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tion mentioned. The operator, having disinfected his hand and arm, introduces his hand into the vagina, and inserts the nozzle of the syringe through the os uteri into the uterus, and then shoves the piston and forces the contents of the syringe into it. It is possible to impregnate several mares with the result of the one act of copulation, if the mares are in a proper state of oestrus.

Probably the most common cause of sterility is a chronic closure of the os uteri. In all cases where mares repeatedly fail to conceive, it is wise to examine the os. This is done by inserting the sterilized and oiled hand and arm through the vulva into the vagina, until the fingers reach the os. In normal cases, one or two fingers can be easily passed through the os into the womb, but when there is a chronic closure, the opening must be dilated. This can often be done by a rotary motion of the finger, with considerable pressure. In other cases the finger has not sufficient strength, and a blunt sound, about the size of a catheter, or a piece of perfectly smooth, hard, tough wood, or an instrument especially designed for the purpose, is used to dilate it. There are cases in which there is a fibrous growth surrounding the os, which prevents its dilation, even with the instruments named, and it is necessary to use a cutting instrument. In such cases it is better to allow the mare to remain barren. When the os has been dilated, as described, the mare should be allowed to stand for a couple of hours, and then bred.

It is claimed that a common cause of sterility is an acid condition of the vagina and uterus, and that what is known as "The Yeast Treatment" will be successful. This consists in adding to an ordinary yeast cake sufficient water to moisten, and allowing it to stand for twelve hours in a moderate temperature. Then add, with brisk stirring, a pint of lukewarm, recently-boiled water, and allow to stand 8 to 12 hours. It is now ready for use. During the early period of oestrus this fluid should be heated to about 100 degrees Fahr., and injected into the vagina, and a little into the uterus. The next day the mare should be bred.

Unfortunately, there are many obscure and unremovable causes of sterility in females. When the general appearance of the animal is healthy, and a manual examination of the organs reveals a normal condition, and, at the same time, repeated attempts fail to cause conception, we are generally justified in assuming that there is some chronic disease of the generative organs, that cannot be corrected.

Treating Constipation in Foals

EDITOR FARMER'S ADVOCATE:

I have two Clyde mares which both had foals last June. Seven days before foaling time (the first mare going 14 days over due) I turned them out to grass, and I noticed both mares had a swelling from the udder along the belly towards the breast. I would like to know if that is just a natural consequence, as I have not seen it before? The mare that was over due foaled first and the foal was weakly in the hind quarters, and in a day or so I noticed the bowels were constipated. I went to work with injections of a solution of castile soap and sweet oil, giving a dose of castor oil and turpentine every four hours. The injections seemed to bring hard chunks of dung through the rectum. I also placed hot salt bags around its body as it lay. The foal being very sick for two days, finally died, and, after making a post-mortem found the intestines full of the hard chunks. The second foal was bright for nearly two days and then took sick like the first one, so I gave it the same treatment as the first, only worked harder, rubbing the belly and rolling it about. The castor oil softened the dung and finally I got the foal much better, and it is doing well to this day.

I fed the mares oats, prairie hay and brome hay occasionally, while working. Some person told me that feeding the mares brome hay was the cause of the trouble with the foals. I should like to know if that is true, also your advice would be helpful on the treatment of mares before foaling, as it is evident that the trouble exists at the time of foaling.

J. E. B.

These were simple cases of constipation in the foals, the brome hay was in no way responsible for the trouble, except in so far as any dry feed would tend to make the mare and also the foal constipated. It is quite probable that these mares did not get sufficient exercise, during win-

ter and they also had more dry feed than was good for them. When grass is not ready, it is a good plan to keep the system cool with bran or boiled oats.

The swelling along the belly was not unnatural, it was simply the enlarging of the milk veins, and is quite common in mares that are heavy milkers.

As a rule, it is not a good plan to interfere with foals, but it is sometimes necessary, especially when the mares have been on dry feed, or have lacked exercise, or are in high condition. After a foal is born there should be no hurry to get him to suck. If he gets the "dry" within an hour, it is soon enough. The first milk of the dam is of a composition that starts the foal's bowels to work, but it may be that the bowels are obstinate, or the mare has lost considerable of her first milk (colostrum), and the foal will fail to pass. When the meconium, as the contents of the bowels of young animals is called, does not come away in less than twenty-four hours, the foal will likely show signs of trouble, and will look dull and listless. Then the thing to do, is to give two ounces, two tablespoonfuls, of castor oil; at the same time if the case looks bad, inject gently about two ounces of warm water and a teaspoonful of glycerine. In about five hours there should be relief. In the meantime, it may do no harm to repeat the injection. If there is no relief in six hours, repeat the castor oil. Do not overdo the injections, and do not dose a foal with all kinds of concoctions, to relieve pain, or with any other object. What is required is to get the bowels to move. Rubbing will help a little, but do not give hot drinks. In the case of the foal that died, it is probable that treatment was not early enough, and he may have got rather too much by injection. The turpentine also was not necessary.

Of course the treatment we have given, will not save every case of constipation in foals, but it is the best that can be done in such cases. If the opposite of constipation develops, give another dose of castor oil. The object is to clear the digestive track of whatever is causing the trouble, whether it be undigested material, or bacteria. Also keep warm, dry, clean and quiet. Being out in a rain is liable to set up scouring.

Clydesdale Certificate of Service

At the season for collection of stallion service fees has arrived, breeders from Clydesdale horses, as well as owners of Clydesdale stallions, should remember the changes in the regulations governing the registration of Clydesdales in Canada, which were made last year.

In order to record young animals in the Canadian Clydesdale Records, it is now necessary to forward, along with the usual application, a certificate of the service of the dam, signed by the owner of the sire at time of service. This certificate may be furnished simply in a written letter, or the common transfer blank may be filled in as a certificate. Probably the more common plan will be to give the certificate as a receipt for service fee.

It should not be forgotten that the service stallion must be recorded as the property of the owner before his certificate of service can be accepted. Very often this matter is neglected, and when the animal has changed hands several times the situation becomes very difficult to straighten out.

Vigilance in all matters relative to the registration of pure-bred stock has become more manifestly a necessity from year to year.

In order to protect the integrity of Canadian registration, it has been necessary, not only to impose more stringent regulations, but in some cases to prosecute, of which the recent conviction of a Toronto horseman, on a charge of forgery in connection with the case of the sale of a Canadian-bred mare, as Jean Austen (imp.)—10373—, is an example.

Owners of pure-bred animals, however, will find in the vigilant care which the Clydesdale Horse Association of Canada, as well as the National Live Stock Records Office, exercise over their records, a protection which will more than repay extra trouble which more stringent regulations impose upon them.

J. W. SANGSTER,

Secretary, the Clydesdale Horse Ass'n. of Canada.

The first foal of the season is reported to us by Wm. Smith of Balgonia, Saskatchewan. The youngster arrived March 8th, and is doing well.

Horse business was brisk at Brandon show. Two good horses from Saskatchewan found purchasers in Manitoba. These were Black Ivory which went to Perdue of Souris, and Duke of Borcheskie, which went to Douglas of Swan River.

Our own judges, Robert Brown and J. G. Washington, are proving quite capable of passing upon Clydesdales; not so fanatical about fineness of bone, cleanness of joints, and silkiness of feather perhaps, but careful to pick a useful sire with strong constitution and character.

* * *

Recently Mr. John Porter, B.Sc., of the Edinburgh Agricultural College, delivered a lecture on the management of horses. In the course of his address, Mr. Porter discussed the question whether whole oats and long hay were more beneficial than bruised oats and chopped hay, and he quoted the result of an experiment with 6,000 horses belonging to the London Tramway Company, when it was found that the latter system, with even a smaller weight of food, proved a more efficient diet. He held that much depended upon circumstances, but certainly horses which were apt to bolt their food, and young horses casting their teeth, should have the food prepared as above.

The "Real Draft Horse"

EDITOR FARMER'S ADVOCATE:

In your issue of February 10th I notice a letter from Mr. Armstrong which I think needs very little of my attention. I had the pleasure of seeing these wonderful classes of geldings judged at Carlisle Royal show, 1902. Of three-year-old geldings there were seven exhibited and of two-year-olds seven exhibited. I judged some of these prize winners at one of the North of England shows shortly afterwards so I know the kind of heavy draft gelding Mr. Armstrong's ideal is. These are not the kind he will find on the English streets, they are merely heavy vanners. I had a friend who bought one of these identical geldings which was a prize winner at the Carlisle Royal show, when he was four years old for a little over two hundred dollars, therefore, I will leave it to the readers of the FARMER'S ADVOCATE to judge as to the merits of Mr. Armstrong's noted geldings. Mr. Foster, I know, quite well, and the kind of horses he buys if he gets one anything like a drafter. For the kind of draft horse I call a "real drafter" we always had to pay from \$350 to \$500 each. This is the kind you get from the Shire; and the \$200 to \$250 you get from the Clyde. I am not one of these people who is a fancier of one breed through mere bigotry; as I have bred both, and my experience of thirty years breeding, led me to the conclusion that if you wish to be able to produce these high priced "real drafters," you must use the Shire and him only. As Mr. Armstrong is a Border man I might tell him that the champion gelding at the Carlisle horse sales, and one of the highest priced horses ever sold in the Border City, was a pure Shire bought as a yearling and taken into Cumberland. It reminds me very much of a great four horse team of Clydes which were brought over the Atlantic to advertise the breed; one of these was a pure Shire, bred in Tyne Valley, and another was a grade Shire. I enclose you cutting, from one of the leading agricultural papers in the old land, of one of the leading horse fairs held in Scotland, which proves my statements that any Clydesdales on London streets are only vanners.

"HALLOW FAIR MARKET.—This old-established annual fair, for the sale of horses and cattle, took place at Edinburgh on Tuesday and Wednesday. The display of horses was much smaller than usual, and consisted for the most part of seasoned animals, colts and fillies, which have always been a feature in most former years, being scarce. As a whole, the quality of the horses was not very high, although in most strings there were two or three outstanding animals. A very good trade was experienced for high-class horses. In one case a grand big five-year-old horse was sold at £78. Several others made £65 to £70. A good many more of this class could have been sold had they been available. Less outstanding kinds, making up £40 to £45, were not so easily sold, but all the same the bulk of the likely horses on offer, were disposed of. A large number of this class were sold to go to London and other parts of England, for van and fast lorry purposes. Two-year-old colts and fillies were in keen demand, and prices up to £40 and £45 were freely going for these."

Alta.

TOM RAWLINSON.