

be high-class, the Thoroughbred-Hackney cross is one of the best. Half-bred Hackneys with substance breed admirably to the Thoroughbred. Coachy mares and trotting-bred ones with action, also mate well with the Thoroughbred sire in the production of saddle horses.

Hunters, saddle and combination horses have increased in demand, and harness horses are being less inquired for since the use of motors has become so general.

LIVE STOCK.

In laying the foundation of a herd of pure-bred stock, it is well to see that all the animals conform to one type. Uniform results cannot follow the breeding of a herd of animals of widely diversified type and conformation.

On many farms where hay is scarce, silage will be more or less extensively fed to sheep this winter. Care must be exercised that too much is not given, as it will cause scours. Up to three pounds per head can be fed daily, without much danger.

A taint in the feeding troughs will put the fattening animal off feed. It is known by experience that the nearer the animal gets to the prime finished product, the harder it is to maintain its appetite. Take special precautions to keep all unwholesome or sour food accumulations out of the troughs.

If any difficulty arises in the housing of the brood sows, it is well to remember that, allowing them to run in the barnyard, with a small pen or the straw stack for shelter, has worked out well on many farms, and has insured that the sows take sufficient exercise.

Cattle or horses will, when accustomed to it, do very well on two feeds per day in winter, but not so with the fattening hog. From experiments carried on at the Dominion Experimental Farm, at Ottawa, it was found that, for best results, pigs during the fattening period must be fed at least three times per day, and, better yet, four times where practicable.

What plans are you making to increase the numbers of live stock kept on your farm, and thus increase the output of this product from the farms of the country? The market seems sure, with our rapidly increasing population, the greater percentage of which settles in the city. Think the matter over and select the breed which suits your conditions, and commence breeding live stock on a larger scale.

Prizes for Breeding. I.

Text of an address given by Prof. H. S. Arkell, B.S.A., at a meeting of the Eastern Ontario Fairs Association in Ottawa recently.

A few years ago, two young Shorthorn females found their way out of the stables of an obscure and almost unknown breeder into the hands of a prominent exhibitor, and, within a year or two, they proved the sensation of the great show-rings of America. I have never heard that their breeder received, then or since, any particular credit for his hand in their making, or that his pockets were better lined as the result of the success that they finally attained.

A few days ago we received a letter from a man of a village in Western Ontario, through which we were surprised to learn that he was the breeder of one of the most famous jumpers that Canada has produced in recent years. I doubt if this man is known even by reputation to half a dozen of those present at this meeting. The name of the animal is famous among horsemen of three great countries, and has won premiums sufficient in value to have provided a competence for an ordinary individual. Our correspondent did not refrain from saying that his fortune had not waxed fast as the result of his early possession of this horse.

It has frequently appeared to me that, as the prize-lists of our exhibitions are at present constituted, the odds, as regards the actual and bona-fide breeders, are scarcely fair. In certain classes imported animals get the cream of the prizes, while, in others, representatives from the stables of some wealthy individual, few of which he has bred himself, rob the smaller breeder of his just due. Money furnishes one of the easiest means to acquire show-yard winners, but it takes brains to produce them. Few things so please and satisfy a crowd at the ringside as to see a breeder take an animal which he has bred and fed himself, step by step, up to the head of the line, and keep him there. I do not mean to say that we should

discourage the exhibition of imported stock or frown upon the wealthy land-owner whose interest and enthusiasm lead him to join the good company of exhibition stockmen, but it appears to me that, if Canadian-bred live stock is ever to attain that foremost place toward which our ambition is set, it is the average breeder, the man who breeds and feeds his own stock, whom we would aim most to encourage and assist. His work is the foundation upon which our reputation as a live-stock country must ultimately be based. Upon him his community depends to furnish sires for its use. In fact, the improvement of the live stock of the country centers about his work. It behooves us, therefore, to evolve an exhibition system which will take into more active and actual account the work of breeders of this class. The more purely commercial interests are now very strongly represented at practically all our exhibitions, and are in a position to take care of themselves. We need not fear for them. To make these exhibitions, however, a really powerful factor in promoting progress in animal production, they must become, sooner or later, impartial courts, at which shall be determined the serviceability for breeding purposes of the various animals presented. Only in this way can the work of the breeder be related definitely and directly to the need of the farmer, and that in a word is the crux of the whole situation. The value of a breeder to a community ought to be determined, not by a commercial standard, as applied to the stock which he at one time happens to have in his possession, but by a practical and, if you will let me employ the word, scientific test of the breeding ability of the sires and dams which he has in use in his own herd, for these are capable of making and are to be credited with the only effective contribution to our live-stock husbandry. To search out animals of this class, the awards of our prize lists should, I believe, be more intelligently and systematically devoted.

Let me illustrate. Does our present exhibition system draw out or establish any information relative to the comparative breeding ability of the males or the females entered in the breeding classes at any of our shows? To make the question wider still: Have we any system in operation, except indirectly that being evolved out of Advanced Registry and Record of Performance tests, which provides a farmer, without expense to himself, with a means of ascertaining the relative utility for breeding purposes of stallions or bulls of breeding age? I am afraid, if such exists, it acts but very imperfectly. We are obliged to rely largely on appearance and pedigree in the purchase of a sire, and these have proven incomplete and insufficient guides. I would repeat that statement: Appearance and pedigree, using the latter term as ordinarily understood, can only incompletely assist in determining a beast's value for use in a breeding herd, and, usually at exhibitions, judgment is awarded on appearance only. There is a well authenticated case of a dairy bull which was bought and retained by a leading showman in the United States, on the sole ground that he could win prizes. He was an almost unbeaten champion at the leading American shows, but his service as a sire of milking cattle was altogether disappointing. The sire of this bull was never beaten in the show-ring, but he was equally disappointing as a sire of performers. Stallions have been brought from across the Atlantic which have won prizes in their native country, and later in Canada, but which have added nothing toward the improvement of Canadian horses.

Nor are these isolated cases. One cannot but feel, when standing at the ring-side at any one of our larger exhibitions, that, because it fosters advertising and sale possibilities, the game of exhibiting animals has been carried farther than is legitimate, if the real purpose of an exhibition is to be preserved, or than is consistent with the maintenance of real utility. To go into a showman's stable at the Chicago International, one would think that horses could be made to order. To watch the great strings of stallions that are lined up on exhibition next day, it would appear that there should be no doubt as to the future of the horse industry on this continent. But beef and ribbon and a smooth coat do not make a horse, and, what is more, they do not make a sire. Do we hear of these horses again in the course of a year or two? What has become of them? The wind-swept lean-to's on many an Indiana and Iowa farm would have strange tales to tell if speech were given them. Is Canada any better off? What advantage do our farmers get, what significance is there to them, in the awarding of the prizes in our show-rings?

We can't get by that question: What is a fair or an exhibition for? If to attract and entertain a crowd, then we need not discuss the question further. If to advertise and display the products of the exhibitors, whether as live stock or as articles of manufacture, then the present system eminently fulfils its purpose. But if these are the only, or even if they are the most important objects, then no Government can legiti-

mately afford them the support they now receive. Then, an organization such as this, and of which you are members, formed as it is in the interests of the agricultural community, can have small excuse for its existence.

But the truth of the case is very different. Exhibitions—agricultural exhibitions, I mean—are organized for the benefit of and in the interests of farmers as a class, and not of any one section of that class. The ordinary farmer ought to receive the same encouragement and appear on an equal level with the wealthy breeder, and such is not the case at present. But you will tell me that this is not possible, and that, when an exhibition furnishes such splendid educational facilities and presents such useful object lessons, it should be considered to fulfil the purpose for which it is organized. But what are these object-lessons? Looking at the fine strings of stallions and of dairy bulls which line up in the show-ring from year to year, one would think that it should be easy to raise first-class horses and cows capable of big milk yields. But you and I know that it is not. Even with the very best of intentions, a farmer is confronted with a pretty serious problem when he undertakes the purchase of a dairy sire or the selection of a stallion to serve his mare. There isn't a man here—I care little whether he has selected on appearance or pedigree, or on performance—who hasn't been beaten badly in his estimate of the breeding qualities of an animal which he has chosen to head his herd. And what is equally to the point, fortune may have favored him in the results obtained from a sire whose appearance was in itself unprepossessing. I must confess to such an experience, and we cannot but all admit that it is not an uncommon one.

(To be continued.)

Tuberculosis the Cause of Loss.

At a meeting of drovers, held in Toronto about two weeks ago, for the purpose of resenting the impost of approximately eight dollars per car made by the abattoir men on all cattle bought by them to cover loss from disease unknown at the time of purchase, it was pointed out that 1,492 of the cattle whose carcasses came under inspection in Canada last year were entirely rejected because of disease, and that portions of 12,108 carcasses were rejected as unfit for human consumption. This shows that from one-quarter to one-half per cent. of all animals slaughtered under inspection are condemned, and that between one and two per cent. are diseased in all or some portion of their carcass.

While the drovers succeeded in more than cutting the impost in half, the fact still remains that a certain sum is to be deducted from all cattle, whether healthy or otherwise, which are bought by the abattoir men on Toronto market. Who will eventually pay the impost? The drover does not feel like losing it, consequently he will buy from the producer at a price which will insure that he loses nothing from the discount. There is also a possibility that, in time, and perhaps in the comparatively near future, animals bought to be slaughtered will be purchased subject to carcass inspection, and if any disease is present which causes a loss of all or any part of the carcass, such loss will be traced to the producer, who will have to bear it in whole or in part.

What is the cause of the loss? One word spells it, "Tuberculosis." The loss from this disease in slaughtered carcasses is greater than that from all others combined, and yet it is not so great, after all, that it could not be controlled and practically wiped out, if proper means were taken in every herd in the country. Dr. Rutherford, Dominion Live-stock Commissioner and Veterinary Director-General, said at the meeting that if this disease could be stamped out, no trouble would result between drovers and packers over dressed meat, because there would be practically no diseased carcasses worth quarrelling over. The number of sheep carcasses rejected is next to a negligible quantity, and tuberculosis in swine is not very prevalent. Thus, tuberculosis of cattle is the prime cause of the impost, which in the end must be borne by the producers of these cattle.

It is no easy matter to rid the bovine population of this disease. Cattle-owners in many cases do not feel like standing the loss which would fall upon them if all animals showing clinical operations were ordered destroyed, much less the loss of all those which react to the tuberculin test. Some system of at least partially reimbursing them for their loss seems expedient. Government inspection of herds would be an enormous task, and would involve immense expenditure—far more than that which is necessitated by hog cholera, glanders, sheep scab and a few such diseases. The time is coming when something must be done, but for the present the Government chooses to proceed slowly, and it is the duty of cattle-owners to put forth every effort to keep the disease in