

AGRICULTURAL.

BOVS IN HORSES.

NATURAL HISTORY OF THE HORSE-BEE.

The Horse-Bee is the most contemptible of all insects—"They for a season inhabit the stomach, prey upon it, destroy its texture, and introduce convulsions and death." They appear from the 20th of June until September, or until the cold evenings commence. There are two kinds—the larger kind generally cast their eggs on the anterior legs, but never under the throat—the smaller always under the throat. It has been supposed that these eggs hatch in the horse's stomach.—Not so; the process of hatching is nearly completed before the horse, feeling uneasy, licks the limbs on which they are hatching, and so they pass into his stomach. They are provided with two sharp hooks by which they secure a hold, and there remain until they arrive at full growth, three-fourths of an inch in length. Their work is effected, most generally, in February, March or April.

General symptoms of Bots in Horses.

Sometimes horses which are hard worked discover no apparent symptoms until death. In young horses the symptoms are generally better ascertained. In general the horse loses flesh, coughs, eats but sparingly, bites his sides and sometimes with violence. These symptoms continue, and increase for a longer or shorter time, according to the violence of the case, and then a discharge from the nose commonly takes place; and at length stiffness of the legs and neck, staggering, laborious breathing, convulsions and death.

Appearance on dissection.

Bots in abundance collected near the passages into and out of the stomach, and of various sizes, according to the time of their residence there.—The texture of the stomach penetrated and greatly injured. The internal coat of the stomach appears thickened and preternaturally hard on those parts where the greatest injury is done.—In four out of five dissections the lungs were found greatly inflamed; some parts in a state of suppuration, others in a putrescent state. The one whose lungs were not marked by inflammation, was a young horse of two years old, whose lungs had never been injured by hardships.

Query.—Why this inflammation, &c. on the lungs?

The irritation arising by the action of bots on the stomach, may produce a general inflammatory disposition in the system; but as the lungs of horses, by hard usage, are more predisposed to inflammation and its consequences than any other given part of the body, the inflammation fixes there, and in many (if not most) instances, seems to be the immediate cause of death.

Experiments to remove Bots from the Stomach.

Aloes, rum, mercury, jalap, brine, linseed oil, pepper, tincture of tobacco, decoction of pink root, &c are all ineffectual. This will not appear strange when we consider how tenacious they are of life. Nothing is more injurious than rum and other heating things to the irritable state of the stomach, whose texture is nearly perforated in numerous places.

Almost every farmer in Massachusetts has some specific, and frequently one of the above named, or those of less consequence. A farmer's horse sickens with a cold or a pain in the stomach from hard travelling perhaps. He asks his neighbour, What is the matter? He answers, The bots. What shall I do? Give him rum. The rum is given, and the horse recovers immediately.—Well what is next? Why rum has cured the bots. In like manner other things obtain credit for killing bots.

Experiments for making Bots let go their hold within the body.

The stomach laid open, the following things were applied to no effect, but in some instances they appeared to hang the stronger—rum, brine, lime, fish oil, British oil, burnt alum, corrosive sublimate, spirits of turpentine, tincture of aloes, decoction of tobacco, pepper, volatile spirit, elixer camphor, weak elixer vitrol, &c. &c. Actual fire would cause them to let go, although not in all cases, sometimes certain individuals would cling the faster, and die like a good soldier, at his post, before they would relinquish their hold. They will live hours after they are considerably scorched by a candle. Strong vitrolie acid would immediately cause them to let go their hold. This acid, joined with oil and water, (equal parts) would answer the purpose, though not so effectually as the acid itself. This acid was found to be more effectual than aqua fortis.

Experiments to destroy Bots without the body.

The following experiments were made at different times, and on bots three quarters grown or more:

Immersed in	hours	minutes.	
Rum	25		} others not so long
Decoction tobacco	11		
Strong elixer vitrol	2	15	} no effect.
Volatile spirits	55		
Spirits turpentine	45		
Essential oil of mint	2	5	
Decoction pink root	10		
Fresh oil	49		
Linseed oil	10		
Solution of salts	2		
Elixer proprietatis	10		
Beef brine	10		
Solution of indigo	10		
Elixer camphor	10		

The experiments which had no effect were discontinued at the expiration of the time specified. Bots cannot endure the cold so intense as to freeze.

Preventive Means.

Scrape off the the eggs, when laid on the horse, every eight or ten days. A much longer interval will answer the purpose, even once in twenty days; but there is a greater certainty of destroying the whole in short intervals, as some may be overlooked at one time and not at another. This practice must be continued through the seasons of them, and may be performed with ease, with a sharp knife. The eggs should not be scraped off where the horse can feed, as in that case the young bots might be taken in. It is difficult to remove those eggs laid under the throat with a knife, but they may be destroyed with a hot iron, made for that purpose.

Palliative Means.

From what has been said, it appears exceedingly difficult to remove Bots from the stomach: they are covered as with a coat of mail, and seem to be proof against any thing that can be thrown into the stomach with safety.

As no certain method has been found effectual in removing them from the stomach, the whole indication seems to be to remove the irritation and inflammation, and this is to be done by blood-letting and a free use of mild oils. Blood-letting has a tendency to remove the inflammatory disposition, and oils lubricate the fibres of the stomach, and tend to obviate the effects of the stimulus which produces inflammation and death. However, all this ought to be done in the early stages, and even then the event is very uncertain.

In most instances it appears that the immediate cause of death was the local affection in the lungs; and in those instances where the local affection of the lungs did not exist, it appears that the irritation occasioned by the bots introduced convulsions ending in death.

When the lungs are much affected death is almost certain; but in those instances where the lungs are not affected, there is considerable probability, that by blood letting and a free use of oils the effects of these insects may be warded off for some time, and perhaps long enough for them to come to maturity, at which time they cease to act.—Am. paper.

From the Maine Farmer.

ON RUTA BAGA, OR SWEDISH TURNIP.

Mr Holmes.—It may be that it will encourage the raising of Ruta Baga, if I state my success in that crop the last season, though not a remarkable one, yet as hay and food for cattle has been, it was a profitable one. It grew on just one fourth of an acre of ground, which yielded 204 bushels by weight, 64 lbs to the bushel—the same as the law requires that potatoes should weigh.

It is supposed by most farmers that two thousand pounds of this vegetable and a ton of hay will sustain our cattle as long, or go as far in our stock, as two tons of hay fed out understandingly, or in other words, that they are worth as much, pound for pound, as English hay. According to the above number of bushels and weight, there grew on the quarter of an acre six tons and a half and 50 pounds. Hay is worth \$20 per ton—if Ruta Baga, is worth as much, then the latter is worth \$20—the six tons and a half and 50 pounds amounts to \$130 50—equal to \$522 24 per acre, when forage is thus high.

I will now give an account of the actual profit as I sold some, and might have sold the whole at the same rate, for as hay has been high I evidently undersold. Two shillings a bushel I sold for, 64 pounds by weight per bushel—at that rate the 204 bushels amount to \$55, equal to \$232 the acre. All can see that I undersold, as forage has been this season—but as the worth of hay is, take one year with another, they are worth and will bring 25 cts the bushel, if kept until April. At that rate my quarter of an acre would bring \$51, equal to \$204 per acre. Is it worth while to attend to raising Ruta Baga?—this question will be better answered when I state the expense, as I intend in a future communication.

From the Pittsfield Sun.

Nineteen years experience has led me to consider the Ruta Baga a valuable crop; but as no persons in this vicinity seemed inclined to make the trial, I had almost began to entertain doubts if that opinion might not be incorrect; especially as the Agricultural Society here, until the present year, turned a deaf ear to my frequent and urgent solicitations to offer premiums on half acres, to promote experiments. It would seem, however, from the recent applications for information as to manner of cultivating this root, that its value is beginning to be appreciated in Berkshire. And as persons in distant towns may be desirous of information on the subject, I am induced to state that this root requires a dry rather than a moist soil. The land should be clean and mellow; such for instance as was in corn or potatoes last year; or turf or stubble ploughed last fall. In either case, it should be ploughed again in the spring, and well harrowed. Previous to sowing, harrow it again, and lay the land in furrows about 27 inches apart, put manure therein, and cover by turning a back furrow carefully on each side, so that they may not quite meet together. In this space, or opening, the seed should be sown, then apply a small roller to the drills, and sow on ashes at the rate of about ten bushels to the acre. I use about fifteen loads of straw manure to the acre. Time of sowing, from the tenth to the fifteenth of July, and if practicable, just before a rain. The roller should be about four