

Freezing and cold-storage facilities vary considerably both in poundage capacity and in temperature maintenance. For freezing purposes some develop temperatures of  $-40^{\circ}\text{F}$ . or less while others operate at  $0^{\circ}$  or  $-5^{\circ}$  or  $-10^{\circ}\text{F}$ . For storage purposes, extremely low temperatures are not necessary. In some cases zero or lower may be the level and in other cases it may be anything up to  $10^{\circ}$  or  $15^{\circ}\text{F}$ . above zero. Federal fisheries technologists advise that in holding frozen fresh fish the temperature should not be higher than about  $-10^{\circ}\text{F}$ . Smoked fish, though perishable, does not require such low holding temperatures as frozen fresh.

**Cold Storage of Dairy Products.**—Cold-storage facilities are a necessary adjunct in the manufacture of dairy products since most of them are perishable to a varying degree.

All creameries have facilities for the storing of butter, the size and type of storage depending on the size of the creamery. Small country plants may have storage capacity for only fifty or one hundred boxes of butter with refrigeration capable of bringing the temperature down to around  $20^{\circ}\text{F}$ . These rooms are used mostly for the chilling of butter for printing. If the butter is not printed for immediate sale, the butter solids are disposed of or transported to central cold storages or larger creameries with better refrigeration facilities. Butter stored for a long holding period is usually carried at a temperature of  $-10^{\circ}\text{F}$ . Larger creameries may have such storage facilities adequate to store several carloads of butter or the butter may be transported to private or public cold storages in the larger urban centres.

In the case of cheese, temperature control is important in the curing process as well as in the prevention of deterioration. Most cheese factories are equipped with mechanical refrigeration and are required to have storage capacity for the production of 17 days during the period of maximum manufacture. The cheese is then transferred to central warehouses. Under the legislation administered by the Food and Drugs Act all unpasteurized cheese must be aged for 90 days before sale for consumption. During the first ten days following manufacture, the period when the cheese is maturing, the storage of the cheese must be at not less than  $58^{\circ}\text{F}$ . and during the remainder of the 90-day period at a temperature of not less than  $45^{\circ}\text{F}$ . For the holding period beyond 90 days the temperature is lowered to just above freezing point, especially if the cheese is to be held for a year or more.

Cold storages are essential in the ice-cream industry as the freezing of this product is part of the manufacturing process. Ice-cream hardening rooms are usually held at a temperature of  $-20^{\circ}$  to  $-30^{\circ}\text{F}$ .

Because of the perishable nature of milk the market milk industry must have cold storage too. As soon as the milk is bottled, it is placed in storage at a temperature of about  $40^{\circ}\text{F}$ . and held until the next day when it is delivered. Dry whole milk and other dried milk products containing fat are usually stored in cool air chambers to prevent rancidity, the temperature depending on the length of storage period.

**Cold Storage of Other Foods.**—During the years 1943-47 the holdings of apples in Canada at the beginning of the storage season on Dec. 1 averaged 53 p.c. cold and 47 p.c. common storage. Except in British Columbia, cold-storage space is inadequate to take care of the entire crop and consequently a large proportion of the production in Eastern Canada, particularly in Nova Scotia, is held in common storage. In pre-war years the bulk of the crop was exported to the United Kingdom and other markets early in the season but the sharp restrictions