

spring renovating, accomplished without drugs, but rather by a liberal use of nature's best animal food, pasture grass. Grass acts as a mild laxative to the horse, but is sufficiently marked in its action to remove all waste material from the animal's digestive tract and tone up the system. Care must be taken in turning horses that are being worked daily to grass, and there is no better time for this than Sundays. Keep the horse in the stable Saturday night, and turn him out on Sunday morning. He is rested, is not overheated and fatigued, as on the night after a hard day's work, and is in a better condition to make good use of the new feed. A tired, worn-out, overheated animal often gives trouble when turned on pasture grass from indigestion. Stable all the work horses at night, after their first day on grass. As the nights get warmer and the rush of work becomes less strenuous, and the horse is more accustomed to the grass, he can be left out, but should be housed during cold, damp or wet nights. Of course, when required to work, grain and a little dry feed are necessary. It is a mistake to think that horses can be called upon to do hard work without grain, even if grass is abundant.

The Mare at Foaling, and the Care of the Colt.

Foaling time should be prepared for by giving the mare regular exercise or light work, and a liberal supply of food of good quality during the whole period of gestation, but especially during the last few months. All breeders have noticed that the mare used in this way usually produces a stronger, smarter foal than the one which has been pampered and kept in idleness, from the mistaken idea that sustaining herself and foetus is quite sufficient work for her to perform. As the period of parturition approaches, special attention and care should be given. It is well to work or exercise her gently every day until definite symptoms of approaching parturition are noticed. As the period of gestation is variable in different individuals, and often in the same mare in different seasons, we cannot tell with reasonable certainty when parturition will take place. In round numbers, eleven months may be said to be the average period, but observation has taught us that this is by no means constant, and that the period varies from ten to thirteen months; hence, it is wise to be prepared for the event at any time after ten months.

When the mare is to foal in the field, it is well to have her alone, as other horses are liable to excite her, and may cause trouble. It is also wise to select a field without open water or swampy places. Most mares foal in the stable, in which a roomy, well-ventilated and well-lighted box stall should be provided. It is unsafe to allow a mare to foal when tied, as she is unable to give the foal the necessary attention; and even when it is strong enough to require no special attention, it is very liable to walk into the stall of another horse, and, while looking for nourishment, to be injured or killed. The stall should be thoroughly cleaned out daily, the floor swept and sprinkled with slacked lime before fresh straw is spread. The lime is a good disinfectant, absorbent and deodorizer. It destroys germs that are liable to cause trouble. Other means of disinfection, as whitewashing, washing with a 5-per-cent. solution of carbolic acid, etc., are also wise, but if the lime be freely and daily applied, other precautions are seldom necessary. The stall should be as large as possible, and contain no feed boxes or mangers in which the foal might drop in case the mare foaled while standing.

The ordinary symptoms of approaching parturition are familiar to all breeders. The abdomen becomes more pendulous, the mammae enlarge, the teats become distended, and in many cases a little of the fluid exudes and becomes dessicated or dried, like a small portion of wax; the muscles of the croup become less prominent, the lips of the vulva enlarge, and in many cases become slightly parted, and in some cases a viscid discharge is noticed. These, we say, are the "ordinary symptoms," but they are not always noticed, and in many cases none of them well marked. The appearance of wax on the teats is often absent, and in some cases appears only a few hours before parturition, but usually two or three days, and sometimes a few weeks. In some cases the teats do not fill at all until after delivery, and even the mammae are sometimes only slightly enlarged. Some mares carry their fetuses very lightly, and even the pendulous condition of the abdomen is not well marked. We claim that it is wise to keep close watch upon a mare that is about to bring forth young, but when we know that definite symptoms of approaching parturition are often absent, and that the period of gestation is so variable, we are forced to admit that in many cases the attendant does not know when to watch. The symptoms of immediate parturition are an excited, nervous condition of the animal (this is more marked in a primipara, or a mare

producing her first foal, than in others). Labor pains are evidenced by uneasiness, probably the mare lying down, elevation of the tail, and straining more or less well marked. These pains are spasmodic, and in most cases progressive; that is, the periods of ease between pains become less, and the periods of pain more severe and prolonged, until the act is accomplished, which is sometimes only a few minutes, and sometimes lasts for hours. In rare cases there are "false labor pains," more or less severe, and then passing off and not reappearing for a variable length of time, as a few days, or longer.

While, in a large percentage of cases, watching is not necessary, the mare producing and attending to her foal without extraneous assistance, there are many cases that have proved fatal to foetus or dam, or both, that might have been prevented if an intelligent person had been present to rectify conditions or assist, or send for an obstetrician, if necessary. The person in attendance should be intelligent and careful; he should recognize that one of the most critical periods of the mare's existence is approaching, and, of course, it is also a critical period for the foal. The mare is liable to lie down with her hind quarters so close to the wall that there is no room for delivery, in which case the attendant can either move her a little or force her to rise. It, of course, is wise for the attendant not to interfere, unless such is necessary. In most cases with primipara, and often with mares that have bred before, it is wise for him to keep well out of sight of the mare, but in such a position that he can observe her, as his presence is apt to increase her excitement; while, in rare cases, the presence of a person well known to the mare appears to have a quieting effect.

In some cases delivery is very easy, and the foal is born enclosed in the membranes or after-birth. If this is not ruptured and removed from the foal's head at once, it will suffocate. Instinct is supposed to teach the mare to rupture this with her teeth, but it must be done promptly, and she often lies for a few minutes after delivery, and when she rises it is too late.

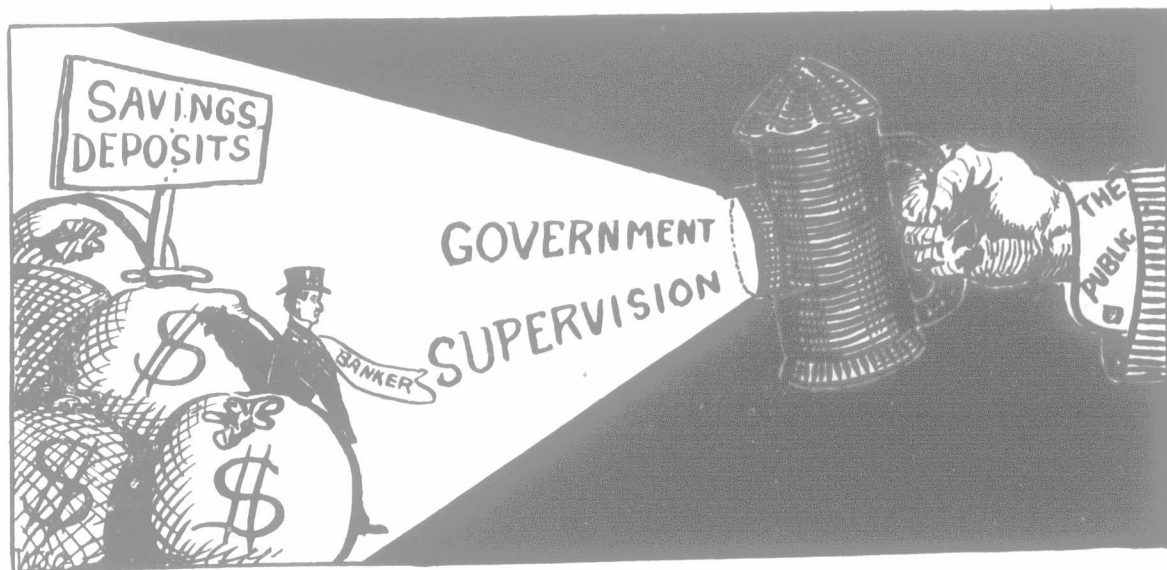
The attendant should be supplied with a knife and a strong, thick cord or string that has been soaked in a 5-per-cent. solution of carbolic acid, and also with an antiseptic liquid, preferably a solution of bichloride of mercury, 15 grains to 8 fluid ounces of water. A ten-per-cent. solution of formalin, carbolic acid, or one of the coal-tar antiseptics, will answer the purpose. If the umbilical cord be not severed during parturition, it should be tied about an inch from the abdomen with the sterilized string, and severed about an inch below that by a scraping motion of the knife, and in any case dressed as soon as possible after with the antiseptic solution, and three or four times daily afterwards until the umbilical opening has healed. This is a precaution to prevent joint-ill. If labor pains have been present and well marked for some time, and no appearance of delivery is indicated, or if part of the foetus is visible, but no further indication of delivery, the presence of an attendant is necessary, and it is his duty now to interfere and ascertain what prevents delivery. The trouble will be either too great volume of the foetus, compared to the calibre of the genital passage, a lack of sufficient expulsive force, malpresentation of the foetus, or obstructions in the genital passage. It is the duty of the attendant to ascertain what the cause is. If the presentation be normal and the passage normal, sufficient traction should be applied to the foetus to effect delivery. This traction should be applied during the expulsive efforts of the dam, unless she be so exhausted that she ceases to try, in which case traction must be given, irrespective of maternal efforts. When the cause of non-delivery is malpresentation of the

foetus, or a diseased condition which increases its volume, as ascites or dropsy of the abdomen, hydrocephalus or dropsy of the brain, or abnormal condition of the genital passage, the attendant, after examination, must decide whether he has sufficient knowledge and skill to rectify the abnormality and deliver; and if not, he should secure the services of an obstetrician as soon as possible. In such cases, the difference between neglect to assist or unskillful interference, and prompt, skillful interference, means the life of foetus or dam, or both.

As soon as expedient after birth, the afterbirth and all wet and soiled litter should be removed, and a fresh supply of clean litter, preferably short or cut straw, should be provided. Efforts should be made to get the dam on her feet and to attend to the foal. If she refuses to do this, the attendant should wipe it dry with cloths or wisps of straw. If the foal be strong, it will soon rise and commence to search for nourishment, in which case it is not wise to interfere, unless the dam be cross, in which case it is necessary to apply a twitch, and in some cases get assistance to control her until the foal nurses. If the foal be weakly, and not able to rise, it should be assisted to its feet in about two hours after birth and guided to the teat, and care should be taken to see that it gets nourishment every hour until able to help itself. If the afterbirth has not been expelled in at most five or six hours after delivery, an obstetrician should be sent for. As soon as the foal has been attended to, and sometimes even before, the mare should be given a drink of water from which the chill has been removed, and this followed by a feed of bran and chopped oats, dampened with warm water, and, of course, if the weather be cold, she should be kept comfortable and excluded from drafts or other conditions that might cause a chill. She should be given at least two weeks' rest from work after delivery, and fed well on milk-producing, laxative food. When the mare is to be bred again, the common practice of breeding the ninth or tenth day after foaling usually gives good results. Theoretically speaking, this may be said to be a mistake, as it appears unreasonable to expect the uterus to have regained its normal condition in so short a time, but the results may be said to justify the practice; and when a mare shows oestrus in eight to ten days after parturition, it is good practice to breed her, unless there be a vaginal discharge or some laceration that has not healed, in which case it is usually wise to not breed her until the next period of oestrus.

CARE OF THE FOAL.

As with the mare, in a large percentage of cases, the foal will take care of itself, and no extraneous interference is necessary. At the same time, it is probably wise for the attendant to examine the foal, and at least take the precautions mentioned to avoid joint-ill. This disease is due to a bacillus that gains entrance to the blood through the navel opening either during or after delivery. The germ exists in the earth, the stable and, in some cases, doubtless is present on the skin or in the hair of the dam, and may come in contact with the umbilical opening during the act of parturition. Hence, the early application of a strong antiseptic, as a solution of bichloride of mercury, 15 grains to an ounce of water, will probably destroy the virus before it gains the circulation, and the frequent application until the part is healed tends to prevent infection after birth. While this precaution is not necessarily effective, the disease seldom occurs where it has been taken. The attendant should examine all external openings to see that they are normal. He should carefully observe the excretions. If urine be not voided in a few hours after birth, a catheter should be passed to break down a false



Let Us Have the Light.

He should not object, and our sleep might be easier.