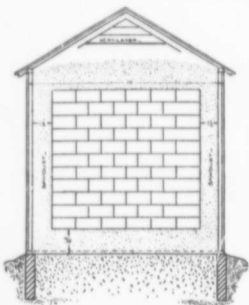


The Farmer's Ice Harvest

The Benefits to be Derived From an Ice Supply—Ice House and Dairy Plans

One of the natural resources of Canada, and one which is of great benefit to humanity, is the annual ice crop. While in towns and cities, almost universal advantage is taken of the ice supply, such is not the case with farmers.

A good supply of ice is more important in the country home than in the city home. People in the



Cut No. 79
Front view, in section, of ice house. The dairy is built in the form of a lean-to at rear.

city can purchase perishable food supplies as needed, while, in the country, it is often necessary to use canned, corned or smoked meat products during the summer, when the table should be supplied with fresh meats. Ice could be used to preserve meat, butter, and other perishable products for the table. The production of high grade dairy products on the farm is almost impossible without ice. Many markets require that, before shipment, the milk be cooled to a degree attainable only with ice. There are many excellent and healthful dishes that may be prepared for the farm table if a supply of ice were at hand.

In many sections of the country, the luxury of an ice supply can be had for the gathering; the cost of harvesting and storing is small, compared with the utility.

Farmers in the neighbourhood of summer resorts may, with considerable profit, undertake to supply ice to the residents during the summer months, or, when harvesting their own supplies, may fill private ice houses in the winter.

In selecting a stream or pond from which the supply is to be taken, care should be exercised to obtain ice free from contamination or pollution, and free from decaying vegetable matter. The latter is very objectionable because, as the ice melts, it will be left in the ice box, rendering it filthy and dangerous to health.

For the proper storing of ice

several points must be carefully considered. (1) Expose as small a surface as possible to the air or to the packing material, that is, have the ice piled so as to form, as nearly as possible, a cube; for example, a mass of ice 12x12x12 feet exposes less surface than the same tonnage piled so as to cover a larger area. (2) Good insulation is necessary; that is, the ice should be protected from external influences such as heat and air. (3) There should be good drainage because the lack of it interferes with insulation. (4) The ice should be packed so as to prevent the circulation of air through the mass.

The more solid the mass of ice can be made, the better will it be preserved. An expensive structure is unnecessary for the purpose of storing the ice crop. The accompanying illustrations show the construction of a simple ice house, as also a combination of ice house and refrigerator room. These are very simple and may be erected by any farmer.

On many farms, there are places in the buildings which could be used for storing ice. A silo which has been emptied by February might be used. Ice can usually be stored at a time of the year when there is little other pressing work

Heating by Electricity

Price Reduction and Storage Facilities Necessary for its Economic Use

Heating of homes in Canada, on account of our severe winter climate, is a matter for serious consideration. Little advance can be looked for at present in appliances for heating, as, with the fuel in use, the methods of converting it into heat are numerous and, on the whole, satisfactory. In this, Canada is far ahead of European countries, and for this reason we are not prosecuting research into the field of newer methods of heating with the same eagerness shown by some of the countries of Europe.

Heating by electricity is one way of solving the house-warming problem but before it can become profitable in Canada, two important difficulties have to be overcome.

In the first place the price of electrical energy used for heating purposes must be enormously reduced. To secure this price reduction it will be necessary to utilize what at present may be

of electric energy for heating look forward to electric heating as an economical proposition. While the price for electricity used for this purpose has not been definitely determined, that proposed is \$6.70 per h.p. per year.

Considerable interest has also been aroused in Sweden by the results of experiments to obtain electric heating at a reasonable cost. The ordinary heating system now used in that country consists of large tile stoves, built in almost every room and designed to burn wood. The heat-retaining properties of these stoves is so great that, although the wood burns out very quickly, the heat from a single firing is retained from 12 to 15 hours. It is proposed to take advantage of this property, by means of portable electric-heating elements, inserted in the ordinary combustion chamber, which will produce during the night sufficient heat to last throughout the following day. In one locality the cost of electrical energy is stated to be \$8.80 per h.p. per year, plus some minor charges; while in other localities the energy used for heating is as low as 2-3 cent per kilowatt-hour.

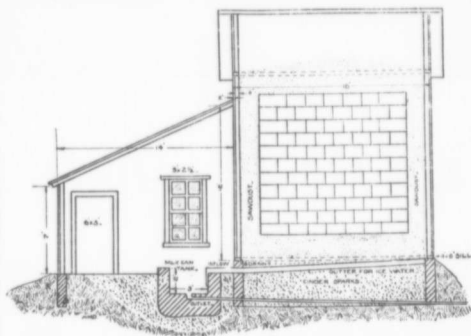
In these countries, a sufficient reduction in rates has evidently been made and they are now turning their attention toward convenient means of storage.—L.S.D.

Fire Protection

In autumn and early winter fires are more frequent on the farm than at any other time of the year. Much of the work in stables and barns is done by artificial light and, no matter how careful the owner may be, accidents will happen, or, hired help, regardless of consequences, may smoke somewhere on the sly, with the possible result of a fire. During October, according to the *Monetary Times* reports, 23 homes and 21 stables and barns were destroyed by fire.

No matter how adequate the fire-fighting appliances may be, one of the first and most useful is a bucket of water at hand whenever wanted. A bucket of water at the right time and in the right place may save your barn or house. Few farmers think of this.

Best of all is a bucket of water at the start of a fire than the resources of a city fire department when the fire has gained headway. Fire buckets can be purchased with round bottoms which, on account of their shape, are inconvenient for general use. These may be placed in a round hole cut in a shelf or bench. They should be covered and regularly inspected to assure their being kept full. To prevent freezing, two pounds of fused calcium chloride to the pail may be used. This will suffice for the purpose for all temperatures down to zero. If the buckets are painted red, they will be more conspicuous and also a constant reminder of the danger of fire.



Cut No. 80
Sectional view of combined ice house and dairy. For ice house only the lean-to section and lower drain may be omitted.

on the farm! Now is the time to prepare for laying in a supply of ice for use in the hot season of the year.

Full particulars regarding ice cold storage on the farm are contained in bulletin 207 of the Ontario Department of Agriculture, and may be had by applying for same to the Department at Toronto.—F.C.N.

Ex-Governor Glynn, of New York State, in his last annual clean-up proclamation, said: "It takes the wheat crop of the United States to pay for the fire waste of the country, as the net gain to the nation barely offsets the average annual fire loss. The fire waste amounts to \$2.50 for every man, woman and child in the country, and 65 per cent of it can be prevented by known means."

termed waste current, or, in other words, to use electrical energy at certain times during the day or night when it is not being used for other purposes which justify a higher price being paid for power, lighting, etc.

A further drawback to the profitable use of electrical heating is the absence of a practical and satisfactory means of storing either heat or electrical energy to carry the service over the time when the electric current is being used on more profitable work.

In this connection it is of interest to note some of the initial steps now in progress in certain European cities. At Stavanger, Norway, with a population of 38,000, so much of the city's available electric power goes to waste or is unused, except between the hours of 4 and 7 p.m., that both the city and the prospective purchasers