

discouraged many from breeding them, hence they are becoming somewhat scarce, and will, in my opinion, be so for a few years at least. Then, again, sheep and lambs are commanding better prices than they have for some time, because the market is higher in Buffalo and other American points. This has been brought about because the American farmer is somewhat different to his more conservative Canadian brother. As a general thing, he is either right in a thing or he is out of it, and just now many of them are out of sheep, and they are finding out that they want them. From these causes there is likely to be a good market, for a time at least, for both breeding and mutton sheep. Stall-fed and grazing cattle realized better prices the last season than they had done for some time formerly, but that should not be a reason why we should go into these lines of meat production too exclusively, nor should we go out of it altogether.

Bruce Co., Ont.

JAS. TOLTON.

#### Sheep—Cross-breeding.

To the Editor FARMER'S ADVOCATE:

SIR,—I was not a little amused on reading in your issue of October 15th the paper by Mr. John Renton on the above-named subject, in which, in my opinion, he went out of his way to get a kick at the Cotswolds. My amusement was caused in part by the little coincidence that in the same issue the result of the lamb-feeding experiment (No. 2) conducted at the Iowa Experimental Station appeared, in which Mr. Renton's arguments or theories are completely floored by actual results, not by guess or estimates, but by scale weights. In this test of Canadian-bred lambs of nine breeds, the report says: "The relative rank of the breeds in the comparison and cost of gains is much the same in both tests. The Cotswolds again lead." The italics are ours. In the first test (see report in ADVOCATE for Nov. 16, 1896) the Cotswolds showed a greater

#### Method of Watering Stock -- Covered Yard.

SIR,—Our barn is a rectangular structure 100 feet long and 40 feet wide, with a neverfailing well outside the west end wall. Originally the cattle were stanchioned in two long rows on each side of the feeding alley, which ran from end to end through the center of the barn. A pump on the inside, at the west end, drew the water from the well and distributed it to the cattle in two long troughs which were placed above the mangers. This plan was not satisfactory, as the urine collected under the stable floor and polluted the well; hay seed and dirt collected in the trough and added other taints to the water; and the animals suffered from want of exercise, as they could not be turned out with safety into the icy barnyard. The manure had to be drawn out every day or else piled against the wall behind the cows.

Three years ago we adopted another plan. We divided the barn in the center by a board fence—principally gates—running across at right angles with the feeding alley. The south side of the east end contains stanchions and mangers for fifteen head. The north side of the same end will hold seven head of cattle and four horses. Two large box stalls capable of housing six or eight young cattle were built in the north end of the barn (we ultimately removed the floor and the stanchions from the entire half). All of the remaining room in the west end was devoted to a covered yard. After the floor had been torn out the ground was scraped clean and several loads of gravel were drawn in and levelled. My intention at first was to cement it, but the expense was considerable, so I tried the gravel as an experiment. The cattle were allowed to travel over it for several days until it became thoroughly packed down and all the droppings carefully removed in the meantime. I then put in a heavy bedding of straw and left the cows in loose at night and during the day when not being fed or milked. In front of the pump and

#### Watering Cows in Winter.

To the Editor FARMER'S ADVOCATE:

SIR,—Previous to this year I always let my cows out to water once a day in the winter to the trough, which was almost 40 yards away from the stable, although it was not what I considered the best or most profitable way. They would stand at a trough shaking with the cold until they considered they had a sufficient quantity to do them for another 24 hours. This I see is the system followed by most of the farmers on the Portage Plains. Some of them even go further, and after the cows have loaded up with cold ice water they are allowed to take a spell of four or five hours to stand shaking with their backs up beside a straw stack. In very cold weather I carried water to my cows. I suppose I would have carried it all the time if it had not been so far.

In laying out my new stock barn last summer one of my first considerations was to arrange it so that I would have a sufficient quantity of good fresh water in my barn at all times of the year, and so arranged that I can let the stock take it when they choose, or I can shut it off and only let them have it as often as I think they should. My well is outside the barn and connected with a force pump in one of the feed alleys, a distance of 67 feet from the well, by two-inch pipe laid five feet below the surface. My reason for having the well outside the barn is to make sure that the water will not be spoiled from any soakage from the stables, and the water after passing through the pipe will be about the same temperature as the earth. I am then placing a tank just below the upper floor and above the pump. This tank I fill with the force pump and have it distributed all over the stable with gas pipe connected with water troughs in front of each animal. In this way I will be able to water my cows twice a day, which, I think, will be sufficient when feeding a few roots once a day. A cow watered twice a day will not



FIRST PRIZE HOLSTEIN HERD AT THE PROVINCIAL EXHIBITION, NEW WESTMINSTER, B. C., 1897, PROPERTY OF WM. NEWLANDS, EBURNE, B. C.

daily gain in weight than any other of nine breeds, and at a less cost per pound of gain, and in the second test they gained 54 pounds more than Mr. Renton's favorites, and at a less cost per pound. Such stuff as Mr. Renton writes about Cotswolds is refuted every time a test of the breeds is made, and wherever good specimens of Cotswolds have come in competition with other breeds they have held their own creditably. For crossing purposes no better evidence is needed of the esteem in which they are held than that furnished by the great demand for Cotswold rams for use in the large flocks on the ranches of the Western States and Territories. This demand has been increasing for the last five years, as the result of satisfactory experience; and some idea of the extent of the trade may be gathered from the statement in the ADVOCATE for Nov. 15th that one firm has taken 1,100 Cotswold rams from Ontario to the States since July 1st, and I know that several other parties have taken out carloads during that time, and even since Nov. 1st, late as the season is, two carloads have gone from one section. Such papers as the one under review are calculated to prejudice and mislead people, and I have thought it right to enter my protest against statements which do not harmonize with the experience of the great bulk of the men who are raising Cotswolds. In no country do they do better than in Canada, and no breed is better adapted to this country, either as pure-bred or for crossing, to improve the grade sheep of the country and to establish a uniform type of profitable mutton sheep, while their fleeces bring as much money as those of any other breed. The case cited by Mr. Renton is certainly an exception to the rule, and may be accounted for by the selection of an inferior animal from a degenerate flock by an incompetent judge of Cotswolds, and an inexperienced shepherd, under unfavorable conditions; and if so, it is unfair to judge the whole breed by such an instance, while hundreds have proved the breed to their satisfaction. Having said my say, I subscribe myself,

Bruce Co., Ont.

"COTSWOLD YET."

against the wall a large tank with a capacity of sixty or seventy pails was placed. It is just low enough so that the animals can drink without difficulty, but high enough so that they cannot butt each other into it; they cannot hook, as their horns were removed before they became cows.

I consider my covered yard the best thing on the farm. In the first place, the cows are free from the stanchion or chain eighteen hours out of the twenty-four and have a plentiful supply of fresh water before them all this time. They are tied up the first thing in the morning, milked and fed, turned loose about nine o'clock, put in again at about three p. m., fed again, then milked and left in the yard all night. When the cows are eating their morning feed the manure and litter from the horses is wheeled into the yard and scattered, taking care to cover all the droppings from the cattle; this serves to keep them clean through the day and insures a thorough mixing of the manure. At night the yard receives a good dressing of straw. This method perhaps requires more straw than where cattle are kept tied and bedded, but not so much as some people would imagine, as ten or twelve tons is all that I require for a year. The yard is cleaned out three times during the winter and the manure spread at once on the snow. None of the juices are lost by leaching, for the gravel has become packed down until it is hard to distinguish it from cement. No nitrogen is lost by heating, because the horse manure absorbs enough moisture from the other manure to prevent it. The water in the well is perfectly free from any odor or taint of manure, and a drain which runs through the yard never discharges anything but clear water.

Before the barn was altered its capacity accommodated thirty-six head of cattle and six horses. We now have stall room for twenty-eight cattle and four horses, but more could be kept, for they might be allowed to take turns at the mangers and in the yard, one lot feeding while the other lot was loose in the yard.

Missisquoi Co., Que.

CHAS. S. MOORE.

take too much at once. I do not believe in watering cows immediately after feeding grain. I generally feed my cows hay in the morning, then water them, after which I give them their allowance of crushed grain; feed roots and a little hay at noon, after which I let them out for awhile, if the day is fine and not too cold. After they are put in again and eat hay until they are warmed up I again allow them to drink. In the evening I feed a little hay and a bucket of bran and crushed oats made into a slop to each cow.

In watering a fresh-calved cow, I always warm their water for them for the first two weeks, only allowing them a limited quantity of two pails a day for the first three or four days, after which I increase until they get all they want twice a day. I hope to hear the views of some or all of our more practical dairymen.

F. W. BROWN.

Marquette District, Man.

#### Changing Stock from Fall to Winter Feed.

The ordinary practice of most farmers in changing from fall to winter feeding is one that might be very much improved upon. Too often it is the case that stock are allowed to run until some more than ordinarily severe storm compels the owner to hunt them up and house them. If the weather continues severe they are at once put upon the dry feed ordinarily used in the winter. If it turns fine they are again allowed to run until the next storm. This is bad practice and poor economy. The change from the succulent feed of the pasture to the dry feed of the stable is too sudden—the digestive organs are not prepared for it—and even if it brings on no serious disorder the animal receives a check from which it takes some time to recover.

The working horses are least liable to suffer from sudden change of food. They are either stabled throughout the year or, in seasons of busy work, allowed to run only at night, and as they are fed in the stable during the day the digestive organs