

# Freestone Peaches

successfully dried when dehydrated according to recommended practice

E. M. Mrak and R. L. Perry

**Dried freestone peaches** of good color, texture and vitamin content can be produced by modern dehydration methods in considerably less time than by sun-drying and without contamination from dry-yard dust, dirt or insect infestation.

Freestone peaches can be dehydrated without being blanched, but blanching substantially reduces the time required for sulfuring and drying. Blanching yields a better dried fruit which usually will retain translucency while unblanched peaches generally do not have it.

Steps for dehydration of blanched peaches are as follows:

1. The fruit is picked carefully to prevent bruising—

2. Graded for size to avoid uneven drying—

3. Cut and pitted by hand or machine and trayed with cut side up to prevent juice spilling after sulfuring—

4. Blanched for four to eight minutes depending upon size, variety and maturity of the fruit, and the efficiency of blanching equipment—

5. Tested to determine degree of steaming—

6. Predried for about 40 minutes and allowed to cool before sulfuring; or allowed to cool if dehydrator is not available—

7. Sulfured for three to four hours—

8. Dehydrated for 16 to 18 hours—

9. Examined for moisture content and stored.

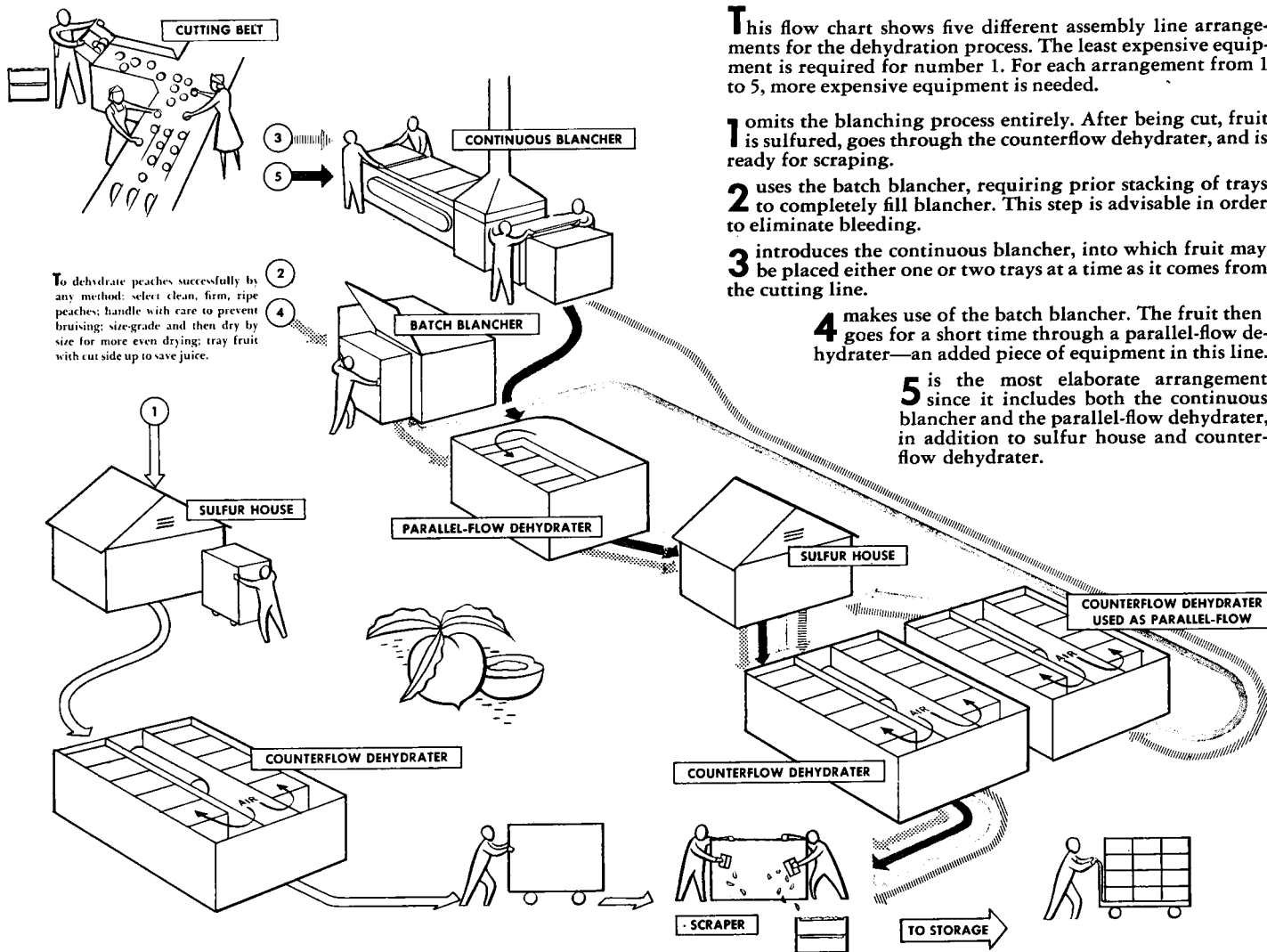
Steam temperature for blanching fruit—if the continuous blancher is used—should be at least 190° F at a point one third of the blancher length from the entrance and around 212° F at a point two thirds of the way through. If a cabinet blancher is used, the steam temperature should be about 212° F.

Properly blanched fruit will be steamed a little more than two-thirds through. Enough heat will remain in the fruit so that it will complete cooking of the pieces while the trays are stacked at the end of the blancher for cooling.

When possible, blanched peaches should be predried before being sulfured, since sulfuring causes additional softening of the tissues and results in bleeding and juice loss. As soon as possible after blanching—cooling is unnecessary in this case—the stacks of trayed fruit should be run into a dehydrator tunnel at the hot end so that they move through the tunnel in the same direction as the air current.

Temperature of the tunnel at the entering end should be between 180° and

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190° F. Fruit must not remain in the tunnel more than 40 to 60 minutes before it comes out at the cool end.

After predrying, the fruit is cooled 10 to 15 minutes before being sulfured to increase sulfur dioxide absorption. A fan may be used to cool the peaches quickly. It takes 3½ hours to sulfur blanch peaches, burning 5½ pounds of sulfur per single car of fruit containing about 25 trays.

The cars of sulfured peaches should be placed in the cool end of the dehydrator and kept there until the moisture content is reduced to 25%–28% unless the weather is cool and humid.

Under ordinary weather conditions, in the central valleys of California, peaches will continue to lose moisture after they are removed from the tunnel until they reach a final moisture content of about 20%.

### Dehydrater

Any type of fruit dehydrater can be used successfully, providing the humidity does not reach a point where sulfur is lost.

Whatever heating method is used in the dehydrater, equipment must eliminate soot and smoke.

Each dehydrater should have one wet bulb and two dry-bulb thermometers to measure temperature and humidity.

The dry-bulb thermometers should be at opposite ends of the air current, one at the hot–dry–finishing end, and the other at the cool–wet–entering end. The wet-bulb thermometer may be placed wherever convenient but in the direct air flow.

The dry-bulb at the hot end of the dehydrater will give the finishing temperature. When it rises too high there is danger of scorching or otherwise damaging the fruit, shortening its storage life.

If the peaches are taken from the dehydrater with as much as 25% to 30% moisture content, they should remain on the trays for about 24 hours to permit drying to approximately 20%, or to the moisture content required by the packing house before delivery.

In foggy climates this procedure does not apply, since the dehydrated fruit may actually pick up more moisture if allowed to stand on the cars after removal from the dehydrater. In such cases, the hot air temperature in the dehydrater is lowered to about 140° F, and the fruit is then dried to the required low moisture content before being taken from the tunnel for storage.

The dry-bulb, at the cool end, used in conjunction with the wet-bulb, gives data to determine the humidity. The difference

between the cool-end dry-bulb and the wet-bulb thermometer should always be more than 15 degrees. When it is less, sulfur is being lost.

If the tunnel is loaded with too many cars or if they are introduced in too rapid succession during dehydration, the humidity will become excessive, the drying rate will be greatly reduced and sulfur lost.

The best method of determining moisture content is with an electric moisture tester which is recommended for any operator whose volume justifies the initial cost.

After the fruit has reached the desired moisture content and has cooled sufficiently for easy handling, it should be scraped from the trays and stored.

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*Detailed recommendations and detachable temperature charts are available in California Experiment Station Circular 381 "Dehydrating Freestone Peaches" which may be obtained without cost from the office of the Farm Advisor or by addressing a request to Publications Office, University of California College of Agriculture, Berkeley 4, California.*

### EQUIPMENT

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discharge nozzles are used by some manufacturers for the very fine nozzles, greater uniformity of discharge being the reason for this practice.

Nozzles may be arranged all on one side of the boom; or as is frequently done, alternate nozzles are placed on opposite sides of the boom and slanted toward one another; and double coverage is obtained with the same gallonage.

## NEW PUBLICATIONS

*A copy of the publications listed here may be obtained without charge from the local office of the Farm Advisor or by addressing a request to Publications Office, College of Agriculture, University of California, Berkeley 4, California.*

**CALIF. CLINGSTONE PEACHES—ECONOMIC STATUS, 1948**, by Sidney Hoos and H. Fisk Phelps. Cir. 385, June, 1948 (27 pages).

**CATERPILLARS ATTACKING TOMATO**, by A. E. Michelbacher, W. W. Middlekauff, and N. B. Akesson. Bul. 707, June, 1948.

**SOILS OF COLUSA COUNTY**, by Frank F. Harradine. Lithoprinted, June, 1948.

**HYDROLOGIC STUDIES IN COACHELLA VALLEY**, by M. R. Huberty, A. F. Pillsbury, and V. P. Sokoloff. Lithoprinted, June, 1948.

Pumps, booms and nozzles all have a bearing on the capacity of the sprayer. The capacity and adaptability of the sprayer must be considered carefully.

Spray booms will vary with the job to be done. The length of the boom and the consequent size of the rig will be limited by the increased bulk and expense of tank, pump and supporting members for the long boom.

When large acreages are to be sprayed with high volumes—over 100 gallons per acre—it may be found practical to have several small rigs instead of one very large machine.

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### DONATIONS FOR AGRICULTURAL RESEARCH

Gifts to the University of California for research by the College of Agriculture accepted in May, 1948

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