

In some cases a fungoid-looking bulging takes place in the wound. This is simply a swelling of the sensitive sole. It will disappear when the inflammation is allayed, hence caustics should not be used. When lameness has disappeared and the discharge has ceased, the opening should be filled with hot tar and tow, a leather sole put on to prevent entrance of foreign matter into the wound, and a shoe put on. As foot punctures of any kind are liable to be followed by *tetanus* (lock jaw) it is generally wise to get a veterinarian to give the animal an immunitive dose of anti-tetanic serum. When lameness occurs after an apparently harmless puncture, the seat of puncture must be located, an opening made for the escape of pus, and the case treated as above.

Pricks, or punctures in shoeing are of two kinds, viz., those actually penetrating the sensitive structures, and those where the nails not actually penetrating the sensitive parts are driven so near as to cause bulging of the inner layer of horn and pressure upon the sensitive interior, leading to inflammation and lameness, with suppuration. Many cases of lameness follow what are termed drawn nails; that is, the smith, finding that his nail has gone too near or even penetrated the sensitive parts, draws it out and drives it again, taking a more superficial hold of the horn. When the sensitive parts are punctured lameness is usually noticed at once, in other cases it will appear in a few days.

Treatment consists in locating and extracting the offending nail and treating as for other punctures. To locate the seat of puncture of any kind, it is often necessary to remove the shoe, then examine all parts of the sole and frog, by pressing with pincers. When the seat of trouble is pressed upon, the animal will usually evince pain by drawing the foot away. In paring and searching lame feet, care should be taken to avoid bleeding if possible, as this renders it more difficult to follow a spot of discoloration to its termination. When suppuration in the foot occurs from puncture or other causes, and an exit be not made through the sole, the pus burrows upwards between the sensitive and insensitive walls and escapes at the coronet causing what is known as quittor, which we may discuss in a later issue.

WHIF.

LIVE STOCK.

Dangers from Pasturing and How to Avoid Them.

When live stock is first turned to grass in the spring there are certain ailments which frequently cause unexpected losses. During the season other diseases may attack the animal and result in decreased gains, in a diminution of the milk flow or in death to the victim. Later when the weather becomes inclement and vegetation is touched by frost, digestive troubles are not uncommon and further losses are sustained. This is not intended to imply that the pasture season is one long period of disease and misfortunes for live stock. There is no season of the year when herbivorous animals are so free from ailments as when living according to nature's plan on nature's provision. But it must be remembered that horses, cattle and sheep are usually stabled during the winter and cared for according to man's way, which is not always the best way. Under these conditions the animal system is transformed or modified to conform to the environments and feeds provided. Often the animals lose tone; the digestive, respiratory and circulatory systems are not normal, the vitality and ruggedness are gone. At the advent of spring they are turned to grass; there is often a sudden change in the character of the feed, conditions are different, and live stock almost always, at least lose in weight until they become accustomed to their surroundings. Frequently the pasturing animal suffers from infection of some sort, which has harbored in the soil, and this form of contagion is indeed difficult to combat.

A stockman may enjoy several seasons' freedom from misfortunes of this kind, but there are few who can claim absolute immunity from them. It is well to consider these dangers and fortify against them in every regard, and furthermore he is wise who is prepared to meet them when they do appear.

A root-fed or silage-fed creature goes to grass better prepared than does the animal wintered on a ration lacking in succulent feed. The digestive tract in such a case is accustomed to the laxative effect of such fodder, and the bowels are more likely to move normally. A cattle beast which has been fed for months on dry roughage will often suffer from severe purgation on its first fill of green, sappy grass, and even though the animal survive, there will be a loss in flesh consequent to the scouring, which no stockman can very well afford. This phase of the matter must be considered during the seeding, in order that the proper crops may be grown for the succeeding winter's feeding. A few of the dangers incident to pasturing demand consideration at this time, for live stock must soon go out to grass. Let us study them in turn.

Bloat.

A common disease of ruminants on grass, as well as elsewhere, is bloat. A fruitful cause of this ailment in cattle is green feed of various kinds, as clover or grass, turnip tops, rape, etc., especially when eaten in a frosted or wet condition. This is particularly noticeable when the victim has been unaccustomed to green feed for a considerable time. Any kind

of feed that ferments easily if taken in sufficient quantities, is liable to cause an attack, as will sudden changes of fodder. It is these conditions which conduce to a disease, frequently fatal, that renders it necessary to exert a special oversight when the stock first go out.

Treatment in this case must be directed either to eliminate or neutralize the excess of gases and prevent their generation. In an ordinary case the administration of 2 to 4 ounces of oil of turpentine in a pint of raw linseed oil, melted butter or lard, or even sweet milk, will give relief in from thirty minutes to one hour. When no drugs are at hand, one-half cupful of baking soda or two tablespoons of carbonate of ammonia given in a pint of warm water, are often effective. It is also good practice to tie a stick or piece of large rope in the patient's mouth, as this facilitates the escape of gas. A piece of garden hose can often be used as a probary and passed down the gullet to the stomach of the patient. If the end of the probary does not happen to lodge in the solids contained in the stomach, gas will pass off. When a probary or instrument of this kind is used it will be necessary to insert a gag, having a hole through its centre, in the patient's mouth, to prevent injury to the probary and to the hands of the operator. When drugs fail to give relief, and death is likely to occur in a short time from results incident to bloating, the general practice is to resort to the trocar and canula with which the rumen is punctured, and the gas allowed to escape. This instrument, now quite commonly known, consists of a pointed spike about six inches long which fits into a metal tube one-quarter to one-half inch in diameter. They are stabbed into the rumen at the most prominent point, which is usually halfway between the point of the hip and the last rib. The spike is withdrawn and the tube is allowed to remain in place while the gas blows off. After this the tube is removed and the wound treated with a disinfectant daily until it is healed. It is usually well, after recovery, to administer a purgative of one to two pounds Epsom salts, and feed lightly for a few days in order that the stomach may regain its tone. The trocar and canula should be in every stable, or in some convenient place, for it is frequently required on a stock farm, and anyone with good judgment can use it.

Preventive measures should be taken in order to ward off attacks. Give the animal a good fill prior to being turned on to grass or clover, and introduce them to the pasture when it is dry. If convenient it is well to have a small stack of dry hay or straw accessible to the stock. They relish it when their feed is sappy, it dulls their appetites, and absorbs the excessive moisture of the watery outdoor rations.

Inflammation of the Lungs.

Exposure to cold while the animal is yet warm or hot often results in inflammation. When the herd is driven any distance to pasture they should be given time so as not to arrive in a heated condition, for a warm tired creature will frequently lie down when once in the field. A dry spot is not always selected either, as a cold, damp place is more comfortable for the beast with a high temperature. An attack of inflammation is first evidenced by the shivering of the animal, and then a fevered condition. The patient is hot, then cold; the pulse quickens, ranging from 60 to 70 beats per minute. The animal does not eat, stands up much of the time with head dropped, and the ears lopping. Constipation follows, and the temperature rises gradually until it reaches 105 degrees.

The patient should be made as comfortable as possible, and well blanketed, while the legs should be rubbed and bandaged. A veterinarian should be called to advise and treat, for the disease is frequently fatal and requires professional attention.

Indigestion.

Sometimes on account of an abundance of old, dry grass, and the cold, wet nature of their rations in the spring, cattle suffer from attacks of indigestion; sometimes the digestive system is in a run-down condition, and the wet, dewy grass will cause trouble. If bloating results administer the oil of turpentine as advised for bloat and follow with a tonic, consisting of one dram each of sulphate of iron, gentian, ginger and nuxvomica, two or three times daily. If the trouble persists it will be necessary to remove the patient from the grass field and feed on good clover hay, roots and bran, until recovery is permanent.

Foul in the Feet.

Cattle are not infrequently afflicted with sore feet that are a great detriment to thrift and gain. The particular ailment to which we refer is known as foul in the foot. It occurs in the fore and hind feet, chiefly, however, in the latter, and the patient suffers considerable pain. Often the animal will not bear the foot on the ground, and severe lameness is the result. The legs swell, the feet break out between or above the clouts and discharge a fetid matter. Veterinarians claim it is caused by standing in, or walking through irritating substances, such as liquid manure, swampy land, rushes, etc. When the barnyards are bad in the spring, foul in the foot is liable to occur, but we have seldom seen a case in the winter when stock is often standing in manure in the stable. The circumstances connected with most cases indicate that the contributing causes are found chiefly in the soil, and perhaps these are vitalized or made more vigorous when coming in contact with manure,

or liquid manure. It is also apparent that cattle coming to the yard or stable daily are more subject to attacks than those members of the herd which remain afield. It is not a common ailment in cattle beasts which are pastured on dry uplands, but when the animals are obliged to cross through swamps, or subsist on the vegetation of low-lying land, outbreaks are not uncommon.

It is not easy to correct the conditions on a farm or pasture field which contribute to the attacks of foul in the foot. However, if the live stock can be admitted to the stable without being obliged to wallow through the deep mire of a dirty barnyard, it might prevent some casualties. If it is apparent that a swamp or low-lying piece of land in the pasture is inimical to the health of the herd, it could be isolated from the remainder of the field by fencing. Besides taking the precautions mentioned, little can be done to prevent cases of this trouble. It is obvious, however, that it will not be wise to rent pasture in a field that has maintained diseased animals, not that the ailment is contagious in the general sense of the word, but because the soil or surroundings are probably such that further outbreaks are likely. The remedy for foul in the foot is simple, but recovery is often slow. The first move is to put the animal into clean, dry quarters, or into a dry pasture field, and cleanse between the clouts by bathing with warm water. Then apply hot linseed poultices until the acute soreness subsides. After which apply, two or three times daily, a fairly strong solution of some good disinfectant. If proud flesh forms apply butter of antimony, once daily with a feather, for two or three days. Sometimes it is necessary to cut away a part of the hoof to allow the escape of pus and render treatment practicable.

Black Quarter or Blackleg.

Black quarter or blackleg, as it is sometimes known, is the cause of considerable loss in Ontario and elsewhere. It is an infectious disease produced by a parasite which lives and propagates in the soil of infected districts and the bodies of diseased animals. One affected animal will not transmit the disease directly to another. It usually gains entrance to the system by entering a wound in the skin, or mucous membrane of the body, or at the mouth while grazing. Animals over two years of age seldom suffer from attacks. In diseased areas recourse is had to a vaccine distributed by manufacturing chemists, and by the Veterinary Director General's Department, at Ottawa. A suspected case of black quarter should be at once reported to the Veterinary Director General, or one of his representatives, as outbreaks of this disease require organized efforts to combat them. In some counties of Ontario, quantities of vaccine are being procured this spring with which hundreds of young cattle will be treated. It would be well to have all suspicious cases investigated so inoculation or vaccination can be practiced before it is too late. The disease is characterized by the appearance of large swellings on various parts of the body, usually on one of the upper portions of the legs, and never below the hock or knee joints. These swellings vary in size, and are formed by the presence of gas collected in the tissue beneath the skin. When the hand is passed over one of these swellings a peculiar crackling sound can usually be heard. When punctured they emit a bloody fluid possessing a disagreeable and sickening odor.

Pasturing Swine to Reduce Costs.

Hog prices swing like the pendulum, sometimes to one side, sometimes to the other. One vibration to the side of high prices may and has reached \$11.25, country points. In the fall of 1914 it swung the other way, as many will still remember. If one had stocked up two years ago and had managed carefully in the meantime, some profits could have been credited to the swine, for the trend in prices has been upwards. To disperse the herd in 1914 and re-stock in 1916 would mean considerable loss. Farmers should not dabble with pigs. Too many dabble in when prices are high and dabble out when they are low, hence the fluctuation in prices. A man in Lambton County, Ontario, who keeps two or three brood sows every year recently said to the writer: "There are not many farmers who like a hog, but they should all keep a few." This system would do away with the speculating or gambling element associated with hog raising, for the prices would be more constant. The most money is made out of hogs by those who keep a few brood sows annually whether the price of pork is high or low. If they make additions it is usually during a depression, in order to be in on the ground floor when the next peak in prices recurs, and the experiences of the last quarter century show that good prices follow bad prices, or bad follow good, whichever way one wishes to look at it.

Conditions influencing the present high prices are somewhat abnormal, and no one knows how long they will exist. So long as the war continues prices will probably remain high, and perhaps after the conclusion of the conflict there will be such a demand for breeding stock in the war-devastated countries of Europe that the demand will still be keen. However, no one has the conceit or the audacity to predict hog prices in 1917 or in 1918. The proper method to pursue is to keep one, two or three brood sows on every farm, and to keep them and their get in such a way as to make good bacon hogs at the least possible cost. This necessitates some feasible means of pasture through the summer, for all swine raisers agree

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