	64,616,358
1901-02	13	104,590,080
1902-03	16	100,000,000

Free Beet Seed.

The Winona Board of Trade have received from Capt. B. B. Boyd, Bay City, Mich., fifty pounds specially selected sugar beet seed. It has been arranged to make a test carried on at the Brandon and Indian Head Experiment Stations. The balance of the seed has been given to farmers in order of their application, and is intended to make returns as to progress of growth, yield, etc.