

for breeding or for the dairy are benefited by ordinary exercise, but if for the butcher, the less motion the more fat. Exercise accelerates the waste of the body; the harder a horse is worked the more food he requires, hence, in fattening cattle the quieter they are kept the more increase is obtained from a given quantity of food. All cattle require a quantity of food containing woolly fibre; its bulky nature commingling with the more concentrated grains and feed seems to detain the whole mass sufficiently long in the stomach to be thoroughly acted upon and digested. Warmth, combined with good ventilation, is highly important. It is necessary to secure the latter requisite without drafts, hence any openings should be at the highest point, and the best results may be obtained by an opening in the roof, divided vertically into two parts; the hot air rising and passing out at one part, while the cold, pure air pours down through the other. The barn should be warm, yet not so close as to induce sweating, which is weakening and otherwise injurious. The idea that some farmers possess, that exposure to the cold renders young stock hardy, is a fallacy.

Nothing is more important than regularity in feeding. If the usual time be allowed to pass, the animals become uneasy and worried, and every feeder knows a fretting animal will not fatten. A supply of good, pure water is absolutely necessary and especially if dry food is used exclusively. Rock salt should be kept constantly in the feeding troughs. Injudicious feeding is generally followed by scouring, and the nature and conditions of the excretions form infallible guides to the careful feeder. All cattle should be carded daily: it is well known to the groom that nothing will so improve the horse's condition, and in all animals it induces warmth and cleanliness, and promotes the healthy action of the skin. Very poor cattle will sometimes be found to be lousy, a remedy for which is a good wash with tobacco water. Animals of restless dispositions do not thrive as well as those of a quiet temper, and kindly words and gentle actions on the part of the feeder will be well repaid in their peaceful contentment and certain improvement.—*Am. Cultivator.*

Keep the Animals Warm.

The first cold blast of wind from the north is a reminder that animals, however tough and hardy, need shelter in winter. It will take less food to keep farm stock over winter in warm stables than when exposed to severe cold. Of course, good wood, stone, or brick barns and stables are expensive, and there are many farmers, especially in the recently settled districts, who have not the means to build such structures, but there is no one too poor to furnish some kind of a shelter for their animals. If a man cannot afford to build what he desires, let him do the next best thing, and build something which will furnish shelter, even if it is nothing better than a shed, with sods for walls, and a roof of brush or cornstalks. All attempts at elegance or extra convenience may be left out of the question where a man's purse is light; still, it is economy to keep all farm stock sheltered from cold, wind, and storms in winter, even if the owner does not possess enough of the humane feelings to care for their comfort.

More than one-half of all the diseases and parasites which infest farm stock are the direct result of neglecting to furnish them with proper food or shelter during cold, stormy weather. Cattle of all kinds, when forced to remain in muddy, wet yards, during cold weather, are liable to various diseases of the feet, such as hoof-ail and foot-rot, and the best preventive is dry ground, or yards littered with straw, or some similar coarse material. Standing a long time in filth, whether in the stable or yard, is almost certain to bring on diseases of the feet. All kinds of farm stock are liable to take cold when exposed to storms, and from this comes a weakened constitution, which invites various kinds of diseases and parasitic insects. Weakened vitality or vigor in either plants or animals opens the way to hundreds of parasites which are resisted by the healthy individual, and the farmer should keep his animals in a condition which will enable them to ward off the attacks of such enemies. He has only to think of his own comforts, such as nutritious food and warm clothing, and consider how the reverse of these conditions would affect him, to understand how it is with his animals.

It is unnecessary to go into details in regard to the building of sheds, stables, or other kinds of structures for sheltering stock in winter, as every man knows best what materials are at hand or

within reach suitable for such purposes, but the fact should be apparent to all breeders of animals that in all cool climates some kind of protection is required. Out on the plains and prairies of the west and south-west it is often asserted that sheep need no protection in winter, and it is even claimed by some that they do better without it than with it; but the frequent heavy losses by cold, starvation, and diseases plainly show that all this talk of mildness of climate is an error. Sheep and other farm stock may live through the winter without artificial shelter or more food than can be obtained on the range in these favored localities, but they would certainly do better with added comforts every winter, and occasionally heavy losses may be avoided by making the necessary provision to protect and feed them when severe storms prevail.

Care of Ewes.

A correspondent of the *Agricultural Gazette*, England, gives the following in relation to the care of sheep, which is as applicable here as there, except that we do not have to counteract the effects of watery food as they do, from the feeding of large quantities of turnips.—If there is no permanent yard, a temporary one can soon be erected by setting down a double row of hurdles and stuffing them between with straw. We began a month before lambing to remove our ewes every night from the turnip pen to the yard, where they have a foddering of straw, night and morning, in the cribs; the yard is supplied with fresh litter daily. Here they have a dry, comfortable bed. Ample breathing space, uncontaminated by noxious vapors, gentle exercise and a moderate supply of pure water are conducive to health. It is surprising the quantity of barley or oat straw a flock of ewes will consume; the dry food has a salutary effect in counteracting the watery influence of the turnips. When the food of the breeding ewe consists principally of turnips during the last six weeks of gestation, the difficulty, and consequently the danger, of yearning is greatly increased. During the latter period of gestation the nutriment derived from the food is principally expended in increasing the size of the fetus *in utero*, instead of being stored up by the mother, hence the increased difficulty and danger of parturition. In order to strengthen the ewe and enable her to safely withstand trials through which she must pass, and to encourage the flow of milk, a mixture of oats and maize—half a pint to a pint per day—should be given for a month before lambing.

FAT CATTLE SHOW.—The Birmingham, England, fat stock show is to be held Dec. 1 to 6. The principal prizes to be contended for are, the hundred pounds' prize for the best Hereford in any of the classes, the hundred pounds' prize for the best Short-horn, fifty guineas for the best Long-horn, fifty pounds for the best Scot, and fifty pounds for the best animal in "other pure breeds," or cross-breeds, and the Elington challenge cup, value one hundred guineas, to be won three times, or in two consecutive years by the same exhibitor. Of this the *North British Agriculturist* says: "This has now been won once by four exhibitors, that is, by Mr. E. Wortley in 1873, by Mr. Robert Wright in 1874, by Mr. Richard Stratton in 1875, and by Mr. Samuel Kidner in 1876. There are also the usual liberal prizes for the various classes of cattle, sheep and pigs, besides those offered for poultry, corn, roots and potatoes.

CATARH IN SHEEP.—A recent writer says: The treatment consists in removing causes, good nursing, administering slightly mucilaginous drinks, as oatmeal gruel or linseed tea, along with a gentle stimulant, such as half a teaspoonful of ginger. The antiseptic effect of a small quantity of clean pine tar rubbed upon the sheep's nose, some of which the animal will lick off and swallow, will be beneficial. If there is fever, and the nose is hot and dry, the following may be given, viz.:—Epsom salts, 4 ounces; saltpetre, 1 drachm; ground ginger, 1 drachm. This should be mixed with molasses and placed on the back part of the tongue with a long, narrow-bladed, wooden knife or spatula. The animal's head should be held up until the whole is swallowed in repeated small quantities. Or the dose may be mixed with thin gruel and administered by means of a small horn.

An English sheep breeder sheared 125 Lincolnshire sheep this spring, all under 14 months of age, which produced 2,257 pounds of wool; 60 of their fleeces weighed 1,201 pounds, and 4 weighed 23, 24½, 25½, and 30½ pounds respectively.

Dairy.

The Elmira Farmers in Council.

From a report of the meeting of the Elmira Farmers' Club we take some extracts on subjects of great interest to us in our profession as agriculturists, adding some brief remarks. It would give us much pleasure to publish similar reports from our Canadian farmers, but as they give us no opportunity to do so, we take up our reports from Elmira, State of New York.

One of the first subjects brought before the meeting was, if bones will dissolve when broken to small pieces and placed with alternate layers of wood ashes mixed with water. In a recent number of the *FARMERS' ADVOCATE* we replied to a similar question, and we have since had enquiries for further information. The reply by the secretary of E. F. Club was as follows:—

"There is no difficulty in dissolving bones in this manner, but the process will be hastened if the mixture is moistened with chamber-lye and soap-suds, from time to time. Unleached hardwood ashes are best and should be used whenever they can be obtained. Another simple method of utilizing bones has been devised by a Russian chemist. It is as follows:—Mix together bones, ashes, fresh lime and water, in the proportion of forty parts bones, forty parts ashes, six parts lime and forty-five parts water. Leave until the bones soften and then stir the mixture with a spade. It forms a valuable compost."

FEEDING BREWERS' GRAINS.

W. B. Armstrong says:—I have fed brewers' grains with other feed for a number of years, and found them to be the best feed we can get, both for making beef and milk, and, if fed prudently with either hay, grass or corn fodder, they will make good milk. Some are pretending that the milk made from grains is destructive to life, but I can safely say, that you can not find a healthier class of farmers than the Orange county farmers. Our doctor says that longevity is on the increase.

President Hoffman says:—We ought to emphasize the mixture. Everything depends on the way brewers' grains are used. Mixed with other food in suitable proportion, they are valuable. The mixture with other feed, is what cows want. No one kind is a perfect feed in itself. As a rule farmers are not careful enough to give their cows variety in food. Some time ago I asked a man, "What is your principal feed?" he answered, "brewers' grains." "What else," I asked, "Nothing," he said, of course hay was excepted. Another said, "I feed beets; they are good to make milk." "Well, what else do you feed?" I asked. He had a similar answer. So it seemed that each farmer with whom I conversed believed he was doing well enough if he gave one kind of food besides coarse fodder. When I advised giving variety they said, "it cannot be done with profit." There is the mistake. Pork and beans make a very satisfactory meal for a hungry man. They might do for a week but they would make a poor diet for all winter. Mr. Billings told us once when we were estimating the value of turnips as cattle food that it would be as easy to fatten cows by throwing snow balls at them. Now I say, poor as turnips are, they go to make up variety, and may be fed with great advantage, although I do not believe they would make good food alone. There is no kind of grain nor roots suited for continued use without other food. We all know that barley is good nutritious food for stock. Now when it is malted and used by the brewer it has not parted with all its nutriment, so it may be still good for cattle.

In practical use I have found good results from very liberal feeding of brewers' grains, and I have found no bad effects. The best results I ever had from churning milks in winter was obtained while feeding brewers' grains. With them I used buckwheat bran, which is said to be the poorest feed made from any grain. The milk made from such feed is said to be light, and the butter from it white. Yet I found this mixture and good hay produced butter of good quality. I want all the kinds of food that I can get for my cows. Oil meal is good—there is nothing better as a concentrated feed; but other substances mixed with it are necessary to produce the best effects. If I can secure the supplies which I consider almost indispensable to profitable results, I would not take my