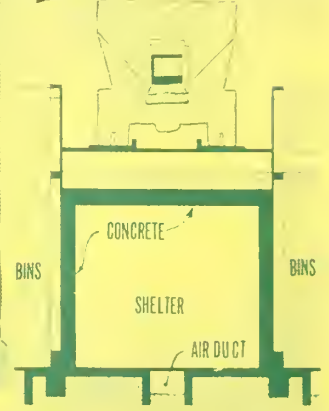
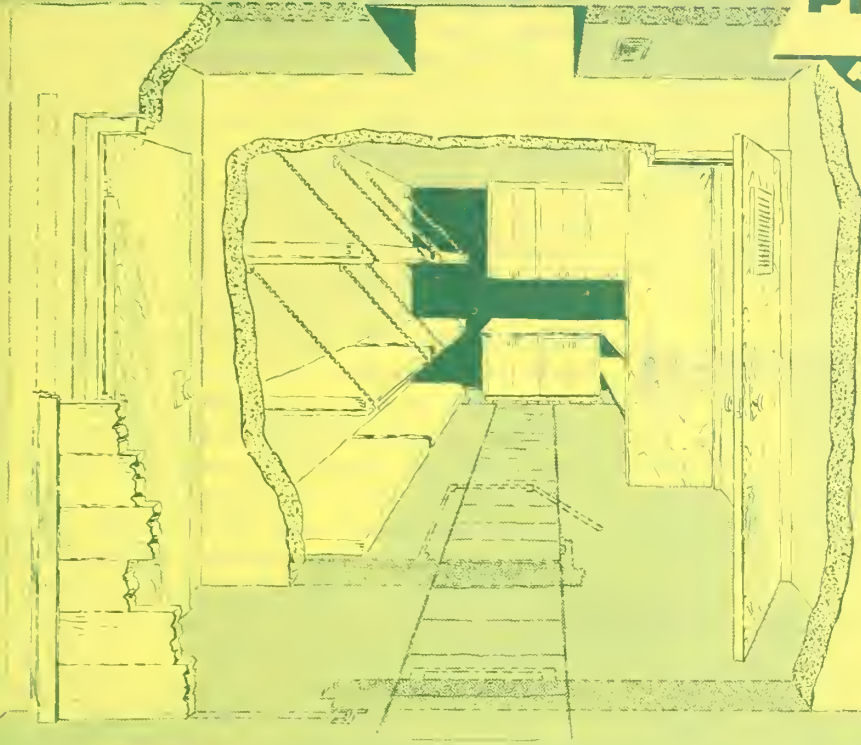


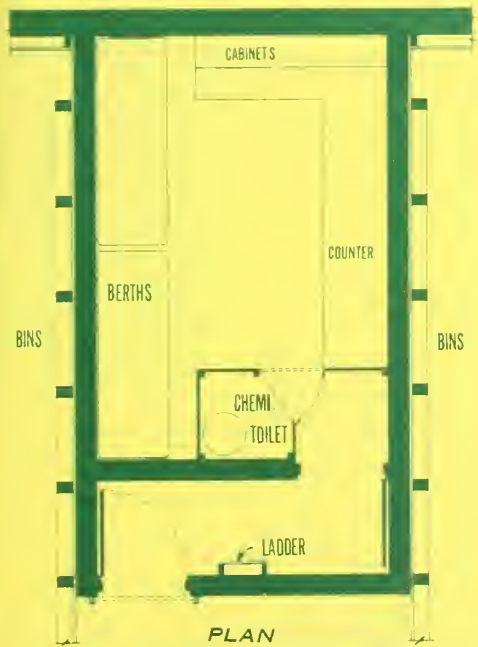
Fallout Shelter IN A FARM POTATO STORAGE

COOPERATIVE
FARM BUILDING
Plan No. 5951
(5 - SHEETS)

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SECTION

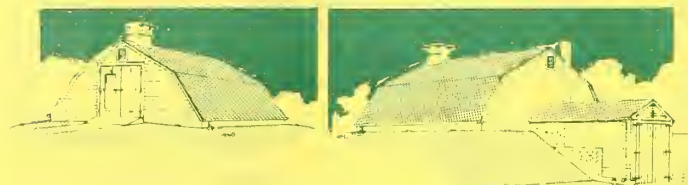


PLAN



Underground storages built to prevent freezing of potatoes may be used to protect humans and livestock from radioactivity. This interior view shows how a potato storage bin can be converted into a family fallout shelter in which the intensity of radiation is reduced to 1/150 of the radiation outside the building. When the bins surrounding the shelter are full of potatoes and a truck is parked overhead, the protection factor is greatly increased. If the surrounding bins are empty, they offer a less protected area to house farm animals.

Water must be stored in the shelter because the location and use of most potato storages of this size prohibit connection to a central water supply. Potable water placed in clean glass jars or plastic containers and covered to exclude dust should be checked every 2 or 3 months to be sure that the water has not become cloudy and unfit for drinking. Boiled water placed in sterilized jars that are vacuum sealed by canning procedures should have longer shelf life than unsterilized water.



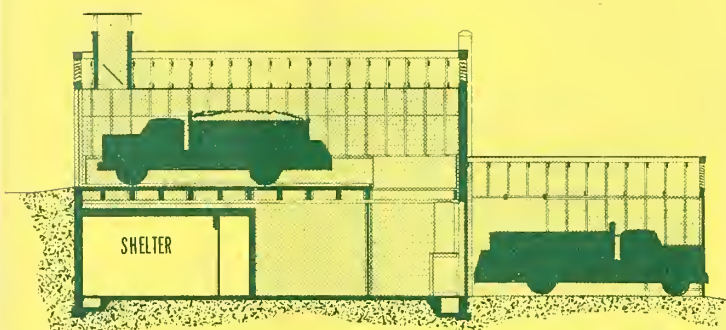
Perspectives

The potato storage can be entered from two levels. The upper is for unloading potato trucks into storage bins, and the lower for loading potato trucks out of storage. Both levels have doors and floors to accommodate a truck inside the building. The family shelter is located in the center bin underneath the floor supporting the unloading truck. Access to the shelter is through a hatch in the floor. If the center bin is not filled with potatoes, entrance may be from the center bin. This entrance is baffled from the main shelter with a concrete wall.

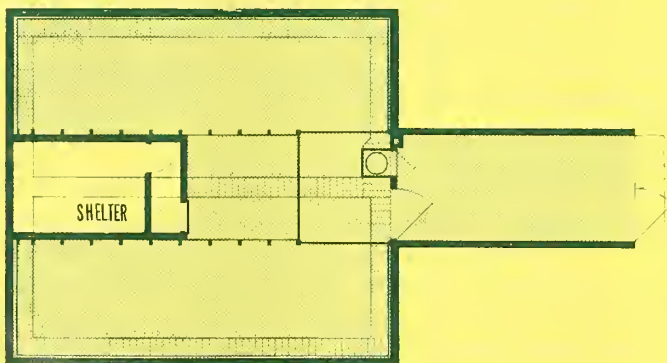
Ventilation is provided by a propeller-type fan equipped with dampers to recirculate, exhaust, or intake air. Air is delivered around the shell of the bins and from a center duct through the center bin of potatoes. A downdraft, counterflow type of air heater may be used to temper the air, or the heater may be suspended overhead near the entrance. If a suspended heater is used, a duct from the outlet of the heater to the fan will increase the efficiency of operation.

The storage shown is smaller than usually needed for present commercial potato farms. However, this type and size (6,000 cwt.) is typical of many existing on-farm storages and is adequate for seed potato storage.

Moisture is usually not a problem in this storage because ample wall ventilation removes condensation, seepage runs into the air ducts, and the natural slope of the site is conducive to good drainage.



Section (LONGITUDINAL)



Plan

In emergencies, with six people in the shelter, a natural draft of air will be created to ventilate the shelter. Air will drift down the side walls into the floor duct. Upon being heated in the shelter, the air will rise through the hatch to the upper spaces in the storage.

Complete, large-scale working drawings may be obtained through your county agent or from the extension agricultural engineer at most State agricultural colleges. There is usually a small charge.

ORDER PLAN NO. 5951, 6000-CWT. FARM POTATO STORAGE WITH FALLOUT SHELTER

If the large-scale drawings are not available in your State, write to the U.S. Department of Agriculture, Agricultural Engineering Research Division, Plant Industry Station, Beltsville, Md. The U.S. Department of Agriculture does not distribute drawings but will direct you to a State that does distribute them.