

The Rearing of Calves on Skim Milk.

Below we give the method of rearing calves from skim milk as recommended by Prof. J. M. Robertson, of the Ontario Agricultural College, Guelph: It is better, in the opinion of the professor, to take the calf away from the cow as soon as dry. For about two weeks it is fed new milk three times a day, giving two quarts at each feed, and the calf is kept in any place that will be comfortable. At the end of two weeks skim milk is substituted for new milk, but gradually, the process of transition extending over but one week. This change is brought about by pouring some new milk into the ordinary skimmed milk rather than by skimming the new milk at lengthening periods of setting.

At the age of two or three months the milk is fed but twice a day, about four quarts at each feed, the change in increase in quantity always being gradual. The milk should always be fed sweet, and when young should be fed at a temperature of about 90°, and never at a temperature less than 60°. A good guide is that degree of heat which feels comfortable to the sense of touch of the finger. The milk may be most conveniently heated by pouring in hot water. They should have access to a small quantity of meal, one half bran the other half bruised or ground oats. A small handful of linseed meal is put into every peck of the mixture. The quantity of the meal should be so increased that they may have all they want of the meal the first season. Always keep the steer calves in the first season to secure more growth, and the heifer calves out save when the sun is warm, to secure constitution and vital force. Proper treatment during the first six months, the second six months, and the third six months is greatly important, and important in the order named.

This paper was in type before the receipt of Prof. Robertson's very valuable article on this subject in another column, which every cattleman should read with the utmost care.

The Clydesdale Horse.

BY D. M'CRÆ, GUELPH.

(Second Paper.)

MODERN BRITISH BREEDS.

No country in the world has done so much to improve the breeds of horses as Britain and no country has to-day as many classes and breeds as that land has. From the small Shetland pony to the heavy draught there are many breeds and grades, and all have been by careful and judicious treatment brought to a standard of high merit and an adaptability for the purposes for which they are used. Of the many small and medium breeds we need say little, as they are far removed from our special subject. The smallest and best of the pony breed is probably the Shetland, with its varieties. These little horses in their native islands are left almost running wild till caught for sale. They are exposed with little artificial shelter to the storms of their native islands. They seldom receive any food but what they can gather from the sedgy bogs and barren hills of the country. In severe winter weather they come down to the coast and feed amongst the sea-weed thrown up by the tide. No wonder they have a good coat of shaggy hair which sometimes felts up and makes a good great-coat. They are chiefly used for children, are easily taught, and become sometimes as sagacious as a dog when kindly used. They show in a marked degree what treatment will do in this respect to the size and appearance of an animal. Wales has a breed of ponies adapted to an elevated country of scanty herbage. They are useful and hardy, and some of them are very

well made and have good style. They average about 13 hands and have neat heads, good shoulders and backs, and generally splendid feet and legs. The Exmoor pony is a hardy little animal, thick and chunky, and have the reputation of being great jumpers. The Highland pony is strong, useful and docile, will carry heavy weights and are very useful over boggy ground.

The racehorse is the most high-bred of any of the breeds of British horses, and superior for qualities of speed to any horse in the world. They have improved very much both in size and speed during this century. They are now from 15 to 16½ hands in height; some reach even 17 hands. As to the question of bottom and stoutness, it is a disputed point, and one that has been much discussed. The blood of the racehorse has been mingled with the other native varieties in every degree. In this way certain valuable properties have been communicated to the inferior races, and many varieties have been formed into different classes suitable for special purposes.

Of carriage and coach-horses the Cleveland bay has been coming of late years to the front. Bred originally in Yorkshire, and used for a pack-horse, he has many valuable properties. They are of a rich bay color with black points, and some of them are very handsome and suitable for private carriages. Some years ago it was said that the old breed was almost if not altogether extinct, but there has been a good modern demand for just such a style of horse, and they are again taking their place amongst the breeds.

THE SHIRE OR CART HORSE.

Of all the draught breeds of English horses the Shire to-day takes the foremost place, and an extended notice, taken chiefly from the writers in the Shire Stud Book, will not be out of place here: The Shire horse of to-day is one of mixed breeding. Writers of 50 or 60 years ago were ceaseless in their objections to the slow, ponderous movements of the draught horses of that day, and urged crossing with animals of more slender build. Some sections of England are now suffering from too much of this light crossing. Stallions of the old Shire breed were mostly black, many were a sooty black; others a dark slaty black; most of these had white markings on the legs and face. Brown and grey were the other colors common at that time, but not so numerous as the black. Staffordshire had most of the browns, while Lincolnshire had almost exclusively black, and the greys were more common in the counties to the south. The old English Shire horse is thus described: Head, large in all its dimensions; forehead and face wide, expressive and intelligent; jaws deep; ears, small and carried slightly outward; eyes, small, not prominent, and generally mild; nostrils, wide; mouth, large, firm and well closed; neck, long, arched, deep, strongly joined between the shoulder-blades, carrying the head well set on by strong, deep and broad attachments; shoulders massive, muscular, upright, low and thick at withers; forearm, strong and muscular; knee, broad and flat; fore and hind canons, short and thick, often 12 inches around, covered with coarse skin, and with a beefy look and touch; fore pasterns very short, strong and upright; hind ones more oblique; feet, large, flat, weak at the heels with horn sometimes soft and spongy; thighs narrow, lacking inside muscle, and having a "split up" look; hocks, rather defective but not showing any predisposition to disease, generally too short and too round, and not sharply defined; hind action, limited and wanting in elasticity; hind legs bent, hocks thrown backward and feet forward, breast, wide and full of muscle, showing great strength rather than quick movement; back long, narrow, and dipping behind the withers;

heart-ribs well arched, but not very deep, hinder ones rounded but short, and last one too far forward; croup, bent at a considerable angle and lacking quality; dock, strong and thick, with broad, powerful attachments, altogether good appearance, with a grand front development, but in contrast rather lacking behind; carrying a great growth of hair, that of mane and tail abundant, strong in texture, glossy, and sometimes several feet long; legs, fore and hind, carrying a profusion of coarse long hair. This was a distinctive feature of the old cart horse breed. From this description it will be seen that the Shire horse of to-day is much improved and is much better fitted than his progenitor for his special duties. Frederick Street, Esq., claims that the Clyde has been improved by a mixture of Shire blood, and that the Shire has been deteriorated by a mixture of Suffolk blood. He sums up his description of the modern Shire horse as follows: "The feet should be fine, deep, and wide at heel; pasterns not too long, and straight; flat bone; short between fetlock and knee. A stallion should measure not less than 11 inches below the knee; girth, 93 to 99 inches; should not stand more than 17 hands; chest wide; head, big and muscular, without coarseness; eyes, prominent and kindly; the head and eyes together should show intelligence and good temper; shoulders well thrown back; full flowing mane; short back, well arched ribs; deep middle; large muscular development of the loins; long quarters, with tail well set on; the lower part of the rump wide and well let down; good, big second thighs; large, flat, clean hocks; plenty of long silky hair on legs." To sum up, a horse should in form be long, low, and wide. In constitution thoroughly free from all hereditary disease. A main point is good action. He, above all, should be a good mover at the cart-horse pace—walking.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL Our Nova Scotia Letter.

SUSTAINING FERTILITY BY MEANS OF IMPROVED STOCK.

From all appearances, the farms in the larger part of Nova Scotia are losing continually in fertility, and a time is nearly approaching when they will no longer be profitably worked under the present system.

When that day arrives, it will of course be necessary for the population residing on these farms to move, either into the towns or into some locality where new and unexhausted lands can be cheaply procured. This has already happened in many localities, and abandoned farms are to be met with in many, or all countries. In many of these cases the land was naturally infertile, and would have proved a more profitable investment if left under wood, but in many cases this was not so, and the loss of fertility is owing to a wasteful system of farming, by which the stock of plant food naturally existing in the soil has been so far reduced that the crops grown no longer give a profit. The great question for farmers in Nova Scotia is to decide whether it is most to their interest to remain on the farm and seek to improve it, or to break off and move to the more fertile regions of the West. There can be no doubt that to many of them the course which offers most material gain is to go West, but the attachment which all men feel for home and friends acts powerfully to prevent them from following it.

To the Government of the Dominion, a removal West would be valuable in filling up our new country with a fine population, which, in all manly qualities cannot be surpassed. To Nova Scotia, such a removal would, on the other hand, be a serious matter. Still, in the end, it might prove a gain even to the Province, as it is not to the advantage of a country to have a large part of its population so placed that its labor is not expended to the best advantage. But while some may move West, many will remain on the farms and work the old fields. What can be done to help these to improve their condition? Much of our land in Nova Scotia is hilly and not good arable land