Farm & Home Structures

Basement Storage
for Homegrown Fruits and Vegetables

George F. Grandle, Assistant Professor
Agricultural Engineering

A well ventilated basement under a house with central heating may be used for ripening tomatoes and for short-term storage of potatoes, sweet potatoes and onions. However, for best results in long-term (over the winter) storage of vegetables and fruits in a basement with a furnace, you should partition off a room. The walls and ceiling of the room must be insulated from the rest of the house.

Basement storage of fruits and vegetables without refrigeration works best in climates where the average outdoor winter temperatures are 30°F or less. The average winter temperatures for Tennessee are 47-50°F, so unrefrigerated long-term basement storage may be less than satisfactory in some years.

Storage facilities must be maintained as cold as possible without allowing them to freeze. This is best accomplished by the managed use of outside air. Circulate outside air into the storage when the outside air temperature is less than the inside storage temperature, but do not bring in outside air when the temperature inside the storage is less than 34°F.

Build the room on the north or east side of the basement, if practical. Do not have heating ducts or pipes running through it. You will need at least one window in the room to install a cooling/ventilating fan.

Equip the room with shelves and removable slatted flooring. These keep vegetable and fruit containers off the floor and improve air circulation. The flooring also lets you use water or wet materials (such as dampened sawdust) on the floor to raise the humidity in the room. Shade the windows to prevent light from entering the room.

If you are interested in more details on constructing a basement fruit and vegetable storage, contact your local Agricultural Extension Service office. Ask for plan number 6228.