

# The Ohio State University - OARDC/OSUE

## Grafting Guide

### Reasons for Graft Failure



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1. Rootstock and scion varieties are genetically incompatible.
2. Insufficient sanitation at any stage from seed sowing through grafted plant healing, promoting the onset and transmission of plant disease.
3. Selected seedlings are unhealthy or improperly matched in diameter.
4. Poor grafting technique.
5. Improper management of the post-grafting environment, including:
  - a. extreme temperatures that dry plants or slow graft union healing,
  - b. extreme humidity levels that either soften and breakdown the graft union or allow it to dry and heal poorly,
  - c. direct overhead watering that saturates the rooting medium, raises "root pressure" (pressure exerted by the upward movement of water from root to growing tip) and weakens the graft union,
  - d. excessive light levels in the first post-grafting environment that force newly-grafted plants to perform activities which are difficult or impossible until the graft union heals and
  - e. insufficient light levels during the hardening-off stage that weaken the plant and graft union.
6. Mechanical disruption of the new graft union through forceful overhead watering or physical contact.
7. Insufficient healing period.
8. Some varieties tend to either produce shoots from the rootstock or roots from the scion. Neither are a form of graft failure but both conditions are undesirable and should be monitored and corrected.