

CAUSES.—Any sudden exertion or atmospheric changes, copious draughts of water when the animal is heated, a blow upon the side, injuries of the chest as also the introduction of stimulating or other matters into the chest.

SYMPTOMS.—The horse will begin by showing great uneasiness, and as the disease takes its course, evincing frequent pain, heaving at the flanks, puffing and blowing, looking round towards his flanks, pawing with his fore feet occasionally, laying down and getting up again; but the grand symptom is that on pressure being applied to the intercostal spaces, he commonly elicits a peculiar grunt with attempts to bite; cough is occasionally present, accompanied with a firm, wiry pulse; mouth hot and dry, and conjunctival membranes highly infected.

The progress of acute pleuritis is very rapid. Should no change take place within twenty-four hours after the disease has made its appearance, very few hours will run over that horse before the disease becomes manifest, either in the acute symptoms subsiding, or the primary symptoms of Hydrothorax or effusion is taking place within one or both sides of the chest.

The junctions of this disease are from
1st. Resolution or a return to a normal or healthy condition.

2nd. Effusion or the throwing out of lymph or serum in the cantres of the chest, the usual result of inflammation of a serous membrane which the pleura is.

3rd. Suppuration, or the formation of or secretion of puss or matter.

4. Gangrene or privation of life or death of an organized substance, in other words the first stage of mortification.

The treatment of pleuritis must be active and prompt. Bleed by general abstraction, that is from the left jugular vein, to be followed up with laxative medicine, such as four Aloes Barb is three drachms; Zigeris, one drachm; Aeps Simples, five drachms; to be made into a ball and given; apply hot mustard poultices to the sides; bandage all the legs and blanket the horse; do not have the stable too hot, but about 50° or 60° Fahrenheit, and not forgetting that most important part of the treatment, a good bed of clean straw, and upon coming in or going out of the stable, let it be done as quietly as possible, and allow no blustering or loud-spoken person to go near the animal, for by doing so he will necessarily excite the nervous and circulatory systems, thereby adding fuel to the fire.

Give oz. Spiritus Nitr, Aeth opt, two ounces, Tinct. opii, 2st night and morning. If there is no change in the symptoms for the better, give a ball composed of 1 oz. calomel, two scruples Digitalis, two scruples antimony polass, tart, one drachm, Tinct. opii, one drachm, camphor half drachm; to be made into a ball with a little lard, and given night and morning. A very good mode of administering calomel, is to place about three grains on the horse's tongue, every two hours, until the mouth becomes tender or the breath affected, as calomel, in this disease, is the sheet anchor in the treatment of it. A very serviceable counter-irritant can be applied to the chest in this disease, after all acids, liniments and blisters have failed, namely; antimony polas tart, four drachms; Oil of turpentine four ozs. dissolved.

And if the symptoms indicate that resolution is about to take place, follow up with tonic and diuretic treatment.

Give for a tonic ball, Ferri Sulph, two drachms, Pulv. Ginger, one drachm Pulv. Gentian Rad, one drachm, to be mixed with a little lard and given every second day.

Before closing this letter, I must here remark that to my own certain knowledge, this disease has often been treated for spasmodic colic, or oftener for a disease called Peritonitis, when in reality no such disease or its symptoms were present. In the early stages of pleuritis, the symptoms much resemble colic, causing no little trouble to the non-professional or Empiric to properly diagnose.

I shall close this letter for the present, hoping, Mr. Editor, that I have not trespassed too much on your columns. In my next I will make a few casual remarks upon a disease closely allied to the above named, as also anything Veterinary or appertaining thereto, that may come under my notice in town or county practice.

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Fellow of Edinburgh Veterinary Medical Society.

For the Farmer's Advocate

Drilling Versus Broadcasting.

The farmers of Canada have of late years made rapid strides in the improvement of Implements of agriculture of all kinds, and for lightness, strength, and adaptability to the work they are intended for, most of our implements are equal to any in the world; but in the use of the drill, we are lamentably behind the times. Drill husbandry is no longer an experiment, but has proved itself so far superior to the old method of broadcasting, that its use is general wherever it has once been fairly tried, and the old system is fast becoming a thing of the past.

The great consideration with farmers, whose dependence for their living is on their crops, is whether drill cultivation will pay them better, and not whether it will look tidier or more finished. To this there can be but one answer, but that every one may form his own opinion on the subject, let us look at some of the advantages it possesses over broadcasting, especially applying to Canada.

1st. Saving of labor and time in the busiest season of the year.

2nd. A reduction of from $\frac{1}{4}$ to $\frac{1}{2}$ in the quantity of seed used.

3rd. The placing of the seed out of reach of birds.

4th. Uniformity of depth and evenness of distribution.

5th. The facility with which the land can be cleaned during the growth of the crop.

6th. The immunity of fall crops from winter killing.

We will proceed to investigate these reasons for preferring the drill with regard to expense. Let us suppose the land is fit for sowing, and the farmer has to decide which he will do, drill or broadcast; we will enumerate the necessary steps to be taken, and every man can price his own labor, if he sows broadcast he has to count the cost of sowing, 3 times harrowing, and say 2½ bushels of seed. If he drills he will first save half his seed, which will pay for drilling, he requires only two harrowings, one before and one after the drill, so that he gains the price of once harrowing, and hand sowing, and what is most important in Spring crops he saves a vast deal of valuable time, as he can fall plough his land at his leisure, and these in the Spring once cultivating and once harrowing, will procure a better seed bed for drilled grain than ploughing would do for broadcast grain. The reduction of the seed does not reduce the yield, as all the good seed will grow; the condition necessary for its germinating being fulfilled by depositing it at a proper depth in the soil. Not the least important consideration is that the seed is placed out of reach of birds, which are often attracted by what remains on the surface to reach for more when that is consumed.

Uniformity of depth in sowing is necessary to insure the simultaneous sprouting and ripening of all grain, but particularly of peas,

and this condition cannot be fulfilled when some of the seed falls to the bottom of the furrow, while others lie scarcely buried and sprout at once, even when sown by a skillful sower; but when the sower is not up to his work, the grain not only lies at all manner of depths but also in lumps, some places being bare and others crowded. Some of the deep sown will be unable to grow for want of warmth and air, and some of the shallow sown will waste from being too exposed to get sufficient moisture, others sown at a proper depth will sprout at once, and the consequence will be a serious diminution in the yield.

The clearing of the land by horse hoeing, harrowing, or hand-hoeing, is one of the greatest advantages of this mode of culture. We are too much afraid of using the harrows on growing crops, one reason being that with a broadcast crop, the harrows must necessarily tear up some of the grain, whereas the roots standing in a continuous line on the drilled land, offer such resistance to the teeth of the harrow, that they throw them into the spaces between the rows, where they cut up the weeds. Horse hoeing although practiced in Britain, is not to be recommended here until we have hoes made suitable for the work; but hand hoeing can not be too highly praised. In the first place it destroys the weeds, and how can a man expect a crop of grain, when a large portion of the strength of his land is consumed to supply the nourishment for the growth of the weeds. But another most important function performed by hand-hoeing is the loosening of the soil round the young plants, enabling the roots to spread and promoting evaporation, and therefore keeping the roots cool. The prevention of winter-killing in fall crops is particularly desirable in this country, when the wheat plant lies with its roots on the surface. A warm sun in winter or early in spring will thaw it out, and very soon it is frozen again, and this perhaps is repeated several times. This is what kills it, every one knows that. It is not because the ground is frozen that the wheat is killed, for then we should always lose it, but because the plant is exposed to alternate freezing and thawing in the light and air. The drill puts the seed at such a depth, that no ordinary thaw will affect it, but if the weather should be so mild as to thaw beneath the roots, the covering of earth prevents the evil effects of it, just as turnips frozen in a pit will thaw without injury if they are only allowed to remain covered.

There is no means within our reach of increasing the yield of our land of such importance as drilling. In the States they see the importance of its use, and in the vicinity of Paris, and in some of the most advanced sections of the country it is used for grain, and also for grass-seeds, and it is quite time we followed their example in that which so nearly concerns our own interests.

C. F. C.

To the Editor of the Farmer's Advocate.

RECEIPT FOR SPAVINS.

2 ounces of Spirits of Turpentine, 2 ounces of Vitriol, and $\frac{1}{2}$ pint of Tanner's Oil.

Directions.—Mix Tanner's Oil, Spirits of Turpentine, and the Oil of Vitriol, not over a tablespoonful at a time. Apply until it blisters; then rub fresh butter and lard.

JAMES MITCHELL.

Mariposa, Jan. 14th.