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THE FARMER'S ADVOCATE

erable energy to raise the temperature of the water to that of the body and an excess means waste of food.

Pulped roots have no substitutes in the feeding of the calves and young cattle. Mixed with silage and a little grain, they make about as good substitute for pasture-grass, as far as succulency is concerned, as winter-feeding affords.

Did your fall litter come into the world in a nest of leaves in the woods, where the sow was "beech-nutting" for a living? Not the best con-ditions for sow or litter. Young pigs suffer greatly from cold rains and early snow, and should by all means be comfortably housed.

The old sow may yet be more valuable as a breeder than as dressed pork. Many of the goodbreeding sows in the country are fattened up and slaughtered just at the time they are coming to their best as breeders. An old sow tried and proven is more reliable than a young one untried. Older sows are usually better breeders than the very young sows.

Housing of the cattle is an important item in the economy of beef-production. The Farmer's Advocate and Home Journal of Winnipeg' says : The Farmer's The almost universal complaint that there is no money in beef cattle is due to the fact that the most expensive means of rearing and housing the cattle is employed. Profit will be made not alone by increasing growth or feeding capacity but in cutting down the overhead charges.

Foot Rot in Sheep.

The first indication of foot rot is a certain degree of lameness in the animal. If he is caught and examined, the foot will be found hot and tender, the horn softer than usual, and there will be enlargement about the coronet, and a slight separation of the hoof from it, with portions of the horn worn away, and ulcers formed below, with a discharge of thin foetid matter. The ulcers, if neglected, continue to increase; they throw out fungous granulations, and separate the hoof more and more from the parts beneath, until at length it drops off.

All this is in consequence of soft and marshy pasture. The mountain or the down sheep, the sheep in whose walk there is no poachy ground, if he is not actually exposed to infection by means of the poisonous matter, knows nothing at all about it; it is in the yielding soil of the low country that all the mischief is done.

Before proceeding further it is necessary we should understand the composition of the foot which presents a structure and arrangement of parts well adapted to the natural habits of the animal. It is divided into two digits or toes, which are shod with a hoof, composed of different pants, similar in many respects to the hoof of a Each hoof is principally composed of the horse.

crust or wall, and the sole. The crust extending

greater hardness of the ground, the hoof was worn down as fast as it grew; but on its moist and new habitation, the hoof not only continued to grow, but the rapidity of the growth was much increased, while the salutary friction, which kept the extension of the foot within bounds, was altogether removed. When the nails of the fingers or toes of the human being exceed their proper length they give him so much uneasiness to induce him to pare them, or if he neglects the opertion they break. If he pares them after they have broken, the inconvenience soon ceases and the wound heals. When, however, the hoof of the sheep exceeds its natural length and thickness, the animal has no power to pare them down, but there long continues a wound, irritated, and induced to spread, by the exposure of its surface, and the introduction of foreign and annoying matter into it.

The different parts of the hoof, likewise deprived of their natural wear, grow out of their proper proportions. The crust, especially, grows too long; and the overgrown parts either break off in irregular rents, or by overshooting the sole allow small particles of sand and dirt to enter into the pores of the hoof. These particles soon reach the quick, and set up the inflammation already described and followed by all its destructive effects.

There is another circumstance which tends to produce disease in an overgrown hoof. The length to which the crust grows changes completely the proper bearing of the foot, for being extended forward, it takes the whole weight of the superincumbent parts. By the continual pressure on this lengthened part, inflammation cannot fail to commence. The progress of the disease is not equally rapid in every instance; sometimes it goes to a certain extent, and the foot to a considerable degree recovers. All the feet may not be equally affected ; the fore-ones, however, are always the most liable to disease, on account of the additional weight which they carry. Sometimes there is only one foot affected, and that is sure to be a fore-one : sometimes only the hoof of one foot and occasionally one speedily heals while the other continues to get worse and WORSe

In the first stage of the disease there is often found nothing but a little over-shooting of the edge of the crust, and which is bent in upon the sole, or the edge of the crust is forced asunder from the sole, and a wedge of earth is introduced which presses upon the sensitive substance beneath; but at other times the edge of the crust continues to grow until it envelopes the whole of the sole. It is seldom that there is inflammation enough excited to throw off the whole hoof at once; but it separates at different parts, and at each part of separation there is a new horn formed ; this, although soft and unhealthy, and not capable of sustaining pressure, covers, and to a certain degree, protects the sensitive parts beneath. By degrees, from increased and long continued irration, the parts are no longer able to secrete even this weak horn, but small lumps of proud flesh sprout out, and then the work of detruction proceeds in earnest.

This is the usual progress of the disease, but other times inflammation seems to be set 110 at once over the whole of that division of the foot; and there is considerable swelling about the coronet, matter is formed, it breaks out, sinuses or openings run in various directions, and the whole of the hoof is gradually detached. The upper part of the space between the hoofs becomes inflamed and swelled, the whole of the inner surface of the pasterns is sore and raw; ulceration commences, it eats deeply, spreads on every side and upwards-and the toes are separated from each other almost to the opening of the biflex That canal becomes inflamed-proper incanal. flammation of it is added to that of the sensitive parts beneath the hoof-the mucous follicles which it contains pour out a large quantity of tallowy matter, which flows over the fore part of the foot and between the hoofs, and assists in the accumulation of filth by its adhesiveness.

lution made by mixing together equal parts of chloride of zinc and common hydrochloric acid. The diseased horn should be carefully cut away without bleeding; then the fungous growths are to be freely moistened with the caustic, after which a dressing of tar is sometimes best applied, though this is not considered absolutely necessary.

Paring and dressing require to be repeated at least once a week for a time. Where a large number of animals have to be dealt with, the method of driving them through a shallow trough in which a strong astringent solution is placed is sometimes adopted. Yet this is of no use if the feet are not cleaned and pared. The solution, which should not be more than one and a half inches deep in the trough, may consist of one pound of blue vitriol dissolved in one and one half gallons of water.

Whatever dressing is used the sheep should not be turned onto wet pasture or soft land immediately alterwards, but kept standing for a few hours in a dry yard or shed, the floor of which might be covered with lime or mortar. In addition to the treatment of the hoef itself, it is always well to give the following internally

Common salt, one dram; sulphate of iron, half a dram; nitrate of potash, half a dram; mix and give once a day.

In serious cases where the deeper structures of the foot have become infected, the foot should be thoroughly cleaned and there should be inserted between the digits or claws, pieces of tow previously soaked in the dressing.

An old favorite dressing among English shepherds consists of sulphate of copper combined with turpentine and lard, the proportions being : sulphate of copper, 1 oz.; turpentine, 1 oz.; lard, half pound.

The sulphate of copper acts as an astringent, and restrains the formation of excessive granula-tions, which some folk call "proud flesh."

Foot rot is indirectly contagious. Any cases of lameness should straightway be looked into. England. G. T. BURROWS.

Some Disease Determinants.

Stock breeders and feeders must ever be on the alert to prevent disease, and occasions often arise where it is necessary to have considerable knowledge in order to be able to diagnose a case properly, and to determine its severity as well as to practice curative treatment. Hoard's Dairyman recently published a report by Dr. Chas. D. Folse, of the Missouri Valley Veterinary Association meeting at which methods of determining some of the common troublesome diseases were fully discussed.

Demonstrations of the ophthalmic (eye test) and the intradermal tests for tuberculosis, diag nosis of hog cholera, the use of anti-hog cholera serum, and discussion of the so-called cornstalk disease, constituted the features of the meeting.

Interest centered in the tuberculin demonstra tions, and it is probable the results obtained will mean that the intradermal method of testing will within a short time become the official method over the whole country, because of its simplicity and inexpensiveness.

ers know, the temperature As all stock own method of tuberculin testing now in use entails the expenditure of about two days' time which occasions considerable burden to the stock owner, who is compelled to submit to it to ship stock interstate or across the border. Temperatures must be taken at three-hour periods for nine hours before the injection of the tuberculin. Be ginning at the ninth hour after injection, temperatures must be taken at two hour periods until the twentieth hour. A difference of two degrees between the maximum temperature before injection, and the maximum temperature after injection constitutes a reaction or positive evidence of tuberculosis. From this it is readily seen the temperature test is burdensome and expensive.

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water considalong the outside of the foot, round the toe, and turning inwards, is continued about half way back between each toe on the inside. The sole fills the space of the inferior surface of the hoof between these parts of the crust, and being continued backwards becomes softer as it proceeds, assuming somewhat the structure of the substance of the frog in the foot of the horse, and performing at the same time similar functions. The whole hoof, too, is secreted from the vascular tissue underneath.

Now this diversity of structure is for particular purposes. The crust, like that in the hoof of the horse, being harder and tougher than the sole, keeps up a sharp edge on the outer margin, and is mainly intended to resist the wear and tear to which the foot of the animal is exposed. The soft pasturage on which the sheep is occasionally put presents little, if any, of that rough friction to which the feet of the animal is naturally intended to be exposed. The crust, therefore, grows unrestrained until it either laps over the sole, like the loose sole of an old shoe, and serves to retain and accumulate earth and filth, or is broken off in detached parts; in some cases exposing the quick, or opening new pores, into which particles of earth or sand force their way until, reaching the quick, an inflammation is set up, which, in its progress, alters or destroys the whole foot.

The finest and richest old pastures and lawns are particularly liable to give this disease, and so are soft, marshy, and luxuriant meadows. It exists to a greater or less extent in every situation that has a tendency to increase the growth of the hoofs without wearing them away.

Sheep that are bought from an upland range of pasturage are more particularly subjected to it. This is very easily accounted for. By means of the exercise which the animal was compelled to take on account of the scantier production of the upland pasture, and also in consequence of the

Professor Brow, an eminent Scottish agriculturist recommends a very effective caustic soThe ophthalmic test consists in introducing a small quantity of tuberculin into the eye of the animal to be treated. This is accomplished by making a dilution or salve of it. Within eightteen hours afterward, if the animal be tubercular.



Ottawa Winners. First-prize pen of Oxfords, at Ottawa, 912. Owned by E. Barbour, Erin, Ont.