and a little oil cake. After February they are handled gently, and exercised by hand if possible every day. In well-managed studs no sticks are allowed at this juncture. Some feed colts rising two years old five times daily, viz., at 5 a. m., 9 a. m., noon, 5 p. m., and 8.30 p. m. In such cases, rough boiled or steamed food, such as barley, maize, cut hay or straw, turnips or cabbages with bran, may be alternated with raw bruised oats and cut hay, and at the noon diet a mixture of cut hay and bran steamed.

The system of feeding and handling stallions rising three years old, and those above that age, is hardly alike in any two studs. The trade in this class is something entirely by itself, and every owner has his own way of feeding. The diets are made up of open, loose food; in some cases such as is given to the younger animals, with the addition of two pounds linseed cake daily to each horse. The constituents in a stallion's diet may be carrots, beans, barley, bruised oats, cut hay, swedes, linseed cake, and unlimited oat straw or hay, cut and bruised, or "chopped." A very successful exhibitor of entire horses uses the following rations, upon which his horses have often come out to victory on a spring day: Five a. m., mash of 2 pounds oatmeal, well boiled, and mixed with 2 pounds bran and cut hay, sweetened with treacle; 8.30 a.m., open rough mash of boiled beans, etc.; 12.30 p. m., 5 pounds chop, with 3 pounds carrots; 5.30 p. m., mash of boiled beans, peas, cut hay, oats, etc.; 8.30 p.m., 5 pounds chop, with 3 pounds carrots. Horses should always be watered before feeding, and get as much fodder as they will eat. The "chop" referred to in this ration consists of 10 cwt. oats, 1 cwt. beans, 1 cwt. peas, 1 cwt. Indian corn, ½ cwt. best home nut oil cake, and 1½ cwt. cut hay—all mixed together in the proportions named, and steamed. No stallion should have less than a walk of three miles every morning from first of January onwards until the season opens, say about the middle of April or beginning of May. When on the road a stallion should be fed often, but never with more than 3 pounds at a diet, of bruised oats mixed with beans. Until grass is plentiful he should receive a bran mash every night. He should be allowed to drink plenty of water, but meal drinks should be avoided.

# LIVE STOCK.

## Canadian Cattle Question.

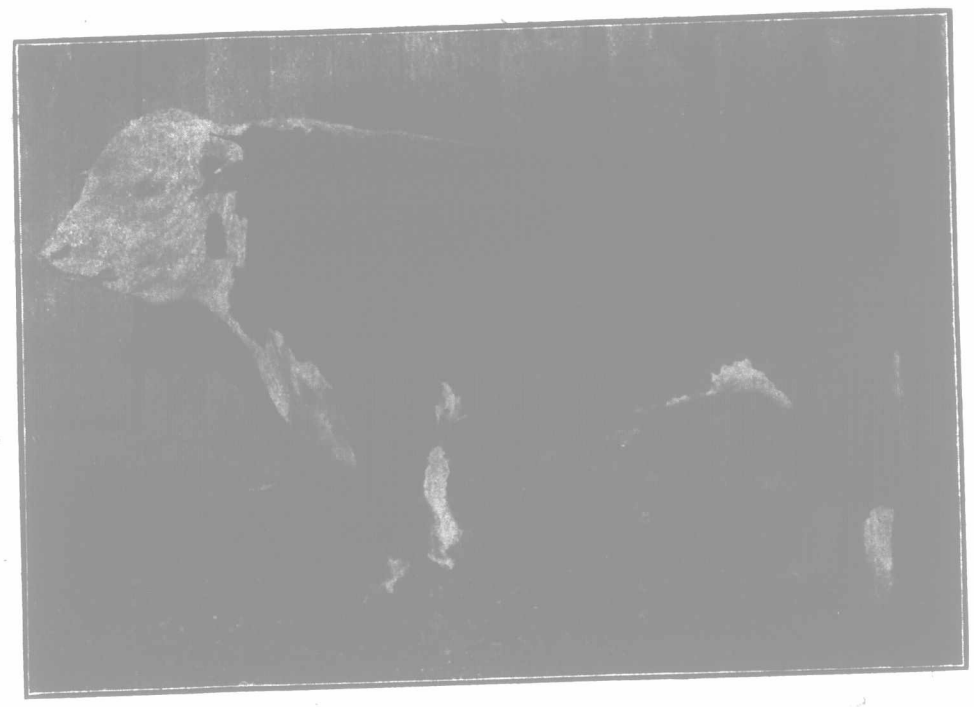
To the Editor "Farmer's Advocate":

My attention has been directed to an article on this question, published in your journal, that is being quoted in certain Scottish journals. You will excuse me, but you are grievously in error when you declare Great Britain and Ireland are acting according to what they believe their constitutional rights in continuing the embargo. Great Britain and Ireland's present constitution, which admits free imports, will have to be changed before you are correct, especially as it has been proved that there was no disease about the animal or in-contact animals, on account of which the Acts of 1892-6 were imposed. Further, I cannot for the life of me understand how any Canadian, unless he is interested in keeping down the price of cattle in Canada, should oppose or even minimize the enormous benefit that would accrue to Canada if all restrictions were swept away, and the best market in the world (the British market) opened to Canadian cattle. Let Canadians feed as many of their own cattle as they can, but Canada not being a maize-growing country, with a small population, and, therefore, only a comparatively small proportion of tillage land for growing cattle food stuffs, is totally unable to feed a fraction of the enormous number of cattle she could breed and rear on her boundless prairies. It is true cattle can be fed fat on the prairies, and a large proportion of the Canadian cattle that at present are landed in Britain for port slaughter, are, I believe, grass-fed, and will be for many years. But I do not know if you are aware that those cattle coming from the Northwest Provinces, some 5,000 miles by land and sea, have lost bloom and condition, and are pretty well melted by the time they reach their destination, where they have to be slaughtered within ten days. The consequence is there is an enormous loss to the Canadian producer and the British consumer, and the quality of the meat discredits and gives a bad reputation to Canadian butcher meat.

The idea that the export of young lean cattle will reduce the fertility of Canadian prairies more than the export of older fat cattle is downright nonsense. If the cattle were fed with cake or maize on the prairies it would be different, but any intelligent man can see that if cattle on the prairies get no auxiliary feeding stuffs, three-year-old fat cattle will decrease the fertility in a far greater degree than two-year-old lean cattle. Large numbers of young stock, both cattle and sheep, have been bred, reared and sold off the comparatively barren mountain land of Scotland for generations, and the reduced fertility is not appreciable. And if this is so, it is surely drawing the long bow to declare that the sale of young cattle will decrease the fertility of the fertile prairies of Canada, where wheat is grown year after year, the straw burnt, and no manure applied. In addition to this, the embargo is most oppressive, and unjust to British tillage farmers and graziers, as it compels them to purchase their store cattle in the restricted market of the United Kingdom, and sell them when fit in a market open to importations of dead meat and fat cattle for port slaughter from all parts of the world, the result being that the general level of the price of store cattle relatively to fat cattle is so excessively high that returns for feeding and grazing are inadequate. In the late spring and early summer months, when the enormous acreage of grass land now in the United Kingdom must be stocked, store cattle are, as a rule, 4s. to 6s. per live cwt. higher in price than fat cattle. What industry could prosper or flourish when the raw material is higher than the finished article? There are, it is true, a large number of farmers who breed most of the cattle they feed, but repeal of the embargo, if rightly regarded, will do them no harm, but possibly greatly benefit them.; for it is the importation of dead meat and port-slaughter cattle that rules the price of their fat cattle, and they could purchase the imported Canadian stores cheaper than they can breed and rear their own. It is even now declared that the embargo is doing Ireland more harm than good, as it makes the price of stores so high to the graziers of the rick grass lands of Ireland that they get no return, and encourages the small farmers to place their dependence for a living on the rearing of a few young cattle, to the entire neglect of tillage farming. The British consumers are also, I am glad to say, now realizing that an embargo which materially reduces the amount of home-fed butcher meat is directly contrary to their interests; and, in consequence, the corporations of many of the large cities, such as Glasgow, Newcastle, Cardiff, Hull, Edinburgh, Aberdeen, and every royal and parliamentary burgh in Scotland, 166 in number; practically every co-operative association in the United Kingdom, and many other industries and interests, are in favor of its repeal. The only people that wish to continue the restrictions are the officials of the British Board of Agriculture who imposed the embargo, and those breeders who are or suppose they are benefiting from it. There is not the slightest doubt there is no justification for the continuance of the embargo upon the excuse of the risk of disease; risk did not prevent the Board of Agriculture repealing the embargo upon Argentine cattle for port slaughter in 1903, although foot-and-mouth disease had spread from the ports, and Great Britain was not many months clear of that disease, imported on a former occasion into this country by Argentine cattle.

Both Mr. Bickerdike and Mr. Sidney Fisher are right; it is an unfriendly Act, and the height of inconsistency for a Government that professes to be anxious to give Canada a fiscal preference and closer commercial relations to continue the embargo, seeing her delegates at the last Colonial Conference and both Houses of Parliament have unanimously demanded its repeal.

PATRICK L. GRAY,
Secretary Edinburgh Branch,
National Canadian Cattle Admission Association.
Murrayfield, Midlothian.



**Keep On — 1564—.**

Three-year-old Hereford stock bull. Second in aged class at the Western Fair, London, 1905. Owned by Thos. Skippon, Hyde Park, Ont. (See Gossip.)

## Cut Out Dairy Steers!

In a recent bulletin issued by the Department of Agriculture, prominence is given to a report from the Iowa Experiment Station at Ames, of the results of a year's feeding test to determine the relative economy for beef production of the beef and dairy types of cattle. This is a question that is receiving much attention at the present time. It was found unprofitable to feed steers of dairy type for beef purposes. The results are summarized as follows:

Dairy type steers show a considerably higher percentage of offal and a lower dressing percentage.

Dairy type steers carry higher percentage of fat on internal organs, thereby increasing the total weight of cheap parts.

Beef type steers carry higher percentage of valuable cuts.

Beef type steers furnish heavier, thicker cuts; they are more evenly and neatly covered with outside fat, show superior marbling in flesh, are of a clearer white color in fat, and a brighter red in the lean meat; but there is little difference in fineness of grain.

The low price paid for dairy steers may be due partially to prejudice, and to the greater expense of carrying and selling the lower grade carcasses; but it is chiefly due to an actual inferiority in the carcasses.

It is neither profitable nor desirable to feed steers of dairy type for beef purposes. They are unsatisfactory to the consumer because they do not furnish thick and well-marbled cuts; they are unsatisfactory to the butcher, because they furnish low-grade carcasses which are difficult to dispose of, and they are decidedly unsatisfactory to the feeder, because they yield him little or no profit, and both breeder and feeder waste their time in producing such a type of steer for beef purposes.

## Problems of the Feed Bin.

I.

One of the most interesting and profitable lines of study in which a stockman can engage is the economy of feeds. All over the world there is a fearful waste going on for lack of an understanding of the chemistry of feeds and animal nutrition. There is much valuable literature on the subject, but to the ordinary layman, the bulk, detail and sometimes technique of the books are forbidding. The aim of this article and a series to follow is to set forth in popular form some useful facts, and arouse, if possible, a discussion on the subject, which is not only interesting in itself, but vitally important, because it touches the pocketbook.

Of all the sciences underlying agricultural practice, chemistry is, we believe, the most important. A knowledge of weeds, insects and bacteria is useful, and is yearly becoming more esteemed; mechanics and soil physics are also valuable to one practical enough to apply them; but more important than all these, in our opinion, is a knowledge of agricultural chemistry. It can not, as yet, be said to be a popular subject, for it is associated in the public mind with complicated formulas, technical language and abstruse symbols. And, indeed, the general chemistry, as studied in our schools and universities, would be but slightly more useful to a farmer than so much astronomy or geology. But eminent specialists have, in modern times, been studying the science in its relation to agriculture and live-stock husbandry. Experiments have been conducted, numerous analyses made, and the results of all this experimentation have been studied and restudied by men combining practical and scientific qualifications, till to-day we have volumes of information upon soil and animal chemistry, and progressive farmers everywhere are reaching out eagerly for the information that has been obtained, that they may bring increased knowledge to bear upon the practical matters of crop raising and milk and meat production.

To the layman who has not studied the composition of feeds and animal increase there is an untouched mine of knowledge that becomes more interesting and more profitable the farther he delves into it. Before going further we may as well answer the question, will it pay to study this thing up, will it enable us to get any better results than the unlettered herdsmen who swear by their "neeps and cake," and oat straw, and clover hay? To which we answer yes and no. It may not enable you to secure bigger returns per animal, for the stuffs these old feeders have found valuable are hard to improve upon. But a knowledge of animal chemistry will enable you, in many cases, to secure cheaper gains and more uniformly profitable results. Conditions vary: feedstuffs are multiplying; every year, almost, some new by-product is heard of; some of these are really economical if one understands how to employ them, though others are sold for more