these things are secured at the expense of making the temperature of the cellar too cold and changeable. The trouble with such a system of ventilation is that, contrary to the furnace, which regulates itself automatically, it acts least when most wanted and most when least required. In cold weather when warm, moist air is needed, cold dry air is drawn in strongly through the smallest opening, while in mild weather when cool, dry air is desirable, very litt a air will enter through the largest opening, and this is comparatively warm and moist. Therefore the ventilators need to be kept almost closed in cold weather, and opened wide in mild weather, and thus they need frequent adjusting in regions where mild weather alternates with cold during the winter. But in a region where it stays cold through the winter, the ventilators do not need much attention. Indeed, such a region provides us with two ways in which the draught may be, in a rough measure, automatically reduced in winter and increased in spring. These are the reduction or even closing of the mouth of the cellar chimney by hoar frost from the condensed moisture from the cellar in the winter, and the heating of the chimney or of the huilding containing it (provided this has a chimney) by the warm subshine in spring, because hy the time the cold weather ceases, the sun is high and powerful.

The necessity for frequently adjusting the ventilators in a region where cold alternates with mild weather, especially in cellars not deep in the ground, constitutes a serious disadvantage to wintering in such cellars in southern Ontario and in conthern Alberta. In southern Ontario, cellar wintering has therefore been largely replaced by outside wintering, and in southern Alberta, where the temperature changes are very great and sudden, and the ground is dry, good results have been obtained at the Experimental Farm at Lethbridge, hy wintering in a dug-out.

For convenience, we have spoken of the temperature and humidity of the hee cellar. The temperature and humidity, however, that we need to consider are those of the air in the hive surrounding the bee cluster. This air may be warmed and moistened to some extent by reducing the size of the entrance of the hive, and by placing a warm impervious cover over the hive.

In taking temperatures, it is very necessary to have a reliable thermometer. Cheap thermometers may be quite accurate at 32° , but may be several degrees in error between 45° and 50° , which are the principal temperatures that we wish to record accurately in the bee cellar. The temperature near the ceiling of the cellar is usually several degrees higher than near the floor.

If it is desired to measure the relative humidity of the bee cellar, a dry and wet bulb thermometer may be waved or revolved briskly in the air and the percentage of relative humidity may be calculated from tables hased on the differences in the two readings. About 50 per cent relative humidity in the bee cellar is a good percentage, but a wide range from below 40 to over 60 per cent may also be satisfactory. Under certain conditions, and for a short period, as low as 30 per cent and as high as 80 per cent may do no harm. It must be remembered, however, that while the relative humidity of the main part of the cellar may be low, and it may also be comparatively low inside the hives in the upper tier, the relative humidity in the back corners of a hive in the bottom tier in a damp, cool corner of the cellar may be at saturation and water may stand here the whole winter and mould the combs and do considerable harm to the colony.

It is the usual practice of Canadiau beckeepers to keep the bee cellar temperature rather low, at about 42° , because it is found that a higher temperature frequently makes the bees restless, especially towards spring. This restlessness, however, as has been shown, does not originate from the high temperature but from unfavourable conditions, of which the most important is unwholesome stores which make the bees restless in the higher temperature. It is quite possible, by having the bees on wholesome stores and bringing them into a suitable cellar before they have been exposed