

Shorthorn patrons from far and near. Perhaps the price of £25 1s. 1d., realized for 44, at a mixed sale held in Perth, in the afternoon of the same day, was a better index to the active value of commercial Shorthorns.

In the following, we made a day of it: At the Duthie-Marr sale of calves, held at Tillycairn, near to Oldmeldrum, 24 bull calves, bred by Mr. Duthie, made an average of £251 1s. 7d. each. Seven bull calves, bred by John Marr, on the famous farm of Uppernill, made £70 16s. 0d., and seven heifer calves, also bred by Mr. Marr, drew an average of £31 13s. 0d. The highest prices for bull calves were 720, 700, 620, 480, 400 and 350 gs. The best calf in the sale was a white bull calf, which would have made any price, had his skin been red or roan. As it was, he made 350 gs., in spite of his white skin. The young three-year-old bull, Golden Promise, was the sire of most of the highest-priced bull calves. The average for six got by him was £374 10s., and the average for nine got by the red bull Jubilant, £254 16s. Golden Promise has been sold by Mr. Duthie for exportation to Buenos Ayres. He is of Augusta descent, and a marked feature of the sales this year has been the "run" on Augusta blood. The Augustas were reared by the late James Bruce, of Inverquhomery. He was a firm believer in them, yet it was not until after his death, which took place about ten years ago, that they sprang into popular favor, and they now share with the Clipper race the honors of first place among Aberdeenshire Shorthorns.

A joint sale was held at Newton, Inch, on the day following the Tillycairn sale. The weather was miserable in the extreme, yet there was a lively sale, 53 head, of varying ages, made the splendid average of £74 10s. 7d.; 390 gs. were paid for a bull calf, and 300 gs. for a heifer calf. Another joint sale was held at Oldmeldrum, when a large number of choice cattle from tenant-farmers' herds in Aberdeenshire were sold, 72 head on that occasion making £33 1s. 10d. Yet another joint sale was held at Aberdeen, when 124 head made £39 10s. 5d. On the last day of the sales, and adjournment was made to Inverness, where a good selection was offered from Ross-shire herds, and herds in Inverness-shire and neighboring counties, very healthy, choice cattle, and the results were that 92 head made £26 18s. 6d. The best average was made by Balnakyle, his figure being £55 8s. 9d. for five.

DECLINING POPULARITY OF THE OLD BREEDS.

By way of contrast, the prices made for Highland cattle at two great sales, held at Sterling, and Oban, may be mentioned. At the former, 52 head realized £13 9s. 9d., and at the latter £30 was the highest price realized. This was paid for a three-year-old heifer from Kilberry, in Argyllshire. The old breeds have no chance against the modern, improved, early-maturity sorts.

DOES NITRATE-FERTILIZING AFFECT SYSTEMS OF ANIMALS?

I don't know whether Canadians try to grow big crops of hay by administering doses of nitrate of soda to the crop. Here there is a wide difference of opinion as to whether hay dressed in such fashion sets up kidney trouble in stock, and especially in horses. Opinion is sharply divided, and no trials have been carried out conclusive enough to satisfy some stock-owners that such a top-dressing is injurious. Some years ago, at a show of the Highland and Agricultural Society, certain valuable animals were seized with kidney trouble of some kind, and, as a result, one prize Shorthorn bull died. The owner set up a claim for damages, and maintained that the cause of death was the hay supplied in the showyard, which was supposed to have been grown on a meadow dressed with nitrate of soda. The farmer who had the contract was well-known to be a gentleman who cultivated his land intensively, using large quantities of manure. It was taken for granted that he had dressed the hay with the suspicious Chilean manure. But the bottom went out of the theory when it was blandly indicated that, knowing the prejudice, the farmer in this particular year had deliberately refrained from applying nitrate of soda to the hay. This was a fine case of the logical fallacy—post hoc, propter hoc. In this case the nitrate was found "not guilty." All the same, there is a case for inquiry and exhaustive experiment, and in the end something may be learned that will be of use. Mr. Speir, of Newton, one of the best-informed and most observant farmers in Scotland, is an out-and-out supporter of the application of nitrate of soda to the hay crop on land which is well manured and in good heart. The truth seems to be that, in dealing with nitrate of soda, as with all other manures, brains must be added to the chemical combination. A successful breeder of Blackface sheep was once asked, at a public meeting, whether the geological formation of the soil had not a good deal to do with the success of sheep-farming? He admitted that it might be so, "but far more depended on the geological formation of the sheep-farmer's head!" This aphorism applies to much more than sheep-farming.

SUCCESSFUL CLYDESDALE SEASON—SOME SALES.

Talking about Clydesdales, we have had a wonderfully successful season, and exports have gone well over the thousand head for the year 1909, so far as it has gone. Recently, there have been some auction sales, at which useful averages have been realized. At the Seaham Harbor foal sale, eleven filly foals realized an average of £38 7s. 6d., and fifteen colt foals realized an average of £38 7s. 11d. At Elgin, in the North of Scotland, a colt foal by Marcellus 11110 made 155 gs.—a first-rate paying price.

PESTIFEROUS VERMIN.

Amongst other things now troubling us are rats and sparrows. Are these vermin common in Canada? In some parts of Scotland there is a saying among farmers that "it is a fell healthy sign to see a wheen rats about a house." Personally, I cannot share the opinion. The most loathsome of all rodents to me is the rat, and there is reason to believe that the loss sustained through them on farms is enormous. The fecundity of the female rat is something to be afraid of. She breeds at an appalling rate, and the plague has become so pronounced that crusades against the rodents are being organized in many districts. In former days it was customary to poison the rats wholesale, but there are difficulties connected with this method of waging war upon the vermin. You cannot very well set poison for Mr. Rat without imperilling the lives of much more valuable members of the farm stock. And, besides, you are never sure that Mr. Rat will take the poison. His sagacity is almost human, and many stories are told of his abstemious policy when he smells danger. A new method has, therefore, come into favor. This takes the form of setting up an epidemic among the vermin by means of a virus. This is given in food. The first animals which partake of it die. The rat is a cannibal. Those which consume the dead bodies of their comrades in due season contract the disease, and die off, only to be the medium of contagion to others, and so on. But even this method sometimes fails. The rat becomes suspicious when he sees such a wholesale death-rate among his comrades, and he flits. Therefore, it is agreed that, in order to be successful, the attack by means of the virus must be concerted, and extend over a wide area. War has been declared by many farmers' clubs, but whether it will be prosecuted to the bitter end, is a little doubtful.

Sparrows are by many regarded as more destructive than rats. How to attack them successfully, is a very grave problem. Poisoning is effective, but dangerous, and it is positively illegal. They, too, multiply at a terrible rate, and they can destroy grain while in the ear to an extent surprising to those who are made acquainted with their ways for the first time. There are other winged farm pests, such as wild pigeons and rooks, but the sparrow is an easy first in mischief and destructive proclivities.

"SCOTLAND YET."

Commercial Feeding-stuffs Act.

By Prof. R. Harcourt.

During the last session of the Dominion Senate and House of Commons an act was passed dealing with the sale of commercial feeding stuffs. The object of the act is to aid farmers, dairymen, and other purchasers of mill by-products to buy more intelligently. It makes it compulsory for every manufacturer or vendor of a commercial feeding stuff to stamp on the bag or print on a tag, which must be attached to the bag, the minimum percentage of protein and fat and the maximum percentage of fibre in the material offered for sale.

The need of this act has been apparent for some time, and has been brought about by the appearance on the market of many different forms of mill by-products. Among these products we find such materials as linseed meal, gluten meal, gluten feed, corn, oil cake, etc., foods rich in protein and fat, and very valuable foods, particularly for the dairymen. Corn bran, oat hulls, oat dust, pea bran, sugar-beet pulp and molasses, and many other by-products, are also on the market. Some of these are good foods, while others are of comparatively little use. Mixtures of these foods are also prepared and offered for sale under trade names, which give no information regarding their real feeding value. Most of these substances are new feeds, and many of them could be purchased to advantage under the present conditions of the market for grains and hays. Those rich in protein are especially valuable for feeding along with the ordinary roughage of the farm, which is usually of a carbohydrate nature. The dairyman must feed his cows a ration rich in protein if he is to secure the flow of milk desired, and many of these by-products are the best materials he can purchase, provided he can be sure of the quality.

The act defines "commercial feeding stuff," "feeding stuff" and "feeds" as any article offered for sale for the feeding of domestic animals, and feeds claimed to possess medicinal as well as

nutritive properties, excepting only hay, roots, the whole seeds or the mixed or unmixed meals made directly from the entire grains of wheat, rye, barley, oats, Indian corn, buckwheat or flaxseed; wet brewers' grains; the bran or middlings from either wheat, rye, peas or buckwheat, sold separately and not mixed with other substances.

The act provides that every commercial feeding stuff offered for sale in Canada shall bear a registration number, which shall be permanently assigned to the particular brand of feeding stuff for which it is issued. The number shall be granted by the Minister of Inland Revenue, on application of the manufacturer of such brand of feeding stuff, or his agent, and on payment of a fee of two dollars.

In addition to the registration number, the name of the brand, name and address of the manufacturer, and the analysis as guaranteed by the manufacturer, must be legibly printed on every package of food sold. This condition shall be held to be fulfilled if a printed tag bearing the statement required is securely attached to the package.

Any purchaser may have an analysis made by the Department of Inland Revenue on payment of one dollar. Samples must, however, be taken in conformity with the regulations laid down by the Department.

It will be noticed that mixed or unmixed meals, when made from the entire grain and bran and middlings, are exempt from this act. It is specified, however, that the bran or middlings from different grains shall not be mixed. The intention is to treat of these foods under the Food Adulteration Act, which has been in operation for some years. During the past summer the Inland Revenue Department collected and analyzed a large number of samples of mill chop, bran and middlings for the express purpose of fixing standards for their protein, fat and fibre content. These standards have not been announced yet. When they are, a manufacturer who sells bran, middlings or chop with less protein and fat or more fibre than the standard amount, can be prosecuted. For example, supposing that the standard for bran is as follows: protein, 14 per cent.; fat, 3 per cent., and not more than 10 per cent. of crude fibre; any bran offered for sale which does not come up to this standard would be considered adulterated. It is hoped in this way to control adulteration of these common foods without incurring the expense of stamping the composition on every bag of them sold.

The Commercial Feeding Stuffs Act comes into force on the 1st of January, 1910. Farmers, dairymen, and all purchasers of mill by-products, should make themselves familiar with the conditions of the act, and thus be ready to make free use of it.

Co-operative Breeders' Associations in Maine.

Equal in importance, for successful dairying, with the cow-testing associations, stand co-operative breeders' associations, and, following closely in the footsteps of Western States in this, as in the former matter, Maine has four Co-operative Breeders' Associations within her borders, for the Department of Agriculture, with Hon. A. W. Gilman at its head, and Hon. Leon S. Merrill, the State Dairy Inspector, are working in unison along this line, and what they consider of the utmost import to dairying comes, and comes promptly.

Says Dr. Merrill in this connection: "There are at the present time about twenty of these Associations in the State of Wisconsin, and so far they have been county organizations. In Michigan, four have been organized, and more are to follow very soon, and I can see no reason why this work, when once begun, should not be extended to associations for other breeds of cattle beside the so-called dairy breeds, also to sheep, hogs, and horses. The Department of Agriculture will encourage its extension along these lines as soon as practicable."

Mr. Merrill states the objects of a Co-operative Breeders' Association to be:

1. To encourage the growing of pure-bred animals.
2. To create a demand for and open channels for the sale of surplus stock.
3. To make possible the interchange of breeding animals for which the owner has no further use.
4. To secure pledges from members and others to use pure-bred sires only.
5. To mutually benefit the members mentally, socially, and financially.
6. To co-operate so far as possible with fellow-members in the buying and selling of animals.

The first Co-operative Breeders' Association was organized in the spring, and is known as the Sebasticook Valley Holstein Breeders' Association. The western part of Penobscot and eastern part of Somerset Counties are included in its jurisdiction. There is a thriving cow-test association in a part of this territory.