

MN 2000 EF 105

# Berry Picking and Handling

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UNIVERSITY OF MINNESOTA  
DOCUMENTS

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- Pick Frequently
- Start Picking Early
- Separate Culls
- Handle Carefully
- Protect Adequately

## For Better Returns . . .

### Pick and Handle Berries Carefully

Minnesota-grown berries commonly are sold under two grades—"fancy" and "commercial." Some shipping organizations use a "pie" grade for berries not good enough to grade as "commercial" and at times an "extra fancy" grade has been used.

Good picking and handling practices usually make it possible to secure berries of fancy grade. Often failure to observe one small detail that could easily be corrected will cause otherwise fancy grade berries to be classed as commercial.

#### THESE BERRIES DIDN'T KEEP

These berries were picked the same day from the same field as those on the right but by a different picker. Carelessness caused moldy berries.

**P**ICKERS must be carefully instructed and supervised to do a good job. Sometimes it is better to train new pickers than attempt to change those with incorrect picking habits. Replace pickers not doing good work by the third day, but do not expect new pickers to keep up with experienced ones. Until used to the work, pickers usually cannot do good work for more than 4 to 5 hours per day.

A strawberry crop yielding up to 50 24-quart crates per acre per day requires from 12 to 20 pickers per acre during heaviest picking. A raspberry crop yielding 25 to 30 24-pint crates per acre per day requires 10 to 12 pickers per acre. Too few pickers may result in poor work because pickers do a much poorer job when tired. Pickers usually are paid by the box or crate.

### Pick Berries Frequently

Pick berries frequently enough to insure the delivery of fruit of uniform ripeness. During most of the season, pick the entire planting every day, especially in hot or damp weather. During the first few days of the season, picking will be neces-

sary only every other day. Boxes containing overripe and underripe fruit do not ship well and bring lower prices. Overripe berries usually serve as infection centers for the spread of mold.

The degree of maturity at which strawberries should be picked for shipment depends upon variety, the distance the berries will travel, and the weather in transit. In general, berries three-quarters red are suitable for 24-hour shipment and those with full color but firm for 12-hour shipment. For longer shipments, "half-ripe" berries showing 25 to 50 per cent of the surface white and the remainder pink usually are required. Do not pick strawberries that are green on the under side. The fruit may be picked riper in cool weather than in warm. Do not pick berries for immediate use or for freezing until fully ripe.

Pick raspberries for shipping "pink-ripe" as soon as the berries can be pulled easily from the "core." In dry seasons, some varieties do not loosen easily until too ripe for shipping. In this event, shallow cultivation immediately following each picking will be helpful. A "dead ripe" berry is too ripe for tomorrow's market.

To pick strawberries, pinch off stem between thumb and forefinger, leaving part of stem attached to berry. Bruising will result if berry is pulled or grasped as shown in the illustration of incorrect methods.

CORRECT

INCORRECT

INCORRECT

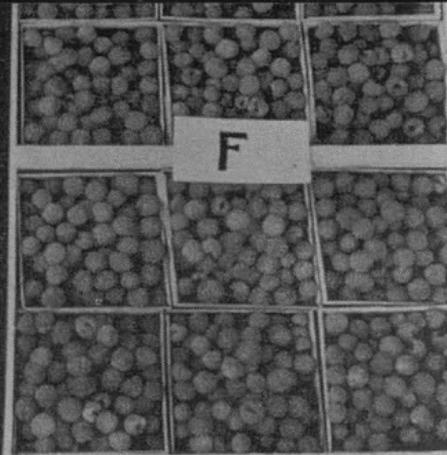
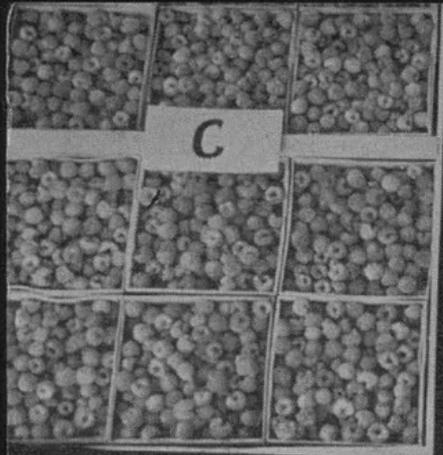
CORRECT

INCORRECT



#### THESE BERRIES KEPT WELL

This and the picture to the left were taken at the same time several days after picking. These berries were picked by a careful worker.



COMMERCIAL

FANCY

PICKING AT THE RIGHT TIME MAKES A DIFFERENCE

## Start Picking Early

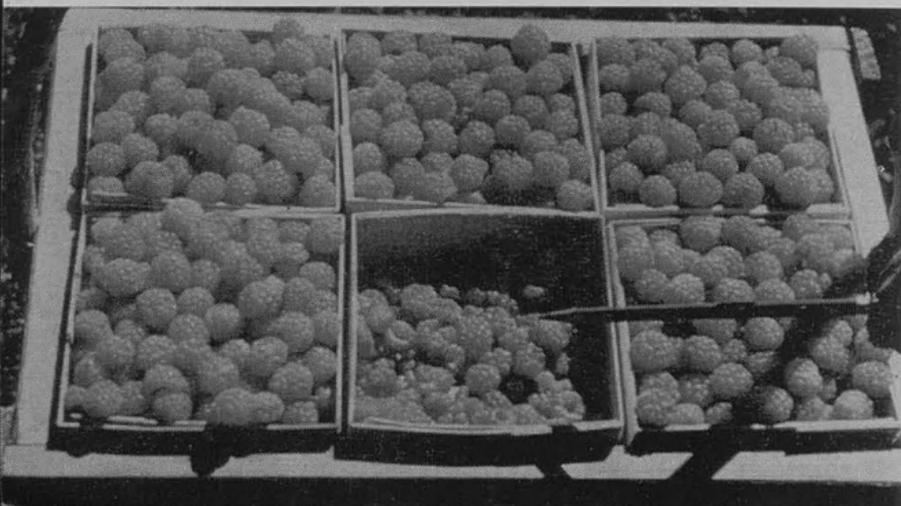
Berries picked early in the day remain cooler and keep longer than those picked later. For each rise of about 15° F. the berry's marketable life, other things being equal, is decreased one half. As the heat of the day increases, berries become softer and the skin is more easily punctured. Rhizopus rot, the principal cause of "whiskers" on berries, does not readily penetrate unbroken skin but easily infects fruit with broken outer covering.

**Wet Berries.**—Allow raspberries wet with rain, dew, or fog to dry on the bush before picking. Wet raspberries cannot be shipped successfully.

Strawberries may be picked as soon as it is dry enough to work even though the dew is not completely off the berries, provided the fruit is allowed to dry off before packing boxes into the crate. It is better to start picking strawberries early when the berries are wet with dew and to get through early than to start late and end late. However, strawberries picked in warm weather at the "tail end" of the season usually do not keep well even when picked under dry conditions, and when picked wet they deteriorate very quickly.

Berries picked after prolonged rain will not keep well and cannot be shipped successfully no

RESERVE ONE BOX FOR CULL FRUIT



# ★ *The Plant May Produce Fancy Fruit . . .* ★

## But Picking and Handling May Produce Culls

matter how dry when picked. Berries from the second picking after rain usually are the most difficult to handle. Hold such fruit for local distribution or short hauls, canning, or freezing.

### Separate Culls While Picking

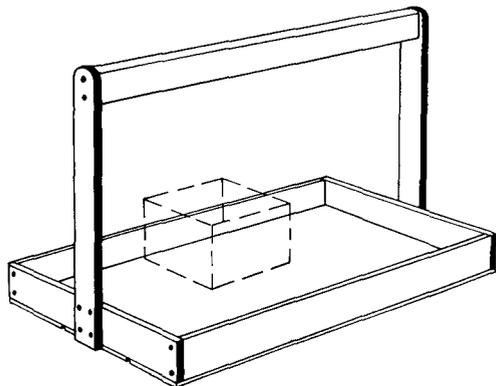
Never sort or rehandle berries after they are placed in the box. Merely emptying the fruit on a table and then replacing it in the box may greatly increase decay and softening. Have pickers sort good fruit from the poor when picking. Reserve one box in each carrier for cull or overripe fruit.

All cull fruit should be picked and paid for at the same rate as for the good fruit. Overripe and rotted strawberries left on the plants promote the decay of other berries. Growing strawberries in rows not more than 18 to 24 inches wide and growing raspberries in hills facilitates "clean" picking.

Cull fruit includes green, muddy, insect-damaged, sun-scalded, decayed, moldy, bruised, undersized, and misshapen berries.

### Fill the Boxes Properly

Start filling all except cull boxes in the carrier evenly at the same time. Do not fill one box at a time. Be sure that the corners are well filled, then add more berries until each box is rounding full. Some shrinkage or settling of the berries en route to market cannot be avoided, and unless berries are "heaped up" when picked the box may fall below the legal requirements.



A SIMPLE LIGHTWEIGHT CARRIER WEIGHING 1½ POUNDS

Place, not drop, berries in the box. Holding a number of berries in the hand before they are placed in the box will bruise the fruit. Do not allow pickers to put all the smaller berries in the bottom of the box and top them with large berries.

Never heap berries on top of a carrier of full boxes and then remove the extra berries to other boxes at the berry shed.

Never allow filled carriers to stand in the sun.

### Provide Lightweight Carriers

Provide one third more carriers than pickers so empty carriers are always available. A carrier should be light in weight and hold six boxes. Some growers prefer an eight-box carrier. Carriers for raspberries usually are constructed with legs to facilitate picking. Carriers with either solid or slatted bottom are used, the former preferred.

### Provide Good Berry Sheds

A good berry shed provides maximum air circulation and protects the fruit from direct sunshine and sudden rain storms. Good air circulation will cool fruit to slightly below the prevailing air temperature in a short time and will help retard mold or decay. Berries in a closed or partly closed shed or room cool very slowly. A damp cellar is a poor place to hold berries.

Sometimes a canvas over a frame will serve as a temporary berry shed, or a table under the shelter of a large tree will suffice. A shed consisting of a roof with a few boards on the sunny side usually will provide necessary protection.

On days when the air is extremely hot and dry, exposure of the fruit to rapid air movement for more than two or three hours may result in loss of brightness and excessive shrinkage. When necessary, the berries must be protected from dust.

### Pack Crates Carefully

The person in charge of the berry shed and not the picker should pack the filled boxes into crates. Good pickers sometimes damage the berries by careless handling in transferring the boxes.

Always set crates level and solid, leaving 2 to 3 inches between each stack for ventilation.



A TEMPORARY BERRY SHED

When possible, do not nail on the cover until it is time to start the fruit to market. Use only standard berry-box nails ( $\frac{5}{8}$ " flat headed, 17 gauge). Longer nails may protrude and injure handlers. If shipping through a marketing association, nail as directed by association manager.

Use strip covers when marketing methods permit or some other cover providing ventilation.

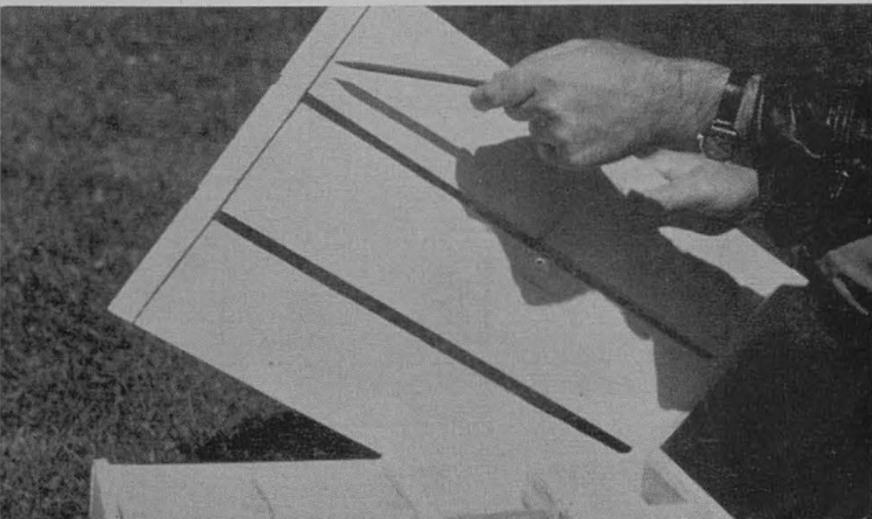
Some growers use special labels on boxes or crates to identify their fruit. Such labels may be registered with the Secretary of State, St. Paul.

## Keep Adequate Picking Records

A common practice is to keep a tally sheet posted in the berry shed to record each lot brought in. Have pickers check each entry before leaving the shed. At the close of the day each picker may sign the tally sheet and receive a memorandum of the amount picked. A duplicate record book, as used in grocery stores, is convenient for this. See that totals on tally sheet correspond with number of crates packed.

Printed tickets to be punched as the boxes are brought to berry shed are also used. When many pickers are employed, save time by furnishing each with a numbered badge to wear.

USE COVER PROVIDING VENTILATION



## Hauling Berries to Shipping Platform

Have crates level when loaded, to reduce the possibility of the "pack" being disturbed by a sudden stop or severe jolt. Drive slowly and carefully over rough spots in the road.

Never haul berries in the car trunk except for short hauls on a smooth road. Never haul a light load in a large truck with heavy springs.

Protect fruit in transit from direct sunlight and from dust, but be sure to keep fruit well ventilated at all times. Move each crate carefully, and never slam crates down hard when loading or unloading. When selling through a marketing association, deliver berries as early as possible in afternoon.

## Loading Trucks for Distant Shipment

Load crates with the longest dimension from front to rear. Leave about 2 inches between each row, the whole length of the truck from front to rear. Place lath strips between each tier or alternate tier of crates. Extend these strips to the sides of the truck for bracing to prevent side motion. Sometimes it is not necessary to nail all the strips to the crates. Always nail the top strips. The amount of nailing on the lower layers will depend on such factors as the distance to be traveled, the kind of roads, and the type of truck used. Use a 4 d box nail for nailing. Brace the crates at the rear well to prevent lengthwise motion. Closed trucks without refrigeration should have large openings in both front and rear for circulation.

## Precooling

Shipments of more than 500 miles require precooling and refrigeration in transit, and berries traveling shorter distances are benefited by proper refrigeration. Efficient refrigeration for long distance shipments requires the rapid lowering of berry temperature to between 40° and 45° F. The danger point for Rhizopus rot is 48° to 50° F. Decay may begin only 2° to 3° above this temperature. Small precooling units can be constructed where volume of production and marketing methods warrant the expense. For further information write to the Horticulture Division, University of Minnesota, University Farm, St. Paul.

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