

Importance of Good Bone.

He wants bone! How many good horses have been set aside in show-ring or fair with these three simple words? How many will be set aside at our coming exhibitions and fairs on the simple whispering of this shortly-expressed verdict? It seems to me more than possible that such an expression may be couched in the phraseology of many dead languages, for light bone must always have been a fault in a heavy horse that carried to battle a warrior fully clothed in armor, as it is now an admitted deficiency in his descendant, when burdened with a heavy load, writes W. R. Gilbert in the Kentucky Stock Farm. The pack-horse wanted it badly at times—both up hill, down hill, and along the sloppy level of the early highways. The heavily-equipped soldier finds the lack of it coming off parade; and the trotter needs all he can have. But perhaps of all others, the modern harness horse, of a fairly heavy type, needs it most. This as regards weight and density, or what is called in the racer "cleanness."

There has been found a difficulty in keeping up the bone of the horse they have experimented with in South Africa. Most likely the pasture is not on top of limestone soils, and, in increasing the bone, which has to be fed-in as much through exercise as a threshing machine has to be fed with grain when in motion, there may be a lack of the necessary nutriment. In this difficulty, resort has to be had to feeding "bone with bone." Physiologists will no doubt tell us that this is nothing new, there being various preparations of burnt bone essences in use for rickety children, where there is an absence of lime in the water. Phosphate of lime forms a large ingredient of patent chemical foods. In South Africa the horses are given a large amount of bones in a ground state, with a view to a large absorption of the same through the stomach into the system, this through the soil being unequal to creating as full development of bone in the ordinary manner. Much of the bone so fed proves insoluble, and passes through the intestines, but a special form of fermented bone is being tried, the full phosphate in which is likely to be taken up. Bone ash, which is just carefully calcined bone reduced to a fine powder, we know to be largely used in the preparation of various forms of human medicines, and can be very cheaply prepared from bones of all kinds.

In regard to this formation of bone through eating bone, this is nothing new in animal life, as the red deer, which cast their antlers every year—these sometimes of great spread and weight—are held by most authorities to consume the same, but not only that, but the bones of the skeletons of the deer found in their travels. The best antlers are, however, developed on good deep pasture, full of lime, and it is a noteworthy fact that some of the largest heads of horns have been found in parts of Ireland, which ornamented the old red deer Galway, which fed on grass which now gives such magnificent specimens of horseflesh.

Breeders of horses will naturally prefer to take the bone through the herbage, but in young stock a little bone-food might well be administered where the soil is known to be deficient in phosphates. Superphosphate of lime and other bone manures may be applied, and these being taken up by the pasture the colts and fillies will furnish as they come on. Of course, it must be quite well understood that there must be a fair substratum of bone to begin with, to be obtained in the usual way, viz., by mating horse with bone to light mare, or vice versa, or with both fully furnished in this respect.

Raising Orphaned Colts.

Occasionally a breeder is unfortunate enough to lose a brood mare at the foaling, and the work devolves upon him of raising the foal by hand.

A useful formula for the first three weeks is three parts warm cow's milk and one part water, with a teaspoonful (not heaping) of sugar to each half-pint; thenceforward add a tablespoonful of lime water to each quart, and tempt the foal with fine oatmeal, mixed with milk and sugar, and play with him by introducing tender grass into his mouth until he gets the flavor, and nibbles on his own account. Orphans learn very much sooner to feed themselves than those with a dam having plenty of milk. There are two special points to be borne in mind: Feed little at a time, but often, not forgetting that the foals suck in the night; watch against indigestion, which shows itself as scour. If the foal looks drummy and dull, do not wait for him to scour, but give a dose, two to four tablespoonfuls of castor oil; it is always safe, whether scouring has begun or not. Do not be afraid to let him get hungry, and beware of giving him too much when you do feed him again. Some people use large rubber nipples, but by feeding from the palm of the hand, the foal is soon taught to drink from a dish, as the hand is lowered into the milk in the bowl, drawing it out from under the sucker's mouth.

The Belgian Draft Horse.

We can give no details of the origin of this horse, further than that he is of Belgian production. He is little known in this country. He is usually of immense size, often reaching 2,400 or 2,500 pounds. Those that we have seen have lacked the quality of bone, the obliquity of shoulder, the length and obliquity of pastern and the quality of action that we notice in most other breeds of draft horses. He is an animal of a very blocky type, legs comparatively short, and body of immense depth and width. We cannot reasonably expect in him the general quality and the action that we expect in the Clydesdale and Shire. He may be any color, and is usually of a somewhat phlegmatic disposition.

Rearing a Foal.

The best way to rear a foal is to follow nature as nearly as possible. We will start with the mare which is on the point of foaling. She should be placed in a large, warm, but well-ventilated box, well bedded down with plenty of clean, sweet straw. It will be found advisable to have an attendant ready, in case any assistance should be required; but it should be impressed on the attendant that he leave the mare alone as much as possible, and only come to her assistance when absolutely necessary, as often more harm than good is done by interfering with the mare. If the navel cord breaks in the act of foaling, which is usually the case, well and good; but if the cord is not naturally severed, artificial means must be resorted to at once. The attendant should tie round it a string, an inch from the belly, that has been well soaked in carbolic oil. He can

should be promptly removed from the box and buried.

In the matter of food for the mare immediately after foaling, a little warm oatmeal gruel is perhaps the best restorative, to be followed by a small feed of well-scalded bran, a little malt meal, and two or three tablespoonfuls of linseed oil. Mares advanced in years, and those in low condition, are materially benefited by a pint of good beer or an ounce or two of whisky where foaling has been protracted and difficult. As soon as the foal can stand, the box should undergo a thorough cleansing. The mare and foal should be kept in their box until the weather becomes favorable, and if the season is unsuitable, they should only be let out on warm days, and in the middle of the day when the sun is shining. The mare should be well fed with crushed oats, bran, and hay chaff; add also a little malt, flour and salt. The mare should be protected from exposure and draught for the first two days. It should be seen that the stable is properly ventilated. Turn the mare and foal out to grass as soon as possible. In a few days turn them out altogether, provided there is good shelter for them at night. Supplement the grass with dry food, and encourage the foal to share the food of its dam.

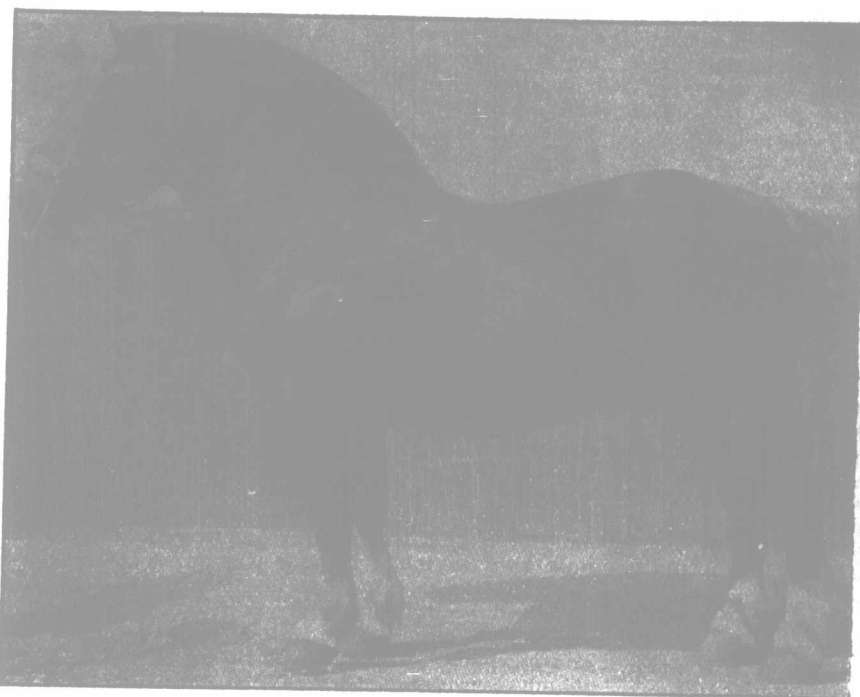
In spite of care and good management, disease now and again breaks out, which may result in hopelessly damaging the udder or destroying the mare. When the mare is lost, the advisability of hand-rearing the foal will depend upon its age, character and breeding. A foster-mother should be procured, if possible. The transference of the mare to the strange foal should be carried out with great care, as it sometimes causes digestive disorder, and diarrhoea at first, especially if it has not received the first laxative milk of its dam. If the foal has not received the first laxative milk of its dam, constipation is more than likely to exist, which should be corrected by a small dose of castor oil and an enema of glycerine and water.

If a foster mother cannot be procured, the next best thing is a cow. Procure, if possible, the milk of a newly-calved cow, on account of its purgative properties, and keep to one cow. Care should be taken to see to the state of the foal's bowels at the outset of this system, and to observe and act upon the indications of nature. The fat and casein of cow's milk is largely in excess of that in mare's milk; but the sugar in mare's milk exceeds that in cow's milk.

In order to render cow's milk a suitable food for the foal, water should be added to reduce the proportions of casein and fat; sugar should be added. To begin with, cow's milk should be two parts to one of water; later, three parts cow's milk to one of water. The cow should be milked into a vessel previously warmed, and dilute with water raised to 100 degrees F., which is the natural temperature. Cold, stale milk provokes diarrhoea. Administer frequently and regularly, both as regards quantity and time, at first half a pint every half-hour. Gradually increase the quantity, and extend the intervals by degrees.

It is now that the digestive organs of the foal have to learn their business. When the foal begins to nibble, the stomach and intestines do the work; then the work of the salivary glands begins. Large glands, under the ears, and under the jaw, and under the tongue, pour into the mouth fluid containing various salts and a ferment which acts upon the food after it is swallowed. If the food given is of soft, wet nature, that can be swallowed easily, and without rolling it in this way and that way across the mouth with its tongue and saturating it, it is likely to have indigestion, flatulence, or scour. The scour is nature's effort to clear out the unsuitable food, in the hope of getting better food, or of so altering the gastric and peptic secretions as to be able to deal with unsuitable food. The foal should be given food, besides its mother's milk, that it cannot easily gulp down, but must learn to grind or chew, for in so doing he will develop more power day by day to digest the kind of food he is destined to live upon—dry bran, with a coarse oatmeal, chaff, or cut grass as chaff, corn, nibbled at first because of the want of grinding power which comes by the use of the masticatory muscles. Hard-and-fast rules for feeding are only laid down by persons without much observation. The successful men exercise individual care of their stock, and abide by no absolute rules.

When the foal is a month to six weeks old,



Champion Belgian Stallion, Reve d' Orr; Chestnut; 17 Hands.

then cut through the navel cord below the string, the precaution of previously carbolicizing his hands and knife having been taken. He must then dress the navel well with carbolic oil, or any other strong antiseptic. In the ordinary course of events the mare will then proceed to lick her offspring all over.

This operation is most salutary; but in certain cases the foal will need more attention. Owing to protracted labor, or to being unduly confined in its membranes, it may be exhausted or well-nigh suffocated. In such cases its mother's attentions will not be sufficient. Any mucus or watery matter contained in the nostrils must be removed; also its legs and body should be well wiped down. Artificial respiration may be necessary if breathing is difficult. Smelling salts or tobacco fumes are useful for re-establishing respiration. If the foal is in a very weak condition, it should be well wrapped in flannel, and a teaspoonful of brandy in a little mare's milk may be administered with advantage. The foal will soon begin to hunger, and after two or three vain attempts to stand, staggers in search of its mother's milk. At this point some slight assistance may be necessary. Meanwhile the attendant should try the mare's teats, as one or both may be blind. It is better that this discovery should be made at once, in time for proper measures to be taken, otherwise the foal may be nearly starved when the defect is observed. The gland also needs attention, because from many reasons there may be an insufficient supply of milk, or what there is may be of an inferior quality. This is especially liable to happen in case of premature birth. Another source of nourishment has to be found, which is best supplied by the surplus milk of some other mare, provided, always, that it can be procured. If the afterbirth has come away, it