SUN DRYING or drying with controlled heat makes it possible to store many of the fruits and vegetables that the garden and orchard supply in abundance. Drying can be done with very little special equipment. If the product is handled correctly it will have a pleasing color and will retain much of its food value. It will not spoil easily because the action of spoilage organisms is retarded after most of the moisture is removed from the food.

The time required to dry a product will vary greatly, depending upon the thickness of the pieces, how deeply they are spread on the tray, and atmospheric conditions. When the day is windy and the air is dry, evaporation takes place rapidly. On days when the air is excessively moist, sun drying should not be attempted. If drying has been started, the food should be taken in or covered carefully, just as is done at night before the dew forms. Under usual conditions 6 to 24 hours of actual drying time are required to finish a product.

Products Suitable for Drying

Some Illinois products that can be successfully dried are: sweet corn, lima beans, beans shelled from wax and green beans, garden peas, pumpkin, apples, and peaches. When adequate pit and cellar storage facilities are available many products can be stored for long periods without being dried.

Equipment Needed

The equipment needed for drying will depend upon whether sun or artificial heat is to be used. A screen or cloth tray such as is shown on page 3 is all that is needed for sun drying.
A cabinet type of drier may be suspended over the kitchen range to make use of the rising warm air. It should, of course, be so constructed and placed that it will not be a fire hazard. It can be made from small-mesh galvanized wire netting and strips of metal, wood, or lath. The screen may either be fastened directly to the framework or the framework made to support separate trays.

Shallow pans can be used in a low-temperature oven for the entire process or to complete drying that has been started in the sun. An electric fan or any other equipment that will keep the air in circulation will speed up the drying process.

Directions for Drying

**Sweet corn.** Any variety of sweet corn can be dried. Gather in the milk stage and prepare immediately. Husk ears and remove worm injuries and silks. Blanch the ears until the milk is set; this means cooking them for about 10 minutes in steam or for 8 to 12 minutes in boiling water. To cool the ears plunge them into cold water. Cut off the grains and place on trays to a depth of ½ inch. Place trays in hot sunshine or in a drier heated to 130° to 140° F. When drying is about half done, lower the temperature in order to prevent the sugar in the corn from caramelizing. Stir the kernels frequently to keep them separate.

Corn properly dried is hard and semitransparent and the kernels break with a clean, glass-like fracture. Twenty-five pounds of fresh corn yields approximately 2 to 4 pounds of dried corn.

**Shelled beans and peas.** Shelled beans can be dried in the same way as peas. Gather full-size seeds from either wax or green beans. Gather peas when they are full size, tender, and sweet but not starchy —do not wait until the pods have begun to turn yellow and dry. Both vegetables require a 10-minute blanching in steam or 7 to 8 minutes in boiling water. Drain and spread on trays to a depth of ½ inch. Place trays in hot sunshine or in a drier heated to 115° to 120° F. As drying progresses, the temperature in the drier may be raised to approximately 140° F. Stir occasionally.

Peas or beans that are properly handled will be uniformly dry through; they will not show moisture near the center when split open. These two vegetables may also be dried on the vine.

**Beans and peas dried on vine.** Peas, wax beans, lima beans, and string beans may be left on the vines until they mature and dry. To help destroy insect eggs and weevils, spread the dried shelled beans on trays to a depth of ½ inch and place them in a drier with a temperature of 165° F. for 10 to 15 minutes.

**Pumpkin.** Select pumpkin that is firm, solid-fleshed, and deep-colored. Cut it into strips 1 to 2 inches wide, peel, and remove seeds and stringy, pithy material. Cut strips into pieces ½ inch wide. Blanch the pieces in steam or boiling water for 5 to 8 minutes, or until they are
somewhat transparent. Spread on trays and put in a drier at a temperature of approximately 135° F. Gradually increase temperature to 160° F. Respread several times during the drying process so there will be no moist spots.

The pumpkin is ready to remove from the drier when the pieces have become leathery in texture and show no moisture when cut crosswise.

**Apples.** Select ripe but not soft apples, of late-maturing varieties, with good cooking qualities. Pare and core the apples and cut them

into slices ¼ inch thick. To help prevent discoloration drop slices immediately into cold salted water (4 teaspoons of salt to 1 gallon of water). Spread slices on trays not more than one or two deep. Place immediately in sun or in a drier at a temperature of about 130° F. Gradually increase the temperature in the drier to 160° F. and then lower to 145° F. Respread slices several times to prevent uneven drying.

The apples are dry when a handful of slices gripped firmly in the hand have an elastic, springy feel, separate quickly when the pressure is released, and leave no moisture on the hand.

**Peaches.** Select firm ripe peaches of the Elberta or J. H. Hale varieties. Wash, peel if desired, and remove pits. To help prevent dis-

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**Screen trays for sun drying fruits and vegetables.** If it is impossible to secure screen that is in good condition, use cheesecloth or other plain light-weight material.
coloration drop the peach halves immediately into cold salted water (4 teaspoons of salt to 1 gallon of water) and leave them there for 5 to 10 minutes. Spread on trays with pit side up and place immediately in sun or drier. Follow the directions given above for drying apples.

Curing

After the product has been taken from the drier, it needs further curing. Pour it into large shallow containers and keep in a warm room for 2 to 3 weeks. Stir daily to distribute the moisture evenly. If fruits and vegetables are stored immediately after drying, they are likely to deteriorate or spoil because of the action of certain organisms which grow and multiply in the less dry portions.

Storing

Dried foods must be protected against absorption of moisture and the attack of insects. Put them in small containers with close-fitting covers that can be resealed after opening. Tin cans, glass jars, or paraffined paper cartons are suitable. Cloth or paper bags are almost sure to allow loss of flavor and spoiling unless some additional protection against moisture and insects is used.

Always store dried foods in a cool dry room.

This circular is issued in response to widespread demand, created by the war emergency, for information about home drying of fruits and vegetables. Altho based on the best information obtainable, it is incomplete owing to the fact that only limited research has been done on this problem. Readers will need to rely to a considerable degree on their own ingenuity and experience in devising equipment and in judging the adequacy of their procedures.