

SHEEP AND COLD

Chills Produced by Evaporation When Fleeces Have Been Wet by Cold Rain. Spinal Meningitis.

The sheep is one of the most susceptible of all animals to cold, says The American Sheep Breeder. Its fleece is a sponge, in fact, and after a cold rain it becomes saturated with the water, which, evaporating by reason of the warmth of the body, causes intense cold by the heat abstracted in the drying up of the moisture. This cold affects, then, the most susceptible and tender part of the body, which is the back, along which the great nerve, the so-called spinal marrow, runs. The cold chills this nerve and produces a disastrous effect upon it, the result of which is to cause inflammation of the covering of the nerve, and this is very apt to spread to the brain. This causes that serious disease known as meningitis, or myelitis, and this is one of the most frequent diseases by which the flock is affected. The name meningitis is derived from the word meninges, which is the name given to the membrane covering the substance of the spinal nerve, or cord, and the brain as well, and while it is a serious disease so far, it becomes worse when the substance of the cord or nerve itself is involved. This is one of the most common diseases of the sheep. It causes convulsions of the limbs, and the animal is unable to stand and falls with the neck and head drawn back or to one side or when it is seized with fits of trembling or stands with the head resting against a fence or a wall. In the more serious form of this disease, as when the brain is also affected, there are trembling and cramps all over the body, difficulty of swallowing and complete inability to stand, and the animal falls on its side with outstretched limbs, which are extended and incapable of movement. Of course, as the great spinal nerve controls the action of the digestive organs, the appetite fails, and nutrition is stopped. Thus the disease is almost always fatal after a few hours or it may be, days, the vital organs all being more or less involved. The disease is recognized, it becomes the part of wisdom to prevent it by every precaution possible. The most effective way is to prevent it by taking care to protect the most sensitive part of the body from the cold and waste of vital heat and force by the abstraction of warmth due to the evaporation of the moisture held in the fleece. This acts as a spongy blanket on the most sensitive part of the animal and, chilling the body, paralyzes the nervous action and produces serious inflammation. It goes without saying that disease of this kind is to be prevented by taking requisite precautions and protecting the flock from undue exposure, especially at this time of the year, when cold rains are to be expected.

In some countries it is the custom to protect the sheep by waterproof jackets, fastened to the fleece over the loins, or to spread the wool along the back so as to draw the water from the sheep. Dry cold has no such effect as the wet has, for the evident reason that a dry fleece is a safe and effective protection from it. It is the wet that sinks to the skin and is there evaporated by the heat of the body. This takes the heat from the skin and causes intense cold. One may easily understand this effect by dipping the hand in, even, warm water and blowing on it, does excessive cold, due to the drawing of the warmth from the skin to change the water into vapor. This waste of heat is enormous, for to produce evaporation on the body requires the expenditure of nearly 1,000 degrees of heat, while it needs only 180 to make water boil. Thus there are 5 1/2 times the quantity of heat taken from the sheep's back by the drying of a wet fleece as would be required to make this water evaporated. The ill results of this chilling may thus be easily recognized.

**Winding Horses.** Visitors who have attended the sales at the Chicago market have been astonished at the thrilling exhibitions of speed in "winding" horses. The trials usually occur on the National Horse Commission avenue and frequently result in sensational accidents. The buyer is entitled to have his purchase wound. The animal is hitched to a cart and driven up the avenue and then run at top speed for an eighth of a mile, which determines if its wind is good. The double teams are harnessed to a heavy truck and the wheels blocked, and a young Hercules with voice and whip urges the horses to their utmost pace. The spectacle is as exciting as a fire department outfit rushing at top speed to a conflagration. In these exhibitions a nervous team occasionally gets beyond control of the driver, and a serious accident results. Horses that under ordinary conditions are perfectly tractable in these trials frequently become unmanageable to imminent danger of life and limb of the driver. Commission men should wind a young, nervous horse with a steady, well broken animal, and accidents would then be avoided.—Drovers' Journal.

**Shropshire Sheep.** The spread of the Shropshire sheep is, among the most remarkable features of the latter day live stock trade. Its rapid growth in popularity and wide spread dissemination in this country do not find parallel in the history of the other varieties of stock, and its fame has spread to far-off countries.—Breeder's Gazette.

SHEEP AND STEERS.

Changes in Range Conditions in the Far West.

While the cattle business under the influence of an increase in value without doubt in a prosperous condition, it must be admitted that its ancient glory has passed away, says a correspondent of The Breeder's Gazette. The railroads, the homesteader, the irrigating ditch and the constantly rising tide of emigration are rapidly destroying the better parts of those rich public ranges which once furnished sustenance for millions of head of cattle and large profits to the cattle baron. During the reign of the gold era the great plains offered an almost limitless expanse of grazing room, and, though the common domain might be designated as a desert, it was thickly interspersed with oases which never left the wandering herds without abundant reserves of food, save when an unusually severe winter buried even the tallest grass beneath a mass of thickly crusted snow. Then it was that thousands of head starved to death, and their bones still whiten hillside and plain. But these occasional losses mattered not to the cattle baron, for the natural increase of his herds, the nominal cost of grazing them and the high price of beef made them of little consequence in the casting up of accounts one year taken with another. But these richer pasture lands, lying as they did along the alluvial valleys, were the very ones to be taken up by the settler, and railroads, too, have a peculiar weakness for skirting the river lands, laying out tempting sites and offering unusual inducements for the incoming of the thrifty emigrant. So the great ranges have been broken up, and the herds perforce have been pushed back upon what might from a purely agricultural standpoint be classified as waste lands. Even these in many instances are of a limited extent and are not calculated to furnish a substantial and unvarying supply of forage when an occasional drought, followed by a hard winter, is taken into account. As a consequence the big herds have been cut up into small ones, cattlemen are securing doled lands, which are being fenced and the bottom lands turned into hayfields to supply hay for winter feeding, while many of the old rangelmen are turning their attention to feeding beef for the market.

**Hinies.** The cross of a jack on a mare produces the hybrid known as a mule, and the product of the reverse cross is known as a hinny. A very interesting illustration is presented in The Breeder's



Gazette of a pair of hinies. The predominant influence of the sire is clearly seen in these two hybrid crosses. The mule always reveals in head and ears the characteristics of the jack, while the hinny takes after the horse in this respect. The sire of the hinies is a pure bred Shetland pony, a bay weighing 500 pounds and bred from stock that came from Woodburn farm, in Kentucky, and the dam is a Mexican jennet. One is a black yearling weighing 400 pounds and the other a 2-year-old weighing 544 pounds. The



breeder of these curiosities—for they are little if anything less than that, so rare is the cross of the stallion on the jennet—is W. C. Meyer, Ashland, Or., and he states that they are the only ones of such breeding on the northwest coast. They are broken to harness, and he writes that they show a kind disposition and good action and promise to make a fine family pair.

**Bone Dust in Stock Raising.** Bone dust, known commercially as "poudre d'os verts," used in feeding experiments, is made from bone dried in the open air and not heated chemically. In a feeding experiment with this a calf about 5 1/2 months old was given a daily ration of about 1 1/2 pounds of skim milk, 3 1/2 pounds of oats, 3 1/2 pounds of hay and 3 pounds of mangles. On this ration it increased nearly 50 pounds in 24 days. To this ration were then added about four ounces daily of bone powder, and in the next 24 days the calf increased in weight 80 pounds, a gain of 30 pounds in 24 days obtained without change of ration beyond the addition of a total of 5 1/2 pounds of bone powder, which cost 3 1/2 cents. The bone dust is said to promote digestion and assimilation of the food and to favor the formation of flesh and fat.—Philadelphia Ledger.

BETTER MILK.

Growing Demand for Cleanliness and Willingness to Pay for It.

It is gratifying to observe the marked improvement now being wrought in the handling of milk for human consumption, says The Breeder's Gazette. Until recently no common article of food was so universally filthy as milk. Rarely was a combination found by the student of this problem where the cows were healthy and fed with wholesome food, the stables clean and well ventilated, milkers neat and tidy and the vessels thoroughly scalded each time they were used. Milk produced in the country for city consumption was fairly wholesome, but that produced in cities or in their immediate vicinity was usually of the vilest character, because the trade, as a rule, was in the hands of ignorant foreigners who kept the cows in filthy, dark sheds and fed them upon the waste products of breweries, distilleries and vineyard factories, the putrid masses of which were often disgusting in the highest extreme.

American enterprise is at last getting hold of the milk supply in many quarters, and the improvement is already quite marked, though it is growing far less rapidly than it should for a reason which will only be believed by those who have carefully studied the subject. It is a surprising fact that as yet no large part of city consumers stand ready to demand pure milk and pay that price for it which cleanliness and healthfulness make necessary. Some years since an Omaha paper sent a reporter out to examine the milk supply of that city, and it was found that a majority of the dairies about the city were extremely filthy as to cows, stables, milkers and utensils. The reporter, however, secured a supply of production to distribution and was surprised to find that wagons from the filthiest dairies circulated freely along the most aristocratic avenues and that the milk they carried was left at the back doors of the finest residences. On consulting the producers he was told that the rich people were unwilling to pay fair prices for good milk, and that the poor people were unwilling to secure their milk at a lower cost, rarely making any inquiries as to its purity and wholesomeness. The one object always was "one more milk ticket for a dollar." Some German ladies figured out how many hundred pounds of cow manure are consumed daily by the residents of Berlin, and it would not be difficult for any person who has looked into the matter a little to make a similar calculation for a city like Chicago. People who will lose their appetite for breakfast at a soiled napkin or a speck of dirt on their plate will not be likely to buy milk drawn from a bottle or picher containing a sediment that advertises itself and drink this mixture with equanimity, even though the last drops in the glass be the other way. Not one of these steps to inquire if the milk he drinks is a germ grower or simply loaded with ordinary stable filth.

Nor does this statement cover the whole of the matter. A little to often not only dirty, but it is drugged with chemicals which threaten the health of the user. Salicylic acid, boracic acid, formaline and other slow or active poisons are now freely used by milkmen, especially during the summer season, to prevent milk and cream from souring. Dirty milk sours much more quickly than pure milk, and the producer of some contaminated products gets even with his more conscientious competitor by throwing in a handful of drugs and then showing the buyer that his milk will keep sweet even longer than the other. The buyers of such milk take with each glass a quantity of drugs which would surprise them, and these materials are swallowed along with the filthy milk by infants and the young of the doctor's care, the physician rarely knowing or realizing that he has a competitor in the drug line in the family milkman.

**Dairy Butters.** At the Indiana state fair the best tub of creamery butter scored 90 1/2 points, while the best 15 pounds of dairy butter scored 97 1/2 points and the best five pounds of dairy butter scored 98 points. This may be taken as evidence that those who will take the necessary care to have their milk clean, from healthy cows fed on wholesome food, can handle it so as to make a better product than the average creamery that receives milk from so many patrons, some of whom seem to think a good butter-maker should be able to make good butter from almost any material they may furnish him. While we are willing to admit that there is much dairy butter which is very inferior to the average product of the creamery, there is some that is much better. The trouble with dairy butter for the dealer and consumer is that such as scores 97 or 98 points does not often reach them. There is usually a home market for it, which keeps it from the general market. The dairymen who have such a market find it more profitable than to supply city dealers.—American Cultivator.

**Two Kinds of Thinness.** To have a cow thin by giving large quantities of milk from good feeding and to have her thin for lack of food are two entirely different conditions. In the one case she is strong, vigorous while in the other she is faint and weak and gives but little milk.—Tennessee Farmer.

**Little Salt and Much Work.** Neglecting to salt the cows regularly makes the milk hard to churn.

GLASS HOUSES.

The Uses the Farmer Can Make of Them—The Cold Grasper.

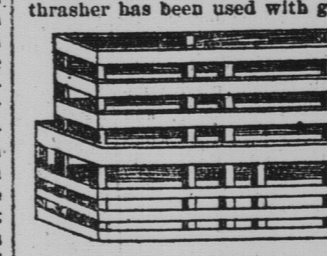
The use of glass houses for growing plants, flowers and vegetables of all kinds is far more prevalent than it was 40 or 50 years ago. Then hot-houses, or greenhouses, as they were generally called, were almost exclusively the luxuries of the very wealthy. Next they were taken up by nurserymen and gardeners to forward a small portion of their crop or to carry on operations during winter and produce more sets for spring planting. Now the greenhouse with steam heat is becoming recognized as one of the most important and best paying adjuncts of every farm whose owner has the skill and industry required to run it. The greenhouse opens a new field of industry. It provides interesting, constructive and profitable employment during months when farm operations consist only in the feeding of stock and the consumption of a large part of what the farm has produced during the summer.

It does not cost nearly so much to put up glass houses now and fit them out with steam heat as it did a generation ago. The creation of such an establishment on any farm must add far more to its selling value than the cost, and the farmer must be indeed a poor manager if he cannot by its use forward the vegetables he will himself grow and sell much more each year than all the cost of keeping it in operation. Besides, there is the luxury of maintaining a bit of summer with all kinds of green things growing for wife and little ones to enjoy while cold and snow prevail outside. There is hardly anything that very little children wonder at more or are more pleased with than to go from a cold outside winter's day into a greenhouse where the air, though moist, is kept at summer heat.

Glass is now made so cheaply and greenhouses are so little expense that they are profitably used for growing many things for market that were formerly grown out of doors. All the best foreign varieties of grapes are grown by some of the leading nurserymen in cold grapes, where no heat is used, and the vines are ready during the winter just the same as they do out of doors. But under glass in the cold grape the buds will start several weeks earlier than they can in the open air. The grapes will not be chilled at night by dews, as they are out of doors even during most of the summer months. Hence they will ripen without mellowing the foliage or having the fruit attacked by fungus.

In concluding the foregoing suggestive article The American Cultivator says that to some extent the growers of native grapes are taking a hint from the grapes under glass, and if a native vine is trained so that some of its fruit is ripened under a protecting awning, such fruit will be much finer and better than it ever can be under the open sky of the vine that are not thus protected.

**Handling Corn Fodder.** No other grain is so well adapted to the requirements of the cattle feeder as cheap corn, and for roughness there are few feeds equal to corn fodder. A Canadian says in the Ohio Farmer that in preparing the corn crop for feeding cattle the common small grain thrasher has been used with good success.



**FEED RACK FOR SHREDDED FODDER.** The shredded fodder as it comes from the machine is run directly into a pen or rack right in the feed yard and large enough, as a rule, to hold a day's rations, say 10 by 24 or 16 by 32 feet. A sort of manger is made around the rack, into which the fodder passes through an opening at the bottom of the rack, as illustrated.

**A Timely Hint.** The month of November and so much of December as may not be very cold are times when sheep need shelter from cold rains and winds. They endure a great deal of dry cold, but when wet to the skin they do not easily get dry again, and the chill will lower vitality. If it does not cause disease, remarks American Cultivator.

**Agricultural Brevities.** The "abandoned farm" bids fair to become extinct in New England. According to latest reports, Connecticut's cheap farms are being absorbed, though at low prices. The acreage in the last official list of farms for sale is much reduced from the original statistics. Commenting upon this, however, an exchange says it does not necessarily indicate a revival of "hard fast" farming. Much land is taken up by summer residents, "fancy" farmers, fish and game syndicates, etc.

The New England Homestead reports the cranberry crop as liberal, on the whole, though unevenly distributed. The outlook for prices is moderately encouraging, with the amount of the total available supply against fancy quotations.

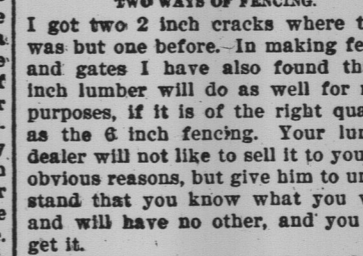
A meeting of the American Beet Sugar association at Omaha is announced for Dec. 5. The question of opposing any reduction in the protection which the government now affords the industry will be considered. Concerning the plan of setting poor people to growing potatoes on vacant city lots, The Country Gentleman says the work has been a good one and is of promise in a most desirable direction. The interesting of poor people, unable to make their own living in the city, in agriculture.

FARM AND GARDEN

FIGURING ON FENCING.

Cracks Cost Less Than Lumber—The More Cracks the Less Lumber.

I was once figuring on building a corn crib, says an Iowa Homestead writer. In figuring the lumber it occurred to me that cracks in a crib were essential and that they did not cost as much as lumber. The more cracks I had the less lumber it required to enclose the crib. I built it out of 2 inch fencing, which was obtained by taking the 6 inch stuff to the planing mill and having it ripped. From a 6 inch board



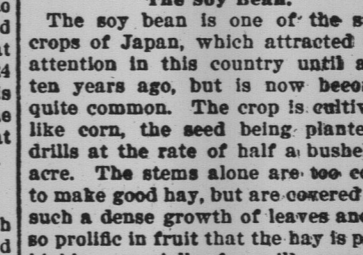
I got two 2 inch cracks where there was but one before. In making fences with gates I have also found that 4 inch lumber will do as well for most purposes, if it is of the right quality, as the 6 inch fencing. Your lumber dealer will not like to sell it to you, for obvious reasons, but give him to understand that you know what you want and will have no other, and you will get it.

Here are two panels of fence. One is made of 4 inch lumber with two wires, and the other of 6 inch fencing. There are four laches at the bottom for another wire, if needed in each fence. It will be found that there is a saving in lumber in the 4 inch fence, and it is about the same height and of the same utility. Figure this out and see the saving.

**Wine Without Grapes.** "Thanks to one of the latest discoveries of science, we are now able to make excellent wines of various kinds without resorting to the grape," said an expert of the department of agriculture. "Take a sip of this and tell me what you think of it." "It's sherry, and good stuff, too," murmured your correspondent. "Apple juice, nothing but apple juice," replied the professor. "Now try this."

"Apple juice again. Now this." "Sauterne, of course." "Apple juice once more," said the professor. "These wines, all of them, are made by fermenting apples. We merely substitute apple juice, which serves equally well as a basis, add to it a small quantity of the same species of germs, procured directly from the Spanish vineyards, and, lo! we have sherry wine, possessing the true flavor and aroma. There are concerns now in France and other parts of Europe that make a business of propagating the yeasts of various kinds, and rendering them up in hermetically sealed bottles for such uses."—Washington Post.

**The Soy Bean.** The soy bean is one of the staple crops of Japan, which attracted little attention in this country until about ten years ago, but is now becoming quite common. The crop is cultivated in the soil, the seeds being planted in drills at the rate of half a bushel per acre. The stems alone are too coarse to make good hay, but are covered with such a dense growth of leaves and so prolific in fruit that the hay is prized highly, especially for milk cows and for fattening animals. The yield of



SOY BEAN—LEAVES, FLOWER AND POD. Green forage is heavy when grown on good ground, and the yield of beans is usually from 20 to 30 bushels per acre. Those who have had most experience with this crop find that the best way to handle it is to cut or pull the plants when the first pods begin to open and thrash as soon as dry enough. In this way the coarse stalks are so broken in pieces and mixed with the leaves and immature fruit that nearly all will be eaten. It is doubtless one of the best of the legumes for the silo, as it can be more easily handled for the cutter than plants like clover or cowpeas. There are a number of varieties, differing mainly in the time of ripening and the coloring of the seeds.

What a first class asparagus bed needs is a 3 inch coat of rich manure every fall.

TRUTH IN HORSE TRADING.

A Western Court Decides Against a Common Form of Lying.

The appellate court of Indiana recently handed down a decision in a case that grew out of a horse trade and that is interesting to every one who may desire to purchase a stallion, says The Horseman. Two breeders made a trade by which they came into the possession of a stallion represented, or, rather, misrepresented, by the vendor to be standard bred and registered. The purchasers, relying on the statements made, took the stallion home and proceeded to stand him for public service, publishing the pedigree as warranted to them and apparently being quite satisfied as to its genuineness. Later they discovered that they had been imposed on and attempted to make the vendor take back the horse and return that which he had received for the animal.

The vendor resisted this, giving as his reason that the purchasers knew perfectly well that the horse was not as represented, that they were well posted on breeding and the register and that they knew quite well at the time that the horse was not as represented. The vendor further stated that it was only a horse traded anyway and that what he got was not a bit nearer being right than what he gave. The purchasers stoutly denied this contention, claiming that they believed what was told them about the stallion's breeding and, relying thereon, took him home and stood him for public service under the pedigree warranted them. As soon as it was discovered that the horse was not straight all their patrons by the preferred claims against them for damages, and altogether their business was plunged into a state of chaos that meant serious financial loss to them. The court held, in rendering its decision, that the fact that the purchasers stood the horse for public service under the pedigree warranted to them was sufficient evidence to prove that they relied on the warranty given, and therefore the vendor must make good the same. The decision, therefore, was against the seller, who was compelled to take the horse back. This decision may or may not have been warranted by the actual facts in the case. Granting all the statements to have been true as made, it assuredly was just and fair. If the purchaser actually believed what he is told and proceeds to do business along that line, he must have recourse on the seller if he has been deceived.

**Selection of a Stock Bull.** If a breeder is determined to keep up a uniform standard of excellence in his herd and, if possible, improve it, says Clement Stephenson, no more important subject can occupy his attention than the selection of a stock bull. Many a moderate herd has been greatly improved and increased in value by the use of a real good bull, and many a good herd has been spoiled and reduced in value by a moderate one. In selecting a bull we have first individual merit to consider and then pedigree, but no amount of the latter will compensate for deficiency in the former. He must be true to the best type of his particular breed, sound and robust in constitution and well grown for his age. By well grown I don't mean high on his legs, but wide, deep and long, standing on short and well set legs. Particular attention should be paid to his horns, for many a good bull is rendered useless by bad horns. He should have a good muscular (flesh) development in the right places, straight top and bottom line, with broad, deep chest and good fore ribs. His eye and general conduct should denote good temper and the skin be mellow and moderately thick. Avoid thin skinned ones. See that he walks well, gay and like a gentleman, and, if he is old enough, see what his stock is like and, if possible, have a look at his sire and dam—in fact, all his family connections that are in the herd. The next thing is pedigree. Not only see that it contains no impurity, but that the recorded ancestors were, as far as known, good animals; if prize winners, all the better. Find out, if you can, whether they were regular, good breeders and lived to a good old age, for nothing is more hereditary. If everything is satisfactory, don't be grudge the price, and if after a trial his stock is satisfactory don't be tempted by price to part with him.

**Sheep Men, Buy Ranges.** Reports from Wyoming state that two organizations of sheep men, one in Ulster county and one in Carbon county, have recently purchased large tracts of lands from the Union Pacific railroad, aggregating over 300,000 acres. These lands are in sections and practically insure the owners' use of intervening government lands, thus giving them control of enormous grazing facilities. The idea is to divide the tracts into summer, spring, fall and winter ranges for exclusive occupancy by members of the organizations, under strict regulations against overstocking and other practices tending toward depreciation of pastureage values. This seems to be a step in the right direction, certainly much wiser than trying to maintain alleged rights by physical force. Some risk of future inconvenience, however, is assumed in the absence of knowledge of what may be done with government lands. If rival herders of either sheep or cattle should purchase and stock these, trouble will be likely to ensue.—Breeder's Gazette.

**Hundred Dollar Rams.** That sheep men all over the country are sharing the general good times is attested by the high price they are paying for good breeding stock. One hundred dollar rams are getting to be almost as common as "leaves in Yulemborg."—Sheep Breeder.