

from the western provinces have been buying for years some of the best stock in Ontario. They have you beaten now in many places, and I say of the old Province of Ontario, boasting as we have often boasted of being the breeding ground for the Dominion and North America, that she is going to take second place to the provinces in the west, if she does not wake up; but I think there is enough energy left in Ontario to wake up, start afresh, and show the people in the west we have just as good breeders left as those who have gone to the west.

Assistance to Breeders.

I want to announce to you that the Minister of Agriculture sees the situation as I am telling you. He sees the lack of breeding of good horses, he sees the lack of interest taken in the best sires, he sees and hears from people all over this country who want assistance, and who want to sell cheap horses, poor horses as sires, and he has decided to offer this year to pay 40 per cent. of the fees for good horses to any club of farmers in any part of the Dominion of Canada. But, remember, good horses must be used, typical of the breed and not the scrubs that many have been breeding to heretofore. It is up to the farmers of this country to grasp this opportunity. It never was done by any Government in the world before. The case has become so acute, now and in the near future, on account of this war, the scarcity of horses in the Old Country is remarkable. Why, gentlemen, horses that we were bringing out here by the scores are working in Scotland, and as draft horses, at more money than they cost Canadians to buy heretofore. What does that mean? That means stallions are going to be very, very high and scarce in the world, and it means that you should take care of the stock you have, and try to get more of the best, because there are going to be other countries looking to you for pure-bred male animals.

Importers Have Lost Money.

I want to say this to the breeders and importers before I close. We have had a number of enterprising men who have gone from different sections of the Dominion of Canada to the Old Countries to purchase pure-bred stock, both stallions and mares. They have brought hundreds over here, and the men who brought good stallions into this country and kept them lost money. There are exceptions to all rules, but the majority of them found no money in the business. They were up against this scrub stock. Of course, that is being got rid of in the different provinces. They have laws to that effect now. In Manitoba they do not allow grades, and in Ontario they have passed legislation to that effect this year. Quebec will suffer, because the scrub of Ontario will go into Quebec unless Quebec legislates to stop it. I say the horseman has not been making money. There is a great deal of risk in going to the Old Country to purchase horses and bringing them back to Canada, and there is the cost of insurance, transportation and keeping him year in and year out, and it has been a pretty hard task for the farmer to keep on the roads and get enough to live on or to feed the horse. The minister of Agriculture realized that, and in an announcement he stated that was the reason he is offering you this grant of 40 per cent. Accept a good offer when you have the chance. I hope it may continue for a number of years. I have no doubt under present circumstances it will, but the day may come when it will be withdrawn. In the meantime all the good colts bred in Canada are required to help out the farmer and the country to play their part in paying the big war debt for this most unfortunate war.

It is to the farmer's interest to keep his premises clean and orderly at all times. The whole community suffers from an aesthetic and business standpoint if one farmer neglects this important duty.

The Cause and Symptoms of Contagious Abortion

As Investigated by the U. S. Bureau of Animal Industry

THE chief and best known symptom of infectious abortion is the death and expulsion of the undeveloped fetus. This is brought about by the entrance of the germ into the pregnant uterus, where, growing and multiplying, it causes a separation between the maternal and fetal membranes. The attachment between the fetus and the mother being thus broken, the fetus is not supplied with nourishment and oxygen, and of course dies. It then acts as a foreign body,

abortion and retained afterbirth. White scours and calf pneumonia are common accompaniments of abortion, and exact a heavy toll. An animal may have acquired infection and not abort, or the calf may be born alive at full term, but be so weak that it soon succumbs to one of the calf ailments; yet that lot is just as truly affected with abortion disease as though she had dropped an undeveloped fetus at seven months.

The signs of approaching abortion are usually

those which precede normal calving, with the exception that they are premature. Two or three days before abortion there will be swelling of the udder ("making bag"), swelling of the external genitals, and the appearance of an odorless discharge from the vagina. These symptoms may not, however, always appear, and abortion may occur without warning. In young animals and in those aborting for the first time the abortion usually occurs at an early period, and the fetus, surrounded by the intact membranes, is expelled. This may occur in the third or fourth month of pregnancy, and may pass unnoticed because of the smallness of the fetus and the absence of any disturbance in the health of the cow. On the other hand, where abortion takes place in the seventh or eighth month of pregnancy, retained afterbirth is a common occurrence, and the act is accompanied by restlessness and pain. In some cases pregnancy may continue almost to full term, and the calf may be born alive, but weak, and may soon die. In herds where the disease is known to be present, these cases, too, should be considered as abortions.

Following abortion there is a characteristic dirty, yellowish-gray flaky, and, at times, bloody discharge, which may persist for two weeks or more. If the membranes are retained their decomposition may cause blood poisoning and death, or if the cow is able to survive, permanent changes may result which render her permanently sterile. If proper treatment is given promptly, these changes frequently may be prevented. In view of the insidious nature of the disease, and the difficulty of tracing its path of introduction, it is always advisable to regard an abortion as one of the contagious variety, and to take ample precautions. Abortion is usually conveyed from herd to herd by the introduction of a diseased cow, which then infects the bull; or a bull from a diseased herd is purchased and he in turn infects the cows. Among small herds, where bulls are kept for public service, the disease may be disseminated throughout the community unless suitable precautions are taken.

Affected cows do not continue to abort indefinitely. Much more than 50 per cent. abort but once, relatively few abort twice, and a very small percentage lose their calves the third time, and thereafter they produce living calves. It is evident, therefore, that an immunity is produced. It is the hope of scientists to develop an effective immunizing agent which will induce this immunity without causing the loss of the fetus, but this hope has not yet been realized fully.



Work Horses on a Farm in Old Quebec. On the farm of Octave Davlan, Yamaska Co., Que.

and is expelled, and this is called "abortion." Thus it can readily be understood that abortion is but one of the symptoms and not the disease itself.

Other manifestations are recognized by those familiar with disease. The infection does not always result in the death of the fetus. It frequently happens that the resisting power of the mother prevents abortion, or that the disease-producing power of the germ is not great enough to kill the fetus, and the calf is born alive and at full term. Under these conditions an inflammation is frequently produced which causes adhesions of the membranes, and there occurs what is known as retained afterbirth. Unless these membranes are removed in a proper manner, their subsequent decomposition will produce inflammation of the uterus, or even blood poisoning, which may cause the death of the cow.

Sterility is another sequel of abortion. Frequently it is a result of neglect following an abortion or retained afterbirth, where infection with pus-producing germs causes permanent changes in the genital organs. Again, sterility may be temporary, from the persistence of the infective agent in the uterine cavity. But whatever the cause, sterility can, to a considerable degree, be prevented by prompt treatment following

* Preventative and curative measures will be discussed in next week's issue.



Listening to Addresses at Brant County Holstein Breeders' Picnic. Listening to the entertainment given by the Holstein Club in this country, time is spent and inspiration gathered at such gatherings. May we see more of them next summer.

—Photo by an Editor of Farm Dairy.