

clover hay or pasture the previous year. An application of barnyard manure is almost an essential. It should be so applied as to be very near the surface when the corn is planted. The corn should be planted only when the land is in perfect tith and warm.

To get best results, right varieties properly sown is the word. Longfellow, White Cap Yellow Dent and Leaming may be safely counted on for all over Eastern Ontario. About equal areas of each will give good results. Sow thinly in rows 42 to 48 inches apart or in hills 42 inches apart. Keep well cultivated and free from weeds from start to finish. Ensilage when in dough stage. Feed when necessary.

To feed add cut straw and a bite of long hay. Suitable meal to feed along with it would be bran, oil-cake meal, corn and barley equal parts. Cotton-seed meal, gluten meal, pea meal or distillers' grains might replace the oil cake meal.

#### SOILING CROPS.

After corn comes the soiling crops. As king of soiling crops where it can be grown stands alfalfa. If your corn field was kept clean, is in good heart and lies gently sloping or is fairly rolling sow the alfalfa there. Sow a small area to begin with. Sow a goodly amount of seed, 20 to 25 pounds per acre. Inoculate the soil or the seed if possible. Every ton of green feed from the alfalfa field is worth half a ton of milk, every ton of hay is worth a ton of bran or thereabout. As an inspiration to milk production on the part of the cow consuming it, it is a marvel. Feed some dry forage along with the green alfalfa.

Clovers, mixed or separate, in value, follow alfalfa fairly closely and are somewhat more easily grown on the average farm. They, like alfalfa, only in a lesser degree, inspire the cow to renewed effort at the pail. Feed some dry forage along with clover just as with ensilage and alfalfa. As make-shifts and good old standbys, come our friend the mixed crops. Peas and oats; oats and vetches; peas, oats and vetches; peas, oats and barley; peas, oats, vetches and millet; peas, oats, vetches and Hungarian grass; and peas, oats, vetches, millet and sorghum, to say nothing of innumerable other possible and commendable combinations. Their great value lies in their certainty. Sow thickly, three to four bushels an acre. Feed when just beyond the milk stage. Too early means a loss of food value, too late means incomplete consumption. As an early ready soiling crop fall rye is of value. Another advantage is it does well on lands so poor other crops will scarcely grow. Sow one bushel per acre in early September. Feed moderately for fear of flavor.

#### WINTER ROUGHAGE.

As roughage for winter use, corn ensilage stands first. The addition of roots makes matters still better. For milk production, everything considered, mangels are probably the best.

To grow mangels necessitates suitable soil, well fertilized and well tilled. Plow in August with shallow furrow, work at intervals, manure, sow early with shallow furrow and subsoil look. Sow early, as early as ever you can. Sow on the flat or on ridges 30 inches apart. If on ridges pack well before seeding. Sow plenty of seed, seven to nine pounds an acre. Mammoth, Long Red or Gate Post varieties are best. Keep clean, cultivate frequently. Harvest before heavy frost. Feed along with ensilage or alone if preferred. Best if fed along with corn ensilage.

As to clover hay, alfalfa and mixed crops for hay for winter feeding, remarks on these crops for soiling will apply.

There remains millet and Hungarian grass to complete the list of the more common and the more advantageous crops for winter forage. These are of value first because in case of adverse weather conditions preventing other crops being grown they may be sown even as late as early July and still give satisfactory results. The soil must be worked well before seeding. It should

be very mellow, very fine and yet very firm under foot. Sow 80 to 40 pounds an acre. Roll the land after seeding. Cut when in blossom or shortly after. As a feed for milk production it ranks very high, being about equal to clover ton for ton.

### A Combined Ice House and Refrigerator

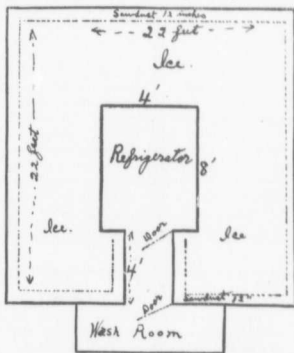
John Fitzer, Supt. Macdonald College Farm.

An ice house and refrigerator combined is a necessity on the farm. At this season of the year farmers usually have time to think of plans to letter their condition. The ice house is one that should be given careful consideration. It is not necessary to have an expensive building for the purpose. Most farmers have sufficient material on the farm with which to build an ice house. Small poles may be used for all of the inside work. The outside would be better if sheeted with lumber. The roof should be shingled.

In selecting the site for the ice house it is well to have it as near the dwelling as possible. This naturally will be convenient to the well where fresh water can be secured for the tank or for washing pails.

#### DETAILS OF CONSTRUCTION.

For the average farmer I would advise a building 22 feet square, as the larger body of ice the



A Refrigerator and Ice House Combined

better will be the results. Drainage is first to be considered. This is to keep the bottom of the ice house thoroughly dry, and to take the surplus water from the tank. It would be best to put in a stone or a concrete foundation, and to have it high enough so that the wood will not come in contact with the earth. Pine, hemlock or spruce may be used for the sills, studding and rafters, and even for the outside sheeting, although pine may be found best for the outside. A height of 12 feet is usually sufficient. It is well to have the door for filling, if possible, in a convenient place, so that the ice can be hoisted the full 12 feet.

The refrigerator is to be built directly in the center of the building, as shown in the diagram, and be four feet wide, eight feet long and seven feet high. The frame of this division should be made very strong, so as to carry tons of ice on top of it. The ice will be placed around the sides and at one end of this compartment as well. The other end is for the door. The refrigerator should be sheeted on the outside only, and have small openings at the top and bottom of both sides to admit of the cool air from the ice.

The doors of the refrigerator should be of double material. Have a space of four feet from the outside to the inside one. A large porch over the outside refrigerator door would be a benefit, also a convenience for washing pails. Should the doors of the refrigerator open inside of another building the porch will not be necessary.

Ventilation, both in the refrigerator and in the ice house is a necessity. The ventilator for the refrigerator should be at least 8 x 8 inches inside, and be made double, allowing 2 inches of air space between each board, and be arranged with a good slide so as to shut off the air or draught if necessary. The ventilator should extend direct through the top of the refrigerator and through the ice house roof, and have a suitable cap for a covering.

#### FILLING THE ICE HOUSE.

When ready to fill the ice house, cover the floor with not less than 12 inches of sawdust. Pack the ice directly on the sawdust. Leave a space of 12 inches between the walls and the ice. Plug the cakes as close together as possible, and fill all spaces between the blocks with crushed ice. Fill in the 12 inch space between the ice and the walls with dry clean sawdust. Be careful that the sawdust does not contain any snow or ice chips. Cover the ice on the top with sawdust to a depth of two feet at least. This will leave sufficient to fill in the sides in the spring when the sawdust already in has settled.

For ventilation in the ice compartment, I would advise a shaft 18 x 18 inches square, fitted with a slide, and to extend well above the center of the roof, and also an opening at each end of the gable, fitted with slats, to admit the air. This should create a thorough circulation of air and thus prevent accumulation of heat under the roof.

A milk cooling box may be made 3 x 4 feet and three feet deep, to be made water tight; this box to be placed in one end of the refrigerator where drainage can be secured.

### Creamery Patrons Losing Money

Fred Dean, Creamery Instructor, Guelph.

There are a few patrons in districts under my instruction who put in a supply of ice each year for cooling their cream in summer. I have always found their cream to be in excellent condition. On the other hand, a large number of patrons, to their loss, seem to think that so long as they can get the cream off their hands with as little trouble as possible, it is all that is necessary.

We are living in hopes that the time will soon come when patrons will awaken and take the best care possible of their cream and then look to the maker or proprietor to pay them as much as can be paid by any other creamery. Then there will not be such a wide variation in the prices paid for fat. We have found during the past season that for one month, the price paid the patrons for their butter fat varied from 17 to 25 cents a pound. Someone was certainly losing a lot of money. Who was it? Who was responsible?

### Sheep at Agricultural College

Prof. H. S. Arkell, Macdonald College, Que.

Mr. Harding's article in Farm and Dairy, January 13, brings up a point in connection with our live stock work which is well worth considering. Personally, I should much prefer to handle a single breed of sheep on the College farm than three, as we are now attempting to do. The farmers of Quebec do not evidence much interest in sheep husbandry though they might well do so with advantage to themselves. It is very certain that the maintenance of one good flock would stimulate more interest than the mixing together of a few representatives of two or three different breeds. The College would further be able to reach a much higher standard of excellence in the flock than could possibly be attained under present conditions. The purchase of a small number of ewe or wether lambs of the other breeds, should represent no great loss if the breeders were not too exorbitant in their prices and should furnish excellent material for work in the various classes. If the members of the Sheep Breeders' Association should take it upon themselves