

progressive age. One must either advance or go back. The Clydesdale has made such progressive strides in the last thirty years that he has grown in favor more and more with the general public, and any broad minded breeder of horses acknowledges this. I predict that in the future he will still go on improving.

Mr. Jaques recommends the "Punch" for crossing on Western range mares. That cross would only produce the cheapest class of horse on the market today either in Canada or the States, viz: the kind termed in the latter country "chunks." A few breeders in the province of Alberta have bred that cross long before Mr. Jaques was ever heard of and have regretted it ever since, as they would have been better off financially if they hadn't tried the experiment.

"The reason why the two English breeds are not represented in Canada is simply because the English stockman is not represented either." We would infer from this statement of Mr. Jaques that he himself is the only Englishman of any importance that is breeding draft horses in this country. I wonder what my numerous English friends will think of this statement.

At the present time I can sell Mr. Jaques a seven year old Suffolk Punch stallion at a small price that was a winner in England before being imported. He has been used by one of those parties referred to and he is more than anxious to dispose of him and put a Clydesdale stallion in the Suffolk's place.

Calgary.

JOHN A. TURNER.

Action

In this country the term action, by universal consent, refers to the trotting gait. It is common knowledge that, however good an animal may be in external conformation, without action he fails to command attention, and is relegated to the drudgery of his kind. The trot is a gait in which the limbs are moved diagonally. The off fore and the near hind limbs reach the ground simultaneously, and this is repeated by the near fore and off hind members.

The relation of the feet when brought to the ground will vary for each individual, or for the same individual under different circumstances. Sometimes the hind feet are brought to the ground behind the fore ones; at others they fall more or less exactly upon the same spot, while in some, again, they extend for some distance in front of them.

I note several varieties of movement are distinguished by the French as the "short trot," "the ordinary trot," and "the long trot."

All these several relations exhibited by the feet while moving may be seen in the same animal at different times, while in some horses one or the other is more or less constant under different circumstances. As to pace, the extent of ground covered in the action of trotting in a given time, or, in other words, the length of the step, differs in different horses. In some it is long and reaching, in others short and choppy.

No doubt it has relation with the age, length of limb, the force and extent of the muscular contractions, and to other points in development and conformation which need not be referred to here. The problem, however, is very difficult of satisfactory solution, owing to the many factors by which it is influenced. It will, however, be remarked that in this respect considerable difference is noticed in different animals. It will be observed that many small horses will outpace animals hands higher than themselves. In these cases explanation will be found in the fact that the rapidity of movement of the limbs in the former is much in excess of those of the latter, and that the long step of the larger horse is equalled or exceeded by the more frequent repetition of the step in the smaller one.

Quite apart from pace, the trot should be marked by symmetry of action; however good the fore action may be, unless the movements behind are in harmony with it, the gait will lack that grace and beauty which go to make up a good horse. It is noticeable in some animals that the knees are freely flexed, the stroke of the limbs is parallel with the long axis of the body, and the step is light and easy, but there is frequently in these cases a marked deficiency of forward propulsion. The hind action in such animals is wanting in that full and complete flexion of the hocks which impels the body forward and gives harmony to the movements of the whole. When this defect exists, the fore action is seldom of that far-reaching character which obtains in animals otherwise constituted.

The converse of this is seen in those cases where the fore limbs are shot out in a more or less straight line, and the contact of the foot with the ground appears to fall upon the heels. There is in these cases only slight flexion of the legs, but the hind limbs are advanced in a vigorous manner, and the body is thus impelled forward. Although an unsightly mode of action, the gait in this instance is decidedly progressive, and the pace much increased.

Horses with high-striding action behind sometimes allow their limbs to dwell momentarily in a state of extreme flexion. This, however, is not a constant condition of the gait, and, being of a temporary character, quickly passes away as the animal cools down and settles into his natural stride. Not the least important point to be considered in this gait is the manner in which the feet are brought into contact with the ground. In some horses, for various reasons, the body falls upon the limbs with great force, and the sound emitted by the feet is strikingly loud, while in other animals it is hardly noticeable. In these horses the touch of the feet upon the soil is light and airy, and in contrast with others there is little loss of time in the movement. Horses with loaded upright shoulders are amongst those of the class referred to, and others in which the axes of the limbs are faulty, the body sways from side to side, and the feet are made to hit the ground with unnatural force.—PROF. WORTLEY AXE. In *English Live-Stock Journal*.

Suggestions from the National Live-Stock Records re Registration of Imported Clydesdales

EDITOR FARMER'S ADVOCATE:

As the pedigrees of a number of horses which have been imported during the present season were not eligible for registration in the Canadian Stud Book, we feel that the requirements for registration should again be explained. While importers might be supposed to be able to look after their own interests, the fact remains that pedigrees of some Clydesdales imported recently have been rejected by the National Live Stock Records, and upon which duty has been paid. Some of these may subsequently be qualified for registration through having the necessary ancestors numbered in the Scotch Book, but some will not, and will probably be sold or travelled on their Scotch certificates. Breeders and buyers should therefore be careful not to patronize or purchase stallions which are not recorded in the Canadian Stud Book. No Clydesdale can now be brought into Canada either from the Old Country or the United States unless its pedigree has been recorded in the Canadian Stud Book, or duty paid.

As the registration fee would probably not exceed \$5.00 and the duty be not less than \$100.00, the course the importer would take is obvious, so a Canadian certificate should be insisted upon as a matter of protection.

If an animal has been imported since July 1st, 1908 and has not a Canadian certificate it can be taken for granted that one could not be procured.

Several shipments have been made which were purchased by agents in Scotland and it has for the most part been in these that the ineligible ones have been found. (In one case the steamship Company was ordered by the Consignee to return the shipment), so persons intending to buy in that manner should furnish their definite instructions as to what is required in order to ensure registration in the Canadian Stud Book.

The animal must itself be numbered; its sire and dam must both be numbered and their sires and dams must also be numbered in the Scotch Stud Book. Reference as to Volume and page is not sufficient, in fact in most cases where pedigrees have been rejected it has been for that reason. As it is impossible to tell from examination of the Export certificate which only gives the number, whether the sire is eligible or not, it is necessary to refer to the Stud Books and tabulate the pedigree for two generations.

The following example of a pedigree which is eligible for the Canadian Stud Book, and one which is not, will illustrate the meaning clearly.

ELIGIBLE

Haggis (17569)	Baron's Pride (9122)	Sir Everard (5353)
		Forest Queen (7233)
	Porridge (16317)	Mains of Airies (10379) Brae (2896)

NOT ELIGIBLE

Mains of Airies (10379)	Prince of Wales (673)
	Pandora (Vol. 20, p. 42 S)
Parthenia (8999)	Everlasting (17614)
	Eve (7766)

Any pedigree which, when tabulated as far as that of Haggis, will be eligible as all the ancestors have numbers, but one which like Scots Wha Hae has but a reference to volume and page where an ancestor is recorded will not be eligible.

It will be noticed that Mains of Airies appears in both pedigrees, he is sire of Haggis' dam and her pedigree can be accepted as he has a number, however as sire of Scots Wha Hae he renders the pedigree ineligible, and his dam, Pandora has not been and cannot be numbered.

Another point which should be clearly understood is that all pedigrees must conform to the present rule, even if their dams and sires have already been recorded and assigned numbers in the Canadian Stud Book as ancestors of animals previously imported and registered.

Criticism has been made of the action of the Scotch Stud Book authorities in issuing export certificates for animals which they must have known could not comply with the Canadian requirements, but it must be understood that any owner may demand an export certificate for an animal recorded in the Scotch Book upon payment of the necessary fee and that it is not the duty of the Secretary to do more than rake out the pedigree and certify that it has been properly recorded in his Book. He would doubtless give the required information if requested, as he thoroughly understands the Canadian standard, but it would only be an act of courtesy on his part, not his duty.—*National Live-Stock Records, Ottawa*.

Clydesdale Certificate of Service Now Necessary

The National Live-Stock Records, Ottawa, forward the following, requesting its insertion.

In the past it has not been necessary when recording pedigrees to have the owner of the sire sign the application form certifying to service. All applications now forwarded to the Record Office must either be signed in the place provided or on a separate service slip.

Rule of entry No. 3 of the revised Constitution adopted by the Clydesdale Horse Association of Canada at the last annual meeting reads:—"After October 15th, 1908, the owner of the sire of an animal, the pedigree of which is offered for entry, shall certify to service, giving date of service, with name and recorded number of sire in the Clydesdale Stud Book of Canada, signature will not be accepted unless ownership appears on the books of the Clydesdale Horse Association of Canada."

Attention is drawn to above rule as few breeders or stallion owners seem to know of its existence, or at least, of its enforcement.

Pedigrees cannot now be recorded unless accompanied by a certificate of service signed by the owner of a sire. An important part of this rule, which if overlooked will cause both trouble and delay, is that the person who signs the service certificate as owner of the sire must appear as such on the books of the Clydesdale Association. In other words if the sire has changed hands since his registration, or subsequent transfers were made, he will have to be transferred to the person signing the certificate before the latter's signature will be recognized.

Stallion owners should procure a supply of the service certificates and give them, properly filled in and signed, to the owners of mares which have been bred to their horses. Perhaps the best time to issue them would be when collections are made for service fees during the winter, when the last date of service is known.

These blanks will be supplied free of charge, upon application to Accountant National Live-Stock Records, Ottawa. The number required should be stated.

In filling in number of stallion the Canadian number should be given as, if he is not recorded in the Canadian Stud Book, the pedigrees of his colts cannot be.

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In 1871 in a population of 3,485,761, there were 5,624 deaths from tuberculosis in this country. In 1901, the last census year, there was a population of 5,371,315, and the total deaths from tuberculosis were 9,709. The total number of deaths from all diseases in 1871 was 46,545. Tuberculosis, therefore, was responsible for a little more than 12 per cent. of the deaths that occurred. In 1901, the same disease caused 11.9 of the total, or nearly the same percentage. About one out of every nine deaths in this country, therefore, is due to tuberculosis. The disease is rather more common in females than in males, 13.8 of the female deaths in 1901 being due to it in comparison to about 10.2 of the males.