

their cross-bred mares in preference to stallions of any other breed. The Suffolk now shares with the Clydesdale pretty equally the approbation of the farmers throughout Great Britain. It is supposed, however, by many breeders of experience that the Clydesdale horse is gradually gaining on his competitor, and that in the course of a few years the Suffolk will be as scarce as the dray horse." Mr. Youatt, in his description of the Clydesdale, says "the Clydesdale is a good kind of a draft horse, and particularly for farming business and in a hilly country." It derives its name from the district on the Clyde in Scotland, where it is principally bred. For the breed of horses now known as the Clydesdale we are indebted to the enthusiasm of one of the late Dukes of Hamilton. In Scotland that nobleman, who lived about the latter part of the last century, entertaining a desire for improving the breed of horses in his district of Lanarkshire, imported stallions from Flanders, which he crossed upon the native mares. Others followed his example, till now this breed is, I may say, almost world-renowned. The Clydesdale is larger than the Suffolk, with better head, longer neck, a lighter carcass and flatter legs, is strong, hardy, pulling true and rarely restive. The Shire horse is the best draft horse in England at the present time; they are bred with more care than any other draft horse in that country. A good horse of this breed might answer those of you who wish to use them as well as the Clydesdale. But it is maintained by some of the best authorities that there is not a breed of draft horses in the world that will improve a low grade of horses as the Clydesdale, and in support of this argument I will quote the opinions of Mr. Pole Gell, one of the best authorities in England. He says: "The progress made in that country in the breeding of horses was remarkable, and afforded a lesson of which they in that part of England might well take heed. Derbyshire has long possessed a fine breed of cart horses, but of late years the quality of the stallions had hardly been kept up, and their mares were continually being bought up by Scotch breeders." Mr. W. G. Powell says: "It is not alone in the great strength of the Clydesdale, according to his weight, over any other breed of horses for heavy draft work, that his superiority consists, but he surpasses all others in his ability to keep up this strain for a much greater length of time—his reserve nerve force seemingly being much greater. This is observable, not only in a continuous pull, but also at the close of a severe day's work. He keeps up through the whole day the same prompt, vigorous and energetic step with which he starts out in the morning to a degree not equalled by any other horse. Being more strongly bred than any other draft horse, it would be an anomaly in breeding were this not so. Many adunghill could out-run even a Ten Broeck for a short distance, but this same dunghill is incapable of continued exertion, lacking the necessary nerve force, which can come only from good breeding, but is no less important in the draft horse than in the trotter or the racer. Another superiority of the Clydesdale consists in his greater prepotency in breeding. Crossed with any other breed of draft horses in world, the Clydesdale characteristic will predominate. This being true, no other evidence would be necessary to establish the fact that, crossed with the ordinary unknown bloods of our country, the Clydesdale will produce the safest and most satisfactory results. Experience and observation everywhere where tested confirm this. This question of prepotency—the power of transmitting the same qualities and characteristics—is of the greatest importance, not only in an individual animal, but also in a breed. This power of prepotency in a breed the Clydesdale certainly possesses in a greater degree than any other leading breed of draft horses on the globe—a quality of the greatest importance, and one which is fast becoming recognized and appreciated."

Colonel Williamson says that the breeding of Clydesdales is not done in a haphazard way; on the contrary, by hard work, by keen observation, by dogged perseverance, the breeders of what we call Clydesdale horses have founded and continued to breed a race of horses that have never been surpassed or equalled in the world—a breed of horses that is a credit to Scotland, and the Scotchmen who bred them. One of the great carriers of Manchester said that he had used some of the largest horses in the world for many years, and his experience was "that there was no breed equal to the Clydesdale for the hard pavement, because their bones and muscles were laid on in the right place." The demand for this noble breed of horses ought to be a sufficient argument in their favor, if there was no other. There is hardly a month in the year but there are purchasers from foreign countries buying them up. I have a personal knowledge of this myself, being there at all seasons of the year, where I have seen some shipped to Australia, South America, United States, Canada, and even to Russia. As many as eighty-three were shipped on one steamer in 1882 to the United States. Hence, there is no breed of draft horses in the world that surpass them, if demand, high prices, and their success in the show ring are a criterion to go by.

Another fact worthy of notice is that while in Scotland there is not a stud of Shire horses or mares to be seen, some of the largest Clydesdale studs in the world are to be found in England; among those the studs of the Marquis of Londonderry, Sir Robert Rodor and the Earl of Cawdor are prominent. As bad qualities are quite as easily trans-

mitted as good ones, if not more so, it is necessary, when selecting a male to improve stock, to see that he is free from bad points as well as furnished with good ones, as it is known by experience that the good or bad points of the progenitors of the sire or dam are almost as likely to appear again in the offspring as of the immediate parents in whom they may be dormant; hence, in breeding the rule is that like produces like or the likeness of some ancestor. Stonehenge says that the purer the breed the more likely it is to be transmitted unaltered to the offspring. Hence, whichever parent is of the purest blood will be generally more represented in the offspring, but as the male is usually more carefully selected, and of purer or less mixed blood than the female, it generally follows that he exercises the most influence, the reverse being the case when she is of more unmixed blood than the sire. Now, I think that we will be able to show you that the best kind of general purpose horses are got by crossing those heavy horses with our common or native mares. The first prize teams at the Central Exhibition at Guelph, since its commencement, in the general purpose class are by draft stallions and Canadian mares, weighing from fourteen to fifteen hundredweight. Indeed, the most of the prizes in this class at all our large shows are generally taken by crosses between the heavy draft and our mares. I may say to those of you who want to breed lighter saddle or carriage horses, that I would recommend a strong, well-bred horse, as large as you can get, with plenty of bone and muscle. Such a horse, crossed with some of our most stylish, well-bred mares, would answer your purpose better than any of those mongrels that are so numerous in the country. In selecting a blood horse I would recommend one of the best bred ones you can find. In height the blood horse varies from fifteen to sixteen and a-half hands. The general height of the best English performers is fifteen hands three inches. Sir Taton Sykes was fifteen and a-half hands. Between that and sixteen hands one inch may be ranged every great winner for the last number of years. The texture of the coat and skin is a great proof of high breeding in all thoroughbred horses. The hair is more silky than common breeds, and the veins are more prominent. The mane and tail should be silky and not curly, though a slight wave is often seen. A decided curl is almost a mark of degradation, and shows a stain in the pedigree as clearly as any sign can do. I would impress upon farmers the importance of health and soundness in both sire and dam. The peculiarity of form and constitution are inherited from both parents, and the excellence of the mare is a point of quite as much importance as that of the horse. It is quite true that the foal proceeds from the sire and the dam, but the experience of ages has proved that the essential parts of the body, such as the bones, the tendons, the nerves and the veins, proceed always from the sire. This is beyond all doubt. There are several mistakes which farmers always make. They pay little attention to the kind of mares they breed from, and less to the proper nourishment of the foals. I would like to impress upon them the fact that there is little if any money to be realized from breeding scrub horses. This class of animals will meet with slow sale and bring unsatisfactory prices, for the reason that the supply is greater than the demand, while for good draft horses there is a strong, healthy demand, far exceeding the supply, and for which such prices are paid as make the breeding of them highly remunerative. In fact, farmers sell the horses that command the highest prices, and keep for their own use such as they cannot sell. This is one of the principal reasons why our supply of good, large horses is so inadequate to the demand. The great mass of farmers follow this practice of keeping only such horses as cannot be readily sold, consequently a large majority of mares that produce our annual supply of horses belong to this refuse class. Until farmers learn that it is true economy to retain only their best mares on their farms, and use them for breeding purposes, the supply of good farm horses, such as we have described, will continue much below the demand, and horses weighing eight or nine hundredweight will be the kind mostly used by farmers. The introduction of good stallions has done much in some parts of Canada within the last number of years towards improving the quality of our farm horses, but until we learn to place a higher estimate on the quality of the mares we use for breeding purposes, the progress must necessarily be slow and unsatisfactory. But if we use a little judgment in selecting a good, sound, well-bred horse, with plenty of action, of whatever class of horses we want to breed from, and keep the best mares, we will in a few years have a far better class of horses than we have at present. What is the reason that we have a better stock of cattle at present than we had twenty or thirty years ago? Simply because farmers use only thoroughbred bulls. Will not the same rule apply to horses as to cattle? Certainly it will. In conclusion, I would advise all farmers to pay more attention to the breeding and raising of their stock, when crops are so uncertain. I think if we would improve our stock, and pay more attention to the proper mode of feeding, then we would be well paid for our trouble or expense that we might incur. Good stock of any kind is, I think, far more easily fed than poor, ill-bred mongrels. I hope these few hints may induce some of my brother farmers to give the subject of breeding a little more consideration.

Allow the Heifer to Develop.

BY THOMAS BELL, MITTFORD, N. W. T.

I see a small article in your issue of 20th October anent dairying. It mentions that some dairymen allow their heifers to go till two years old without breeding, thinking that it is essential to have a large, well-developed cow before the time of calving. Well, sir, I certainly think that these dairymen are quite correct in their theories, as my own experience as a dairyman, or farmer, in the Old Country has amply proved.

Certainly I have seen heifers calving at two years and doing great things, but I have also invariably seen it to be the case that in the next season they never do so well as those that are allowed to develop properly before calving; in fact, I think they never make up the loss they sustain at that immature age. Such has been my own experience as a breeder for over sixteen years.

FARM.

Brokenhead District.

BY GEO. BARTLETT, BEAUSEJOUR.

The majority of the settlers in Manitoba have settled on the open western prairie land, thinking to gain by having no land to clear. Many of them are now realizing the disadvantage of settling so far from wood and water, and attention is being directed to the equally fertile woodlands east of the river.

As yet, however, the district of Brokenhead has not attracted much attention, on account of its position. It is several miles north of Beausejour station, and as the land around the station and along the railroad is stony and not good for cultivation, the intending settler concludes that the whole country is like it. He therefore passes it by, little thinking that he is within a short distance of some of the best land in Manitoba.

Anyone who has taken the trouble to go a few miles north of Beausejour is surprised to find that, instead of rocks and swamps, it is an excellent farming district, which can and does raise heavy crops every year. It will grow anything which can be grown in any part of Manitoba, and offers advantages which few districts can offer. It is the object of this article to show the advantages which this country offers to the settler with the capital or enterprise necessary to make a start in a new country; for if he has neither of these qualifications he is of no use here—he is not the man for Brokenhead.

The Brokenhead district is the country along the Brokenhead river between Beausejour and the Indian reserve near Lake Winnipeg. It is heavily wooded in places, especially near the river, but has some fine stretches of prairie which makes excellent hay land.

Brokenhead is over one hundred feet above Lake Winnipeg, and about forty feet above East Selkirk, so that the swamps may be easily drained by digging ditches to the river. This is being successfully done by the new Government ditches, and a rapid improvement is taking place in the land and roads in consequence of this drainage. Any swamps or marshes in this district are caused, not by low ground, but by want of drainage.

The Brokenhead river is a large stream of excellent water, which winds with sweeping bends through the settlement, giving everyone all its advantages of water, drainage and transportation.

The soil is a rich vegetable deposit, formed by the heavy grass of the prairie and the leaves of the forest. Farther west extends a sand ridge, about fifty feet high, which runs along the east side of Lake Winnipeg, crosses the Brokenhead river near the Indian reserve, and runs southward and crosses the Canadian Pacific Railway near Tyndall station. It was the eastern part of one of the series of beaches of the ancient glacial Lake Agassiz. From the river to the ridge the land rises slowly, and near the ridge it becomes sandy. Along this part, and on the eastern slope of the sand ridge, many kinds of fruit grow wild, and several kinds have been successfully cultivated. The chief fruits growing there are plums, cherries, raspberries and blueberries. All of these, except blueberries, grow in all parts of the district, and wild grapes grow abundantly along the river banks. Melons, cucumbers and corn are successfully grown in all parts, especially near the ridge, and magnificent crops of potatoes are raised. Nearly all Ontario fruits have been cultivated, but wild fruits are so abundant that few people take the trouble to cultivate them. In places the blueberries are so plentiful that the pigs live on them during the autumn.

Fish are plentiful in the river during spring and early summer, and game is also plentiful during shooting season. Partridges are numerous, ducks and prairie chickens are quite common, and moose and deer are sometimes found here. Timber is close at hand for building purposes or for fuel, poplar, spruce, oak and jack pine being the principal kinds. A saw mill, which is run during the winter, makes lumber easily obtainable.

Most of the cultivated land is cleared bush, but the prairie has also been cultivated with good results. The land is very fertile. The wood lands raise heavy crops of vegetables and grains, and the prairies always yield good hay in abundance.