**Grafting** - joining one plant to another

* Use compatible plants
* Cut surfaces matched so cambium layers line up
* Various matching cuts possible
* Wrap with tape
* Seal with grafting wax

Zone of joint called **Graft Union**
Rooted cutting called **Stock**
Attached branch called **Scion**

**3 *Good* Reasons for Grafting**

1. Dwarfing

Stock = Shrub (Quince)         Scion = Tree (Apple or Pear)

Tree makes normal fruit, but tree limited by root supplies, so is dwarf

2. Cold Hardiness

Stock = Hardy Wild Species (Wild Rose)
Scion = Less Hardy Species (Hybrid Tea Rose)

Wild rose withstands frost heave in soil,
flowers are fancy hybrid type

3. Disease Resistance

Stock = Resistant Wild Species (American Grapes *Vitis labrusca*)
Scion = Susceptible Species (French Wine Grapes *Vitis vinifera*)

Root aphid cannot attack roots of American grape,
vine makes good wine grapes

All those vines in France are not truly French
but FRANCO-AMERICAN grapes!

 **Not-So-Good Reasons to Graft**

1. Multiple varieties on one plant

Stock = Good tough type (Hardy apple)
Scions = Several types of self-incompatible fruit varieties       (Macintosh, Delicious, etc)

In small space you have cross pollinating varieties.

Down side:
Competition between varieties lower yield
Not synchronized so UGLY!

Another Downer:
Tomato-Potato grafted plants compete with each other
neither any good!

**Maintenance of Grafted Plants**

1. Plant with graft union ABOVE ground!

Otherwise dwarf becomes tall,
hardy becomes susceptible

2. Prune root sprouts mercilessly!

Root stock will have better connections to own shoot
Competition reduces yield

3. Never prune below exposed graft union!

Excise desirable scion from plant...only stock left!