

and when used for inoculation abortion has been produced experimentally. The animal that has aborted must be isolated for at least two weeks. During the isolation the cow must be thoroughly irrigated with some germicide so that the bacillus may be destroyed. Corrosive sublimate is probably as efficacious and convenient as any disinfectant, and it is specially suitable for this purpose, as being made up in pellets containing a definite quantity, a solution of known strength can easily be made. The pellets contain corrosive sublimate to the extent that when one is dissolved in a pint of water the solution is then one part of sublimate to one thousand of water. One in two thousand is the strength to irrigate a cow that has aborted. Although it is difficult—sometimes impossible—to kill all the germs by the flushing, there is a peculiarity in the life history of the bacillus which assists us in our endeavors towards its destruction. It is not very tenacious of life, and seems to expend its powers in a season or two. Many stock breeders have noticed that a cow which has been sterile or has aborted for two or three seasons seldom gives further trouble. Whether it is that the bacilli die out or that their products make the environment inimical to them is not clearly understood, but this peculiarity has suggested a possible preventive. It may be, as in vaccination for smallpox, that an immunity has been produced, and the attempt to induce the violent contractions of the uterine walls is successfully resisted. If this naturally takes place we may be able to imitate nature, and by inoculating the cows with a vaccine prepared from a pure cultivation of the bacillus produce that immunity which would rob abortion of its terrors.

The Economy in Purchasing a Good Bull.

An Old Country contemporary has the following to say regarding the purchase of good bovine sires:

"Money invested in a bull, providing always that such bull turns out fruitful, is about the safest investment that can be made in any herd, and does more towards making money, as well as a name, than ten times the amount spent in any other way. If you invest in a high priced cow she will probably produce you but one calf, and that may possibly be a misfit. You may invest a big sum in feeding moderate cattle in the hope that the old story of breed going in at the mouth will benefit you, and this will be found a failure; but the highest class pedigree bull, with anything like ordinary success, and supposing he has a good herd of cows and heifers to work upon, is likely to beget you from twenty to fifty animals in the course of a year, each one of which will be of great value."

Ventilation Better Than Tuberculin.

In his evidence, recently, before the Parliamentary Committee on Agriculture, at Ottawa, Dr. J. G. Rutherford, Chief Veterinary Inspector, stated that, so far, no change has been made in the policy of the Department re Tuberculosis. Cattle of any kind coming from other countries, were tested in quarantine. With the exception of animals comprising a few herds which were under the control and supervision of officers of the Department, no official testing with tuberculin is now undertaken, although subject to certain conditions, it is supplied free to qualified veterinarians when employed by owners of cattle.

While no one was more firmly convinced than himself of the value of tuberculin as a diagnostic agent, yet it was subject to certain limitations which justified his attitude in counselling a policy of comparative inertia, now being followed. So far no satisfactory and intelligent method of dealing with bovine tuberculosis has been evolved, and he considered it better to await results of investigation being conducted by scientists in different parts of the world, in order that they might be sure of achieving reasonable results, and thus making some progress in the eradication of tuberculosis before deciding upon a policy which would involve universal and promiscuous testing. He believed firmly in tuberculin, when honestly used, as a diagnostic agent, and for specific and definite purposes, but the fraudulent methods adopted by many owners to prevent the occurrence of a typical reaction, the time which must necessarily elapse after infection before it is possible to obtain from the animal a reaction from tuberculin, would require frequent and repeated tests before it is safe to pronounce free from tuberculosis any herd infected, as well as other limitations which must be allowed for and overcome before compulsory testing should be resorted to. In the meantime, no effort should be spared to induce owners of cattle to adopt every possible means of combating the disease by practical common-sense methods. Thousands of animals were yearly becoming affected, owing to unsanitary conditions under which their owners insist in keeping them, and the importance to live stock of thorough and effective ventilation was of infinitely greater value than tuberculin. To put the case plainly, he stated that stockmen were breeding tuberculosis a great deal faster through neglect of this important subject of ventilation than it would ever be possible to stamp it out by promiscuous use of tuberculin and the slaughter of diseased animals. He was carrying on experiments at the present time which he hoped would be productive of results of value to the stock-owning public.

Sheep Nomenclature.

The word "teg," as applied to a Southdown or Romney Marsh sheep, is generally applied in an inaccurate sense, and is misleading to breeders in other parts of the country. Teg is a corruption of the word "tag." An unshorn lock of wool tapers to a point, and forms a fine point very similar to the tag on an old-fashioned shoe-lace. After a sheep is shorn these tags are much less in evidence, and in short wool breeds the wool looks as though it were blocked off square; consequently to call a sheep which has been shorn a tag or teg is an error. In other districts, when a lamb is put on to roots in the autumn, it is called a teg, and is so rooted until it is shorn; though, of course, there are many districts where the word "teg" is not used at any time. These misnomers are sometimes awkward when dealing with others at a distance. A peculiar inversion of words also commonly occurs among those who keep these two breeds. A hurdle made with slats is called a wattle, but when made of wattle, like coarse basket ware, it is called a hurdle; and if any one accustomed to the words in their ordinary sense were to send an order for wattles into Kent or Sussex, he would find he got an ordinary barred hurdle.

All Wheat Screenings not Good for Sheep.

Dr. Alexander in the *Live Stock Report* discusses in the following words the unfortunate effect of some weed seeds in wheat screenings; it is also a good argument for a weed destruction campaign:

"It will pay sheep feeders to carefully examine samples of wheat screenings before using them in any quantity for sheep that have not been accustomed to such food. We say this for the reason that recently we have traced disease of a flock of sheep to screenings containing almost ten per cent. of corn cockle seed. The seeds of this weed are poisonous and cause an intense inflammation of the bowels accompanied by paralysis toward the end of the attack. The seeds are black in color and hard and gritty, feeling, when wet, like particles of gravel. We have failed, thus far, to find any allusion to this weed poison in English text books at our command but German books describe a disease due to corn cockle and warn against use of contaminated screenings.

The matter came to our notice in this way. A Wisconsin sheep feeder wrote us that his sheep had been doing poorly upon generous feeding on screenings, timothy hay and corn fodder. They gradually lost flesh and at length became unable to use their hind legs and died. On opening the victims of the disease he failed to find any trace of worms or other cause of disease and was therefore at a loss to know what caused the trouble and how it could be prevented. He was asked to send us a sick sheep and on opening it we found a part of the small intestines distended with some gritty material and the exterior covered with large purple blotches. The lining of the intestines was seen to be intensely inflamed. In the mass of impacted matter yellow seeds could plainly be seen and on close inspection the gritty particles were seen to be seeds. The owner was then asked to forward samples of the screenings and sent three of different qualities, two of which were found to be very badly contaminated with corn cockle seed. The dangerous samples were, by Prof. Woll, pronounced the worst contaminated of any that have been examined at the Wisconsin Experiment Station, and while it is quite possible that too much dry food such as timothy hay may have aggravated the trouble by causing impaction, screenings so badly infested with corn cockle could not possibly be fed without danger to sheep, and we are sure that both poisonous effect and mechanical irritation and stoppage due to this weed seed was the direct cause of death of so many sheep in the particular flock in question; while there is little doubt that many sheepmen are feeding similar dangerous screenings at the present time and while their sheep are seen to be doing badly the owner has not a suspicion that cockle is the cause.

It may be possible that where cockle seed is prevalent in screenings its bad effects are partly discounted if succulent food is fed in conjunction with the screenings and hay, and there would be still less likelihood of trouble were the sheepmen to feed generously of other food such as oats and bran, which, however, is seldom done where screenings are used on a wholesale scale.

So far as the writer at present is aware this is the first intimation that has been published in the live stock press drawing attention to the danger-

ous properties of corn cockle seed which usually is not so plentiful in screenings as to cause death from poisoning. It serves to emphasize the importance of carefully examining screenings and we would advise all who are feeding screenings and getting poor results to examine for the presence of corn cockle seeds."

FARM

Dry Farming in Alberta.

EDITOR FARMER'S ADVOCATE:

In response to your request for an article on dry farming I shall endeavor to give you a summary of my observations for a number of years. From Macleod and as far north as Nanton then to the United States boundary and west to range 30, west of fourth meridian and east to Medicine Hat or farther can be classed as a semi-dry district and should be farmed as such.

Although we have sufficient rainfall, it is difficult to retain it, as the prevailing west wind is very dry and rapidly absorbs the moisture. Therefore, in cultivation we should have one aim, and that should be the preservation of moisture. How is this to be done? I would suggest summer fallowing. It should be the watchword of every farmer. It is not only efficient in retaining moisture, but it is the most economical way of working land prior to seeding. The proper time for working summer fallow is from the 20th of May to the 20th of June. This allows the weeds to start and they can then be readily destroyed. I have found fall plowing utterly worthless, as it tends to increase the weeds and lessen moisture. Spring plowing is much better than fall, if it is shallow enough—not more than three or four inches—as the soil dries to the depth of the plowing and the plant has to reach the subsoil for moisture. Spring plowing should be done only as an absolute necessity and not as a principle of good farming.

Wheat is the best crop for dry farming. Both the fall and spring varieties will stand more drought than any other cereal that can be grown successfully north of the 49th parallel of latitude. Oats and barley do well but do not yield in proportion to wheat.

The question of hay is taking the attention of the farmers in this district. Hitherto the supply has been obtained from unoccupied land, but this is now all taken either by purchase or homestead, and so the farmer must face the proposition of hay growing for himself. I have tried brome but found it worthless for hay, though fairly good for pasture. I find that oats and wheat, equal part, sown together make a very good substitute for hay, if cut when the wheat is in full bloom. Alfalfa is being introduced in this section and there are high hopes of its success, but my experience with it is limited and an expression of opinion would be premature. Timothy has also been tried but is a success only under irrigation conditions. When the system of summer fallowing and cropping on alternate seasons has become universal in this section, we shall have one of the greatest hard wheat producing districts in the world.

Macleod, Alta.

D. L. MUDIMAN.

Prepare for Next Year's Fall Wheat.

Despite the prophecy of a dry season, we find this year at the end of May the second largest record of precipitation in the recorded history of the Province of Alberta. During the last two weeks of May a total of nearly seven inches fell over the greater part of the province. Last year during the same month the rainfall amounted to only a little over an inch and a half. These figures seem to cast a doubt over the minds of many and leave the impression that the climate of the sunny province is rapidly changing its ways. Under such conditions in the atmosphere of the optimistic west, there is certain to grow up a feeling of carelessness on that important feature of western farming—the preservation of moisture. "The rain is here now; it looks as if it could rain every day whether it was needed or not, so why worry." This is the doctrine that plays havoc with prosperity.

During the past year we had a heavy precipitation in June and those who kept the land cultivated and thus prevented the escape of moisture until the time arrived for fall wheat seeding, are