

first at Ayr a year ago. He is by Baron o' Buchlyvie, and his sister was by Revelanta. She went to Canada.

THE CENSUS OF SCOTLAND.

Turning to other matters, we have had the census taken, and the figures for Scotland have now been published. The results are disquieting. They bear out the opinion that was freely expressed on general grounds, of the depletion of the rural population and the congestion of the cities. But they do more. They prove the existence of a serious national peril in the withdrawal of so many of the best of our youth from the rural districts. Their places are being taken by incomers from Poland and other parts of the Continent, as well as from the western counties of Ireland. Where there is an increase of population, there is too much reason to fear that it is due to this cause, and not to causes which might be viewed with greater complacency. The Legislature will undoubtedly do something to put an end to this exodus, but if it is to do anything that is worth doing, it will require to act promptly. There is no time to lose, for every week witnesses an addition to the trek westward. Many are now also turning their eyes to Australia, where the Government have at length realized that a population of 5,000,000 is very little on a continent. The best capital of a country is a healthy, moral, rural population. To crowd cities is not necessarily proof of prosperity. It may be the very reverse. And of this we have more than enough in this country at present. What is required is sane, simple methods of guaranteeing security of tenure to every honest, hard-working man. The magic of ownership is very well to talk about, but the average man in this country has not enough capital to purchase his holding. Moreover, if he had security of tenure, he could do more to improve his land than is even possible for him while he remains subject to the will of another. The great attraction which virgin soils like those in Canada present to youth is the certainty that, whatever improvements they effect upon a farm will ever improve themselves. They are not working for another all the time. And thus, while some are able to save something against the rainy day, the majority take their chance, and a very poor chance it is. In Canada, a man's labor and his capital are invested to benefit himself, and when he is thrifty and diligent, he cannot miss gathering together some gear.

A movement is on foot to secure for Scotland a Department of Agriculture such as Ireland has been blessed with for several years. There is much to be said in favor of such a scheme. Ireland enjoys the spending of an annual sum of £124,000 for the development of agriculture alone. The figure seems high, but Pat spends it all. He has the privilege of buying a Shorthorn bull at the handy figure of £30, and the beneficent Government will bestow upon the animal a premium of £15, provided it remains in Ireland. A Kerry bull, worth little more than £15, will get a £15 premium, same as the Shorthorn. It is all very pleasant for the taxpayer, but somebody has to pay. The British taxpayer enjoys that luxury—but who is he? A much-hardened individual who on occasion cries out against his oppressors, but more commonly meekly accepts the situation, believing that quietness is best. The one redeeming feature in the Irish aspect of the question of improvement has there (in Ireland) a marked improvement taken place in the quality of the commercial cattle of the country. Those who buy Irish cattle as "stockers" are loud in praise of the improvement seen in them in the past ten years. They are altogether better fleshed than was common twenty years ago. This is certainly due to the work of the Department, and those who preceded them in the Royal Dublin Society and other institutions.

Having recently been on tour in Holland, I shall give some impressions of that country in my next.

The Warble Fly.

One of the most destructive insect pests in this country, says a leaflet issued by the British Board of Agriculture and Fisheries, is the Warble Fly, which is injurious to the living animal, to the hide, and to the meat. Though the flies do not sting or pierce the skin, it is believed by some investigators that they have a peculiarly irritating effect on stock, and that, when tormented by them, cattle will rush wildly about the fields in their endeavor to avoid the flies. Careful observations made in Ireland showed that cattle, and particularly calves, were extremely sensitive to the approach of the Warble Fly. In the case of fattening animals, this would occasion a loss of weight, while it would be still more injurious to cows by diminishing the supply of milk. With in-calf cows, also, loss may arise from this cause, simple abortion being the result of the excitement and exertion.

The maggots or bots living beneath the skin are also a source of irritation to the cattle, and

by perforating the hide, seriously damage it for tanning purposes. Thirdly, the meat round the wounds is frequently so altered by the inflammation set up that it is quite unfit for sale. When the hide is stripped from a carcass, the affected parts appear as straw-colored, jellylike patches on the surface of the meat. This is known in the trade as "licked beef," and it has to be entirely cut away, thus causing substantial loss, especially as it is usually found in the most expensive parts.

Various estimates have been made from time to time of the loss caused by the Warble Fly, but there are no reliable data on which an opinion

All stock should be frequently examined during winter and spring, especially from February to April, and the maggots extracted from the warbles and destroyed.

The maggots, when "ripe," may be extracted by squeezing the warbles with both thumbs, and may then be squashed under foot. This is a better plan than covering the opening of the warble with grease or mercurial ointment, so as to suffocate the bot within. Alternatively, a small amount of arsenic in solution may be inserted into the warble, to destroy the maggot. The use of equal parts of Archangel tar and paraffin has

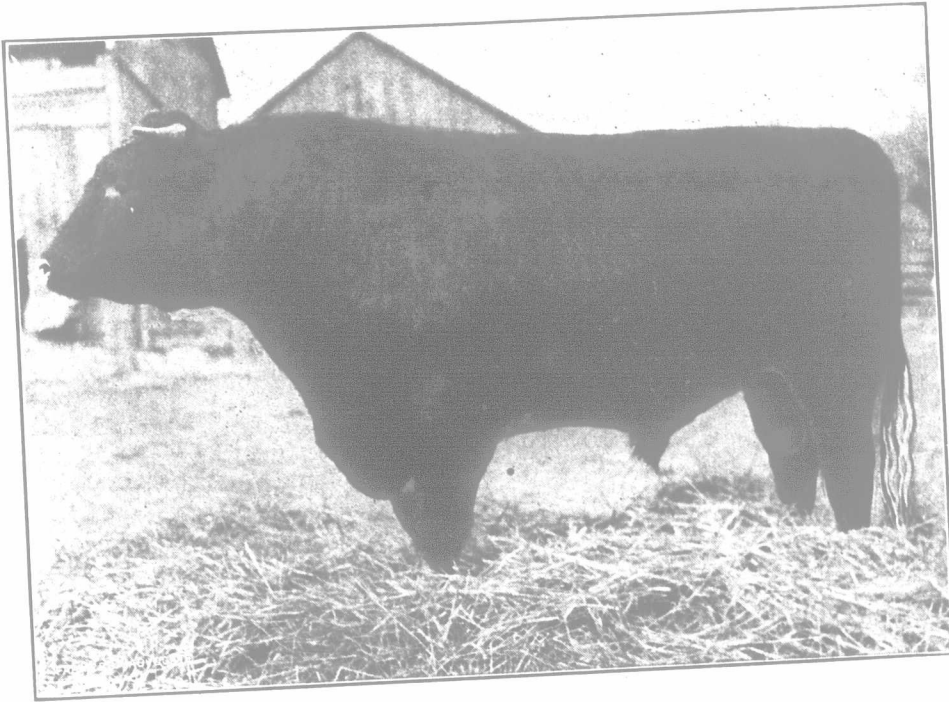
also proved successful in Ireland as a means of destroying the warble under the skin. In the case of cattle treated with this mixture, all the warble maggots were found to be dead or shrivelled, and in many cases at least were being worked out of their holes, so that injury to the hide and flesh was reduced to a minimum, while the application did not appear to damage the animal's skin and hair. The mixture should be applied thoroughly at least twice in the season, about the middle or end of April and at the end of May.

If the practice of destroying the maggots be systematically followed, it must result in an appreciable reduction in the number of adult flies.

Consequently, fewer eggs will be laid to produce maggots in the following season. The method has been tested in the course of some experiments carried out for the Irish Department of Agriculture and Technical Instruction by Messrs. Carpenter and Steen, and seemed to result in a substantial local reduction in the prevalence of the fly. In 1907, 2,090 maggots were squeezed out of 194 cattle on the farm where the investigation was being conducted, an average of 10.77 per beast. In the spring of 1908, 132 of these cattle were still on the farm, and had been left throughout the summer of 1907 without any kind of dressing or protection against the fly. From these cattle 586

maggots were squeezed out, an average of 4.44 per beast, and this reduction was thought to be due to the destruction in the previous year. In 1909, however, the proportion rose to 7.77, while in 1910 it was 7.52. The conclusion arrived at is that systematic maggot destruction in the spring will reduce the liability of the cattle to attack to a certain extent, but that the benefit will be limited until similar steps for the destruction of the maggots are taken on neighboring farms. This is possibly the reason why the cattle grazing on the outskirts of the farm suffered more than those near the center of the farm.

The Board would suggest that Agricultural Societies and Farmers' Clubs should urge their members to adopt the plan of removing and destroying the maggots, it being certain in its results, and more effective than the use of strong-smelling dressings, with the idea of deterring the flies from laying their eggs. The use of these dressings, though they have long been recommended, appears, in the light of recent investigations, to be of doubtful efficacy. Ostertag, the German authority, has stated that no case was known to him where good results had been attained by it. He expressed the view that the only useful method of

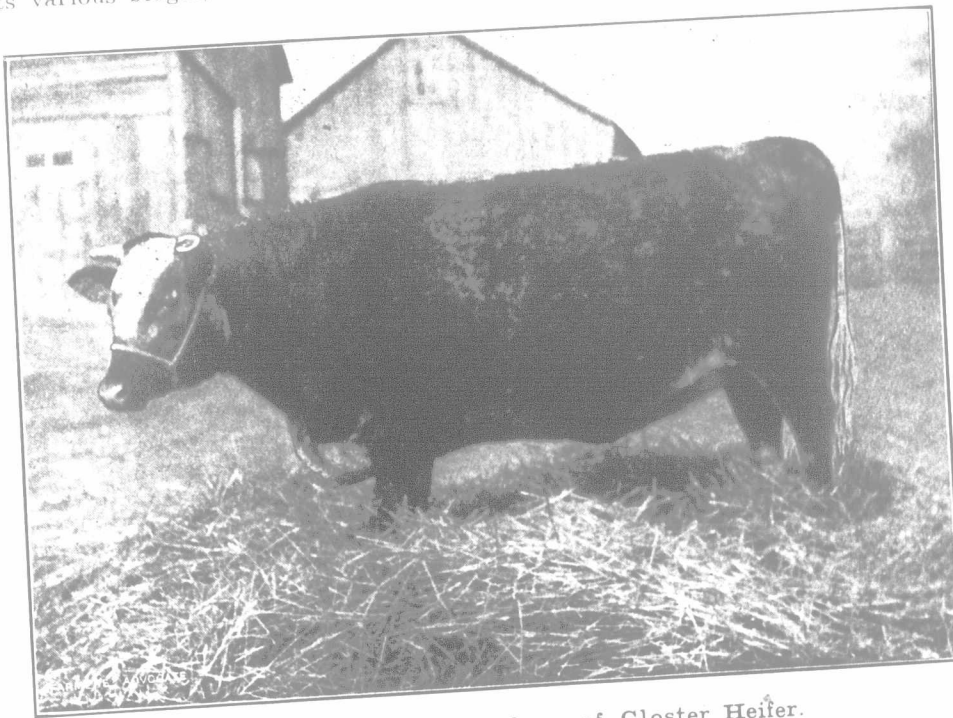


Royal Baron =76746=.

A two-year-old Duchess of Gloster bull, by Spicy Count (imp.). Bred and owned by D. Birrell & Sons, Greenwood, Ont., included in their Shorthorn sale, June 20th.

can be formed. As an example of the comparative prevalence of the fly, it may be mentioned that the Board were recently informed that, in the case of a tannery where 132,000 hides were dealt with in one year, 40,000 of these were found to be damaged by Warble Fly, but in another case only 1,500 out of 20,000 were affected. The damaged hides were depreciated in value from 2s. 6d. to 5s. per hide.

A point of considerable importance to the tanning industry is that the warbles, when in an immature state, cannot easily be observed under the hide, and this makes it difficult to fix a fair price. Generally, it may be said that this insect, in its various stages, must be the cause of a good



Yearling Cruickshank Duchess of Gloster Heifer.

Included in D. Birrell & Sons' Shorthorn sale, at Greenwood, Ont., June 20th. See advertisement and Gossip.

deal of suffering which, from a humanitarian point of view, it is desirable should be diminished, while at the same time it must occasion a loss of condition in the cattle.

It is evident that any attempt to minimize the injury must be made by the farmer, and every farmer who knows that his stock are troubled with Warble Flies should make a systematic attempt to eradicate the insects. There is good evidence to show that their numbers can be greatly reduced, and the united action of a number of farmers in a district might be expected to be productive of the best results.