

ganization that begins in a small way by a few neighbors co-operating to handle a few commodities might develop into a commercial colossus, but its growth would be contemporaneous with the increasing capacity of its numbers for co-operation. The lack of that capacity is the great stumbling stone of co-operative effort. It has wrecked other organizations and the people fear it. Experience and practice in a less pretentious way would beget assurance and encouragement which would insure the further development of the enterprise. The hungry man very often bites off more than he can chew.

HORSE

Opinion now is fairly unanimous that the agricultural horse conforms in type to the drafter but has much less scale and substance.

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In the pure bred draft classes it does not follow that if an animal is not up to sixteen hundred pounds it should not get a prize but weight must always receive some consideration.

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If you get a good coat of white wash all over the stables, floors, ceilings, walls, mangers etc., you are sure to destroy those distemper germs that are waiting to attack the horses next spring.

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One of the pities in horse breeding is that there are not enough first class horses to go around. Many a man has to use breeding stock that he knows is not up to his ideal but has no other course open to him.

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If a judge at the fair should come along and scarcely take two looks at your horse then give the prize to an animal that you know is not half as good as yours it won't hurt the horse and you may lay it to an ordinary difference of opinion.

Money in Blubber.

There are still a few smooth Alexs running round the plains trying to syndicate ton stallions that possess the merit of fatness. This is usually all the merit they do possess. They have been doped and petted and drugged until they have become impotent, and then they are shipped to a new section and unloaded by the joint note route. Farmers will do well to stand on guard against such games. There are several reliable horse importers in the country who are known, men who have a stake in the country and can't pull out. These deserve confidence; they are the men who are doing something for the West and for our horse interests.

Caring for Orphans.

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 whiskey 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 casin 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 a 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 begin. 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, grain, 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.

The mare may be worked a little if it is wanted, but if the working of the mare is not a necessity she will be better left in peace in the field to suckle her young. Some farmers allow the foal to follow the mare to work, and let it take refreshment from the mare now and again. This plan may be carried out when the mare is only called upon to work very gently in the field. But if more severe labor is required of the mare, and she is likely to get at all hot, the foal had better be left at home. Often, for one reason or another, it is undesirable to take the foal with the mare when going out to work. In these cases the foal has to be left behind. It will be good for the foal if it can be tempted to eat during its mother's absence. If it takes to its food it will not be likely to fret so much after its mother. When the mare returns, care should be taken that the foal is not allowed to suck the mare until it is cool. It is best to keep the mare from the foal for an hour or so after her return, and to draw off some of the milk before she is allowed to return to her foal.

The sooner the education of the young foal begins the better; it should be taught very slowly and gently, short but often lessons being the rule. A halter should be put on the young foal, and it should be gently led about on the grass for half an hour or so, every day at first, then the intervals of training can be lengthened until he is only haltered now and again to keep him used to it. This will render it quiet and docile, and it will not be nervous, but used to being handled when it comes to be broken in. The longer the foal remains with its mother, the better; but it must be remembered that stud mares have the double duty of breeding and suckling at one and the same time. And that as the foetus attains the higher development, the demands on the nutritive resources of the mare become greater. The drain upon the system created by the suckling is not only dependent upon the mare, but also to the young she bears. Foals under proper management are ready to leave the mare when about five months old, though six months is the usual age for wean-

ing. The actual age at which a foal should be weaned will depend on circumstances. If the foal is well grown and strong, eating its food well, it will be better for the mare if it is weaned at five months old. On the other hand, if the foal is not as well grown or as strong as it might be, or has not taken to its food as well as it might have, it will be better for it to remain with its mother for another month. In the case of mares that have not been covered again, and are not required for work, the foal can remain with advantage till it is six months old. The foal should be supplied with an extra quantity of oats, bran and chaff for a fortnight or three weeks before separation.

On Biting Horses.

The rule in biting horses should always be to bit them with an easy or mild bit. Horses that have been properly broken in and mouthed do not require severe biting, and go best in a mild bit, whilst for breaking in a young horse an easy bit is essential, a severe one being quite out of place, as the latter will inevitably spoil the animal's mouth.

A mild bit—either curb or snaffle—requires to have a fairly thick mouthpiece. A bit with a thin mouthpiece is more or less severe, because the latter has a cutting action which tends to hurt the horse. The thinner the mouthpiece of a bit is, the more severe is the latter in its effect upon the horse's mouth. A twisted form of the mouthpiece, or any grooving on it, add to the severity of a bit, as the ridges on a twisted mouthpiece and the edges of the grooves on a grooved one tend to hurt the mouth of the horse by cutting into the flesh. A smooth mouthpiece is the easiest and most comfortable for a horse, and is therefore the best and most suitable.

In curb bits, the port must not be unduly high, as a high port means a severe bit. The port requires to be quite low in a mild or easy curb bit. Bits with high ports are neither sensible nor useful under any circumstances, and should not be used. A mouthpiece with a very low port is the best, and it is practically as mild and as easy as a straight mouthpiece.

In the case of snaffles, the form or shape of the mouthpiece is the sole factor which determines the mildness or severity of the bit. But in the case of a curb bit, its action on the horse's mouth is largely dependent upon the length of the lower cheek-ends. The longer these latter are in a curb bit, the more severe is it in its effects, because the amount of leverage that is exerted by the bit increases proportionately with the increase in the length of the lower cheek-ends. It is, therefore, essential that a curb bit should have comparatively short lower cheek-ends, if it is to be mild and easy. In the case of riding bits, the lower ends of the cheeks should not be more than twice as long as the upper ends (including the top eyes), and they may well be somewhat shorter. When the lower cheek-ends are longer than this, the bit is needlessly severe for ordinary use.

The action of a curb bit is, of course, to some extent, affected by the way the curb chain is hooked in. A tight curb chain adds to the severity of a bit, whilst the more loosely the former is adjusted, the less severe is the action of the bit. A properly adjusted curb chain (being neither too tight nor unduly slack) should allow of two or three fingers being placed between it and the horse's jaw.

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 the 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 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 the racer "cleanness."

There has been found a difficulty in keeping up the bone of the horse they have experimented with