

synovial bursæ of the joint, and giving a bulging appearance to the lower, front aspect of the joint.

Susceptibility to contract both of these conditions is transmitted by affected sires and dams. Sprain or other injury of the joint sets up the irritation and inflammation, giving rise to spavins in weak hocks and those of poor conformation.

The same is true of curb, which appears as a bulging, indurated or calloused enlargement upon the rear aspect of the hind leg, just under the hock joint, and implicating the tendons and ligaments of that part.

Crooked or "sickle hocks" are most prone to this injury and curb, which follows undue strain when at play or work.

Actual unsoundness implicating the hock joint, and objectionable conformation, rendering the joint liable to contract disease or become unsound, should be carefully avoided in the selection of breeding stock.

Cannons, Fetlocks, Pasterns, Feet.—What has been said relative to these points in the fore limb, applies with equal truth to the like parts of the hind extremity. The cannons of the hind leg should have the same wide, flat appearance desirable in those of the fore leg.

In examining horses having hairy legs, care should be taken to search for evidences of grease, such as old scars and fissures, grape-like tumors, or discharge having a foul odor. Sidebones are not commonly found on the hind coronets. Ring-bones implicating the hind pasterns are as serious as those of the fore feet, from a hereditary standpoint, but the lameness due to them is more easily cured by puncture-firing and blistering.

In spavin lameness, the horse goes out of the stable lame, and works out of the lameness after going a short distance. On moving him "over" in the stall, he is apt to jerk up the affected limb, and the toe of the shoe will be found worn thin. The test for spavin lameness consists in lifting the foot of the affected limb, holding it up towards the stifle joint for a few minutes to "shut" hock joint tightly, then dropping foot and at once trotting horse, when, if afflicted with bone spavin, he will go much more lame than was previously the case, and, in bad cases, go on three legs for a rod or two.

Chorea (shivering or St. Vitus' dance) is best seen when moving the horse from one side to the other in stall, or backing him out of stall. The leg is jerked up once or twice at these times, and the tail and muscles of flanks may quiver momentarily. These symptoms of the disease disappear when the horse is exercised.

Cribbing, wind-sucking and weaving, also, are best discovered when the horse is in his stall, and although not certainly hereditary, are highly objectionable and detrimental unsoundnesses.

How Shall we Mate Our Standard-bred Mares.

By the use of the word "Standard-bred" in this article, we will include all road-bred horses, though they may not be registered or eligible for registration. If a man has a mare of this class that is a good representative of the gentleman's road horse, has the size, substance, style, action, and necessary speed to make a high-class light-harness horse, it should not require any consideration to decide the class of stallion with which he mates her. He has a typical and valuable mare, and if he wishes to breed her, he cannot expect to do better than reproduce herself; hence we will select a Standard-bred sire of the same type as the mare. If the breeder is aiming at producing race-horses, and has a mare with sufficient speed at the trotting or pacing gait to race, he will, of course, select a speedy Standard-bred sire, to a greater or less extent, regardless of individuality other than speed. He is breeding for speed, and while he likes style and size combined with it, he will have practically gained his object if he produces speed. When we speak of a "Standard-bred stallion," we mean a registered animal, as, while all road-bred horses are of composite breed, the fact that a stallion is registered is a guarantee that he is either produced by registered animals of both sides, or has speed himself or has produced speed; and we do not think that an unregistered sire of any breed or class of horses should be tolerated in the stud.

There are many sections in the Dominion, and individual cases in mostly all sections, where mostly all classes of mares have been bred to trotting or pacing sires, with the expectation of producing race-horses. Failure after failure did not discourage; the fillies were again and again mated with Standard-breds, and still very few race-horses were produced. We think we are quite within the truth when we say none except where the foundation stock on both sides were of good breeding and individuality. A cold-blooded mare, if mated with a Standard-bred, may, in rare cases, produce a foal with extreme speed for short distances, but seldom a race-horse, as the cold blood in his veins is not likely to be accompanied by the courage and staying powers necessary in a campaigner.

The consequence of such breeding, as above

noted, could not be other than it is, viz., the presence in our country of many horses, both geldings and mares, and not in rare instances stallions, that have no particular qualification to make them valuable for any purpose. In many cases they are too small for ordinary road work, let alone reasonably satisfactory service on the farm, and they have not sufficient speed for racing, nor sufficient style and good looks to make them valuable for light roadwork. Others may have sufficient size, but the infusion of the blood of so many breeds or classes has failed to give them the quality, style, action and speed required, and, while they may be serviceable for ordinary light work on the farm, and will give reasonably satisfactory service on the roads, they are not animals that the market demands, hence the breeder is not wise to endeavor to reproduce animals of the type. We may be accused of moralizing too much in this article, but now we come to the main point, viz.—provided the owner of mares of such types as mentioned decide to breed—what class or breed of sires should he select? No set rule can be laid down. Each mare should be mated according to her individuality. There is no doubt whatever that the idea of breeding some of these mares should be abandoned. Unless the owner, after carefully considering matters, decides that he has reasonable prospects of producing a tolerably good animal, he should abandon the idea of breeding. This applies especially to those undersized mares that possess neither speed, quality, nor action. If one of this type should produce a valuable animal by any sire, it should be regarded as an accident rather than as a result to be expected, and the breeder who persists in endeavoring to improve his horses with such dams is doomed to disappointment and loss. As in all classes of stock-breeding, violent crosses should not be tolerated, hence we may exclude from our consideration all the heavy breeds and classes. If the prospective dam of the Standard-bred class be small, and at the same time have sufficient style, substance and courage, we think we would endeavor to select a Hackney stallion of the blocky type and good action. This mare has not sufficient size to breed to a Thoroughbred with the expectation of producing a saddler of reasonable size, neither has she sufficient size to mate successfully with the larger breeds of coach horses, hence we think that we have only two classes to choose from, viz., either a large, strong horse, good-actioned, stylish stallion of

sized Hackney with typical action, as he will be more likely to produce an animal with the flash action that the present market demands; but if desirous of producing size, even at the expense of action, one of the larger coach stallions may be selected.

If the mare has size, and probably action, but is coarse, lacks the style and quality we desire, then we have practically no choice of sires. There is but one stallion that will, with reasonable certainty, produce well out of her, and he is the Thoroughbred. He, on account of his prepotency, which has been assured by centuries of breeding in certain lines, has the power to overcome the lack of quality in the dam and transmit in a marked degree his own characteristics to his progeny. No other breed of stallion will so surely stamp quality on his produce out of coarse mares. The produce of this line of breeding, with few exceptions, are horses that excel in the saddle and give good service in harness, either heavy or light. They make combination horses—have not speed enough for the ideal road horse, nor action enough for the ideal carriage horse, but at the same time do fairly well in either buggy or carriage, and, as stated, "excel in saddle."

In the selection of a Thoroughbred to sire our colts, we must not select him simply because he is a Thoroughbred. We should demand fair size, soundness and good temper. On account of the prepotency mentioned, he has a great tendency to transmit to his progeny, both desirable and undesirable qualities, and we often notice that a Thoroughbred stallion that has undesirable points, either in conformation or temperament, will transmit them to a much more marked degree in his progeny than they exist in himself, hence the need of care in the selection of a Thoroughbred sire.

"WHIP."

LIVE STOCK.

Getting at the Facts in Hog Feeding.

To the Editor "The Farmer's Advocate":

In your valuable paper of January 25th there are a few statements regarding the swine industry to which I would like to call attention.

On page 116, Mr. Robert L. Holdsworth states that unless the packers will pay a better price for bacon hogs, the Berkshire, Chester, Poland-China, and other easily and cheaply fed hogs will be the only ones raised. On page 120, a correspondent who signs himself "Producer," makes a very sweeping charge against the Tamworths, and implies that Berkshires and Chester Whites are more economical producers than either Yorkshires or Tamworths.

At different times there has been a great deal more along a similar line in various agricultural papers, and I would like to call attention to the results of eight experiments where Berkshires, Yorkshires, Tamworths, Duroc-Jerseys, Poland-Chinas and Chester Whites were fed side by side under the same conditions. Five of these experiments were conducted at Guelph, and three of them at the Iowa State Experiment Station. When we come to analyze these results, we find the standing of the breeds in the eight different experiments, so far as cheapness of gain is concerned, to be as follows:

BERKSHIRES.—Four times stood first, once second, twice third, and once sixth, in the list.

YORKSHIRES.—Twice stood first, three times second, once third, once fifth, and once sixth, in the list.

DUROC-JERSEYS.—Twice stood first, twice third, twice fourth, once fifth, and once sixth, in the list.

TAMWORTHIS.—Three times stood second, once third, twice fourth, once fifth, and once sixth, in the list.

POLAND-CHINAS.—Once stood second, twice third, once fourth, once fifth, and three times sixth, in the list.



Maple Cliff Stamp 4307.

Prizewinning Clydesdale stallion colt. Owned by R. Reid & Co., Hintonburg, Ont. (See Gossip.)

her own class, or the sire mentioned, and we think prospects would be better if she were mated with the Hackney, as he would have a tendency to produce substance and action, while the mare being of good quality, we need not fear its sacrifice, and we may expect to produce a low-set animal, with substance, quality and action—in other words, a "cob"—for which there is always a brisk demand. At all events, we may reasonably expect a colt with more size and substance than its dam; hence, even though he may not be a flashy actor, he will, by virtue of his size, be more serviceable for ordinary purposes.

If the prospective dam has the size and quality we desire, but lacks the speed necessary for her class, and we wish to produce an animal in which speed is not an essential, we have a choice of stallions. We may select a Hackney or one of the heavier classes of coach horses, viz., the French or German Coach horse, or the Cleveland Bay. I think I would, in most cases, prefer the good-