

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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THE DOMINION.

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Address—THE FARMER'S ADVOCATE, OF
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Polled Angus-Ayrshire Cross and the General Purpose Cow.

To the Editor FARMER'S ADVOCATE:

SIR,—I notice in your issue of March 6th an enquiry as to crossing Polled Angus bulls on Ayrshire cows. I have had some experience in Scotland with this cross, but can scarcely agree with Mr. Ferguson's opinion that "the best beef cattle cross from an Ayrshire is through the Polled Angus bull." This dictum may be true as to quality and early maturity, but the element of size or weight has to be considered, and if this is taken into account, I have no hesitation in saying that the Shorthorn cross is the most profitable on Ayrshire cows. This is true also of undersized cows of any breed or grade. As is universally admitted, there are no better butchers' cattle than the Polled Angus and their crosses; but bulls of that breed should be put to cows of some weight and substance. Ninety per cent. of the calves will be polled and black. From Hereford cows the white face will appear on the black body. From white cows the calves will generally be blue-grays. In Scotland—apart from the pure-bred herds—farmers' cattle are generally Shorthorn grades with a strain of Ayrshire blood. The steers are splendid butchers' cattle and come early to maturity. The heifers make good dairy stock. To use a much-abused term, they are "general purpose" cows.

In Manitoba the question is often asked at farmers' meetings, "What is the best breed of cow for the Manitoba farmer?" The answers are various. If a dairy expert is present he will probably reply: "You must not attempt to combine beef-making with dairying. If you go in for dairying you must have cows of one of the distinctive dairy breeds. You must sacrifice the beef-making qualities to the milk pail." "But what shall I do with my steer calves?" asks an innocent enquirer. "Oh, knock them on the head," says our expert. This is mischievous doctrine, and enough to discourage any farmer who is a lover of live stock from embarking in the dairy business. There is no incompatibility between dairying and beef raising. The one is the complement of the other; and here, as in Scotland, the man who recognizes this is more likely to make a success than his neighbor who knocks his dairy-bred steers on the head.

Eastern Manitoba.

Wheat Cultivation in the Territories.

To the Editor FARMER'S ADVOCATE:

SIR,—You have very kindly requested my views on important points in connection with the cultivation of the soil and growing wheat in the Territories.

Preparation of the Land.—For new settlers this must necessarily be the first matter of importance, and as you no doubt have, and will continue to have, many newcomers as subscribers, permit me to refer to "breaking and backsetting" as the first preparation. Breaking is best done in the month of June, and is no doubt intended for this month alone; but the wants of man require that part of it be done before of after the month mentioned, and it seldom happens that breaking is confined to the proper period. June is our rainy season, and to break properly rain is an absolutely necessary adjunct. Breaking should be done as shallow as possible, one and a half to two inches at the deepest, and turned in narrow furrows "as flat as a pancake"—if I may use the expression. Rolling, where practicable, will materially aid in the rotting process. In six to eight weeks' time, according to the amount of rain that has fallen, backsetting can be started, as by this time the sods will have rotted sufficiently to break in pieces.

Backsetting is simply turning each furrow back to its original position, with the addition of one or two inches of new soil. To accomplish this, plowing should be done in same direction as breaking, and from one to two inches deeper. So far as the crop is concerned, nothing is gained by going deeper than two inches, and each additional inch increases the draft on the horses and occasions a loss of time. After backsetting, if a disk harrow be used, and the surface made as fine as possible, the preparation is complete. In many cases breaking cannot be finished by the end of June. After this date, instead of continuing to plow shallow, the sod should be turned over three to four inches deep, and not backset, but cut up with disk or spade harrow, and in this way made ready for the crop. In no case will such preparation produce as good returns as breaking and backsetting which has been done at the proper time, but it helps to increase the acreage for crops, and to a limited extent may be made to serve the purpose. In some parts of the Territories breaking and disking constitute the entire preparation of the land, and when breaking is done in June to a depth of three to four inches, and the sod, when thoroughly rotted, is cut up by spade or disk harrows, good results may be anticipated. Breaking and backsetting at the proper time, however, gives the best results, and in the end saves labor. After one crop of grain has been taken from either breaking and backsetting or deep-breaking, it is advisable to follow the land before sowing the second crop, after which the land should be followed every third year.

Fallowing land constitutes the mainstay of success in securing good crops in every part of the Territories, and if done in accordance with the climatic conditions of each district will ensure a good or fair crop of grain each year. Fallows, like breaking, should be plowed the first time early enough to secure full benefit of the June rains. If left until rains are over and weeds have attained their full growth, the work, no matter how well done, is no better than face-plowing, which time and again has proven to be a very unsafe preparation for crops of any kind in the Territories. Until such time as land is proof against winds, or where winds are not severe, the land should be plowed from six to seven inches deep in May or June, and cultivated, harrowed or stirred in any way to keep down weeds and loosen the top two inches of soil at least three or four times during the growing season. Stirring the soil retains the moisture, which, if not absorbed by weeds, will be sufficient for the crops the following year, even in the event of a light rainfall.

Where soil is old and is subject to injury by winds after the grain is sowed, it has been found that plowing deeply and cultivating the surface during the summer pulverizes the soil to such an extent that it becomes in the best possible condition to suffer from winds. To overcome this as much as possible, the first plowing should be done to a depth not exceeding five inches, after which cultivate as advised above, and when the growing season is over plow again, going one to two inches deeper than formerly. The last plowing will bring to the surface sod which has not been worked, and which will not blow to any great extent. There is, however, one objection to this method of making the fallow. Many weed seeds which in previous years have been turned under to a depth of six to seven inches are made to germinate, having been brought to the surface by the last plowing. These seeds, however, will have germinated by the time the grain is appearing, and the weeds should then be entirely killed by harrowing; there being no risk of injuring the grain plants if harrowing is done at the time the grain is appearing above the ground. One-third of the land under cultivation should be fallowed each year. When this is done, one-half of each crop will be on fallow and one-half on stubble land that has produced one crop after fallow. Where fallows are properly made a large quantity of straw will be produced, which, when harvested, should be cut as high as possible and left until the following spring. After the fallow land has been sown, choose a warm, sunny day, with a south or south-west wind, and burn the stubble. To ensure

a good burn, scatter straw on the outer edge of the whole field, so that advantage may be taken of the first warm day, irrespective of the direction of the wind.

Seed.—There should be no mistake made in this important matter, and it is safe to assume that the best seed procurable is none too good. While No. 2 wheat may make good seed, it should never be used if No. 1 is available. Very often favorable springs, with plenty of moisture, produce good crops from inferior seed; but more often unfavorable springs will give the very reverse, and as exceptional seasons are the rule, no risks should be run. Seed should be changed from light to heavy soil, or the reverse, once every four years.

Treatment of Seed.—To old settlers nothing need be said as to the advisability of treating seed with bluestone as a preventive of smut. With newcomers it is different, and I give the remedy, which, when properly applied, is a sure preventive of what at one time was one of the Northwest farmers' worst enemies. Take one pound of bluestone, crush fine, dissolve in boiling water in a wooden pail, add two and a half pails water. This is of sufficient strength for ten bushels clean seed. If seed be afflicted in the least by smut, use one and one-quarter to one and one-half pounds bluestone with the same quantity of water and seed as mentioned above. Put solution in a half-barrel, in which dip the seed contained by an oat sack, allowing it to remain in the solution for one to two minutes. After draining, empty seed in a heap and allow it to dry in the pile. For smut in oats the following treatment has been used for the past two years on the Experimental Farm with excellent results: In ten imperial gallons of water mix three ounces of formalin. In this solution soak seed for two hours. The seed will be considerably swollen, and when sown, one-half bushel by measure per acre should be added to the quantity usually sown. The trouble in applying the above treatment may be thought too great, but the results will fully justify it. [Mr. Bedford, in his experiments at the Brandon Farm, found five minutes soaking as effective as two hours.—ED. F. A.]

Seeding.—Seed should invariably be sown by drill, either of the hoe, shoe or rolling-cotter patterns, and never broadcast, except on breaking or backsetting where drills may not work, as in broadcasting it is impossible to put the seed in deep enough to escape injury by dry weather and winds. Two and one half inches is about the proper depth to sow wheat. Although in favorable seasons one and one quarter bushels good seed per acre will be found sufficient, it is safer to sow one and one half bushels per acre for fear of unfavorable springs.

Sowing East and West or North and South.—No difference has so far been observed in the different directions of seeding. At the beginning of the windy season the east and west seeding may resist the blow slightly better than that sown in opposite direction; the drill marks, however, will soon become entirely obliterated, after which it is immaterial which way the drill has been run. Some claim that seeding east and west prevents the hot winds of July and August entering the field on account of the drills running in an opposite direction to the prevailing winds. Where the soil has been properly fallowed hot winds do not affect it or the crop to any great extent; stubble land, however, having little or no moisture is liable to injury, no matter how the grain is sown.

Harrowing after Seeding.—This is a matter that has not yet received very much attention from farmers, but is one deserving consideration, and should be tested by every one for his own satisfaction. In new land, with few or no weeds, or in land which has been fallowed and the first plowing has been finished before June rains came on, and the cultivation afterwards has been sufficient to encourage germination of weeds and then destroy them, harrowing is not necessary. In old land, full of weeds, or on late worked fallows, harrowing is of very great advantage, not only in killing the weeds, which is the main object, but in keeping the top soil loose as long as possible to act as a preventive of evaporation. Where land is rough, harrowing should be done just before or at the time the grain is appearing above ground, when two strokes of iron harrows should be given. No harm will be done if a third stroke be given in the course of a week, or before the grain gets too high. It is impossible to state definitely the time which should elapse between harrowings. In some springs with rapid growth, a few days is sufficient; in other years, when growth is backward, a week or ten days will not be too long. Grain to be harrowed should be sown at least two and one-half inches deep. Broadcast seeding will be more or less injured by harrowing. An implement called the Breed Weeder is very useful, and is perfectly safe to use on grain until it has attained a height of four to six inches.

Should Grain be Sown by Drill or Broadcast Seeder on Backsetting?—Where backsetting has been well done, and especially where disk or spade harrows have been used after backsetting, and the soil permits, a drill should be used in preference to a broadcast seeder. There are cases where drills will not work on backsetting, and only broadcasting can be done, but the instances are rare. Winds cannot injure backsetting, so danger need not be apprehended from that quarter, but in broadcasting a good deal of the seed will remain uncovered, and more of it will be too near the surface to be safe from injury by the hot weather of July and August.

ANGUS MACKAY, Supt.
Indian Head Experimental Farm.