

Mr. W. S. Hawkshaw's Shropshires.

In the cut on our first page is represented a group of shearing Shropshires imported last June by W. S. Hawkshaw, of Glanworth, a well-known importer and breeder, who, by making it his aim to import nothing but the best class of stock, has secured a large number of purchasers for this mutton and wool-producing sheep, now as popular in Canada and the United States as it has been in England for many years. In this flock are found sheep from no less than eight different breeders in England. In his last trip to England, Mr. Hawkshaw was ably assisted by Mr. John Thonger, of Nesscliff, a noted breeder and a judge of Shropshire sheep. By examining this importation we are convinced that the most critical eye will see a very superior flock. Mr. Hawkshaw has left the showing, not having time to attend to the fitting of sheep, therefore all his sheep are in their natural form. Many farmers are content with size, forgetting that sometimes the largest animals are often devoid of the valuable characteristics found in the pure Shropshire. In this flock purchasers see size and quality combined; some of the shearing ewes weigh as high as 180 lbs.

This flock brings with it a certificate from the Secretary of the English Flock Book Association to the effect that the sheep are up to the full standard of pure-bred Shropshires.

On our visit to his farm Mr. Hawkshaw informed us he was just going to dip his sheep, as a preventative of ticks and other parasites in the skin. He has a very well-devised dripping trough and draining tray; he says that the expense of dipping is amply repaid by the improved quality of the wool and thriftiness thus induced. He uses Little's Sheep Dip, which has given him the best satisfaction.

We have known Mr. Hawkshaw for many years. He is an excellent business man, educated, honorable, a good judge and a careful buyer; having an intimate knowledge of shipping, he is able to reduce his expenses when importing to the lowest possible point, and is therefore able to give customers very good value.

In June last this gentleman brought out sheep for the Hon. John Dryden, Minister of Agriculture for Ontario, who was so pleased with Mr. Hawkshaw's mode of doing business that he recently told the writer that Mr. Hawkshaw was one of the fairest and most honorable men he had ever dealt with.

We inspected this flock a few days ago, and found the sheep an exceedingly good lot, full of quality, large and vigorous, and splendidly woolled. The flock is a very large one.

Tuberculosis in Cattle.

[Read by S. J. Thompson, V. S., at the Central Farmers' Institute Convention.]

In beginning I might say I have selected this subject for the purpose of drawing the attention of the cattle owners of this province to this disease—a disease that has caused great and widespread loss of valuable cattle in almost every country where cattle are domesticated. I will endeavor to deal with the subject in the most practical manner, avoiding the use of technical terms as far as possible, so all may understand the desirability of guarding against the introduction of the disease into their herds, and the great necessity of stamping it out where it already exists. Tuberculosis, or what is commonly called consumption, is an infectious, contagious disease, caused by a bacillus or germ, that may enter into the system, either by being inhaled into the lungs or taken in with the food or drink, or through some wound or sore either externally or internally.

It is not only an infectious, contagious disease, but it is also hereditary (that is, it is handed down from parent to offspring). I do not claim that every offspring of a consumptive parent has the germs of the disease in its system; but if it has not, the great majority have a weakened constitution that is predisposed to the disease, and in which the germs find a most suitable soil.

Tuberculosis does not affect all animals alike; man is mere subject to the disease than the lower animals. But of the domesticated animals cattle are most liable to the disease, and they might be divided into two classes—the thoroughbred and the common or scrub; of these the thoroughbred is much more subject to the disease, not from the fact that they are thoroughbred, but from the way in which they have been bred and cared for.

I do not know that it is necessary for me to spend time quoting authorities to prove this disease contagious; but as some may not realize to what extent it is contagious, and the great danger to health and life there is from using the milk or meat of tuberculosis animals, I will give you an account of a few experiments that have been used to decide the question, and also the conclusions arrived at by a number of eminent men after many careful experiments. Professor Gerlach fed forty-six different animals with uncooked tuberculosis food; of those thirty-five became affected. Professor Bollinger gave the milk of tuberculosis cows to pigs; the pigs became affected. Professor Taussiant, after experi-

menting with hundreds of different animals, says tuberculosis is a contagious disease equal in infectiveness to glanders and contagious pleuro-pneumonia. He says it is not only contagious in the ordinary acceptance of the word, but it is also transmittable by the milk and flesh of infected animals. He also says that contagion plays a more active part in propagating the disease than heredity. Professor Koch, of Berlin, of whom it may be said, "He has done more than any other to enlighten mankind on the nature and cause of this disease," says it is not only transmittable from one animal to another, but from animals to man and man to animals, and warns all of the great danger of using the meat or milk of diseased animals. I might give you numbers of instances where one diseased animal in a stable contaminates others until almost every animal is affected.

The symptoms of this disease are mostly well-marked, but in exceptional cases they are quite obscure; the first symptoms noticed by the owner or herdsman in the majority of cases is a slight cough, which is aggravated by exertion. This may continue for a month or more before any other symptoms may appear, or they may appear so gradually that a person who attends it every day can scarcely notice the decline in its condition. But after a time the symptoms are more pronounced—the animal has an irregular appetite, it will stand with its back arched or humped up, nose protruded, flanks and belly drawn up; eyes sink back into their sockets, and have a peculiar glazed, anxious appearance; the cough becomes deeper and more troublesome, the breathing more labored, especially if given exercise; the nose is sometimes quite moist and healthy-looking for a short time, and again quite dry and hot; also the temperature of the ears and horns often change, sometimes one or more of the joints become swollen and painful, and if lanced discharge a curdy or cheesy-looking pus. Again, we may have an animal that will cough for a long time, but its appetite and condition will remain unimpaired until it is exposed to some aggravating cause, such as a cold storm, starvation or badly ventilated stable, when it will develop and often appear as a chronic diarrhoea. Again, we may have an animal that will swell in one or more joints without any other symptoms of the disease for some time, and would lead the owner to believe it had been injured. There are, no doubt, instances where the disease becomes localized in a joint or small part of the lung or the udder, and extends no further, but those are very exceptional cases.

Certain conditions of the animal cause a predisposition to contract the disease, and to aggravate it where it already exists, such as prolonged milking—that is, milking a cow too near the time she is due to calve again, which has a great tendency to weaken her constitution, and make her liable to contract and succumb to any disease to which she may be exposed. This is one of the reasons why cows of the milking breeds are more subject to disease than others, from the simple reason that common or scrub cows do not generally give milk long enough, or in such quantities, or of such quality, to have much effect on their constitution. I do not think a good cow should be kept milking an unreasonable length of time, for in this way the owner often "kills the goose that lays the golden egg." Another predisposing cause among bulls is using a young bull to a large number of cows. Another cause among thoroughbred cattle is over-feeding and want of exercise, keeping animals in what is called "show condition" by feeding them on concentrated and stimulating food for a lengthened time. Again, we find that the opposite usage will have the same effect, such as feeding an insufficient quantity of food of a poor quality, or, in other words, starving the animal. Another predisposing cause is stabling in a crowded, badly ventilated stable, also exposure to cold storms, pneumonia or inflammation of the lungs, bronchitis, or any other disease that has a tendency to weaken the lungs or system in general. Another, and I believe one of the principal predisposing causes in this province to this as well as to other diseases, is keeping cattle in a warm stable through the night in the winter, and then turning them out to drink and stand about in the cold until they are thoroughly chilled, when they are again put in to go through the same experience day after day all winter. I am sure you will admit this kind of usage is a great strain on the animal's constitution, as well as a great waste of food.

As tuberculosis is a disease that can be transmitted not only from one animal to another, but from animals to man, you will readily see how important it is that we should use every endeavor to eradicate the disease from our herds. This can only be done by the owners refusing to breed from any animal, whether male or female, that they suspect is affected with the disease; also by isolating every animal suspected of the disease, and if it proves to be affected to have it at once killed and the body burned. I cannot impress too strongly on the horse and cattle owners of this province the necessity of isolating at once any animal showing signs of sickness, especially if they have the slightest reason to suspect it may be a contagious disease. Another thing I would call your attention to, is the desirability of making strict enquiries before purchasing breeding animals. Do not purchase a bull or cow because they are offered for a small amount of money—first satisfy yourself the animals are healthy and from healthy stock; if not, they may be dear at any price. If you are offered

an animal that has a slight cough, and are told that they neglected to bring him in out of the rain and he has a slight cold, he may be telling you the truth, but do not believe him: let him keep the animal until he is perfectly sound before you purchase.

As tuberculosis is an incurable disease (I hope we will not have to say this much longer, and that some one will succeed in finding a cure), the only treatment is killing the animal and burying the carcass; but until stock owners realize the great danger there is of the disease spreading and becoming worse year by year, thereby causing a great financial loss, I say until they realize this it will be very difficult to get them to use the necessary care and caution to stamp out the disease.

As regards the means that should be taken to cleanse a stable in which an affected animal has been, we cannot be too particular; everything that can be removed from the stall and adjoining stalls should be taken away and burned; the stable should then be thoroughly washed with a strong solution of carbolic acid, and then thoroughly whitewashed; this would not be taking any too much trouble. I might say, I believe if the authorities were to take the matter in hand and pay the owners at least one-half the value of the animal destroyed, owners would be more likely to report suspicious cases, and would more willingly destroy affected ones; and I have found by careful enquiries over the province, and I am pleased to be able to tell you, that at least the rural parts are singularly free from the disease at present. But you must not understand me that there are no cases of it, which would be a mistake.

I contend this is the time when we should use every means to stamp it out before it multiplies. No doubt it is known to all or most all of you, that the renowned Professor Koch, of Berlin, has prepared a substance he calls Tuberculine, which, when he had first prepared it, he expected would cure the disease, but in that it failed. But now it is used as a test in obscure cases, and it is said by those that have used it to be an infallible test; that is, it will react or raise the temperature of the affected animal, while it will have no effect on a healthy one. I obtained some a short time ago, but have not had a good opportunity of using it yet, but hope soon to have an opportunity of fully testing it.

Care of Foals.

In order to obtain anything like a remunerative price for a horse now, it is necessary to present him in as well developed a state as possible. There is no period in a horse's life that requires more care to insure rapid development than the first few months. It is no uncommon thing to find a mare that is a poor suckler, especially at this season of the year when the pastures become dried and flies bad. We are too apt to drift into a neglect that seriously affects the growth of the foals, by allowing them to take their chances in the fields, thinking perhaps that the loss can be easily made up by heavy feeding when there is more time. Just here the old proverb comes in: "An ounce of prevention is worth a pound of cure." We can do a good deal to prevent stagnation in the growth of the youngster by placing the mare and foal in a cool, darkened box stall during the warmest hours of the day, and supplying such food as the working horses are getting, until the fodder corn is fit to use, which may become almost the entire food after they have become accustomed to it. It will pay well to supply the foal with a quantity of cow's milk each day, also some crushed oats and bran placed in a box in a little pen where the dam cannot enter. By this treatment the foal will readily learn to take a considerable quantity of the food mentioned, and thus prepare it to be weaned early if the dam's services are required for the fall work.

When the foal is to be taken from the dam it should be tied to an adjoining stall, with the partition so open that they are in plain view of each other, and the food of the mare should be reduced to a small ration of dry oats and hay. When the udder becomes so full as to cause her uneasiness a part of the milk should be drawn off, but she should not be milked dry. This first milking may be done by the foal itself, but afterwards it should be done by hand, as the milk in the drying-off process soon becomes unfit for the foal; and, besides, drying off will be more speedily accomplished than if the offspring is occasionally permitted to suck. After the milk has entirely dried up the mare and the colt may be separated.

Skimmed milk may still be given to the foal, especially if the condition is not up to what may be desired, but clean, sound oats, ground or unground, constitute the best of all grain foods. We prefer to have them ground, and as cold weather approaches one-fourth in weight of corn or pea meal may profitably be added, or, as wheat is low, four-fifths oats and one-fifth wheat will be found a capital grain ration, as it helps to lay on fat and keeps up the animal heat. A little oil meal, say a pint a day, may also profitably be given with the oats for some time after weaning. Do not be afraid of feeding too liberally. More foals are injured the first six months after weaning by too scanty a supply of food than from the opposite extreme. As soon as the foal has forgotten its dam it should have the run of a good pasture, as there is no food better than grass, no medicine so good as exercise, and no exercise so profitable to young animals as that which may be taken just when they feel like it.