

Another very common defect I notice in the arrangements for stabling cows, consists in having the stable and body of the barn in a single, open, room, so that the heat radiating from the cow rises and spreads, without hindrance, over the whole barn and leaves the cows in an envelope of cold air all the time, and they are compelled to eat extra food enough to compensate for the heat thus lost. But such a barn is better than no barn. Every protection from the cold counts for something. I made a test by putting cows in a stable thus arranged and sided up and down in the usual way, and I found that from a little saving in waste of hay by foddering in a manger, and the little protection from the cold it gave, it took two pounds and a half less hay per day to keep cows thus stabled and foddered, than it did to fodder out of doors and let the cows lie in the yard at night. This was worth saying, but it did not do enough. By making the outside walls tight and double, and ceiling over head and all round except openings which could be regulated for ventilation, I saved 5 pounds per day more. The figures were 25 pounds of hay per day for cows running out all the time, 22½ when kept in a common stable at night, and 17½ a day when kept in a stable where they could be comfortable in any weather. Had I provided as well for the comfort of the cows during the day as I did during the night the saving would have been still greater. I have known of several experiments made by others where improvements in comfort both for the day and the night in which a saving of one-third of the fodder formerly used was saved. This waste of cattle food by needless exposure is worse than a dead loss, because the cows in the summer do not do as well as when comfortably wintered. This defect constitutes a great leak which puts us at a disadvantage with our competitors who avoid such wastefulness. The foddering season here is about 200 days in length. At a pound of hay a day for every 50 pounds of live weight when comfortably cared for (which is a pretty safe rule), it would take

two tons of hay, or an equivalent in other food to winter a cow weighing 1,000 pounds, and three tons if she has a cold stable at night, and an unprotected yard during the day. Suppose such a cow to give 5,000 pounds of milk in a year that would make 500 lbs. of cheese, the extra ton of hay at \$5 a ton would be one cent a pound on the cheese. If her yield was but 4,000, as it would more likely be, it would be a cent and a quarter on each pound of cheese she would make. This matter of comfort in the wintering of cows is a prominent element in the profits of the dairy, and one that needs very much more attention than it receives. I have no doubt from what I have seen of the arrangements and conveniences for dairy stock in cold weather that Ontario as a Province could easily save a cent a pound in the cost of her cheese in this direction alone. And while I say this I do not charge her with a greater dereliction in this respect than is common to other dairy districts. Dairymen cannot afford this waste. It makes milk too much. It would be some mitigation for this waste if somebody profited by the neglect. But it does nobody any good. To turn cows into a cold stable or expose them to the wind all day, to warm the passing breezes, is rather a useless attempt to tamper with the climate. The effort will not reach the nearest neighbor.

Another element of profit in the dairy consists in full feeding. A very large proportion of dairymen fail to appreciate how much more it makes milk cost to feed sparingly than it does to feed flush. This fact was well demonstrated last spring through the entire dairy belt of the continent. Butter and cheese were low, and dairymen generally scrimped the feed of their cows, and the consequence was that they lost flesh all winter, and when they began to give milk in the spring on their scanty feed they ran down at a fearful rate and became very thin.

I never saw such an amount of poor cows as I did last spring, and many of them ap-