

Malarial Fever, or "Swamp Fever."

BY W. A. DUNBAR, V. S.

This is a disease of horses, common in some parts of Manitoba. It is especially prevalent during the months of July, August and September in the low and marshy localities of the Red River Valley. Considering the great loss that many farmers have sustained from its ravages, a few remarks on the subject, through the widely circulating "Farmer's Advocate," may be interesting if not beneficial to horse owners living in the districts where it frequently appears. During a residence of many years in Winnipeg, I have, in the capacity of a veterinary practitioner, had many opportunities of observing and treating this disease, and it is upon this experience chiefly that I will base the following remarks:

Malarial fever has been very prevalent among military horses quartered in the low-lying districts of India, and by prolonged investigations, conducted by scientific army veterinarians, it has been fully demonstrated that the disease is caused by specific germs entering the system, chiefly through food and water.

As it is common in districts where malarial fever is prevalent to call several other diseases of the horse by that name—such as influenza, bilious fever, pernicious or progressive anemia, etc.—I will mention the symptoms of this particular disease, which vary very slightly in any case that I have had the opportunity of observing: The first symptom is usually a shivering fit, which may or may not be observed, and the breathing is more or less quickened; the animal becomes dull, its gait sluggish, and is easily fatigued; it frequently hangs its head, and the appetite is usually much impaired. The pulse will be found to be 50 to 60; respirations increased, and the temperature 103° to 105° Fahr. These symptoms may be manifested for several days, and then the animal usually shows signs of improvement; in fact, appears almost well, but in a few hours, twenty-four at most, the acute symptoms return. The intermittent character of the disease is noticeable throughout its course, which is usually of from one to five weeks' duration. As the disease advances the animal becomes emaciated and weak; swellings appear on the abdomen, and on one or more limbs; the inner surface of the eyelids are of a yellowish or brownish-yellow color. Thirst, accompanied with diarrhoea, is sometimes present. Partial paralysis manifested by crossing of the legs and an unsteady gait is often well marked. In the latter stages lung complications often appear; this is evidenced by greatly accelerated breathing and a low, painful cough. The disease has in every case a typhoid tendency.

The treatment of malarial fever is, in many cases, very unsatisfactory, often owing to the proper remedies not being administered until the disease has made too much progress. I would advise every farmer and horse owner living in malarial fever districts to purchase a reliable clinical thermometer and, when practicable, take the temperature of each of their horses at least three times a week, and when it registers above 104° Fahr., the animal should be closely watched and its temperature ascertained twice daily for two or three days. If the temperature should approach 103°, no time should be lost in calling on veterinary aid. Horses running at pasture should be rounded up and inspected once a week, and if any of them are found to be "out o' sorts," a condition which any practical horseman can readily observe, such should be immediately separated from the rest and put in proper quarters for treatment. I am fully convinced that if infected animals were noticed at an early stage of the disease, and subjected to proper treatment, a much larger percentage of recoveries would be the result. "An ounce of prevention being worth a pound of cure," much may be accomplished to prevent this disease by giving proper attention to hygienics and sanitation. Many of the stables in Manitoba are, unfortunately, unfit habitations for the equine race; they are neither clean, properly ventilated, sufficiently lighted, nor drained; low ceilings and insufficient air space are also common objections. Under these adverse conditions, it is not surprising that horses' blood becomes vitiated, their system debilitated, and, in consequence, an inviting field for the development and destructive progress of disease germs. I am well aware that lack of finances prevents not a few farmers and others from providing stabling for their horses with all the modern requirements; but I also know that much improvement could be made along that line, with very little monetary outlay, by an intelligent direction of manual labor. For instance, a stable, no matter how old or dilapidated, if at all deserving the name, could be thoroughly cleansed, disinfected and whitewashed twice a year at very little expense, which is a work of paramount importance. A drain to receive and carry away soakage is in most cases an inexpensive work. One, two or three windows and one or two ventilators (according to the size of the building) can be placed at small cost. A prolific cause of disease is watering animals from a well in or near the stable into which urine and liquid manure is al-

lowed to run or percolate. This should be particularly guarded against, as no water is too pure for a horse to drink. If the improvements mentioned above cannot all be made at once, the work should be done by degrees, and as soon as possible. It will pay to do it.

The stagnant water and excessive moisture of marshy pasture lands greatly favors the multiplication of malarial germs, which plainly indicates that drainage and cultivation will eventually very much lessen if not altogether remove the primary cause of malarial fever.



TWO NOTED CHAMPION MARES.

Arlene Macgregor on the left, and Princess Royal on the right.

BRED BY AND PROPERTY OF J. B. THOMPSON, HAMOTA.

Winter Hogpen.

When the question of wintering hogs was being discussed at the Swine-breeders' convention at Winnipeg in February last, those who had made a success of the business were pretty unanimous in the opinion that there was no pen as good as a crib made of poles and built about four feet high, with the strawstack over the top.

As all who have tried it well know, an ordinary pen when made at all warm is sure to be damp, and damp pens and healthy, thrifty pigs seldom go together. The crib under the strawstack is cheap, and also free from the above objection. It enables the hogs to take all the exercise they need, and if the opening is sheltered to some extent it will be sufficiently warm, and good returns may be expected for the feed consumed. If you have poles within reach try it; practical experience says it will pay.

Every pure-bred bull of good individual merit that goes into a district becomes a missionary directing the farmers to stop raising scrub cattle and to raise such animals as he is.



FIRST-PRIZE DRIVING TEAM AT LACOMBE FAIR.

OWNED BY TICE & FORTUNE, LACOMBE.

The Standard.

The "Farmer's Advocate" is truly the farmer's classic, and a standard for agricultural journalism throughout the land. Once acquainted with its bright, noble pages, it would be a trial to do without them.

R. H. MCGREGOR.

Conditions for Wool and Mutton.

BY J. M'CAIG, LETHBRIDGE, ALTA.

The sheep, being a dual-purpose animal, there must come up from time to time the consideration of the relative merits of specializing on the wool or on the mutton side. The decision of this point depends mainly on two things. These are the character of the situation and conditions of the producer and the character of the demand for his products.

The situation of a country or district with respect to the advantages to be derived from the specialized pursuit of one side or the other is not the same at all times. A hundred years ago, during the time of the great European war arising out of the French Revolution, English shepherds were induced to specialize on the side of the production of fine wools by reason of the supply from the continent being cut off from the English markets. The Southdown was a favorite for the time being, and this family was bred and selected for fineness of fleece. The families with similar fleece, such as a Hampshire, Somersetshire and Ryeland, shared this popularity. This wool was at this time, and also before this time, the carding and felting wool of the English manufacturer.

This example serves also to illustrate the adaptation of countries to particular branches of sheep husbandry. Under the impulse of strong demand for felting wool and no foreign supply, the Spanish Merino was introduced into Britain with the idea of having a sheep of excellent fleece and passable carcass qualities at the same time, but the Merino failed to satisfy the English taste for mutton. Nor did the attempt to cultivate the Merino for wool alone in England prove any more satisfactory. With the resumption of trade with the continent again, the Saxony wool proved superior even to the Spanish wool and could be produced cheaper than the English Merino wool of inferior quality. Since this time, the idea of producing fine wool profitably and successfully in England has been abandoned. The example of England thus illustrates very decidedly what relation both demand and adaptation have to do with the special character of the industries of a country.

While it is true that Britain cannot produce a fine wool successfully, it is equally manifest that this country has surpassed all others in the production of mutton and in the development of a magnificent type of mutton sheep. This arises from two main causes, viz., the same as those of her failures with respect to fine wool, demand and adaptation. The dense population of the country means a very strong demand for foodstuffs, and the English are great meat-eaters. The existence of this demand has led to the improvement of agriculture that means large and rapid production of meat animals on the smallest possible area. In this demand and intensive cultivation combined we have the conditions that have produced that perfect and symmetrical animal, the English sheep.

While cultivation is the accompaniment and necessary condition for good meat production, we may reasonably be led to infer that wool production belongs to open, uncultivated areas. At the time that the English were perfecting their meat sheep, wool-growing was becoming the big industry of the Australian colonies, and lands, of course, were so cheap that good profits followed leaving mutton out of consideration altogether. At the time that the Australian colonies were go-

ing largely into the production of wool, the United States were evolving their improved American Merino, and the beginnings of sheep husbandry in this country show the same bias for wool production as belong to most new countries. Since then the Argentine Republic has become a big sheep country, and it is more than probable that South Africa will in the near future become important for wool production. It seems plain that England, the greatest wool-manufacturing country in the world, will be able to and will continue to draw her supplies of fine wool wholly from abroad.

The general physical explanation of the matter is that a certain degree of warmth seems conducive to the production of fine wool, while it is likewise opposed to the accumulation of flesh or fat in large measure. It would be scarcely correct to say that English wool deteriorated with the improvement of agriculture, but it changed