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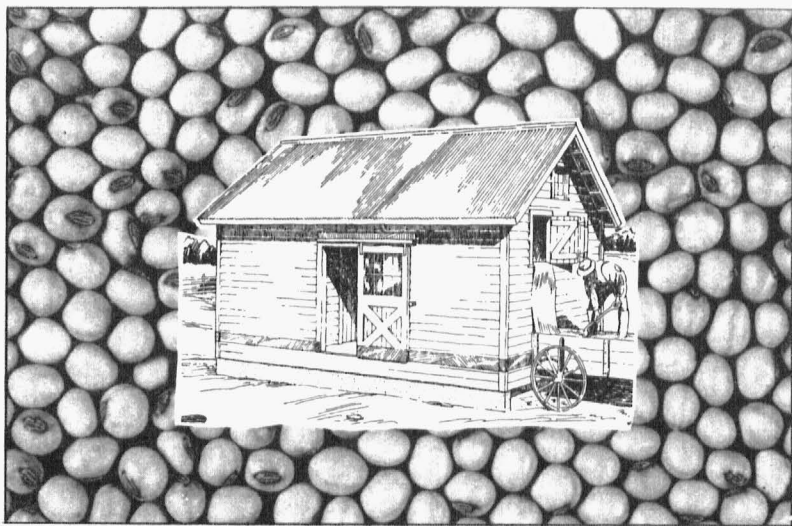
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# Emergency Storage for Soybeans

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A severe shortage of storage space is in prospect for the 1942 crop of soybeans. Farms in areas where the acreage of beans for grain has been increased will find it necessary to provide additional storage space on their farms because of possible delays in transportation to the processing plants. The rubber shortage decreases the possibility of securing trucks, and the railroads are loaded with freight immediately essential to the war effort.

### Temporary Storage Structures Not Recommended

Snow fence or pole and wire enclosures and similar structures are not suitable for storing beans except for a very short period. The crop is sufficiently valuable to justify complete protection from moisture, birds, rodents and from contact with the ground. If temporary storage is needed it would be preferable to convert corn cribs and existing bins for soybeans. Corn cribs should not ordinarily be filled more than half their depth with beans. Beans weigh 60 lbs. per bushel or 48 lbs. per cubic foot and because they are round and smooth exert much more pressure on a crib wall than does ear corn. If cribs are filled more than half full, both the joists and the studding on the sides would be overloaded. One-fourth-inch mesh hardware cloth nailed inside the studding allows for needed air circulation.

### Plan Storage Buildings for Alternate Uses

A moveable grain bin of 500 bushel capacity is adequate in size to serve as a small brooder house, fuel storage house, or for other purposes on the farm at a later date. A 1000-bushel bin can later be converted into a poultry house or other building if desired. The construction must be adequate to hold the weight and lateral pressures produced by the beans.

### Strength Required

If beans are to be stored to a depth of 8 feet in bins, the side walls should have strength equivalent to 2x6 studding spaced every 16 inches from center to center. Studding should extend to the sills and should be nailed securely to the joists. To carry the load safely lay the joists for buildings of various widths as follows:

2x12 joists spaced 12 inches apart on 10-foot spans

2x10 joists spaced 12 inches apart on 8-foot spans

2x 8 joists spaced 12 inches apart on 6-foot spans

Concrete or tile floors placed on a screened rock or screened gravel fill of 6 inches, with both fill and concrete above the surrounding ground level, will be satisfactory.

### Storage Requirements

No special factors affect soybean storage other than the usual problems involved in storing shelled corn, wheat, rye or barley. It is presumed that storage for loans will require the same specifications as for corn and wheat.

Soybeans should be mature and thoroughly cured in order to be stored safely. No trouble should be experienced if mature soybeans with moisture content of 10% to 12% are handled in the same

manner as other grains. Moistures above 13% cannot be considered safe for storage. If beans are harvested with a higher moisture content they must be spread out on a dry floor preferably in driveway or other building where there is good circulation of air until the moisture content is reduced. If no such floor is available and it is necessary to place the beans in bins directly from the thresher, it will be necessary to move them from one bin to another whenever they begin to heat. If they are moved on a dry, windy day they will lose moisture and the temperature will be reduced. A power elevator is most satisfactory for this moving process as it affords better aeration than moving by hand. The better plan however is to leave the beans in the field until they are dry enough for safe storage.

### Arrangements Should Be Made Now

Concerning loans for storage buildings and the necessary procedure for compliance with War Production Board regulations on the procurement of materials, the Secretary of Agriculture has issued the following statements:

#### *Loans for Storage Buildings*

"The Farm Security Administration and the Farm Credit Administration are in a position to make loans which will permit farmers to buy lumber and other materials for grain bins in advance of harvesting season. Lumber yards also may advance materials on credit in view of the storage allowance. War Boards should make certain that materials are available for storage construction or repair, particularly lumber, nails, and roofing. If a scarcity is anticipated, county war boards should work with dealers well in advance of harvest so materials will be on hand. County and State War Boards should report promptly on cases where needed materials cannot be obtained."

#### *War Production Board Regulations*

"The W. P. B. order L-41 limits new construction, remodeling or rehabilitation of agricultural buildings, structures, or construction projects to those with an estimated cost of \$1000 or less. No priority assistance is given, no permit or certificate is required, and farmers may secure materials from any supplier. Unless the order is modified later it will be difficult, if not impossible, to obtain certificates or authorization orders for more expensive buildings."

### Plans for Storage Buildings

Plans for storage buildings may be secured by writing to the Department of Agricultural Engineering, University of Missouri, Columbia, Missouri. A few of these plans that are or could be adapted to soybean storage are listed on the next page.

**Single Corn Crib.** Plan No. 1-732-C1. Cost of blueprint 15c. Crib is 10 feet wide by 32 feet long. The capacity for ear corn is 53 bushels per foot of length and would be the same for beans when filled up to the half-way point.

**Double Corn Crib.** Plan No. 2-732-C1. Cost of blueprint 15c. Capacity 3,000 bushels. Waterproof roof doors for use in filling with an elevator may be added. Space over driveway may be used for small grain if proper supports are provided.

**Movable Grain Bin.** Plan No. 7-732-C1. Cost of blueprint 25c. Size 10 by 10 feet, capacity 550 bushels. Bin is built on skids so that it can be moved when empty. (Midwest Plan No. 73211.) A second plan, to hold 1,000 bushels, may be secured at the same price.

**Farm Granary.** Plan No. 4-732-C1. Cost of blueprint 25c. Each of the four bins in this granary will hold 450 bushels. In an emergency the center hall can be filled, providing additional space for 700 bushels. (Southern Plan No. 5528.)

**Farm Elevator.** Plan No. 73213 Midwest. Capacity 2,000 bushels. Cost of blueprint 25c.

For more complete description of plans for storage buildings, ask your county extension agent or write for Extension Circular 474, "Plans for Storage Buildings."