

used in obtaining it, is essential to her recovery. In higher degrees of this disorder, where the cow ceases to ruminate or to eat, and almost the appetite goes off, and the milk is almost entirely lost in all the quarters, the drench should be assisted by whey, as directed in the treatment of red water, and when scouring succeeds, the cordial astringent drench must be given, as directed in the treatment of scouring or scantering. The swollen udder requires only the application of sweet oil, or foot oil.

When cattle are turned suddenly into good pasture, they sometimes fill the rumen in a trice, so hastily, and so distend it, that it is rendered incapable of returning the food to the mouth for rumination. Fermentation then takes place, by which much air is generated, and the distention soon becomes such as to suffocate the animal, unless relief is afforded by introducing an instrument named a probang, and letting out the confined air. As soon as this has been done, the air must be given, and the animal turned into a bare pasture, where she must be for some time attended, and have the fermenting food removed from the mouth as it is thrown up; without this precaution it may be ruminated, and again swallowed, and the third and fourth stomach so filled with it, as to produce the flatulent colic, and a fatal inflammation of the stomach and bowels, from excessive distention of the air, which would be generated, for in those cavities air could not escape upwards in consequence of their valvular structure. Should this fresh disorder, through negligence, be permitted to happen, the opening drench is still the best remedy that can be employed. Another method is sometimes made use of for relieving an animal in this disorder, which is commonly named *blown, bloated, or blasted*,\* that is, a sharp knife is plunged through the left side of the distended rumen, or first stomach, the part where it is most prominent is chosen, viz: between the last rib and the hip bone; and always on the left side. The air being thus completely let out, the wound is closed by a pitch plaster, and the animal turned into a bare pasture, where it may get plenty of exercise and little food, that is, after the fermenting food has been removed from the mouth as directed above. This method, however, is essentially injurious, and must be avoided, by that of introducing a probang, and letting out the confined air by the mouth; a method first proposed by Dr. Muir. The wound in the rumen, as it he, always adheres to the side, and thus a regular contraction of the cavity is ever afterwards prevented, and rumination thereby rendered difficult and imperfect. Sometimes when an animal is turned into good grass, especially about the month of August and September, when the grass is high and abundant, from having been well watered, they eat a great deal during both the day and the night, but not as much as to hinder rumination. Thus they gradually fill all the stomachs, and towards the morning become so oppressed, that they lie down on the cold grass, which is perhaps wet or covered with hoar frost. Distention is thus put a stop to, and the animal often succumbed by the excessive distention of the stomachs. In this disorder, which is commonly called fog sickness, the probang must

be introduced, and the opening drench given. The animal must then be made to move if possible, and the food that is thrown up into the stomachs be returned. Here, also, a bare pasture is necessary afterwards; but no medicine is required; but a free access to water is necessary to soften and carry off the accumulated food, and when this has been accomplished, the cordial astringent drench may be necessary, morning and evening, for two or three days, to restore the tone of the injured stomachs and bowels. It is probable, however, that this would be more effectually, though more slowly accomplished, by keeping the animal in a bare pasture.

Sometimes when the animal is kept in rich pasture during the month of June the appetite is powerful, and the digestion is quick and imperfect and thus, in a short time, so much rich blood is formed as to exceed the capacity of the blood vessels, and then inflammation is produced in some vital organs, and nothing but the most powerful detonic and blood purifiers will save the animals life. The lungs are the most likely to suffer, and next, the brain and the kidneys; producing mal staggers, or the inflammatory red water; and in steers or heifers, or in yearlings, the quarter ill is thus produced. In all cases of inflammation, the animal appears stupid and heavy; the breathing is disturbed; the nose and the upper lip hot and dry, the horns hot, especially at the roots, and the vessels of the eye distended. The pulse rises above 100, and the appetite is usually lost. All these symptoms quickly increase, and unless the animal is properly treated, terminate fatally. Bleeding is the essential remedy, and must be performed as early as possible. The quantity of blood drawn should not be regarded, but the effect which is produced by it, that is, faintness; this gradually ceases, and after a few hours he appears revived, and cheerful, and often devoid of any fever. But this must be given cautiously, the barest pasture is the best place for him; but he may be allowed now and then a quart or two of fresh whey, which will serve to unload the stomachs and bowels. This remedy (bleeding to faintness), always succeeds perfectly if employed in season, and I followed by a suitable diet. In the month of September and October, scouring often takes place, especially in animals predisposed to this disorder by hereditary weakness, frequent calving, weakness of the stomach and bowels, gradually induced from several winters feeding on bad hay. Animals that have been taken from their native soil and climate, are also subject to this disorder, as well as remarkably good milkers, and this is the period when scouring generally commences. In this case the cordial astringent drench must be given every morning and evening, as directed in the continuation, but must always be preceded by the opening drench, at whatever period the disease may occur. This remedy, I have reason to believe, will always succeed, if employed in season, and if the time of the year will admit of the animal being kept at grass.

In very cold and wet weather, when shelter becomes necessary, intervals of fair weather must be taken advantage of, for some grass, and some exercise are essential to recovery.\*

\* I have lately been informed that many scowering cows have been cured by giving once or twice a day a drench made by boiling three or four sheets of large common writing paper in three pints of skinned milk, reduced to a pulp. One pint of this is added, and my correspondent adds, that he has never known it to fail. The cow is fed on the sweetest hay, and turned out for exercise when the weather is fine.

and when grass is deficient, either in quantity or quality, the best food is good hay in moderate quantity, and mashes of good fresh bran with a little ground malt. A handful of wheat flour also may be stirred into each pint of water. In this way the animal may be restored and strengthened; and when grass becomes nourishing, and the weather favourable, the green fields will effectually recover her. Those are all the internal disorders of cattle, except the contagious epidemic, named murrain, or pest, and the epidemic catarrh, named distemper, or influenza. These are inflammatory disorders of the highest degree, and if not cured, at the outset always is, can be cured only by the most early copious bleeding. An absurd apprehension of fatal debility, and of the putrid nature of the disorder, must never prevent this remedy from being employed with boldness, nor should the animal ever be taken from grass, and the open fields, as is often done in the epidemic catarrh. Contagion, however, must always be guarded against with great attention, and the most efficacious antiseptics in those disorders, and bleeding and grass are the only remedies ever required.

I have now endeavoured to give a simple, but comprehensive view of the internal disorders of cattle, and such as may lead to their prevention. I judge a hope that the proprietors of cattle may be led by this, and the other essays I have written; to reflect upon the subject, and give a fair trial to the curative and preventive measures I have proposed. It should be recollected, however, that the success of the remedies I have suggested can be insured only by an early and careful application. Disorders are often neglected until they become incurable; and then the most absurd and expensive drenches are frequently had recourse to. In Downing's book on cattle medicine, a pint of port wine and a quart of strong beer are prescribed, as a tonic, and a vehicle for grains of paradise and other drugs; and in another receipt a quart of port wine is prescribed for one dose. Sometimes a choice is offered the reader between beer and urine, as if their properties were similar. The cordial astringent drench, including the beer, will cost about four pence; the opening drench is more expensive, and costs from a shilling to six shillings a pence. But an animal always sufficient the strong cordials given to cattle, or even the beer in which they are given, which is seldom less than a quart, may afford relief in some disorders, but they certainly weaken the stomach, and thereby increase the tendency to disease. The weaker the cordial the better, provided it be strong enough to produce the desired effect, and then it may be so regulated as to be innocuous. But on a remedy that effect more durable, and even permanent, in scouring cattle I have not yet known the cordial astringent to fail. Proprietors would find great advantage in directing the medical treatment of their stock themselves, and still more were they to attend carefully to preventive measures. Were the practice to become general of making hay in the early part of June, when the grass is in flower, it would go a great way in preventing the disease of horses and cattle. In the former animal the only other conditions required for the preservation of health, would be to give such hay with moderation, to work him fairly, and afford him such treatment as he has a just claim to, for all his disorders are occasioned by hard work, by excessive exertions and by feeding upon hay. The crop, when cut early, may be less in quantity, but this is abundantly compensated for by its superior quality, and the after grass would be infinitely better.

\* I have lately been informed that hoven or blasted cattle have been quickly relieved by giving four ounces of carbonate of soda, half a pint of castor oil, and a pint of water. The person who gave me this information, says that he has never known this to fail.