

Basic Grafting Guide

Adapted from past presentation given by Greg Giuliani



Additional information from NC State Extension

[https://content.ces.ncsu.edu/](https://content.ces.ncsu.edu/grafting-and-budding-nursery-crop-plants)

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- * Grafting, like budding, joins parts of similar plants to grow as one plant.
- * Generally, scion is the aboveground part attached to rootstock which becomes root system of graft.
- * Graft exhibits characteristics of both scion and rootstock.
- * Weather and physiological growth stage of both scion and rootstock heavily influence chance of a graft union "taking".
- * Grafting usually is performed during winter or early spring with both scion and rootstock dormant.
- * For successful grafting, at least a portion of vascular cambium of both scion and rootstock must line up at the graft union.
- * At the graft union, cambium cells of both scion and rootstock divide and grow together if held firmly together.
- * Vascular cambium is one-way conduit; scion must be attached to rootstock with scion wood's buds pointing up and away from rootstock.

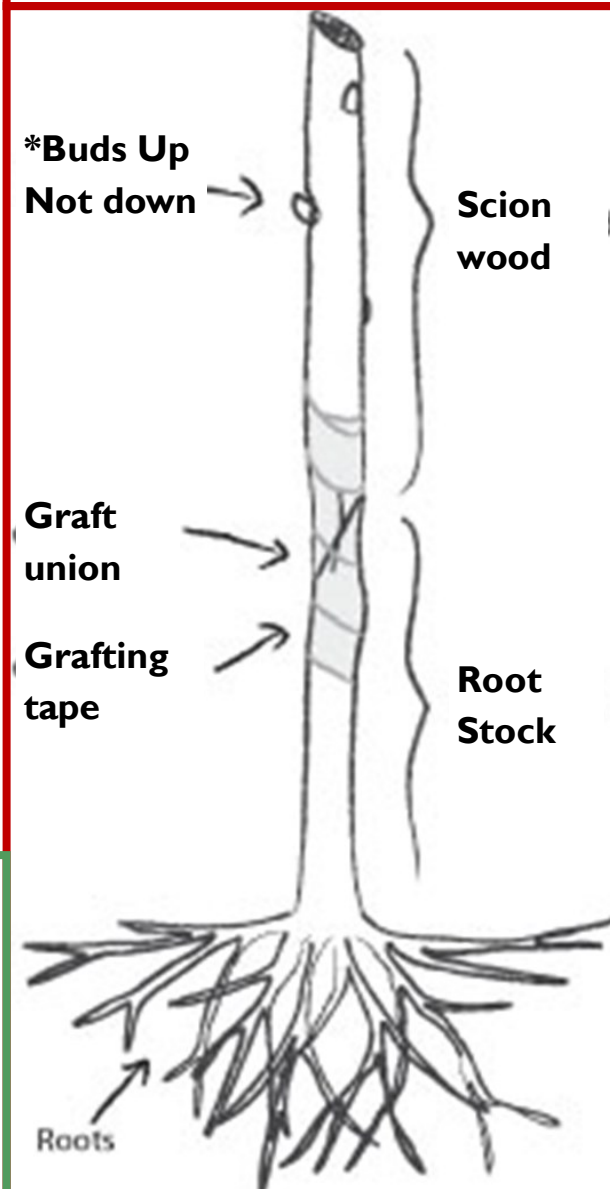
More on grafting treefruit: Laure Jansen's grafting article in USP April 2020 P 5-6

Grafting knives?

- are specifically designed for grafting
- come in lefthanded or righthanded versions
- have a blade beveled on only one side
- must be maintained very sharp to ensure clean cuts for graft union

ANSWER: All of the upside down

Graft - Finished plant comprised of scion wood and root stock joined together.



Basic Grafting Guide

Tools and Materials of the Grafter



A - Grafting knife for splice, whip & tongue grafts OR ...

B - Omega tool for omega grafts

C - Banding or grafting strip to stretch around graft union; if thick rubberbands substituted, protect from sun degradation by shielding with tape or latex paint.

D - Grafting seal or wax to cover exposed cut surfaces. Latex paint works as a substitute.

E - Painter's tape or similar tape to cover graft union

F - Small wood planer for whip & tongue grafts

G - Aluminum tags to label planted graft

H - Sharp bypass pruner

I - Exam gloves - Sweat/skin oils kill cambium cells of scion and rootstock at cuts for graft union and this contamination can cause graft failure. If U R sweaty, glove up.

Assess Scionwood Viability

Dead scionwood cannot be revived by grafting onto living rootstock. To assess viability, with a sharp bypass pruner, cut the bottom of the scionwood stick. (Hint: buds are oriented to point towards the stick's top) Healthy woody scionwood has a vascular cambium layer just beneath the stick's bark that is green and hydrated. Ideally and usually, the cambium of viable scionwood forms a thin green ring.

Scionwood's buds should still be closed. Swollen and opening buds are a source of dehydration that may hamper healing of the graft union.

Cut your losses and don't pray for a miracle: Throw away dehydrated scionwood with dark cambium or open buds or both.



Basic Grafting Guide

Splice

Sweat/skin oils kill cambium. Don't touch cut. Wear gloves.



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Scion's buds point up & away from graft union cut



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For splice and whip & tongue grafts, diameter of scion and rootstock at union should be same ensuring alignment of vascular cambium. Splice cut should be ~ 1 inch long.



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Whip and Tongue begins with Splice (shown above) then ...



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Basic Grafting Guide

Omega cutter creates Saddle-like graft



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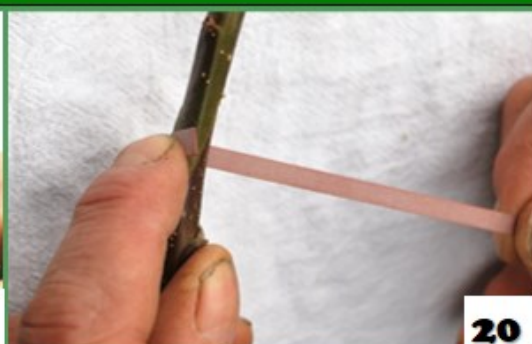


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Graft secured same way for splice, whip&tongue, Ω /saddle



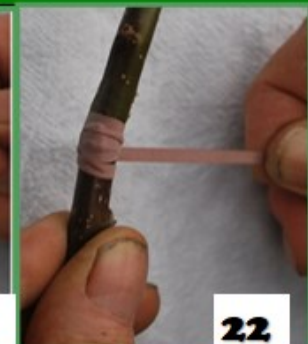
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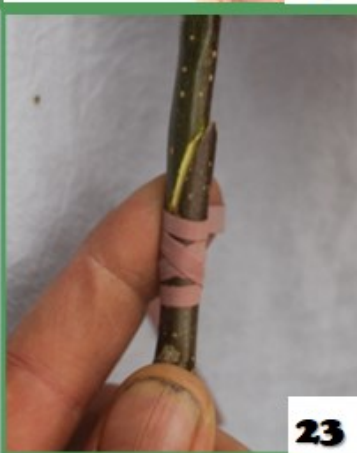
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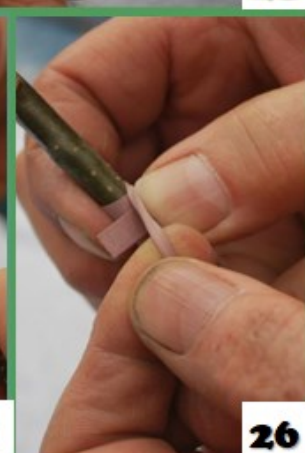
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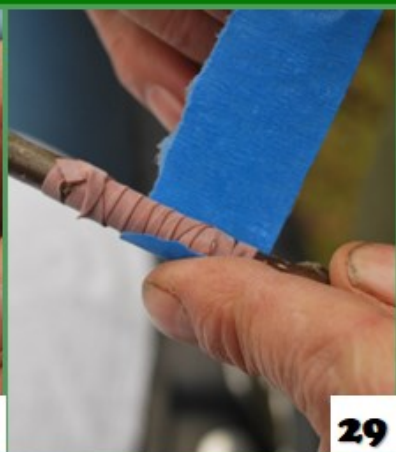
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Basic Grafting Guide

Cover Banding Strip with painter's or other tape or paint



**Seal cut exposed cambium w/ grafting wax or latex paint.
Plant graft. Remove bandage ~4 months after grafting.**

