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EC9964 Drying Fruits and Vegetables

Mabel Doremus

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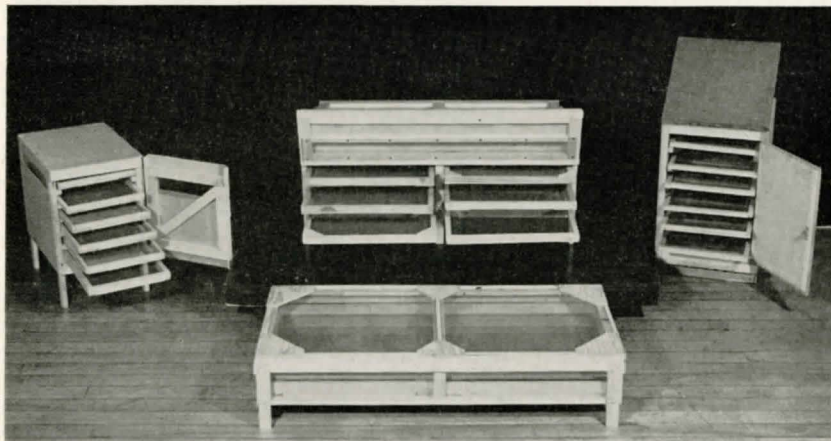
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Drying Fruits and Vegetables



Models of homemade driers. Left to right—top of stove drier, glass type sun drier, electric drier. Front—screen type sun drier.

PLAITE CO. AGR. EXTENSION SERVICE
COLUMBUS, NEBRASKA

**University of Nebraska Agricultural College
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Drying Fruits and Vegetables

Mabel Doremus

A variety of ways to preserve food is desirable at any time, and especially so in an emergency. Canning and freezing are probably the most desirable method; however, when it is necessary to preserve large quantities of food, drying has a place. Different methods of preserving food will help assure an adequate supply and give a pleasing variety to meals.

The time of drying can be shortened by increasing the temperature or by quickening the rate of air movement, as with a fan. Generally, flavor and cooking quality are best preserved by rapid drying.

Drying in the Open Air

For best results, sun drying should be attempted only in districts that normally have practically rainless weather with a high percentage of sunshine, high temperatures, and low humidity during the period in which the drying is done.

Some equipment should be provided for protection against insects and dust. When the sun is very hot, there is usually little difficulty from flies and other insects. Canvas, muslin, or heavy wrapping paper held in place by strips of lath, may be satisfactory for drying small quantities of food. If large quantities are to be dried, specially constructed trays should be used, made of light-weight lumber and screening. A sloping roof with a south exposure is an excellent place for sun-drying.

It is desirable to have drying trays placed so as to permit free movement of air beneath as well as over the trays. Materials dried in the sun should be stirred several times during the day. Place the material to dry in the sun when the dew is gone in the morning and remove before it starts to form in the evening.

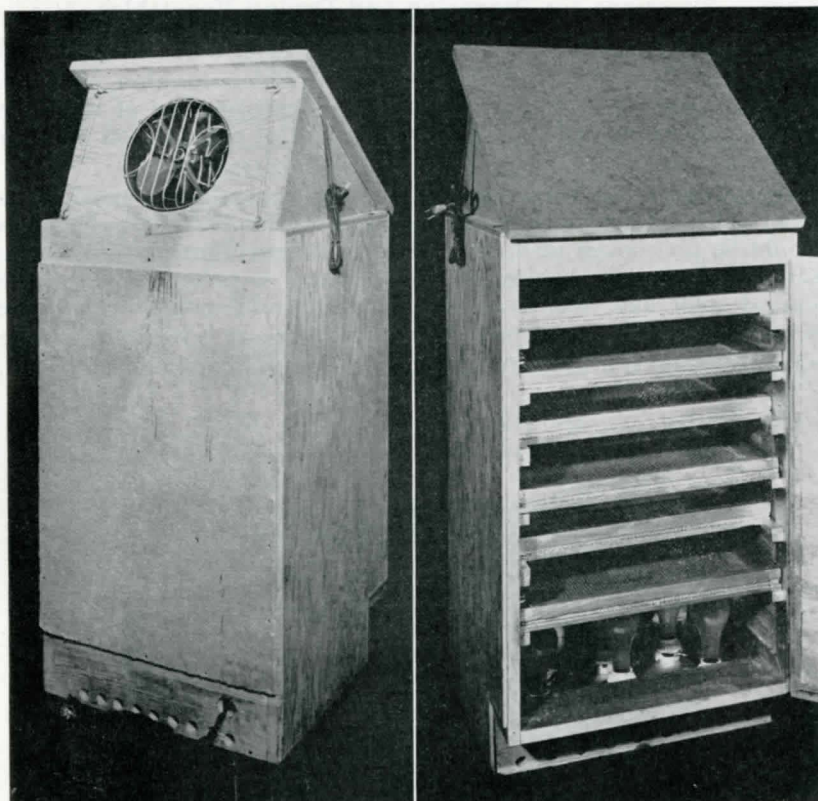
Before storage, sun-dried products should be placed in a very slow oven (250° F. or lower) for 20 minutes. Keep the oven below browning temperature. This is done to complete drying, and destroy any insect eggs collected during the drying period.

Drying by Artificial Heat

When sun drying cannot be depended upon, drying may be done by artificial heat. Foods may be dried in the oven with the heat low and constant. Stir the materials often to insure even drying. Leave the oven door open to allow moisture to escape.

Small quantities of food may be dried by placing a drier on top of a kitchen range or heating stove.

Electric driers may also be used for small quantities of food.



Homemade electric drier with fan. Front and back views.

Directions for Preparing and Drying Fruits

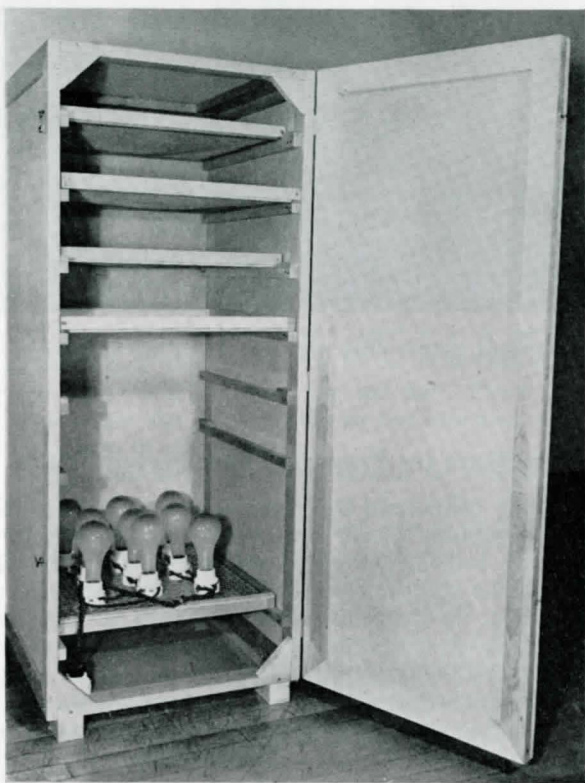
Apples, peaches, pears, and apricots discolor rapidly when the fruit is cut open and exposed to the air, unless the sun is very hot. The color changes are indications of chemical changes that have an injurious effect on the composition, flavor and odor of the fruit, if permitted to continue. As the fruit is cut, it should be dropped into salt solution (three to five teaspoons of salt to one gallon of water), and then be drained well or dried on a cloth.

To prevent further darkening, expose the fruit to the fumes of burning sulfur before drying. Place the trays of cut food in a tightly covered packing box out of doors. In the end of the box or in the bottom, burn sulfur in an iron pan, one teaspoon of sulfur to one pound of fresh fruit. Length of exposure varies with the fruit. Fruits which are sulfured before drying are not bothered by insects.

Directions for Preparing and Drying Vegetables

Many dried vegetables are more likely to deteriorate in flavor and palatability than are dried fruits. Since this deterioration often becomes apparent in a few months, only a small number of vegetable products should be dried, and other methods of preservation used for the rest.

Vegetables to be dried must be in their prime. They need to be taken quickly from garden to drying process. Practically all vegetables should be pre-cooked in boiling water or steam. This prevents chemical changes and darkening or discoloration. It preserves or sets the natural color and coagulates some of the soluble constituents. The escape of moisture is hastened. When boiling water is used, count time when the water starts boiling again after the vegetable has been put in.



Homemade electric drier, natural draft.

Drying Table for Fruits

FOOD	PREPARATION FOR DRYING	DRYNESS TEST
Apples	Wash, pare, core, and slice apples thinly. Sulfur may be applied for 20 to 30 minutes as described above or the apples may be dropped into water, to which table salt has been added in the proportion of 3 to 5 teaspoons per gallon. Wash with clear water and dry the surface.	Elastic feel. Leaves no visible moisture on the hand.
Apricots	Method same as for peaches; time of sulfuring 1½ to 2 hours.	Pliable, leathery feel.
Cherries	Wash, pick over to remove stems and imperfect fruits, spread in a single layer on the trays, and dry. Large cherries may be pitted before being dried.	Leathery but sticky.
Peaches	Wash fruit, scald and peel if desired, split in half and remove stone. Place on trays, pit side up. Give sulfur treatment mentioned above for two to four hours, or until the flesh takes on a rather uniform, semi-transparent appearance and juice begins to collect in some quantity in the stone cavity. This necessitates careful handling in transferring the fruit from the sulfuring box to the drier.	Pliable, leathery feel.
Pears	Remove stem and calyx. Split in half lengthwise, with or without removing core. Do not peel, Sulfur the pears for 3 or 4 hours at least. (See directions above.) Spread to dry in single layers, with cut surface uppermost.	Leathery, springy feel.
Plums	Wash plums, cut into halves and remove stones. Plums dry somewhat more quickly if dipped into boiling water until the skins check. Place in trays in a single layer, stone cavity uppermost. Sulfur as directed above for 20 to 25 minutes to preserve the color and help them keep better.	Pliable and leathery.

Drying Table for Vegetables

FOOD	PREPARATION FOR DRYING	DRYNESS TEST
Sweet Corn	Remove husks and silk from corn. Place in a wire basket and plunge into boiling water for 8 to 12 minutes, allowing corn to remain in water until milk is set. Drain corn, cut from cobs, and spread to dry.	Kernels hard and semi-transparent. Shatter when hit with a hammer.
Beans, shell	Gather when full grown and before pods are dry. Shell, and scald for 3 minutes in boiling water. Drain dry and spread out thin on trays. Stir frequently during the drying process.	Brittle.
Beans, snap	Gather string beans when ready for table use. Wash and cut in one inch lengths. Blanch or steam 2 or 3 minutes, then place on trays and dry.	Brittle.
Beans, soy	Shell, blanch 4 to 6 minutes.	Brittle.
Kale	Gather when ready for table use. Wash thoroughly, strip out the heavy mid-rib. If desired, kale may be partially dried before stripping, as then stripping is easier. Dry off water, place on trays, and dry.	Crisp, very dark green.
Peas	Gather peas when in ideal condition for table use—that is, when the seeds are full size. Wash well and place pods in boiling water for 3 minutes; then spread on a wire screen having mesh large enough to allow peas to pass through into a box beneath. Rub pods vigorously to burst them so peas will fall into box beneath the screen. Dip shelled peas for about 2 minutes in boiling water to which table salt has been added at the rate of 2 tablespoons per gallon. Drain and spread thinly on drying trays. Stir often while drying.	Brittle.
Celery leaves, parsley, and sage	Wash and dry. Place on drying trays.	Crisp.



Dried foods add variety to meals.

Storing Dried Foods

Dried foods are non-perishable only when they are adequately protected against dust, absorption of moisture and attack of insects and mice. Satisfactory storage containers are tin cans or boxes with close fitting covers, moisture proof wax-paper cartons with close fitting lids, and glass jars if stored in a dark room. If the food is stored in several small containers within a larger one the entire quantity is not exposed to the air each time some is removed.

The room in which dried fruits and vegetables are to be stored must be cool and dry.

More of the Vitamin C is lost during the drying process, so foods containing Vitamin C must be included elsewhere in the diet when dried foods are used.

Cooking Dried Foods

Cover dried fruits with cold water and soak for $\frac{1}{2}$ to 6 hours, adding more water if necessary. Cook slowly until just tender in the same water in which soaked. Most of the liquid will be absorbed during the cooking.

Dried vegetables have been precooked so can be cooked for the table in a very short time. Before cooking, soak only until plump. Dried greens do not require soaking. Cook until tender in boiling water to cover.