

remarkably low price, it looks as if the problem of the cheap cultivation of large tracks of land has been solved. The advantage of such a machine in backsetting new lands can scarcely be estimated. The present machine can handle about five acres a day, but another is to be built with a capacity of fifteen acres daily. Mr. A. A. Barnhart, to whom the evolution of this machine from a crude idea to the present stage is due, has shown wonderful perseverance and high mechanical ability, and is deserving of the highest praise. I understand Mr. Alliston McKay, of Chatham, contemplates having his land prepared by Mr. Barnhart, and no doubt there is lots of land awaiting the coming of this promising labor-saver.

Farming.

BASIC.

The Dairy.

SEASONABLE NOTES FOR DAIRYMEN

October will soon be with us, with its constantly varying temperature and weather. Bright, warm, sunny days, coming hand in hand with cold frosty nights, suddenly lost sight of in a week of bleak, raw and rainy weather, with an occasional flurry of snow. This sort of weather, with its natural results, frozen grass, wet pasturage, etc., etc., is not best adapted to the profitable management of the dairy herd.

Newly calved cows or heifers, and big milkers, must be kept in the stable during night and during all inclement weather. A cow may be permanently or temporarily ruined by just half an hour's exposure. It is not wise, with an eye to the pocket, to tempt Providence, and leave valuable cows out to weather every storm, neither is it humane. It would be interesting to note the result of treating two cows, giving the same quantity of milk, in the two opposite manners. Leave one out to rough it, and treat the other as any one would wish to be treated oneself, if one could imagine oneself in the cow's place. This little experiment could be very easily carried out by any dairyman who needs convincing. He would find out then, for himself, just what others, who have tried already, could have told him; first, that the poor cow having to rough it would shrink nearly one-third in her milk yield and considerably in its quality also, on account of the discomfort she

must undergo, and the far greater proportion of her food which she must utilize in producing heat for her body, which would under more considerate treatment show itself in the milk pail. He would find himself with a far less valuable cow to winter than might with care have been the case, it being impossible, except perhaps with extravagant feeding, to raise the quantity of milk again to where it once was, and from where it need never have shrunk half so much. I am unable to discover records of any experiments in this line, with the exception of a clipping from the Indiana Experiment Station's "Bulletin No. 47," in Gurler's "American Dairying." In this interesting treatise, on the "Effect of Exposure on Milk Cows," the following points of importance are brought out:

1. That cows exposed during the day to the inclemency of winter weather ate more food than those given the shelter of a comfortable cowhouse.

2. That cows thus exposed gave on an average less milk per day than those not so exposed, and much less milk as a total, during the experiment, which extended over forty-eight days in January, February and March.

3. That the cows which were exposed to the weather during this experiment lost in weight, while those given shelter gained in weight.

4. That there is a difference of \$12.79 in favour of shelter for cows in winter.

Considering this experiment from the financial standpoint, including cost of food eaten, weight of milk secured, and animal weight lost or gained, we get the following results in favour of the sheltered lot:

Saving in cost of food eaten	\$4.23
Value of difference in milk secured (161.1 lbs at 15 cents a gallon)	2.79
Value of 231 lbs. flesh gain at 2½ cts a pound	5.77
Amount saved by sheltering 3 cows 48 days	12.79
Amount saved by sheltering 1 cow 48 days	4.28

Prof. C. S. Plumb, Director of the Indiana Agricultural Experiment Station, who made this experiment, offers the following observations:

"A reasonable amount of exercise should be given farm animals, and pure air ought to be available at all times, but no animal should be exposed to weather conditions that involve suffering, neither ought farmers to expose stock in such a manner as to cause them financial loss. Beef cattle with thick mellow hides and heavy coats of fine hair may be exposed to outdoor conditions that would cause thin-skinned milch cows to suffer