

ling as to render harmless any parasites which may have been overlooked by the meat inspector.

The available figures indicate that nearly 1 per cent. of all the cattle slaughtered in the United States at the present time are affected with measles, and this in the aggregate, in addition to exposing to considerable risk of tapeworm infestation the consumer who is not careful to cook thoroughly the beef which he eats, entails a large economic loss as a result of the condemnation of numerous beef carcasses and the more or less expensive restrictions which are placed by the Federal meat-inspection regulations on slightly infested carcasses that may properly be passed for food. Though much of the responsibility for the prevalence of tapeworms in human beings and of the cystic stage of the parasites in cattle rests upon the consumers who do not properly cook the beef which they eat, the lack of proper sanitary precautions in the disposal of human excreta in the localities where cattle are raised and fed is the principal factor in the spread of tapeworm infestation.

LIFE HISTORY.

When a piece of beef containing a living tapeworm cyst is swallowed the immature tapeworm contained in the cyst, consisting of a head and neck, resists the action of the digestive juices and attaches itself to the wall of the small intestine by means of muscular suckers with which the head is supplied. In from two to three months after the ingestion of the tapeworm cyst the tapeworm reaches complete maturity and is then several feet in length, consisting of a chain of segments which, very small in the neck region, gradually increase in size posteriorly and reach a length of two-thirds to three-fourths inch and a width of one-sixth to one-third inch at the posterior end of the body. New segments are constantly forming in the neck region, pushing back the segments formed previously, and the full-grown segments at the posterior end of the body are constantly breaking away and passing out of the intestine. The full-grown segments are filled with eggs averaging in number about 8,000 in each segment. When it is considered that 10 to 12 ripe segments are commonly passed by a tapeworm patient every day and that a tapeworm may live for many years in the intestine of its host, it is evident that one tapeworm patient may be the source of infection of hundreds or even thousands of cattle with tapeworm cysts. The faeces of such a person deposited in a barnyard, feed lot, insanitary surface privy, or in other improper places are liable to contaminate the feed or water supply of cattle by natural drainage or otherwise, with the result that some of the many thousands of tapeworm eggs present in the faecal material ultimately reach their proper intermediate host. When swallowed by cattle the eggs hatch and the tiny embryos migrate from the alimentary canal, get into the circulation, and are carried to various parts of the body, where they settle down in the intermuscular connective tissues. At the end of two to seven months after infestation the embryos have developed into full-grown tapeworm cysts, ready to complete their development into tapeworms when swallowed by man.

The life history of the beef tapeworm thus consists in an alternation between two hosts—man and ox. The ox becomes infested by swallowing the eggs of the tapeworm with feed or water contaminated by the faeces of the human host, and man becomes infested by eating the raw or imperfectly cooked flesh of infested cattle.

The prevention of tapeworm infection in human beings and of measles in cattle and hogs is comparatively simple and may be accomplished by the following means:

1. An efficient meat inspection.
2. Proper cooking of meat before it is eaten, particularly if there is any doubt of its freedom from infestation with measles.
3. Disposal of human faeces so that live stock can not have access to them and so that there is no possibility of contaminating the feed or water supply of live stock.—U. S. Bulletin.

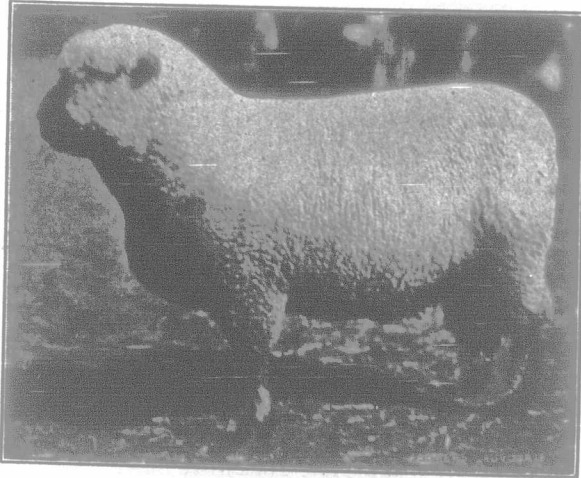
Feeding Beef Cattle in Ontario Under New Market Conditions.

Editor "The Farmer's Advocate":

It seems that, in the event of any change in our commercial conditions, and the results that are likely to flow therefrom, "there are none so blind as those who will not see." This remark, to my mind, is doubly emphatic, when applied to many members of the farming community. We are now hearing the expression that the Canadian cattle-feeding business will be ruined, as the Americans will get the stocker cattle. The very fact that the Americans have lately been paying 27½ per cent. duty in order to get our feeding animals, and even against such a handicap, have already taken across over 20,000 head of Canadian feeders at Buffalo, should show to Canadian farmers that the buyers of these cattle, at least, expect to see the price of beef very high when those animals are finished. To my mind there

never was a time when Canadian, and more particularly Ontario feeders of beef cattle, ought to redouble their efforts, and try to feed the best quality of animals they can secure. Let us always bear in mind that what Americans can do in the feeding line Canadians should never be backward in trying to do. Canadians do not need to take a back seat in this respect.

With the change in market conditions, which the adoption by the American Government of the Underwood Tariff Bill will inaugurate, the beef cattle trade of Ontario will be revolutionized. Up to the present time, most of our Ontario cattle feeders have bought their supply of feeding cattle in the fall of the year, with the expectation of finishing them for the British market, when navigation would open at Montreal in the spring. All this will now be changed. The



Champion Shropshire.

A Toronto and London winner. Owned by J. & D. J. Campbell, Woodville, Ont.

prices ruling in Chicago and Buffalo will now regulate the market price in Ontario. The greatest consuming market of the world will now be open to Ontario feeders at every season of the year, and to the wide-awake, beefing farmer marketing time will come any day, and be controlled only by the market fluctuations of those great American markets. The very fact that all summer long, Chicago and Buffalo prices for the best cattle have ruled over \$2.00 per cwt. higher than Toronto, should be an eye-opener to every Ontario farmer.

The consumers of those great American centers of population, which lie right at our door, are looking for the best quality of beef they can find, and they have the money to pay for it; therefore, it should be the endeavor of Ontario cattle feeders to feed for that high-class trade, and with that object in view, secure the choicest class of animals they can get and feed them to a high finish as rapidly as they can, always bear-



A Smooth Steer.

Champion Shorthorn steer at Toronto. Owned by Jas. Leask, Greenbank, Ont.

ing in mind and watching the fluctuation of market prices.

Judging from present conditions and considering the prospective supply of beefing animals at present in sight on this North American continent, prices of choice beef animals are bound to be high, in fact, much higher than have ever yet ruled on our Canadian markets; therefore, while it should be the aim of the more exclusive feeders of beef cattle to do as I have already indicated, yet every farmer who follows the business of raising beefing animals should redouble his efforts in trying to handle those animals carefully and feed them well from the day they are dropped, and as long as he can afford to profitably keep them. It is in this regard that, in the

past, our raisers of beef cattle have lost to themselves thousands if not millions of dollars every year.

The fact should never be lost sight of, and it cannot be too strongly impressed, that the first office of food in the animal body, is to support life and meet the requirements of the animal system. This must always be done before any profit in the way of an increased carcass can be obtained; and it is only from that portion of food given, over and above what is required to maintain the animal system, and which can be properly digested and assimilated, that gives the cattle grown his daily profit.

The deduction is plain. Every grower of beef animals should give to his young stock such full and suitable rations as will keep them growing and laying on meat every day. Let there be no hold-up or set-back. Keep them going continuously as long as you profitably can, and when they must or should be sold, if a proper start has been made, that is, if the right quality of animal has been obtained to build on, the quality of the article will be such as will best satisfy the table of the consumer, command the highest price, and line the producer's pocket the best.

Huron Co., Ont.

THOS. McMILLAN.

THE FARM.

Constructing a Stave Silo.

Editor "The Farmer's Advocate":

In connection with the building of our silo we began making preparations in the early winter of 1912-13. We were fortunate in having a wood lot on another farm, and we got out a number of logs and hauled them to the sawmill, and the result was a quantity of lumber of different sizes. The material for the silo was 2 in. x 6 in. x 12 ft., and to make a silo 11 ft. in diameter it required 79 staves of this width, and each stave is made of two 12-foot lengths and a 6-foot length. Each alternate stave has a 12-foot length in bottom with another 12-foot length on that and a 6-foot length on top, the other staves having a 6-foot length in the bottom with two 12-foot lengths above, thus breaking joints six feet and making a substantial job. Of course the ends of all the pieces were squared. The material was pine and spruce.

In arranging the doors we concluded to have the door frames made continuous from bottom to top. Our silo, as stated, is 12 feet in diameter and 30 feet high, and the door frames are made of 2-in. x 6-in. material throughout, that in the sides are 2 in. x 6 in., and cross pieces are of same size, and these frames take up about the space of five staves. The doors are all made 20 inches wide and are made of two thicknesses of 1-foot stuff, crossed and bevelled on all four sides of the doors. The one thickness toward the inside of the silo projects

one inch on all sides over the outer thickness.

The door frames are all babbitted out and bevelled to allow the doors to fit snugly in place, and the doors are furnished with long strips bolted on the outside to swing in the manner of a button, which is turned to a vertical position when the door is in place.

The side pieces of the door frames are mortised and the cross pieces have tenons which fit in and then they are nailed together. The frames are made in three sections, two of them being twelve feet long and the other one six feet long. The top and bottom of each section where they join are halved together.

The six lower doors are 20 in. wide and 24 in. high and the upper five doors are 20 in. wide and 30 in. high. The doors are

arranged in these sizes to allow us to use twelve bands, which are spaced two and one-half feet apart half way up and three feet apart the rest of the way up. These bands are made of round iron, each band being in two pieces, each piece nineteen and one-half feet long and threaded eight inches on each end and furnished with hexagonal nuts. The two halves of each band are joined together by malleable clips or lugs, which are furnished for this purpose and which may be purchased at any hardware. The rods were purchased in 19-foot lengths and threaded and fitted with the nuts at the rolling mills. We run them through a tire-bending machine to make them fit the circle. We used 12 bands, the lower three