

## CARE OF BROOD MARES IN COLD CLIMATES.

If people could be made to understand the difference between "dry" cold and cold with moisture, and low temperatures without wind, and low temperatures attended by strong winds, the difficulties in the way of wintering live stock in cold climates would be greatly lessened. Barnyards are too often left without any proper provision for drainage, so that animals cannot pass through it without sinking down into the moisture, which, being buried under a thick coating of straw and manure, is not apt to freeze firmly enough to prevent animals breaking through into it. Thus horses and cattle that are running in the barnyard are apt to have wet hoofs and legs night and day, except indeed when a sharp frost has thoroughly stiffened their watery covering into a thin sheet of ice.

Another drawback to wintering stock in the open air is to be found in the bleak, unsheltered locations of many of our farm yards. In spite of all that has been said and written on the subject of forestry, it seems that our farmers are very slow to appreciate the value of the natural protection to both crops and live stock offered by a comparatively thin strip of growing timber. It is not enough that there is a shed to keep the wind off the live stock. Let the north wind be pouring itself on the back of an open shed that is merely sheeted up with inch boards when the mercury is at ten below zero, and woe to the cattle that have to sleep under that shed. If the wind did not come whistling and shrieking through the cracks it would soon so chill the boards that they themselves, though they might stop the force of the wind, could not do much toward keeping up the temperature inside. But let a farm yard be located in such a position that it will be sheltered by a suitable growth of trees on every side and an open shed will be found to supply all the shelter that brood mares, calves, and store cattle will need, especially if the barnyard be so drained as to make it perfectly dry under foot.

However, the question as to the propriety of wintering live stock in open sheds is one thing and the possibility of accomplishing it successfully is quite another. In any event it is desirable if at all practicable that the farm yard should be sheltered by suitable windbreaks, while it is indispensable not only for the health and comfort of the live stock, but for the preservation of the manure, that it should be properly drained. Of course these drains should lead to a cistern or tank especially constructed to save not only all the urine from the stables but all the "leachings" of the barnyard manure as well; but as we are not discussing the manure question just now, the amplification of this view of the subject can be laid aside for the present. Whether cattle be stabled or not, it will not do to have them running through the wet in very cold weather, while no one can question the desirability of locating ones stables, sheds, and other

farm buildings in the most sheltered position that is available. So far as calves and fattening stock of all sorts are concerned it is doubtless better that they should be carefully and comfortably stabled, but in the case of the brood mare it is quite a different matter. She must have shelter from storms always available, but at the same time it is absolutely necessary if she is to have a lusty, vigorous colt that she herself must have plenty of fresh air and exercise. Every one who knows anything of horse-breeding is aware that the surest way to produce a knock-kneed, calf-hocked, puny colt is to keep the dam closely stabled and deprived of coarse food and wholesome exercise during her pregnancy. It is very certain that the dam must have exercise in the open air and plenty of it; but on the other hand, if she happens to have been stabled for two or three days during stormy weather and is then let out in her paddock for exercise, she is very apt to rejoice so violently over her new-found liberty as to endanger her own safety as well as that of the colt she happens to be carrying. It is by all odds safer and more desirable that she should at all times enjoy perfect liberty, while the most ordinary ideas of economy, to say nothing of humanity, would dictate that she should be kept as warm and comfortable as the circumstances will permit.

Mr. C. A. DeGross, an extensive breeder of Minnesota, gives the following description of his method of wintering brood mares. After relating his experiments with box stalls and paddocks attached and the dangers arising from the inclination of the mares to take too violent exercise after a day or two of enforced confinement on account of bad weather, he proceeds to say:—

"I found that with the number of brood mares I had it would be necessary, in order to obviate this danger, to change my mode of handling them, and as I remembered I had been down in the timber when the mercury was 35 degrees below, but was compelled to take off my buffalo overcoat, owing to the change of temperature in the shelter of the woods, I made up my mind that this was the place to keep brood mares in winter time, for here they would be protected from the winds and storms. I therefore at once erected sheds.

"I first cut out three acres from this dense forest to give the sun a chance to shine into the opening. In the centre of this opening I placed the shed, which faces the south, and is boarded up on three sides, with a rack on the side and on each end. This shed is large enough to accommodate about forty brood mares. After completing it I moved all my mares from their box stalls, as above described, to this shed, and there I keep them now during the winter and have done so ever since.

"The result has been that I have never lost a colt from the dangers that I feared and experienced when the mares were in their box stalls and paddocks. The mares have their exercise every day in this lot, and are protected from the cold chilly winds and blizzards, and do not breathe foul air as they did in the box stalls,

although they were well ventilated. These mares keep in better condition than they did before. They are stronger and their foals are larger and stronger when they come. These mares are never put in the stable winter or summer, and never brought to the barn except when bred, and from two to three weeks before foaling time.

"Then they are brought up and placed in a large paddock of one or two acres, nicely set into blue grass. Each mare has a paddock which is set apart for this special purpose, and has a box stall fourteen feet square in which the mare and foal can run out at will. The mare is kept there till the ninth day after foaling, and then bred, after which she is turned out to a blue grass pasture set apart for mares with foal by their side. At the proper time these mares are looked after, and when safe in foal are turned out into another blue grass pasture. There they remain till fall, when the colts are taken up and weaned. The mares are then returned to the open shed, in the timber, as above described. I have never lost a colt by this method of handling them."

## THREE GREAT REGENERATORS.

It is not long since every Canadian farmer handled his own milk and cream. His family made all the butter and cheese used in the house and usually had some of each commodity to sell. It is no slander to say of farmers' butter and cheese that a little is very good, a larger share "passable," but that very much more than half the gross product is decidedly inferior. The reasons for this are manifold. To begin with, many farmers' wives could not make good butter and cheese under the most favorable conditions, simply because they do not know how. In the second place, many farmers have no proper place for storing their milk and butter. Operating as they do on a small scale, they cannot afford to put up ice to assist in their dairying operations, and without this, or the coolest of cellars and the coldest of spring water, it is difficult to make good butter in hot weather. And then there is the trouble of getting anything like uniform grade and color for a single package, and a thousand and one reasons why butter made on the farm should average away below that made in the creamery, and perhaps nearly as many reasons why factory cheese should always excel the home-made product in quality. No one who knows anything of the matter disputes the advantage arising to farmers out of the establishment of creameries and cheese factories, though, singularly enough, those most to be benefitted by these institutions appear to be singularly slow in fully availing themselves of the advantages they offer. Even in the old days before those two regenerators of the farming industry—the cheese factory and the creamery—had been thought of, the best of our farmers, in the oldest settled portions of Ontario, were becoming fully alive to the fact that under the conditions then existent dairying was sure to pay better in the long run than