Introduction to Grafting

Jari Sugano (Extension Agent)
University of Hawaii at Manoa
College of Tropical Agriculture and Human Resources
Department of Plant and Environmental Protection Sciences
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Plant Propagation

Plant propagation is the process of artificially or naturally propagating plants

- **Sexual means**
  - Seeds, spores, etc.

- **Asexual means**
  - Cuttings
  - Air layering
  - **GRAFTING**
  - Tissue Culture
  - Etc.
Grafting

- Does not involve the exchange of genetic material
- Almost always produces a plant that is identical to the parent
Purpose of Grafting

- Combine one plant's qualities of flowering or fruiting (scion plant) with another plant, which has qualities of vigor and resistance (the rootstock).
- Propagation difficult via other vegetative means
- Establish resistance to various diseases and pests
- Fruit trees are not always true to seed
- Create plants that are identical to their parent plant
  - Vigor, yield, size, taste, disease tolerance, dwarf, etc.
- Maximize space, ex. more than one varieties can be grown on the same tree
- Grafted trees bear earlier than plants from seed
How Does Grafting work?

- One plant is selected for its stems, leaves, flowers, or fruits (scion)
- One plant is selected for its roots (rootstock)
Types of Grafts

- Whip
- Whip and Tongue
- Cleft
- Bark
- Tip
- Saddle
- Wedge
- Budding
- Many more
Successful Grafting

- Cambium tissues of the stock and scion plants must be in contact with each other.
- Both tissues must be kept alive till the graft has taken.
- Successful grafting requires that a vascular connection takes place between the two tissues.
Materials Needed

- Rootstock
- Scion wood
- Clippers
- Grafting knife
- Grafting tape or Para film
- Labels or markers
Scion & Rootstock Selection

- Scion and rootstock should be the same size
- Scion can be dormant, or active with 2-3 buds, 4-5 inches in length
- Scion in right direction, not upside down
ROOT STOCK
SCION WOOD: BACKWOOD
SELECT SCION WOOD WILL WELL DEVELOPED BUDS
MATCH ROOT STOCK WITH SCION WOOD
STEP BY STEP APPROACH
CLEFT/ WEDGE GRAFT
CLEFT/ WEDGE GRAFT: CUT ROOT STOCK
CUT SCION WOOD INTO WEDGE
LINE UP CAMBIUM LAYERS OF SCION AND ROOTSTOCK
SECURE SCION AND ROOTSTOCK WITH TAPE
COVER TOP WITH PLASTIC OR PARAFILM
EXAMPLE OF SUCCESSFUL CLEFT/WEDGE GRAFT
STEP BY STEP APPROACH
SPLICE GRAFT
SPLICE GRAFT: CUT ROOT STOCK AT AN ANGLE
CUT SCION WOOD AT AN ANGLE AND LINE UP CAMBIUM LAYERS
LINE UP CAMBIUM LAYERS AND WRAP WITH GRAFTING TAPE
FLAGGING TAPE OR GARDEN TAPE CAN ALSO BE USED
EXAMPLE OF SUCCESSFUL SPLICE GRAFT