

THE HORSE.

Diseases Resulting From Wounds.

Tetanus.

Tetanus, commonly called lock-jaw, is not infrequently met with as a result of wounds or operations. It may result from a very trivial injury, as a saddle or harness gall, cracked heels, etc., but is more apt to follow punctured wounds, and frequently occurs as a result of a punctured foot. The operations which are most liable to be followed by tetanus are docking, castration, operations for rupture, the insertion of setons, and it has been known to follow the application of a blister. The disease is due to a germ which gains access to the circulation through the raw surfaces caused by injuries or operations, or may be introduced directly by the object that inflicts a punctured wound. The disease may be described as a powerful and painful spasm of the voluntary muscles, which is long-continued and uncontrollable. The spasm of the muscles is that of a rigid contraction, the intensity varying in degree, but of a constant and non-intermitting character. The disease is technically known by different names, according to the groups of muscles principally involved, but the term "Tetanus" is used to denote it generally. When the muscles of mastication alone are involved it is called *trismus*, or lock-jaw. When the muscles of the back and superior portion of the neck are chiefly involved it causes an elevation of the head and a downward curvature of the spine, and is called *opisthotonus*. When the muscles of one side only are involved it causes a curvature of the body, drawing the head and hind quarter of the side affected towards each other and is called *tetanus lateralis*, or *pleurosthotonus*. The first two forms mentioned are usually those met with in horses and we notice that, while the spasms involve some particular set of muscles more severely, all the voluntary muscles of the body are usually affected to a greater or less degree.

Symptoms.—The symptoms appear in a variable period after an injury or operation, but usually in eight to twelve days. A general stiffness and rigidity of the animal will be noticed, he moves with difficulty, the nose protruded and the tail usually elevated; the eye has a wild, excited, nervous expression; he will usually champ his jaws and sometimes grind his teeth, and there is often a flow of saliva from the mouth. Respirations become accelerated and the nostrils dilated; the eyes are drawn within their sockets, which causes the accessory eye-lid, that is lodged in the inner angle of the orbit, and is called the *membrana nictitans*, to be pushed out more or less over the eye. If the patient be suddenly disturbed, as by a slap on the head or neck, he becomes greatly excited, the *membrana nictitans* shoots suddenly over the eye, the nose becomes more protruded, the tail suddenly elevated, and the superficial muscles, especially those principally involved, become very hard and tense. At first the pulse is little altered, but in the course of two or three days it usually becomes hard and frequent. The progress of the disease is usually somewhat slow, and a horse will sometimes continue to work for a few days after the first symptoms are noticeable, but the symptoms gradually, sometimes quickly, become more marked, and when the spasms become general the position of the body will be regulated by action of the most powerful muscles chiefly involved. The jaws usually become more or less firmly set, in some cases it being impossible to separate the incisor teeth sufficiently to allow the introduction between them of a fifty cent piece, in other cases slight motion of the jaws remains. The limbs are extended and difficult to move. The action of the bowels is checked, and urination is difficult. A husky cough is usually noticed when the patient attempts to swallow, which act is usually performed with a difficulty which gradually increases. The muscles of the abdomen are rigid, the belly looks small and feels hard, and respirations are difficult. Although the spasm is continuous its intensity varies. Excitement, meddlesome attendance, strong light, noises, etc., cause paroxysms of great severity. In a modified light, when the animal is kept quiet, the spasms usually diminish in intensity. In severe cases the symptoms continue to increase until the animal can no longer retain the standing position, he falls and is usually unable to rise, and struggles violently and apparently suffers intensely until death ends the scene.

Treatment.—If the jaws become firmly locked in the early stages, there is little hope of recovery, but if even a slight motion remains, which enables the patient to drink or suck fluids, recovery may result. The hypodermic injections of large doses of a serum known as anti-tetanic serum, is considered the most successful treatment. This should be administered only by a veterinarian. It is very expensive and not successful in all cases, hence the owner in some cases does not care to risk the expense. As it is a disease of the nervous system the animal should be kept as quiet as possible in a cool, dimly-lighted apartment, removed from all noise and excitement and where other animals are not present. If unable to stand he should be placed in slings. If possible, a purgative should be given by the mouth, but when this cannot be done the bowels should be acted upon by the hypodermic injection of a gram of eserine or arecoline. The hypodermic injection twice daily of one-half to one dram of carbolic acid in an equal quantity of glycerine has given good results in many cases. If he can either eat or drink, it is well to mix with damp food or water about twenty drops of Scheel's strength of prussic acid three times daily, but attempts to drench him should not be made, as the excitement defeats all benefit that may be derived from medicines and good care. When recovery is about

to take place the symptoms gradually disappear, the jaws become relaxed and extreme nervousness decreases. When a case is going to prove fatal, the symptoms increase in severity, despite treatment and care. It should be remembered that in the treatment of tetanus, quietude is probably of more value than medicinal treatment, hence none but the attendant should come near the patient, unless a veterinarian be in attendance.

WHIP.

More and Better Horses Needed.

EDITOR "THE FARMER'S ADVOCATE":

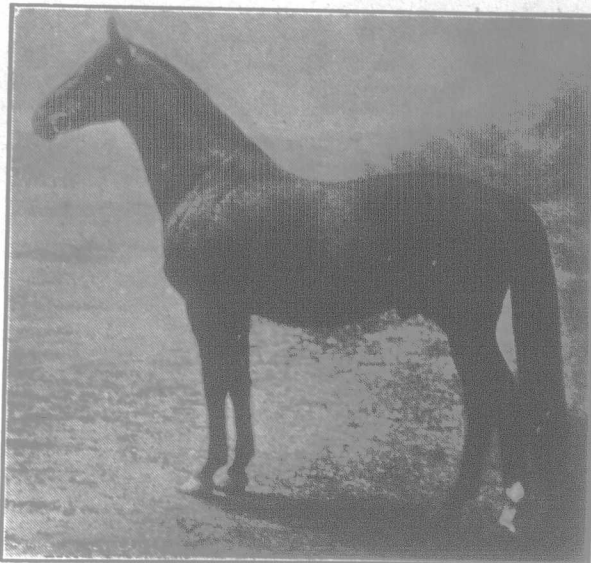
Now is the time to emphasize the desirability—indeed the necessity—of breeding all good mares to the best available stallions this spring.

The breeder of good Percherons never faced a more favorable future. Draft horses are urgently needed for war, city and farm use. Not more than 1,000,000 of the 21,000,000 horses on the farms and ranches of the United States will, at maturity, weigh over 1,600 pounds and classify as drafters. No other nation has draft seed stock in sufficient supply to produce a draft surplus of consequence. The United States alone can be counted upon to produce the draft horses, which the world needs.

Exports of horses to Europe for war purposes from September 1, 1914, to January 31, 1918, a period of 41 months, totaled 983,899 horses valued at \$207,283,114 and 343,435 mules at \$67,390,991. In addition to this the United States Army purchased more than 300,000 head of horses and mules between June 1, 1917 and March 1, 1918.

Additional purchases for war use depend on the length of the war, transport space available and number of troops used. One horse or mule is reckoned on every four men put in the field, exclusive of cavalry; and the importance of cavalry, somewhat obscured during the last three years, is likely to receive greater emphasis as the battles approach open field warfare.

WAYNE DINSMORE.



A Real Thoroughbred.

LIVE STOCK.

J. A. Countryman & Son, Illinois, had an average of \$91 for their herd of Poland Chinas.

At the Weaver and Garden Shorthorn Sale at Upper Mill Farm, Iowa, an average of \$1,155 was made on 46 head.

At the third annual sale of Berkshires by Hood Farm, Massachusetts, 75 head averaged \$176. One sow brought \$370, and another one \$350.

The Central Shorthorn Breeders' Association held a sale in Kansas City early in April when 191 head averaged \$282. Of this number 116 were bulls and their average was \$227.

Herefords are bringing good prices. W. I. Bowman & Co., Kansas, realized \$33,485 for their herd of 107: The 74 cows and heifers averaged \$326. The Main & Hager sale of 60 Herefords, at Harlan, Iowa, averaged \$518.

What the World Owes the Shorthorn.

EDITOR "THE FARMER'S ADVOCATE":

There is not a country in the whole world to which the English or the Scotch Shorthorn has not gone forth, on missionary duty. There are very few places in which the breed has failed in its mission work, after it has enjoyed a thorough "try out".

We in Britain cannot overlook the enormous influence the Shorthorn has exercised on the commercial cattle stocks of the whole American Continent, both North and South. The pioneer cattle breeders of the United States drew extensively on British Shorthorn

herds to grade up the cattle of their country, and at the same time many fine pure-bred herds were established. Think of what the Shorthorn has done for the cattle of the Argentine. The native stock of that country has been graded up to a marvellous degree of quality by the continued use of high-class Shorthorn bulls on the large estancias there, and for many years now the best customers for all our highest class Shorthorns have been Argentine breeders, and unless they had found the purchase of these high-priced sires a lucrative investment they would not send over as they do year by year for as many of the plums of the breed as can be pulled from the family tree.

The influence of the Shorthorn has now reached South Africa, and the Australian continent has for years imported good Shorthorns from Britain. To Russia, Japan, Spain, Germany, France, Belgium and Holland have exportations been sent in pre-war days.

The Shorthorn's true value has been in its propensities; a power which the breed seems to possess in excess of most, if not all, other breeds. No matter what kind of animal is mated with a high-bred Shorthorn the offspring is certain to show strong Shorthorn characteristics. It may be asked why the Shorthorn exercises a greater influence than any other breed in cross-breeding. The answer is that all the principal Shorthorn types have been established by a system of close breeding practised by master minds, and that in no other breed of cattle has pedigree and purity of blood received so much attention.

The raiser of commercial stock, whether for dairying or beef purposes, turns to the Shorthorn sire as being the most reliable and the most likely to beget the class of stock they require, knowing full well that the Shorthorn, above all other breeds, possesses in combination the attributes of a high-class grazing and milking animal. If we take the dairying interest, for example, we find that the great majority of the dairy herds in Britain are headed by a Shorthorn sire, and although in many ordinary or small farmers' herds the cows are cross-breds of various types, yet they more or less show evidence of the Shorthorn sire.

The same applies in breeding for beef purposes alone. Are not the popular Blue-grey cattle of Northern England and the Border-land of Scotland the result of crossing the white Shorthorn bull with the Galloway or Angus cow, and what is the influence of the Shorthorn in this case? The Galloway is a hardy, small, late maturing breed, and never attains any great size at any period of life. The Aberdeen-Angus cannot be called a large breed; but the Shorthorn cross gives scale, size and earlier maturing characteristics, and it is quite safe to say that no class of beef animal is more popular with butchers all over Britain than the Angus or Galloway Shorthorn crosses.

The Blue-Grey Cross.

Blue-grey cattle are highly esteemed both by grazier and feeder. They are hardy and suitable for varied conditions, and can be fed to great weights. On many farms of a high-lying and poor character herds of Galloway cows are kept and mated as stated, with a white Shorthorn bull. In choosing a bull for this purpose the importance of a good, well-bred one cannot be over-estimated. He should be well-fleshed, early maturing and possess plenty of size. On such farms calving takes place usually in April and May, the cows suckling their calves throughout the summer. The calves are weaned in October, and the cows are then wintered out, receiving in bad weather a small allowance of hay. The calves are also usually wintered out and receive about 3 lbs. concentrated food, and 7 lbs. to 8 lbs. meadow hay. The advantage of this system is that most of the stock is wintered outside with the aid of home-grown foods (chiefly hay) together with very little purchased food. The young cattle are quite hardy enough to be wintered outside in this manner (a shelter shed is very useful, however) and are preferred as summer grazing cattle, while these open-air conditions undoubtedly guard against tuberculosis.

The cattle are grazed during the second summer of their lives, and if on good pasture are likely to become fat, when they may be sold to the butcher, or if this is not done may be fed off in the autumn and winter months, making choice fat cattle when about two years old. Many blue-greys are sold in the autumn when about eighteen months old as feeding cattle and are keenly competed for in the sales and markets; others are wintered out and make excellent cattle for grass-feeding in the following year. The calves when weaned are usually fat, and would make excellent veal, but so highly are these valued by graziers that the butcher is unable to compete with them in the market.

In many districts where dairying is carried on good Shorthorn cows are mated with a Galloway bull. In this way very similar blue-grey cattle are bred. These calves are, as a rule, brought up on the pail, and bring splendid prices either as weaned calves or store cattle, and, like the Shorthorn-Galloway cross, they do equally well. By both methods calves are sometimes produced which are either black, red or roan, but the prevailing color, if bred correctly, is blue-grey.

Other Commercial Crosses.

The bulk of the excellent store cattle which are now sent over from Ireland are of the Shorthorn-Angus cross, and it is well to look for a moment and consider what the Shorthorn has done for Irish cattle breeding. It is almost impossible to estimate the value of the Shorthorn influence on cattle breeding in that country. Even from the little Kerry cows and others of the non-descript sort excellent store cattle have been bred by some of the premium bulls of the Shorthorn type, and the continued use of well-bred Shorthorn bulls for some years has produced a revolution in the cattle stock