

Veterinary Department.

Bots in Horses.

Bots are the small grub-like bodies frequently noticed in the newly voided feces, and in post-mortem examinations are often found adhering to the coats of the stomach. We believe they are present in greater or less numbers in nearly all horses that have been running at pasture during certain months of summer. Bots are the larvæ or grubs of the *Ectons* or Gaddy, and several kinds have been found inhabiting the alimentary canal of the horse. For a description of the various kinds, and of their origin, we will refer to the remarks of the late Bracy Clark, who bestowed long and particular attention to their origin, effects, &c. :

Mr. Clark has particularized three species of bots, viz., the "*Ecton* *luteus*," or large spotted bot, which are the most common and are generally found adhering to the cuticular coat of the stomach. The female Gaddy during the summer months deposits her ova on the horse's leg or sides, which becomes firmly glued to the hair, and after remaining some days in this situation they become ripe, and at this time the slightest application of warmth and moisture is sufficient to bring forth the latent larvæ. At this period, if the tongue of the horse chances to touch the ova, their opercula are thrown open, and the contents readily adhere to the tongue, and with the food are conveyed into the stomach, and there being lodged and hatched, they cling to the cuticular coat.

In speaking of the *Ecton hemorrhoidalis* or fundament bot, Mr. C. says that the ova are usually deposited upon the lips of the horse, or some part of the body within reach of his tongue.

It may be stated in a few words that the ovum or egg which ultimately forms the bot is deposited on the legs or other parts of the body which the animal can reach with its tongue; and by the application of heat and moisture as in the animal licking himself, the egg is conveyed into the mouth, and from that into its proper nidus the stomach, where it grows and finally adheres to the coverings of that organ, especially the cuticular portion.

In the spring months, it becomes detached, and is passed through the alimentary canal and expelled along with the feces, where from exposure it is changed into the state of chrysalis, out of which it finally changes into a fly.

Bots may adhere to any portion of the stomach, and in post-mortem examinations we have seen them in considerable numbers sticking to the termination of the œsophagus and to the beginning of the small intestines. These little bodies are very frequently blamed for causing disease of the bowels, when the disease is produced by other and far more likely causes. No doubt if they are present in very great numbers, they may excite irritation of the stomach, and interfere with the process of digestion, and in some cases possibly setting up an inflammatory action of the coats of the stomach. But when they only exist in ordinary numbers and as they principally adhere to the cuticular portion of the stomach, we believe very little, if any harm results from their presence. In fact we may safely affirm that two-thirds of the horses of this country are infested with bots to a greater or less extent during the winter months, and at the same time they enjoy perfect health and are in excellent condition. In after-death examinations we often find bots in the stomach, when death had resulted from accidental causes, which could in no way be attributed to disease of the digestive organs, and where up to the time of the accident the animal had been in the most perfect condition. In nearly all the horses that are destroyed at the Veterinary College in this city, for the purpose of dissection, bots are found to exist in the stomach. Very often when

horses are suffering from colic or other diseases of the digestive organs which produce severe and violent symptoms, these symptoms are often erroneously supposed to be due to the presence of bots. Should the animal unfortunately die and an after-death examination be made by a party entirely ignorant of the structure and general appearance of the digestion tract, and any bots found, the cause of death is at once put down to the effects of these little bodies—when other well-marked appearances would show the cause of death to have been due to a very common and well-marked disease.

Some people attribute certain milder symptoms as due to the presence of bots in the stomach, such as biting at his body, and rubbing against the stall or manger. Such symptoms we believe are more likely to be due to some irritation of the skin than to the effects of bots.

When they do produce irritation of the stomach, the usual symptoms of indigestion will be present, such as an unthrifty coat, weakness, and a capricious appetite.

Various specifics and remedies are recommended for the removal of bots, but it is very questionable indeed if we possess any medicine in our pharmacopœia which has the effect of removing these bodies, without at the same time proving injurious to the animal within which they are lodged, because they hold so tenaciously to the coats of the stomach. However, at certain seasons of the year, when they are about to let go their hold, and are about to be expelled from the system, their expulsion may be expedited by certain medicines—such as a dose of purgative medicine, or two ounces of oil of turpentine given in half a pint of raw linseed oil, and at the same time a change of feeding for a few days has a beneficial effect. The preparations of iron are also found useful at such times. A favourite remedy in some parts of the country is one composed of sweet milk and molasses, which if it does not do any good, it cannot possibly do any harm—except in its administration. Some people very absurdly imagine that the drench is more effectual when poured down the nostrils than when given by the mouth, and we have known several fine animals destroyed from being drenched in the above manner. This method of drenching is highly dangerous and on no account should be resorted to.

B'g Head.

Many suggestions have been offered as to the cause of this malady. It has been attributed to eating Indian corn. Prof. Varnell, who has given the best description of the disease to be found in the English language, enters into a lucid examination of its causes, and leaves one with the impression that it is due to food or water deficient in the salts of lime. We are only prepared to state that the disease has long been known, and French and German literature is particularly rich in materials relating to it. It has been witnessed in England, Normandy, Switzerland, Hungary, Saxony, Prussia, and in the south of France.

In these countries it may be said that the disease is enzootic, though it is more frequent in some years than in others, and is generally considered as allied to scrofula. It is usually fatal, and appears to be incidental to youth. It has been called scrofula of the joints (*arthritis*), big head, from the bones of the head being more frequently involved, though all parts of the skeleton are disposed to take on the abnormal condition. We are prepared to state that the disease is not contagious. With respect to the original causes, we would only say, in the words of an acknowledged authority on such subjects: "It is better to confess these are unknown, rather than by labored and pretended explanations to endeavor to conceal our ignorance." There is no special remedy for big head. The only good that can be effected is indirect, by means of careful dietetic and hygienic management.—*Spirit of the Times*.

—According to a French journal, horses and other animals may be protected from the persecutions of flies by painting with a pencil the insides of the ears, or other parts liable to be bitten, with a few drops of empyreumatic juniper oil (*huile de cade*.)

What Ails the Pigs?

A correspondent, some days ago, wrote stating that his litter of pigs had lost the use of their hind legs, so that they had to drag themselves along to the trough, and asks what was the matter.

We answer, emphatically, paraplegia, otherwise called paralysis of the hind quarters. The treatment indicated is usually to give some physic and move the bowels, which are generally torpid. Castor oil is good, the dose according to the size of the pig. After the medicine is given, if you have a comfortable place immerse the bodies in a hot bath for a few minutes, and having some dry cloths rub them dry, applying considerable friction.

A paste made of mustard and vinegar should then be applied to the skin on each side of the spine (back bones) particularly over the loins; for several days the pigs should not be exposed to the cold air or storms.

As to the causes which produce the disease, it is supposed that sudden changes of the weather, exposure to rain and strong draughts of air often produce an attack of the disease in question. We do not recollect that our correspondent (we lost or mislaid his letter) wrote anything by which we could form an opinion in the present case.—*Vet. Ed. Mass. Ploughman*.

Correspondence.

To Manufacturers etc.

We give below specimen extracts from letters received by almost every mail from the sister provinces of New Brunswick, Nova Scotia, Manitoba, and even British Columbia, sections of country in which, we are happy to state, the CANADA FARMER now circulates very extensively. We notice them here for the purpose of directing the attention of manufacturers to the importance of advertising their goods, and so keeping them before the public. We would urge this more particularly upon manufacturers of agricultural implements and machinery in the province of Ontario, inasmuch as for some years at least, this Province will maintain the leading position it now occupies with regard to that class of manufacturers, and will contribute largely to their supply in the sister Provinces.

DITCHING AND TILE-MAKING APPARATUS.—To the Editor of the CANADA FARMER.—Would you kindly inform me where the necessary machinery or apparatus for making drain-tiles can be procured, and the probable cost; also where the ditching machine is manufactured, a cut of which appeared in a recent issue of the CANADA FARMER.—*W. B. Truro, Nova Scotia*.

STUMPING MACHINES. *To the Editor of the CANADA FARMER.*—Which do you consider the best Stump machine in the market, and where, and at what cost can it be purchased?—*G. M., Bracebridge Ont.*

LIGHT BRAHMA FOWLS &c.—*To the Editor of the CANADA FARMER.*—I notice in your issue of January 15th cuts and description of Light Brahmas. Would you please inform me where I can procure the bird themselves, or their eggs, as I intend going into the poultry-raising business on a small scale?—*A Subscriber, Grimsby, Q.*

These Canada Thistles.

(*To the Editor of the CANADA FARMER.*)

I have been a Canadian farmer for over twenty years, and during that time have had many severe battles with the Canada thistle, which I ultimately conquered as follows:—

When the land was intended for summer-fallow, I never ploughed in the fall, but waited until the spring work was done, or about the middle of June. I then ploughed the land for the first time, using a chain or ball on the plough, for the purpose of dragging down the thistles, repeating the operation as often as the pest showed itself above ground, and going an inch or so deeper at each ploughing.

When the land was intended for a root crop, I ploughed in the fall, but very deep, and, when prac-