A SAND BAR

Will Not Grow Crops From Which a Fortune May be Derived—And a One Crop Country is not Much Better is the Idea of This Writer, Who is One of the Large Farmers of North Dakota—Everybody Should Read What This Farmer Has to Say.

It is an old saw that "No man can become rich on a sand bar or in a one-crop country." While this may perhaps not be literally true, still it contains sufficent warning to warrant the aphorism. The experiences in the past development of the spring wheat districts of the West have shown that as a whole not more than seventeen successive crops of wheat can be successfully raised without some change in the method of cultivation or variation of agricultural products. It has been claimed that even the virgin soil, broken and put into wheat after seventeen years of surrounding settlement, does not on the average produce the yield that the same soil would have done seventeen years before. Why this is so has not been satisfactorily explained. Whether it be the effects of settlement, drainage, or the introduction of new weeds and enemies of the plant, I am unable to say; but the fact still remains. The wheat districts of North Dakota have now passed the time allotted by experience, that farmers can hope to become rich by the means of the sole occupation of raising wheat. We are passing through the trials which every spring wheat country has experienced and we should profit by their example. It is within the memory of many readers of this paper, when it was thought that wheat could eb the only staple produce of Northern Iowa and Minnesota and the persistence in raising wheat brought distress and poverty to those who relied solely upon that crop. Others who foresaw the inevitable result turned their attention to other methods and products and eventually became well-to-do. The time has passed when the Dakota farmer can afford to buy pork and beef that is raised in Kansas and Nebraska and dressed in Chicago, or butter that is churned in Iowa, or flour, vegetables, poultry and eggs, that are ground, raised and hatched in Minnesota, or clothe themselves with woolen goods that are sheered from sheep in Ohio and are manufactured in New England. He must if he would meet the coming change of conditions raise these articles on his own farm and seek and encourage their manufacture within his own state.

Now comes the often and anxiously repeated question, "What can the farmer do that he may better his condition?" The answer, I think, may be found in the following economic axioms:

"A country should supply the demands of its people."

"Diversity of occupation, of the people of a country, is its only financial safety."

"The producers of raw material cannot compete with the manufacturer."

"Seek protection against those communities having concentrated capital and cheap labor, and reciprocity with those who produce goods that we cannot produce and which has not concentrated capital and cheap labor."

Acting upon these precepts, the spring wheat districts of the older states have given us examples, and may we not profit by their experience. Instead of raising wheat as a staple, they cultivate corn, oats, barley, flax, rye, buckwheat, beets, honey and beans. These crops can be raised in Dakota and, with the possible exception of buckwheat and corn, will yield as sure a crop of as good a quality as any state in the country, and with the fact that the corn belt is now moving west at the estimated rate of fifteen miles a year, that crop will soon cease to be problematical. Instead of sending their raw products to the Eastern manufacturer, these older states "manufacture" it themselves into poultry, beef, pork, mutton, wool and horses. Flour, grist and woolen mills; starch factories and slaughter houses have been erected within their states; poultry markets established; creameries and cheese factories have been patronized; freights have been reduced, and the "empty-cars-on-trains-going-West" argument has been successfully met. Their country is now supplying the demand of the people, by the diversity of occupation and the balance of trade is now in their favor. They have in a great measure succeeded in protecting themselves against the concentrated capital and cheap labor of the Atlantic states, as the banking reports during the last panic has shown, the West is fast becoming the creditor instead of the debtor of the East, for if it had not been for Western money in the New York banks, Wall Street would have gone to the wall.

Then the question remains, "How can these things be brought about?" To attain ultimate and universal success, the movement should in the end be universal. This cannot all be achieved in a year, but must come gradually. How was this accomplished in the older states? Like most valuable corrections, they began at home. Nothing was bought that could be raised on the farm. The writer knows by experience that charging at cost for everything raised on the farm, also including labor, attendance, cooking, fuel and articles for the table that he could not raise, like tea, coffee, sugar, etc., the board of men and the farmer's family should not exceed 22 cents per capita per day, whereas it is customary to estimate (and with many farmers often exceeds) 40 or even 50 cents per day. The writer knows of a farm of about 1,200 acres on which the balance of the store bill for the year was about $23.50. The table was beautifully furnished. They raised all their meats, poultry and vegetables selling the over plus to the neighboring grocery store, leaving only the above balance for them to pay. The meets were, to a great extent, raised upon products that, on the average Dakota farm, would be considered as waste. his is a beginning and in the right direction. Another farmer who made application for a loan with which to buy more land desired to pay one-half of his interest in the spring and one-half in the fall. He said: "I have some hogs and cattle to turn off each spring, and it makes the payments more easy. I can clothe my family with the sales of poultry, butter and eggs." The writer, in conversation with a bright widowed German woman, who was not only running the farm, but bringing up a large family, was told by her that she did not care for the hard times. "My farm is paid for, I owe no one and I have butter, eggs, chickens, cattle, hogs and horses to sell every year." A gentleman at the head of one of the largest loaning institutions of this state informed me that, having a large number of loans in the northern part of the state some years ago, he advised the mortgagees not to raise so much wheat, but put in more flax, barley and oats. Wherever this advice was followed the farmers had paid their debts, and in almost every case where the advice was persistently raised the mortgagees had lost their farms. I have been informed by brewers that when the right kind of barley is sown in Dakota and properly cared for it is as good a brewing quality as any in the country. With five years of experience in raising barley in the Red river valley the writer has never got a less grade than No. 2 until the present year, and, if persistently raised the crop, he followed the advice "For the care of the crop," issued by the farmers (?) on the boards of trade of Chicago, Duluth and Minneapolis, and consequently lost by not following his own experience. One farmer of my acquaintance has a car load of cattle to ship every year; another is buying sheep in the fall, feeding them on the weeds of his fallow ground and wintering them on refuse and screenings and selling them in the spring at a profit. In another case the farmers of a neighborhood are joining together and ship a carload or two of hogs annually. In all of these cases the farmers have endeavored to get the best grade of animals. "No one but a rich man can afford to raise a scrub." The farmers of Dakota must raise the market before they can expect to have a home market. We have wheat and buyers are at our door. We are beginning to raise barley in quantity and buyers have found it out, and this is the first year they are seeking it. When we have cattle, hogs and sheep in sficient quantity the buyers will come also. We will then have a home market, and not be (like all new countries are) at the mercy of the combinations of local butchers. If the local butchers will not give a fair price now let the farmers of a neighborhood join together, fill a car and ship to a better market and buyers and slaughter houses will come in time. The buyers and slaughter houses did not go to Iowa, Nebraska and Kansas until the farmers had raised sufficient cattle and hogs to warrant their establishing themselves there. Creameries have been a success in Iowa, adding greatly to its prosperity, and the same state is achieving a national reputation for its cheese. Why cannot Dakota do the same? The potato starch factories in this state have been successful, adding much to the income of the farmer in the locality in which they were established, and potatoes at 15 cents per bushel is more profitable, with an average crop, than present price of wheat. The farmer can also remember that potatoes have been estimated to be worth 1 cent a pound when "manufactured" into pork. I am informed that the sugar beet of a very superior quality can be raised in Dakota. I have seen as fine corn and pumpkins in the Red river valley, within the past two years, as I saw in Iowa, and with the improved machinery for shredding, the stalks and nubbins make most excellent feed for stock, to say nothing of the increased yield of small grains the following year. In the opinion of the writer the farmer should not only raise all the horses he uses on his farm, but he should have some to sell annually. Owing to the extremely low price of horses the farmers of Illinois, Wisconsin and Iowa have almost entirely ceased to raise horses for sale, and are barely breeding enough for their own home use. Horses cannot, like hogs, be matured in a year or two. It takes four or five years, and the writer ventures to predict that horses foaled the coming year will bring a good paying price at maturity. Farmers are starting out faster than they are being grown.

We have the example of other states before us, and their methods and experience are open to our examination. Let us read, write and inquire. Find out, if possible, the reason of their failures and the causes of their success, and profit by their examples. Let us cease to be producers and vendors of the raw material, but "manufacture" it into the better paying commodity, and, as they say in Iowa, "Send our grain to market on the hoof."

—William B. Douglas.

He Had Forgotten the Word.

"I want to get out at Fletcher street," said a small boy to a street car conductor the other night.

"What do you say?" asked the conductor, not understanding what he meant.

"Please," responded the youngster, flushing slightly.—Lowell Citizen.

CREAMERIES.

North Dakota is to be One of the Great Dairy States—How Creameries Are Managed—An Able Exposition by an Experienced Scientific Dairyman—This is the Place, Where the Dairy Interests Are in Their Infancy, to Begin.

The creamery industry of North Dakota is yet in its infancy. Like all new countries it is some time before the first settlers will give up exclusive grain growing to the more confining system of dairy farming. To make a success of dairying requires good management combined with hard work, early and late, seven days in the week and fifty-two weeks in the year. Now when prices are low, hard work at seed time and harvest, with play the remainder of the year, will not suffice. So it is the North Dakota farmer is looking about him for a more profitable system of farming his lands. Dairying first, last and all the time for keeping up the fertility of our farms is the watchword in the older states.

Various communities in North Dakota have taken up the cry, and the season of 1895 finds at least twenty creameries and cheese factories in operation. During the season of 1894 three creameries were in operation and produced about 120,000 pounds of butter.

From reports furnished the writer by the managers of the ten creameries operating this season, the estimated yield is placed at 300,000 pounds of butter, and from the ten cheese factories a product of 250,000 pounds of cheese is assured.

A majority of these creameries are running on the separator plan, that is, the patrons deliver their milk at the factory, where the cream is removed and the skim milk returned to the farm. This is a much better system than where the cream is gathered, as it is possible for the butter maker to so control the conditions necessary to produce good flavored butter. In some communities, however, the requisite number of cows necessary to the successful operation of the creamery cannot be obtained without hauling the milk too great a distance and gathering cream is the only means left for operating.

The plan of paying for the milk at so many cents per hundred pounds, regardless of quality, has become obsolete, and the newer system of paying by the test is the rule. It seems a little queer that the farmers who were most benefitted by this system of buying milk were the last ones to consent to its adoption in the creamery.

As a rule, those who were the worst "kickers" are now its most ardent supporters. When once thoroughly understood the wisdom of such a plan becomes self-evident, hence the readiness with which it has been adopted. Then the Babcock test has been known to exert a powerful influence on the morals of some communities. While it doesn't tell you that a certain amount of water has been added to the milk, it has shown that some patrons' milk increased its fat content by fully 50 per cent in a few days. On the basis the price of milk has varied at all the factories ranging from 50 to 65 cents per hundred according to quality and time of year. At the gathered cream factories, the price per gauge, and each gauge will make a pound of butter, has ranged from 10 to 14 cents. At the cheese factories a uniform price has been received for the milk, and as the patrons received the whey instead of the skim milk the amount was a little higher, ranging from 55 to 70 cents per hundred. The price of cheese the coast season would not warrant a higher price, yet when we consider the feeding of skim milk, there is not quite enough difference between the prices paid at creameries and cheese factories.

Of the twenty circular letters sent out by the writer, but nine answered the questions, and furnished the information desired. With but one exception, all those report the outlook for next season as being exceedingly bright, some even saying they will double this season's yield.

It is in those portions of the state where the rainfall has ceased to be sufficient to insure a crop of wheat that factories have been most successful. In those sections the farmers are enthusiastic over this year's results, and next season will see larger herds and new creameries established. Make haste slowly in building a new creamery. Co-operation has been tried with good results, and for the benefit of those who contemplate erecting a creamery the coming season, the following is appended:

No creamery can be successful without the requisite number of cows. It is not advisable to attempt the project unless the product from 300 cows can be assured. With a less number it will be difficult to successfully operate a creamery.

The first thing to do in considering the advisability of starting a creamery is to ascertain if the required number of cows can be secured within a radius of five or six miles.

Advantages of a Creamery.—There are many advantages to be derived from the creamery plan. The first is that it increases the production. With the ordinary system of cream raising there is a considerable loss of fat, there usually being from ten to twenty-five per cent left in the skim milk. The best results in setting milk are obtained only by a liberal use of ice. This cannot always be had, and the conditions on most farms are not conducive to a low temperature, which is the principal cause of a thorough creaming, the quality of the milk effecting it but little. A modern separator creamery will get practically all the fat out of the milk. In the creamery system the butter is all made at one place by a skilled butter maker, and is of a uniform and high quality, commanding a better price than can be obtained for butter made in a private dairy.

Another advantage of the creamery is the less work required around the house, in the care of the milk, churning, working and marketing the butter.

Let all those interested in the project hold a meeting to discuss the advisability. All great reforms are worked out slowly, and a number of meetings may be necessary. When all sides of the question have been thoroughly discussed, adopt a constitution and bylaws, elect officers and begin the erection of a building. There are a few creamery companies who will do all the work of forming the company, erecting the building, equipping it with the necessary machinery and turn it over to the company ready to run. Such creameries have not been generally successful. You can do all the work of organizing and building with much less expense.

Salaried men to organize the company with plans on the work and equipment aggregate too great a cost for the creamery to be a profitable investment for some time.

The usual plan in building a co-operative creamery is not to have the stockholder pay cash for the stock subscribed, but to borrow the money, each stockholder being personally reliable for the whole amount, and then create a sinking fund to pay off the indebtedness.

The 5 cents per 100 pounds deducted from the amount of milk delivered at the factory to create a sinking fund is not felt by the patrons, as even then they will be getting more than if selling the milk and feeding from 10 to 25 per cent of the fat to the pigs in the skim milk.

By adopting this plan a creamery depending on the product from 300 cows will receive at least 6,000 pounds of milk per day, thus creating a sinking fund of $3 per day, and as such a plant need not cost more than $2,000 to $2,500 a very great length of time need not elapse until the plant is entirely paid for. If successfully managed the first season, each patron will wish to increase the number of cows in his herd so that a creamery starting with 300 cows will soon have the product of 500 or 600, thereby decreasing the cost of production per pound of butter, as there will be no material difference in the running expenses of a factory where the product is 6,000 pounds and where it is 10,000 pounds of milk per day.

One more thing. The writer, having recently been elected professor of dairying in the North Dakota Agricultural college and dairyman of the experiment station connected therewith, is desirous of furthering the dairy interests of the state to the highest possible extent, and requests the hearty co-operation of all her citizens in this important work.

The advantages of dairying to the farmers of North Dakota are many. Wheat has almost ceased to be a profitable crop, except in especially favored localities. The depreciation of soil fertility, the exceedingly low prices received for the crop and the rapid inroads of fungus diseases of the wheat plant can be assigned as the principal causes. Thus it is our farmers are looking about them to reclaim their worn-out lands, and make a comfortable living in the meantime. Dairying is the Mecca of all diversification in farming. With it the farmer is enabled to utilize most all the grains grown on the farm, and thus put back into the soil what has been removed by the growing crop. His income is steady, comes at regular intervals, and he markets his products in a manufactured form, thus saving considerable in the way of high freight tariffs.

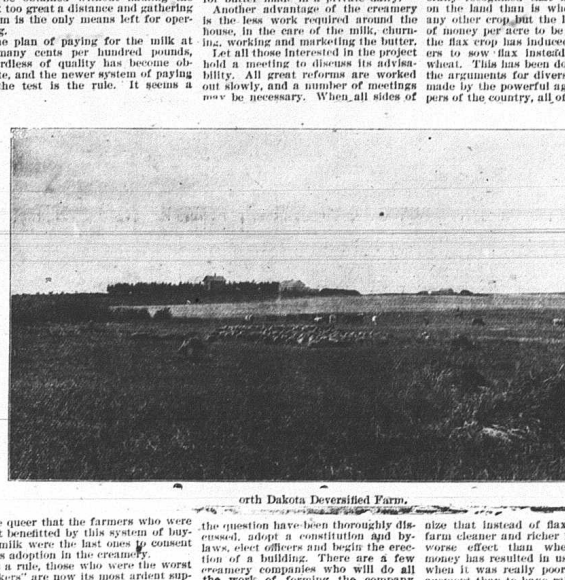
During the last few years barely more than half the butter consumed in the state has been produced within her borders. Is it policy for us to pay the farmers of other states high prices for an article of food that can and should be produced at home?

North Dakota for Dakotans should be the slogan of her farmers as well as the people of the cities.

As an aid in this work the writer is ready to answer or will try to answer others are some questions in dairying still unanswerable any questions asked, to furnish plans and estimates of buildings and equipment and copies of constitution and by-laws for organizing co-operative creamery associations.

—E. E. Kaufman.

Thrashing Scene in North Dakota.



orth Dakota Deversified Farm.

FLAX FIBER.

The Rich Prairies Will Raise Flax —There Shall be Oil Mills, and Linen Factories, and Twine Factories, and Rope Factories Within the Borders of North Dakota —Who Will Take a Fortune Out of These Industries?—There is More Than One Waiting.

During the past few years there has been a very marked greater interest taken in flax as a crop for seed in the Northwest than heretofore. The low price of wheat and other small grains, and even the low price of stock and other products of the diversified farm, have caused the attention of the farmers to be turned toward anything that would bring money. It has been generally recognized that flax is harder on the land than is wheat or almost any other crop, but the larger amount of money per acre to be derived from the flax crop has induced many farmers to sow flax instead of so much wheat. This has been done in spite of the arguments for diversified farming made by the powerful agricultural papers of the country, all of which recognize that instead of flax making the farm cleaner and richer it has even a worse effect than wheat. Need of money has resulted in using this crop when it was really poorer field management than to have raised corn and other cultivated crops with which to make live stock products. Flax is certainly a greater breeder of weeds than wheat, and other crop that grows, but in spite of this the better remuneration has led farmers to grow flax, not only on newly broken land, but on older lands which have been kept in good heart or have been specially prepared for crops of wheat. There may be money in opening up new lands, raising two or three crops of flax, and, as one farmer put it, "Take the flax out of the land and then sell it;" but no one will claim that it is patriotic to thus enter upon our virgin soils, skim them of their best fertility, make them weedy and then sell them. People usually overestimate the injury to the soil by growing flax in the way of reducing the fertility. A crop of average flax does not take very much more fertility out of the land than an average crop of wheat. The serious effect seems to be the liability to introduce weeds through the flax crop, for they increase more rapidly than with almost any other crop. It is even suspected that there is some peculiar mechanical or chemical effect, possibly due to bacteria in relation to the flax which is injurious to future crops of wheat, and especially future crops of flax. As a matter of fact, corn, millet, potatoes or other rank feeding crops follow flax, especially if the land be manured, there is doubtless no more harm from a flax crop than a crop of wheat. Though it does seem, as we ordinarily manage plowing and the preparation of flax stubble land, that wheat and other coarse grain does do so well after these crops as after other small grains.

Varieties of flax have been introduced into this country from Russia and other European countries. Considerable of this seed is scattered over the Northwest and is coming into general use. It looks like the ordinary flax both in plant and seed, except that the seed is somewhat larger. It is generally believed that this flax yields better than the ordinary American flax, as it is called. In a number of experiments in flax, however, the writer has not found any variety that yields very much better than the common flax. The use of flax has now reached such an important place that varieties should be produced suited to our own conditions by careful selection and seed breeding. The writer has no knowledge of a large supply of flax which he could recommend for seed as compared with other flax. We have no class of field seeds with which it is so important to be careful as to purity as in the selection of flax. Owing to the small size and rather heavy weight of the flax seed it is very difficult to separate from them many of the common weed seeds, such as mustard, pigeon grass, French weed, Russian thistle, tumble mustard and a host of others which should be kept entirely off the farm. The best way to select flax is to hunt up a field at harvest time and pick out the flax when standing to see that it is grown on clean land and make purchase at that time. Many weeds can be taken out of the flax, but it is only with special machinery and with a large amount of work that some of the seeds above enumerated can be entirely gotten rid of. One half dozen stalks of mustard in a field of flax may escape notice and each produce many seeds, and there will be many weeds in the field the next year. Flax needs about the same kind of land to do well as does wheat, and the kind of preparation needed is about the same. The seed-bed should be rather solid, as that formed by early fall plowing, by corn or potato land kept clean until fall and then not plowed, or by summer fallowing. Flax will do fairly well on spring plowing, on new breaking, and especially, will it will do well on back setting or on summer plowed timothy sod. Good seed, clean of all weed seeds, planted on the best land will produce much more money per acre than wheat. The seed should be planted about two-thirds the depth to plant wheat, and may be planted from the middle or last of wheat seeding time, as late as corn planting time, though medium early planting generally gives the best results. Plants will stand some frost and still make a crop, though, as many found last spring, the hard frosts either killed out or materially reduced the yields.

As yet we are growing flax for seed, but there is a strong probability that before long the fiber will be saved for ropes, twines, and even medium and coarse cloth products. We are now burning our flax straw and manufacturing fuel into binder twine, and with which to bind our wheat and even our flax. Machinery is being invented to thresh flax without destroying the straw, and it is with these a few years hence that the practice will be accomplished along this line. There are a few factories already starting up where the straw is kept straight by simply threshing off the heads from the bundles by sticking only the head of a bundle in the cylinder, then throwing the bundle aside to be retted and made into a pretty good class of fiber. Numerous factories throughout the West are using flax straw for making tow for the use of upholsterers, but this demand is comparatively easily satisfied as soon as the fiber can be so threshed, that it is kept straight and not broken up as with the ordinary spike threshing cylinder and made into cordages and coarse fabrics it can be used to great advantage to growers and manufacturers. The retting can be accomplished in large tanks in a building, where the retting can be done very rapidly by having the water somewhat warmer than where the retting in streams and lakes is practiced.

For seed alone flax should be sown from one-half to three pecks per acre, and should be sown in drills with ordinary grain seeding machine. For fiber, however, or for fiber and seed combined, sow one to two and one-half bushels, and the land should be very nicely prepared both as to fineness and smoothness, and should also be rather compact, and the grain sown broadcast. Flax pulling machines are being invented, and it is believed these machines will soon be beyond the experimental stage. Where the fiber is to be saved either by pulling machines, pulling by hand or cut off close to the ground with the self binder, it is important that the land be level, smooth and rather compact, that the wheels of the machine will not sink deeply into it. Many farmers use the flax dump on ordinary self-binding machines, by which is meant the device of some slats or fingers which hold the bundle, and when filled the bundle is dropped by hand or by foot lever. Where the fiber is to be used, it is best to use the self-binding attachment, that the fiber may be kept straight. While there are numerous agricultural questions to be settled regarding the flax industry, the question of machinery will do most toward making the flax business successful in the Northwest.

—W. M. Hays.

"Aw, Cholly, hawveaw been weading about these Turkish outwages in Armenia?"

"Aw, yes; beastly thing, don't you know."

"Well, weally, Cholly, I'm so worked up that I'm going to give up the Turkish cigawette."—Chicago Record.