Much of our winter loss is due to inadequate stores. A colony of bees in Manitoba will eat about ten pounds of honey during the time they are confined by the cold. Leave the bees at least thirty pounds of honey, as with this amount they will have sufficient to do until they gather again in the spring. Be careful not to leave honey from year to year in the brood chamber, as this honey will granulate during the winter and cause loss. Our late fall gathered honey often candies quickly and is therefore not the best for winter food.

If it is necessary to feed, a sufficiently thick sugar syrup can be made of two parts of sugar to one of water by volume. To this add 1 ounce tartaric acid to each 50 pounds of sugar, while the syrup is being heated. This syrup should be boiled 15 minutes. The acid helps to invert the sugar and thus retard its granulation in the combs.

The principal way of wintering bees in Manitoba is in cellars or basements. Do not place the bees in their winter quarters until you think they have had their last fly for the year. This is usually about the first week in November. Another, and perhaps better plan, is to have the hives well protected on their summer stands with straw, or some other material, and put them in the cellar when the cold weather commences. A satisfactory plan followed by many is to have their bees well protected outdoors, and then place them in the cellar or basement when the temperature can be controlled so that it will remain about 45 to 50° F. Ideal cellar winter conditions are an even temperature around 45 to 50° F., freedom from dampness, proper ventilation, total darkness and quietness.

Have the cellar or basement well built so that the inside will not be affected by the outside temperature. Many make the mistake of allowing their bee-cellars to become too cold. This causes a slight movement of the bees in the cluster to generate heat. Bees are expensive heat producers as this muscular motion, if long continued, wears the bees out, causing early death, besides necessitating increased consumption of stores, which will often bring about dysentery. Many follow the practice of having a pipe from the furnace to the room where the bees are kept, and in this way are able to regulate the temperature.

In many of our cellars excessive dampness often causes considerable loss. To prevent dampness have the proper temperature, sufficient ventilation, and if necessary, use some hygroscopic substance, such as lime. The best results are obtained when the hives are placed up from the floor at least one foot; the cellar having two ventilators, one going right down to the floor, the other in at the ground level.