

Dr. Alexander on Warbles.

The grub is the larva of the ox warble-fly (*Hypodermis bovis*), and was "taken into" the system last summer during fly-time. The Government entomologists would have us believe that the eggs of this fly are deposited upon the hair of the chest and legs of cattle, are licked up and swallowed by the cattle, and eventually hatch out into little grubs, which penetrate the walls of the stomach, and then wiggle through the tissues until they arrive under the skin. The writer was taught differently years ago by that noted entomological authority, the late Miss Eleanor E. Ormerod, of England. She, with other entomologists of her day, claimed that the eggs were deposited under the skin of cattle by means of the "ovipositor" of the fly; that they there gradually attained full-size, and by the irritation induced the formation of pus and lymph about the abscess and under the skin, which led butchers, seeing the condition on skinning the animal, to use the term "licked beef" in speaking of such beasts. The fact that such a collection of inflammatory material is found under the skin shows that the grubs cause great irritation, and, necessarily, pain and misery to the host. When badly infested, steers have failed to fatten and cows to give a full flow of milk, while hides are injured seriously in price by the holes consequent upon the presence of these pests. We can the better understand the misery of the infected steer when it is remembered that the grub is supplied with some stiff bristles with which to irritate the tissues within reach, apparently for the very purpose of inducing secretion of pus and diffusion of lymph, which probably supplies the sustenance of the parasite. At this time of the year, feeding cattle and cows should be examined for the presence of these grubs, and means should be adopted for their removal and destruction. When fully "ripe" the grub may be squeezed out between the fingers and thumb, but a better way is to apply a nut key over the tumor and bear down hard, when—pop goes the warble! The grub should be destroyed under foot, else it will assume the form of a pupa in the ground, and later emerge an imago or perfect insect to carry on its mischievous work. Injecting a few drops of turpentine into the orifice of the tumor will also kill the grub, and the same end is attained by smearing with mercurial ointment. In using the latter preparation, however, care will have to be taken to prevent licking, as the ointment is poisonous, and the objection to both plans of treatment is that the carcass of the grub is left within the tumor to act as a foreign body and continue the formation of pus and other products of decomposition and irritation. Any application that will keep flies from settling on the backs and legs of cattle in summer will tend to prevent the formation of these warbles, whether the eggs are deposited under the skin or upon the skin, and some such attempt should be made to lessen the trouble. Miss Ormerod also advised washing the backs of cattle with strong brine in late summer and early winter as a preventive of warble formation. This we think should be done, but a strong solution of coal-tar disinfectant might prove even more effective than brine. We still incline to the belief that the eggs are deposited under the skin, and for that reason have faith in external applications. It is sad to confess that we cannot fully stomach the life-history of the warble grub as taught by modern authorities, but such is the case, and we have yet to find the man who has discovered a grub in transit from the stomach to its eventual lodging-place under the skin. Grub taken into the belly is something every feeder knows more about to date!

[A free translation of the scientific name given the warble fly is evidence that the scientists giving the name believed that the cattle hides were punctured by the fly and its eggs deposited beneath the skin.—Ed.]

The Faker Still Tramping.

O'Neil Bros., Southgate, Ont., write: "We are in receipt of a letter from a Simcoe County breeder stating that he recently had a visit from a dark-complexioned man, under medium height, with dark, sharp eyes, and wearing a moustache, also small finger crooked, representing himself to be one of the firm of O'Neil Bros., of Southgate, Ont., and wanting to buy Hereford cattle. This is the same crook that you have exposed previously in your paper, that goes among breeders of pure-bred stock and purports to buy some, or, at least, get a few days' board. He is a fair judge of cattle, has pedigrees well off, and has been over the most of North America. He is a brilliant conversationalist, having been in the ranching country of the South-western States, and is acquainted with nearly all of the most prominent breeders, as he could pick out nearly all of them from photos. We would be obliged if you would again publish an article on first page of your valuable paper exposing this rascal, and also announce that we have not been on a purchasing tour in Ontario in the last year, as we do not know to what extent he has used our name and reputation."

I am nearing the seventy-fourth milestone in the journey of life. The "Farmer's Advocate" has been my companion for one-half the journey, and I have everything good to say of it.

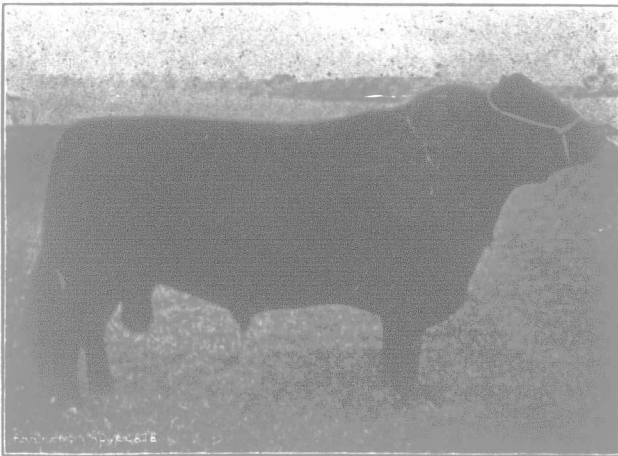
Elgin Co., Ont.

ROBERT JONES.

The St. Louis Live-stock Exhibit.

To the Editor "Farmer's Advocate":

Sir,—I regret that unjust criticism has been directed at Mr. F. W. Hodson, Canadian Live-stock Commissioner, because of the course of the Canadian breeders regarding a national exhibit of live stock at St. Louis. The action of the Canadian breeders was initiated by themselves, through the executive officers of their associations, and their resolutions endorsing the action of Live-stock Commissioner Hodson, and not to make a national exhibit at the St. Louis Exhibition under the conditions offered by the management of that exposition, were passed almost unanimously at the an-



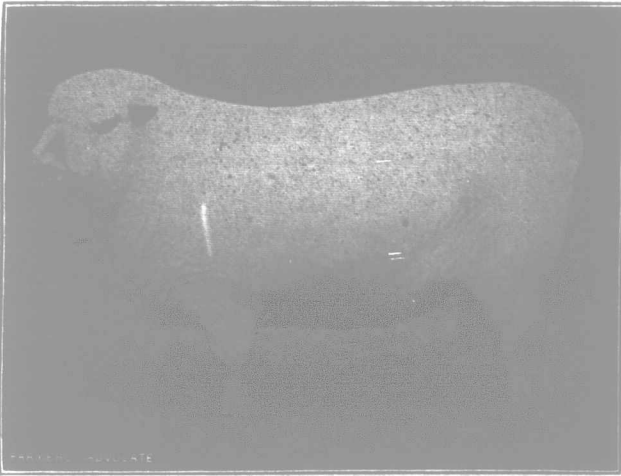
Maramere 18160.

Champion Aberdeen-Angus animal, Dumfries, 1903. Age three years and six months.

nual meetings of those associations, and whether the Canadian Live-stock Commissioner and the representatives of the Canadian Live-stock Associations who went to St. Louis to try to smooth away the difficulties in the way of a Canadian live-stock exhibit were treated by Mr. Coburn with courtesy or not had no bearing on the matter, as their decision had already been made. It may have had the effect of strengthening the breeders in their resolve not to kiss the feet of the man who had insulted them and pick up the crumbs he might throw to them.

I believe the sentiment of the Canadian breeders is that they would prefer to take their chances with the independent sense of justice of the average American, especially the live-stock breeders, in a straight, friendly competition, than submit to any indignity to any branch of the live-stock industry. Some of the obstacles have been removed in a half-hearted way since, and probably as a result of the action of the Canadian live-stock associations.

The conditions of the Exposition did not affect the sheep and swine breeders in quite the same way, and I believe they would have been willing to accept the terms offered—a statement I made to the meeting at the Rosin House, Toronto.



Shropshire Tup.

Championship best Shropshire, Dumfries, 1903. Bred by A. Tanner. Age two-shear.

Our Government informed the deputation who waited on them regarding a grant for the purpose, that a grant to assist in making an exhibit of our Canadian live stock could only be given upon condition that the breeders united and made a thoroughly representative display of our great live-stock interest.

When the conditions of the Exhibition were made so repulsive to the horse and cattle breeders that they decided they could not accept them, those stipulations could not be complied with, and it did not require a very great stretch of patriotism to have the breeders of other lines decide to stand with them, and I do not think there are many of our breeders anxious to humiliate themselves before any corporation.

A. W. SMITH.

FARM.

Beet-pulp Feeding Experiment.

On the 70-acre farm of the Ontario Sugar Company, in Waterloo Co., Ont., near Berlin, there are cultivated annually 12 to 13 acres of sugar beets, but no other roots, except a few potatoes, are grown. Beets follow clover, and are followed by grain seeded to clover. It is not found necessary to summer-fallow to keep the land clean, which is easily done, accomplished as a secondary advantage in beet cultivation. Beet pulp as a stock food is fast growing into favor among the growers, who are allowed pulp free at the factory; or, in other words, f.o.b. cars. Last year (in a little more than two months) the beet-growers teamed away 3,800 large loads to their farms, where it has been fed with splendid results to growing cattle, beef cattle and milch cows. Had the car pulp orders been received sufficiently early before the storms blocked transportation, as many as one hundred carloads would have been shipped to growers outside the county.

To make up our straw into manure, we purchased last winter eleven head of yearling cattle, which were put on a beet-pulp feeding experiment, in which nothing was fed except beet pulp, oat straw and oat chaff. The results are interesting and should be of value, particularly to beet-growers who are within the county, or situated within shipping distances of the factory.

On October 14th, when the experiment commenced, the eleven animals weighed 8,100 pounds, being an average of 736 2-5 pounds. Until snow came (about the middle of November) the animals were enclosed in a two-acre paddock, which contained practically no pasture, and fed pulp only twice a day. They were then dehorned and housed in a box stall, where they received oat straw, oat chaff and beet pulp, morning and evening. No hay or grain was fed, and they took no water. Usually a little salt was sprinkled over the pulp when fed. It was very noticeable all through the six months' experiment, that the animals were at all times perfectly contented and restful, but always ready for their feed.

After three months, on Jan. 14th, 1904, the animals weighed 9,005 pounds, being a total increase of 905 pounds, or an average of 82½ pounds. Two of the animals being heifers, were together weighed and sold. Their weight of 1,740 pounds was deducted from the above 9,005 pounds to obtain the weight of the remaining nine animals, namely, 7,265 pounds. On April 14th, after another three months' feeding on oat straw, oat chaff and beet pulp, the nine steers weighed 8,300 pounds, being a total gain in three months of 1,035 pounds, or an average of 115 pounds.

Taking into consideration that these animals are remarkably thrifty in appearance, these figures show that beet pulp has a very high value as a succulent food for the economical production of growth.

A. E. SHUTTLEWORTH.

Sugar-beet Growing.

The best means of producing sugar beets to as near perfection as possible, is a subject that is worthy of consideration, not only from the point of productiveness, but also to encourage a home industry, and making it profitable as well to the individual farmer who puts forth his energies to obtain the best possible results.

As regards the soil, I prefer land that is not too heavy, thoroughly drained clay loam to sandy soil. Sugar beets will do well after peas, oats, barley, wheat, clover sod and corn, but not after timothy sod or following a root crop. I prefer farm manure to artificial fertilizers, but would advise the latter to give them a quick, strong, healthy start. Still, one can obtain good results from any farm manure not containing too much straw, well rotted and evenly spread. It is better applied in the fall or winter months. If applied in the fall, harrow thoroughly in spring, with the drag-harrows first, then use disk harrow until it is well worked into the soil. The same rule is followed after winter manuring, as early in the spring as ground will permit, without being too wet and cold. The ground should be thoroughly cultivated as early in the spring as possible. Cultivate deep, and harrow, then let it remain until you are ready for sowing, which should be done from the 10th to the 15th of May, first plowing deep, the depth of the ordinary subsoil, but not deep enough to disturb the clay; then disk and harrow thoroughly, and roll, and your land will be ready for sowing.

I use an ordinary force-feed grain-drill, every third tube, which leaves rows about twenty-one inches apart. Still, eighteen inches is sufficient, sowing when the ground is in warm growing condition, using 15 lbs. per acre of seed, and I would advise more rather than less, in order to insure an even catch. Thinning should commence as soon as the plants will allow, without injury to the young plants, using a six-inch hoe, leaving them six inches apart, doing the work thoroughly, and leaving but one plant in a place, not allowing any weeds to remain undisturbed near the plants. Cultivate as often as possible, especially after each shower of rain, which will help to conserve the moisture and also keep the weeds in check. Continue