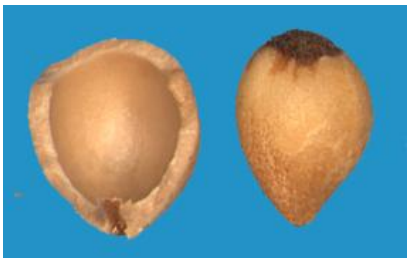
# FAMILY: ROSACEAE

Genus: *Prunus*

## Morphology

Fig 1 External



endocarp seed

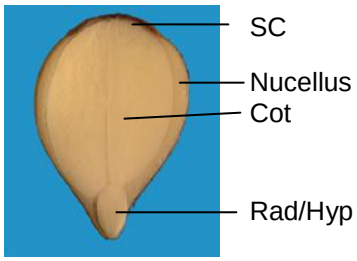



Fig 2 Embryo

## 1. PRECONDITIONING AND PREPARATION:

| METHOD 1 | TIME (h) | TEMP (°C) |
|---|---|---|
| Steps:<br>1. Soak intact fruits in beaker of water<br>2. Crack and remove endocarp. Use vise placing pressure on seam.<br>3. Nick seed coat at distal end<br>4. Soak seeds, changing water each day<br>5. Remove seed coat and nucellus from embryo | <br>overnight<br><br><br>1-3 days | <br>20-25<br><br><br>20-25 |

Step 2 Step 3 Step 5

seed in vise with pressure on seam endocarp, left seed coat/nucellus embryo

| METHOD 2 | TIME (h) | TEMP (°C) |
|---|---|---|
| Steps:<br>1. Soak intact fruits in beaker of water<br>2. Bisect seed longitudinally along seam | overnight | 20-25 |

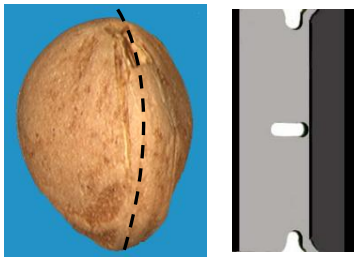


Fig 3 Preparation methods

## 2. STAINING:

| METHOD | TZ Conc (%) | TIME (h) | TEMP (°C) |
|---|---|---|---|
| Method 1: Place intact embryo in solution | 1.0 | 2 | 35 |
| Method 2: Place embryo half in solution | 1.0 | overnight | 30-35 |

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**Post-staining notes:** None

## 3. EVALUATION:

**VIABLE (NORMAL STAINING)**

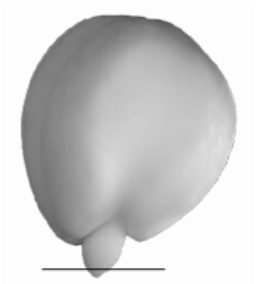
- radicle/hypocotyl completely stained or unstained distal tip acceptable
- cotyledons
  - completely stained or,
  - ⅓ or less of distal end unstained if pervading necroses or,
  - less than ½ of distal end unstained if superficial necroses or,
  - area near center unstained.

**NON-VIABLE (ABNORMAL OR NO STAINING)**

- radicle/hypocotyl greater than distal tip unstained
- cotyledons
  - basal ½ less than completely stained or,
  - more than ⅓ of distal end unstained if pervading necroses or,
  - ½ or more of distal end unstained if superficial necroses

- immature seed (see sections 15.1.3.2 and 15.1.3.4)

Notes:



distal tip of radicle (just below the conducting tissue)

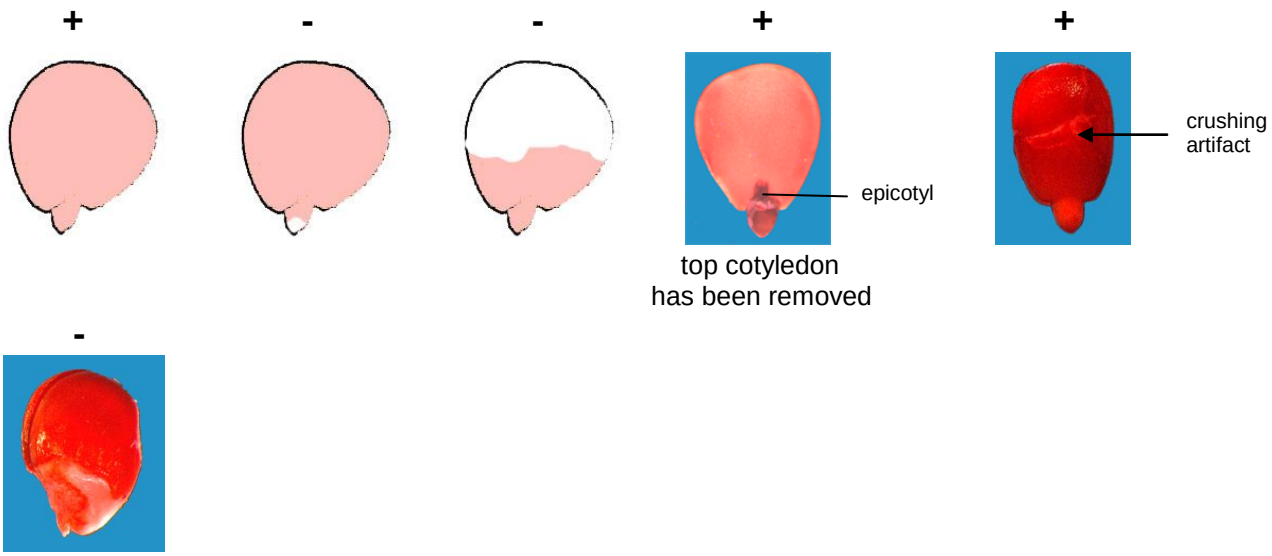



Fig 4 Seed stain evaluation

Photos and drawings: Annette Miller, USDA/ARS NCGRP