

Breeder and Grazier.

THE TUBERCULIN TEST.

TO BE APPLIED TO ALL CATTLE ENTERING CANADA.

Ottawa, Nov. 14.—The tuberculin lymph test which has been departmentally ordered by the Minister of Agriculture to be applied to all neat cattle entering any of the quarantines from any place outside of Canada, has resulted in the finding, by Mr. E. P. Westell, the veterinary inspector of the department in charge of the animals' quarantine at Point Edward, a Shorthorn bull, the eleventh Duke of Niagara, eighteen months old, to be affected with tuberculosis. The owner is offered, by direction of the minister, the alternative of returning the animal to the place whence it came in the United States, or of having it slaughtered in the quarantine without compensation. The Department of Agriculture is informed that the quarantine station at Grosse Isle will close on November 15.

tury, they received but scant care and feed. With the exception of the milking cows, they were as a rule wintered in the field and were scantily fed with a little hay of the poorest quality, or some straw. Very many had to exist on seaweed heather and rushes. It is said that at least one-fifth of them used to perish of starvation every winter, when the snow lay long on the ground, fully one-half of them succumbed. Of course, the survivors of such treatment were those having the greatest vigor, and the quality of hardiness in the breed was intensified by this process of selection. When a more rational treatment followed the harsh one alluded to, this cattle soon demonstrated their worth. Even now, when subjected to poor treatment and scant fare through the winter, they will respond to a more favorable environment more rapidly than any other breed, putting on flesh with speed.—*Am. Ag.* (1)

TUBERCULOSIS.

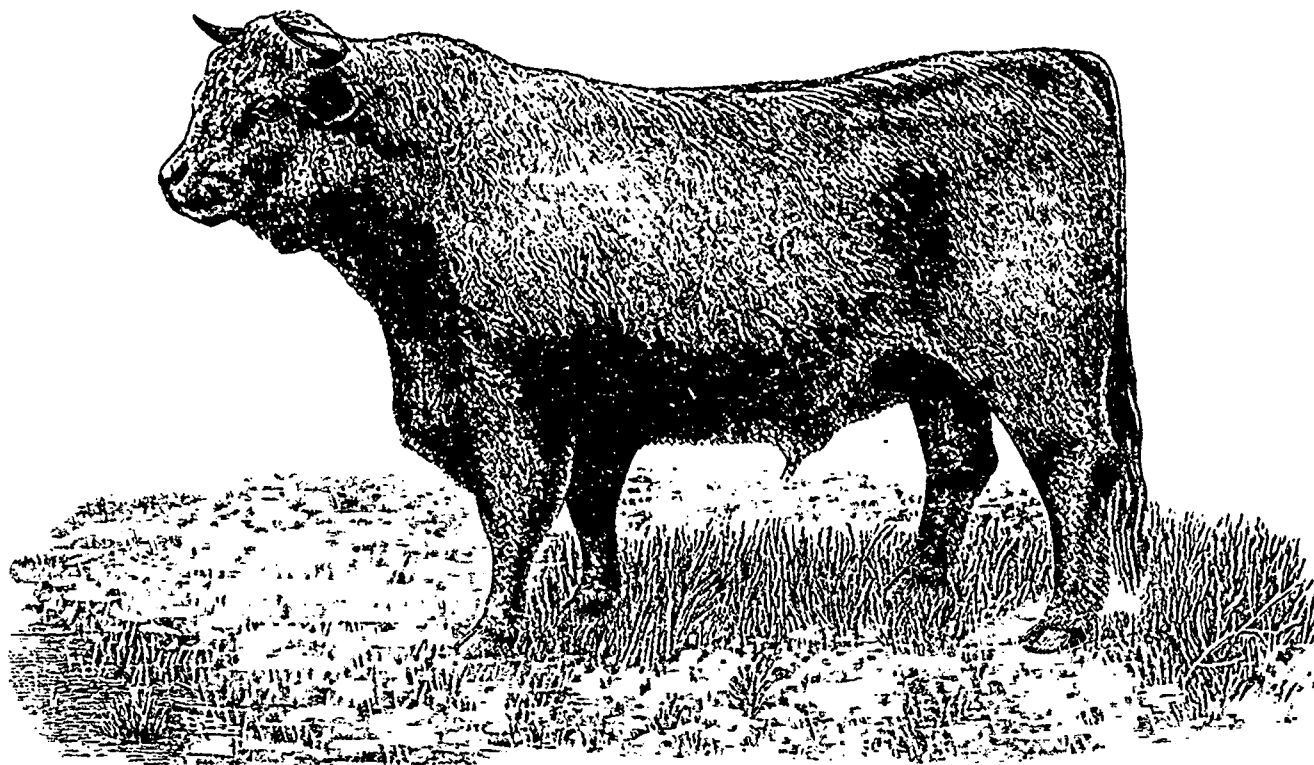
Tuberculosis was now by far the most widespread, and, as regards the

cattle under two years of age the proportion of tuberculous individuals was less than 1 per cent., and that it steadily rose with age until among adult cows it was seldom less than 10 per cent., and not rarely 40 or 50 per cent. These facts were quite incompatible with the view that hereditary transmission of the bacillus played a rôle of any importance in the propagation of the disease. On the other hand, every known fact regarding the incidence of tuberculosis, as regards age, breed, and locality, was in complete harmony with the view that it was a contagious disease, which could, with great certainty, be spread by housing tuberculous and healthy cattle together, but which had only feebly contagious properties among cattle kept in the open air. A few years since, even to the most sanguine, the possibility of being able to grapple successfully with the disease appeared very remote, because of the admitted impossibility of recognising it in its early stages, for to the most careful clinical observation a tuberculous animal might appear perfectly healthy and yet be capable of infecting others. But it was now in the

RAISING FALL AND WINTER CALVES.

We formerly raised the calves that were born in the early spring and kept them in the barn until the middle of June before turning them out, and I think it would have been better to have kept them in and fed milk and hay until after harvest. According to my experience, milk and hay make a better ration for young calves than milk and pasture, which are apt to be too laxative. Some of our calves, after being turned out to grass refused to come to the trough to drink milk until driven to it by thirst.

For several years past we have raised our fall calves and found it a decided improvement on the old way. The calves when taken from the cows are fed their mother's milk freshly drawn, for about a week, than a portion of sweet skim-milk, warmed, is substituted in place of part of the new milk, and the substitution goes on gradually until the moss is entirely composed of skim-milk. The milk is always fed as warm as the calves will drink it, which is warmer than blood heat, and



THE CHAMPION WEST HIGHLAND BULL, CEATHARNACH BUIDHE.

WEST HIGHLAND CATTLE.

There is something in the accompanying illustration of a conspicuous member of the family of West Highland cattle that is at once indicative of his birthplace—the rugged land and climate of Scotland. There is a suggestion of vigor and robust hardiness that at once impresses the observer in studying this breed of cattle. This picture is that of Ceatharnach Buidhe (719), owned by Mr John Stewart of Scotland. This fine animal was first and champion at the Highland societies show at Inverness, Scotland, and also champion at Stirling.

The West Highland, or to be more accurate, the Southwest Highland, breed of cattle are very highly esteemed in Great Britain. They are most at home on the western islands of Scotland and in the adjoining counties. This breed and the Galloways are believed to be descended from the same original stock, the former being often called "Highlanders without horns."

In the early history of this breed, in the beginning of the eighteenth cen-

loss which it occasioned, the most serious, of the disease of farm stock. Probably not less than 20 per cent. of the adult cattle in Great Britain were tuberculous. Could it be stamped out? He believed that that question might be answered in the affirmative. As a first step in that direction it was necessary to diffuse among agriculturists correct notions regarding the causation of the disease. The discovery of Koch's bacillus had in one sense settled all disputes regarding the cause of tuberculosis, but there still prevailed, both among veterinary surgeons and farmers, a very serious misconception regarding one factor in the disease, viz., the belief that it was often congenital. For some time past they had had before them information that made that view quite untenable. They knew that when tuberculous lesions were sought for at birth in the progeny of tuberculous cattle, they were not found in one calf in a thousand. They knew, further, that in

(1) About the best beef in the London market, Giblett, the Bond Street butcher used to have up about 25 in his shop every week.—*Ed.*

power of any stockowner to stamp tuberculosis out of his herd at an expense that would be trifling compared with the loss entailed by the present neglect of all precautions against the spread of the disease. In any herd the use of tuberculin would enable the veterinary surgeon to separate the diseased from the healthy; and this, combined with the thorough disinfection, would with great certainty arrest the spread of the disease. As regards the diseased animals, the owner might be left to decide whether he would have them promptly slaughtered or not; the material point with regard to the arrest of the disease was that the infected animals should not subsequently be allowed to mix with the healthy. But if tuberculin made it possible for anyone to free his stock from tuberculosis it also afforded the means of keeping it free. No animal ought now to be bought for breeding purposes that was not free from tuberculosis as indicated by the tuberculin test. It was to be hoped that some of the famous breeders of pedigree stock would set the example of selling their animals with a guarantee of this kind.

the calves relish it as a man does a cup of hot coffee on a cold morning.

E. E. Rockwood, on page 671, says: "To hot milk is binding to the bowels." I am not disposed to grant it, as it is not confirmed by my experience; but if it were true, I should not be afraid to feed it, as constipation is not an evil that our calves are subject to. On the contrary, the danger is all the other way. Diarrhea is the disease to be guarded against.

Mr. Rockwood says: "Too much milk must not be fed the calf while young." I suppose he means skim-milk, or may be sour, or lopped milk; for our calves will usually take all their mother's milk if she gave ever so much, and I have known farmers who were raising a show calf to let it suck two cows with a decided improvement in its growth. He says that "two or three quarts at a time is sufficient." That is about the average quantity we feed our calves when quite young, though some will drink more and thrive faster. I generally try to find out about how much each one will stand, and give them that much and