

grandsire, great-grandam and great-grandsire, and great-great-grandam, and so on down the line, are given, together with their complete ancestry, so that an experienced stockman can ascertain at a glance the good and inferior crosses in the pedigree of any particular animal. Think what it means to the value of a Clydesdale horse to trace to such sires as Prince of Wales 673, Darnley 222, and many others. In Clydesdale pedigrees, it is an easy matter to trace them back to the very foundation of the breed. Extended pedigrees are full and complete, and form an accurate, clear, concise picture of the breeding and background of the animal for generations; often, in fact, to the very foundation of the breed. Insist upon seeing this class of certificate before purchasing high-priced animals.

Should the Stallion Be Subject to Inspection?

In a short time the breeding season will again be at hand, and many good horsemen will, by this time, have selected the sires with which they are going to mate their fillies. As in other years, many good and worthy sires will do service at the stud, but, while our horse business shows yearly improvement, and while there are fewer "scrub" stallions travelled in the country, many still remain which have no right, from pedigree, conformation, or soundness, to be allowed to become the sire of colts—mostly inferior, nondescript colts—and thus hamper the breeding and advancement of one of the greatest branches of the basic agricultural industry. If every colt foaled was as sound as the soundest, conformed to the best type of the particular breed to which he belonged, and had the most desirable pedigree to back up his good qualities, how much would the value of the horses in the country be enhanced yearly? It costs just as much to feed the common colt as it does the best.

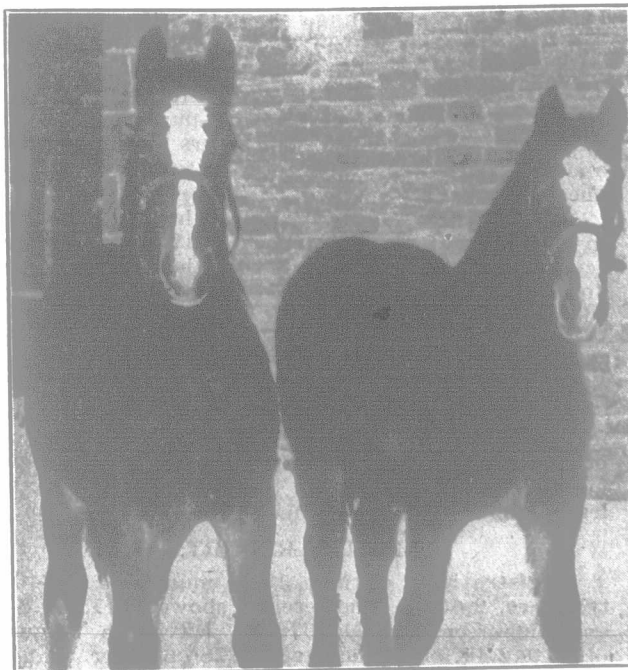
How are horsemen to proceed to improve the quality of the colts? There are two factors which are predominant, viz., the mare and the stallion. Frequently a good colt is produced when only one of these is of the kind desired, but, as a general rule, to get the most satisfactory results, both must be high-class individuals. Now, taking for granted that both these animals fill the eye well, are fairly good representatives of their particular breed, and sound, should the breeder not concern himself about the pedigreed ancestry of the animals to be mated? The "drag of the race," "heredity," "atavism," "reversion," or whatever nomenclature you choose to give that influence which the grandsires, grandams, great-grandsires and great-grandams, etc., generations back exert upon the offspring, is a very potent influence for good or bad in the making and improvement of any breed of live stock. True, the parent influence is the greatest of any one generation, but breeders have seen, time and again, in actual experience, a cropping out of characteristics common to fairly remote ancestry, hence the value of pedigree. If the sire and dam were the exclusive and sole factors entering into horse-breeding, it would be a comparatively simple proposition, and nearly all of its present intricacy would be eliminated. A good pedigree is essential.

While it is impossible, at the present time, to breed only pure-blooded dams, it is possible, in most localities, to use nothing but pedigreed sires of a high order on the dams. The very fact that so many mares are of a very common order makes it all the more imperative that the horse with which they are mated is an excellent individual himself, and that he has back of him a list of ancestry which insures that he is capable of perpetuating to a marked degree the most desirable qualities of his breed. In other words, he must be prepotent, and prepotency seldom if ever results from indifferent breeding. Blood tells. Mixed breeding in the mares has a detrimental effect on the breeding ability, and pure blood in the sire is of supreme importance.

What does this mean to the horseman or the man with one, two or three mares to breed, such as many farmers have? All are working together in the best interests of the breed in which they are interested, or, at least, they should be, but still there are many who will breed their mares to an inferior, unsound, indifferently-bred stallion, if the service of such can be obtained at a smaller fee than is being charged for a pedigreed animal of the best type in the neighborhood. The result is inferior colts.

This sort of thing should and must be stopped. What is the remedy? It seems simple enough. Manitoba, Saskatchewan and Alberta have inaugurated laws governing stallion service, making pedigree and inspection necessary before a stallion may be used for service. This insures better breeding and the use of nothing but sound sires. There are many hereditary unsoundnesses that it is not safe to trifle with an unsound sire. Ontario, the premier horse-breeding Province of the Dominion, needs such a law. By a unanimous vote,

the recent annual meeting of the Canadian Clydesdale Association, present at which were many of the leading horsemen of Canada, declared in favor of such a bill, and it is to be hoped that when the Minister of Agriculture is waited upon by the Horse-breeders' Association, and impressed with the importance of such procedure, he will give the matter the consideration it deserves, and see fit to bring in a bill covering the difficulty, and solving it to the best interest and satisfaction of the horse industry and the country at large.



Foals born in June, 1911.

A healthy pair, bred and raised at Brockville, Ont., Asylum Farm, D. McCrimmon, Manager.

LIVE STOCK.

Prizes For Breeding. III.

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

We have need to go one step further, and award prizes as they do in Denmark, according to the known and demonstrated efficiency of an individual in actual breeding practice. I would repeat that phrase, "in actual breeding practice." We have seen that appearance is an unsafe and disappointing standard upon which to base our judgment. Performance, also, as a standard, is, when considered by itself, reliable only in a degree. You may not agree with that statement, and it may scarcely be orthodox. But you will find, I think, some difficulty in disproving it. Experts in plant-breeding maintain that what I have said is true. The most recent and suggestive experiments in poultry-breeding point evidently to the same conclusion. Animal breeding, if we will but admit it, establishes the same principle. If the opposite were true, the milk and butter-fat records of dairy cows, and the track records of trotting and running horses would determine their value as breeders. Unfortunately, they do not. I have heard a man say, whose opinion is counted for something amongst dairymen, that, if he were given a clear field to select stock for the foundation of a herd, he would confine his purchase not to animals with high individual records, but to representatives of families within which there had appeared a succession, from year to year, of descendants the records of which had been consistently high. I believe that to be the secret of successful breeding practice with all classes of live stock. I think I can give you an illustration, which, in a rather remarkable manner, bears out this point. The Standard-bred mare Miss Russell has probably the most noteworthy breeding record of any mare in any breed. She is said to have been of very fine conformation, but, being by a pacing-bred stallion and out of a Thoroughbred mare, her pedigree was without particular distinction. She never established a record for herself better than 2:41, but her descendants have had practically unparalleled success on the track and in the stud. She was the dam of:

Maid S., 2:08½; Rustique (died young), 2:18½; Nutwood, 2:18½ (sire of 174, and of dams of 361, and of sires of 1,206 in the 2.30 list); Pistachio (n.), 2:21½ (sire of 9, 2 sires of 5, 10 dams of 15 in 2.30 list); Cora Belmont, 2:24½ (dam of 1, and 2 dams of 3 in 2.30 list); Russia, 2:28 (dam of 1, and 1 dam of 6 in the 2.30 list); Melbourne (trial), 2:26½ (sire of 8, 5 sires of 7 and 3 dams of 5 in the 2.30 list); Mambrino Russell (sire of 17, 21 sires of 154, 26 dams of 40 in

the 2.30 list); Lord Russell (sire of 34, 28 sires of 138, 34 dams of 36 in the 2.30 list); Lady Russell (dam of 5, 3 sires of 128 and 2 dams of 6 in the 2.30 list); Rusina (dam of 1, 2 sires of 2 and 2 dams of 5 in the 2.30 list); C. P. R. (sire of 1 and 3 dams of 3 in the 2.30 list); Nutula (dam of 2, 2 sires of 4, 3 dams of 5 in the 2.30 list); Slavonic (p.), 2:09½; Suffrage (dam of 1, gr. dam of 2 in the 2.30 list).

Miss Russell has 256 descendants in the 2.10 list, 2 in first, 3 in second, 94 in third, 100 in fourth, 43 in fifth, and 9 in sixth generation—an unequalled record.

Comment on this great mare's career is scarcely necessary. It illustrates the wonderful prepotency of the blood of a single individual through several generations, and indicates very definitely, I think, the manner in which live-stock improvement is to be expected. It is by selecting out prepotent individuals, male and female, and by giving them a chance. Name after name springs to one's mind, as we realize the important part that individuals have played in the progress of breed history. Let me instance a few: De Kol 2nd (a Holstein), Champion of England (a Shorthorn), Prince of Wales (a Clydesdale), Eclipse (a Thoroughbred), Hambletonian 10 (founder of Standard-breds), Old Grannie (an Aberdeen-Angus), Stoke Pogis 3rd (a Jersey).

But gentlemen, to bring the matter nearer home, I want to remind you that you have had experience in your own herds, both with males and females, which has indicated conclusively that certain animals, including their descendants, have been more valuable for breeding purposes than others. You have had cows that would mate well with almost any bull, while others wouldn't throw a decent calf, no matter what the sire. You have had experience with stallions that has cost you very dearly; while, in the case of others, their colts have come strong and true. You have had sows which have regularly farrowed large litters of healthy, thrifty pigs, and again you had others which have consistently given birth to diminutive litters or to a choice collection of runts. Such is the experience of every stockman. The question now is, "How can we eliminate the use of the unprofitable sort?"

I have given this question pretty careful thought for some considerable time, have talked it over with others, have discussed it from different points of view, and I am led to think that in our agricultural exhibitions we have the most effective agency for the solution of this problem. A single agricultural society, through a partial rearrangement of its prize-list, with that end in view, could do a great deal, but an organization such as this, in the influence it may exert over the exhibitions of half a Province, would be in a position to enter upon the problem in a thoroughly systematic manner, and to perfect an organization which would have immediate and far-reaching results. I want briefly to suggest, if I can, a reasonable method of proceeding with the undertaking.

In the first place, it should be clearly stated that we have no quarrel with the market classes of live stock. Draft and harness horses, butcher bullocks, fat sheep and lambs, bacon and fat hogs, are themselves the finished product, and if so judged, and from a utility standpoint, will be rated according to their worth. With the breeding classes, however, it is very different. In these classes, animals are valuable according to their ability to reproduce their kind. Should such, then, not be made the standard of comparison in passing judgment upon them? Such a standard sets before it, first and foremost, the objective of utility, and, upon such a basis, permanent progress is to be anticipated.

The prizes awarded to a "breeder's young herd," to the "get of a sire," to a pen "bred and fed by exhibitor," point the way to the policy we would suggest. Without unduly disturbing the present arrangement of the prize list, let a class be provided either by substitution or by addition, say for mature stallions and for mature brood mares, in which the prizes shall be awarded on the basis of the individual and combined excellence of their get, on the one hand, and of their offspring on the other. A specified number of the get of each stallion or the offspring of each mare competing would, of course, have to be presented in the ring, and, to induce the owners of such to bring them to the fairs, a proportionate prize should be awarded to each of the individual descendants, upon the aggregate merit of which their sire or dam, as the case might be, had been granted a premium. The same principle would hold good, and might be worked with even greater facility in connection with the other classes of live stock. With dairy cattle only need there be any wide variation from the suggested policy, and even in the case of these, adhering to this policy, without change, would be a long step in the right direction, and would mark a distinct advance. Both performance and appearance, however, of their descendants should be the standard adopted