

needed is a law that will give the horseman a lien on colt and mare, so that he may be secured; then, if a man buys an in-foal mare, it is his business to ascertain whether there is a claim against her or not. This would save horsemen much loss and work no injury to honest breeders.

Another point that came up at the recent meeting in London was the necessity for a Federal regulation debarring from the Dominion any inferior breeding horses. A case was mentioned where some stallions were taken from the United States to Alberta, and effort made to syndicate them. Failing this, their owners tried to take them back home, only to be refused admission by their own authorities. Canadian horsemen think it is a poor rule that will not work both ways. Horses too poor to be admitted to the United States, are too inferior for us.

While a compulsory license would, in some cases, shut out worthy horses which cannot be registered, still, as Mr. Wm. Smith points out, it is rarely that a law or rule framed in the general good does not hit somebody. He had himself suffered loss in connection with a certain action of the Shorthorn Breeders' Association some years ago, but he believed it was good for him, or, at any rate, for the Shorthorn interest, that he did. That is the spirit in which we should meet the proposed legislation, and we trust, when the reports are all in, Hon. Mr. Monteith and his lieutenants will feel warranted in framing a good up-to-date Lien and License Act.

The investigation may be expected to reveal wide diversity of opinion, and a process of sifting and digestion will be necessary in handling the evidence. It would doubtless be advantageous to have a conference of all the commissioners after the last of them have completed their labors. They could compare notes, and some further ideas might be evolved than would be committed to paper in their regular reports.

Feeding Horses.

The following short hints on horse feeding are intended not for the experienced, but in the hope that some owners who, with the best intentions, know nothing of the delicate organization of the interior economy of a horse, may be induced to pay more attention to the feeding of that useful animal, says an exchange. All probably know that a horse requires three meals a day, but are not careful of the proper interval of four to five hours between each meal. Few, for instance, know or care to know the time required for digestion—namely, at least two hours for oats and three hours for hay—so that the hay should be given in the evening when the day's work is over. The evening meal should be, of course, the most substantial, for, the work being over, there is ample time for rest and digestion, and for the renewal of exhausted tissue or muscle. Some horses are such shy feeders as to eat only at evening or night. Feeding should be regular, and the horse required to work as little as possible on a loaded stomach, and an interval of half an hour should elapse before food is given to a heated and tired animal. It is equally injurious to feed a horse too often, or too seldom, both being productive of the same result—namely, colic. The horse fed at too long intervals is apt to fret and knock about, eats too greedily when he gets the chance, and is apt to become a cribber. Food, then, should be given about every five hours, when the previous meal is digested, before charging the stomach again. But little food or water should be given during short stoppages, in order that both stomach and bladder may not be overcharged while at work. Most people know how a bucket of water will stop a race-horse, but few think how the overcharged stomach affects the lungs of a horse when at work. A horse when fed while heated and out of breath cannot digest its food, and the result is diarrhoea, or, curiously enough, the extreme opposite, in the form of colic or indigestion.

Norsemen Care for Their Horses.

"You never see a broken-winded horse in Norway," said a horse doctor. "That is because the horses are allowed to drink while they eat—the same as mankind. Our horses, let them be as thirsty as get out, must still eat their dry fodder, their dry hay and oats and corn, with nothing to wash them down. But in Norway every horse has a bucket of water beside his manger, and as he eats he drinks also. It is interesting to see how the Norwegian horses relish their water with their meals. Now they sip a little from the bucket, now they eat a mouthful, then another sip, then another mouthful—just like rational human beings. You never see a broken-winded horse in Norway, and the natives say it is because they serve water to the animals with their feed."

The foregoing, says the Rider and Driver, is good "horse sense" in many respects. Too frequently the horse is deprived of water, especially when he comes in warm and thirsty after a long and dusty drive. Many stablemen act on the long-established theory that a horse must not have a drink after a ride or drive until he has thoroughly cooled out. It is true that it would not be wise to permit the animal to drink too much,

and especially of ice-cold water; but a reasonable drink of aired water is not only enjoyable, but beneficial. As to the infrequent supply of water causing the broken-windedness of a horse, we are not prepared to say. It is, of course, a well-known fact that when a horse has the "heaves," or is "broken-winded," that he should be given water in frequent small quantities, rather than a large quantity at once.

Breeding of Hackneys.

Discussing the question of the relative influence of the sire and dam in the breeding of Hackneys, a writer in the Live-stock Journal (English) remarks: "The idea that the foal, as a rule, may be expected to take its size from its dam, and not from its sire, is one that is scarcely capable of contradiction, for the correctness of the theory is proved by the existence of some very big Hackneys which are sired by small stallions still living.

So far as the internal arrangements are concerned, I imagine that the majority of breeders will give the dam the credit of being responsible for them to a greater extent than the sire, but I rather incline to the belief that, as a rule, the latter has most to do with the temper of the foal. I do not mean by this the courage that the latter may be possessed of, as the cases which have come under my personal notice have left me quite undecided on the subject, though I rather incline to the belief that faint-heartedness is more often transmitted by the sire than by the dam. Probably we shall never arrive at unanimity on such matters, but a very great deal can be learned

about that a grand-looking, brilliant-acted horse may never get a foal worth his halter, whilst his brother, which, so far as appearances go, is not worth forty pounds, is a brilliant success at the stud. If these mysteries could even be partially solved, the task which breeders have to face would be far less onerous than it is, for the contemplation of such and other contradictions which exist almost makes one despair of arriving at any definite theories upon horse-breeding.

The extraordinary development of the Hackney, however, during the past few years, has proved that the following out of certain principles of breeding may reasonably be expected to be succeeded by certain definite results, but there will always exist an element of uncertainty as to what a horse will get or a mare will throw. I suppose there is the influence of back blood to account for this, and the prepotency of certain strains and individual animals, but one becomes bewildered when one attempts to account for the phenomena—they can be termed nothing else—that occasionally appear.

Diseases Resulting from Wounds.

ERYSIPELAS.

Erysipelas occasionally occurs as a result or a complication of wounds. It may be defined as an inflammation of the skin and underlying tissues, characterized by a diffused swelling of the parts affected, which has a remarkable tendency to spread, and is dependent upon some unascertained alteration in the blood.

Symptoms.—In an indefinite period, but usually about the third or fourth day

after the infliction of an injury, the skin in the immediate vicinity of the wound is noticed to be swollen, smooth, shining, hot, tender and painful; the swelling gradually extends in all directions from the wound, embracing, if a limb be affected, its whole circumference in the course of a few hours. The swollen surface pits on pressure (that is, when pressed it has a doughy feel, the finger sinks into the tissues and the impression does not quickly disappear) where muscular tissue is present, but where the subcutaneous tissues are hard and firm the pitting is not so well marked. In rare cases little vesicles are formed, which is followed by some amount of sloughing. This occurs more frequently at the flexures of the joints when a

limb is affected. Besides local symptoms, we notice more or less constitutional disturbance; the pulse becomes frequent and strong; shivering fits are noticed, temperature increased, and there is a loss of appetite, and lameness, if a limb be involved. In more severe cases the constitutional disturbance is greater. The tendons and ligaments, the fibrous coverings of adjacent muscles, as well as the skin and subcutaneous tissues, become involved; the pain is excessive, the swelling hard, tense, and occupies a large extent of surface. In a variable period, purulent collections form in the muscles, or more deeply between the tendons and ligaments, which, on being opened, discharge a watery pus which in some cases contains shreds or masses of gangrenous tissue. The systemic disturbance is severe, rigors are frequent, pain acute; the pulse, at first full and strong, becomes frequent, small and feeble; the respirations hurried; the bowels generally constipated, and the faeces covered with mucus; the urine scanty and high-colored. The appetite is lost, but the thirst usually excessive. Occasionally the inflammation extends to the articulation nearest the injury, and the case becomes complicated with open joint.

Treatment.—A brisk purgative of 6 to 10 drams aloes, according to the size and condition of the patient, with two drams ginger, should be given. The swollen parts should be fomented frequently with warm water, or, if practicable, warm poultices applied. After the purgative has operated saline diuretics, as nitrate of potash, in



Tatton Dray King.

Foaled in 1904. Champion Shire stallion, Royal Show, Eng., 1906.

by the exchange of experiences; and, surely, anything that throws a light upon the science of breeding cannot fail to be valuable to horse-owners.

Color, I am convinced, is more influenced by the sire than the dam, and I base my opinion upon what I have seen and what the studbook tells us. For instance, the Fireways and Lord Derbys were for the most part browns, whilst Denmark, a chestnut, has transmitted his color to his stock, and hence, no doubt, the preponderance of chestnuts at the present time, for the Denmark family, thanks to the excellence as sires of some famous stallions, invariably monopolizes the lion's share of the prizes throughout the season. At the same time, there can be no denying the existence of certain mares which invariably throw bay or brown foals. I saw one sold a few months ago, and a hunt through the studbook proved the correctness of the statement that she had always thrown bay foals. Still, there are exceptions to every rule, and, therefore, breeders are compelled to base their calculations upon the law of averages. There are so many things that are unexplainable in connection with breeding, totally irrespective of the laws of heredity, that it appears hopeless to unravel them. Still, the pursuit of knowledge in such matters must always be of interest to the lover of horses. For instance, many of us would be glad to be able to account for the fact that some horses are colt and others filly breeders; why some families should mature early and others late; and how it comes