

Is top-working right for you?

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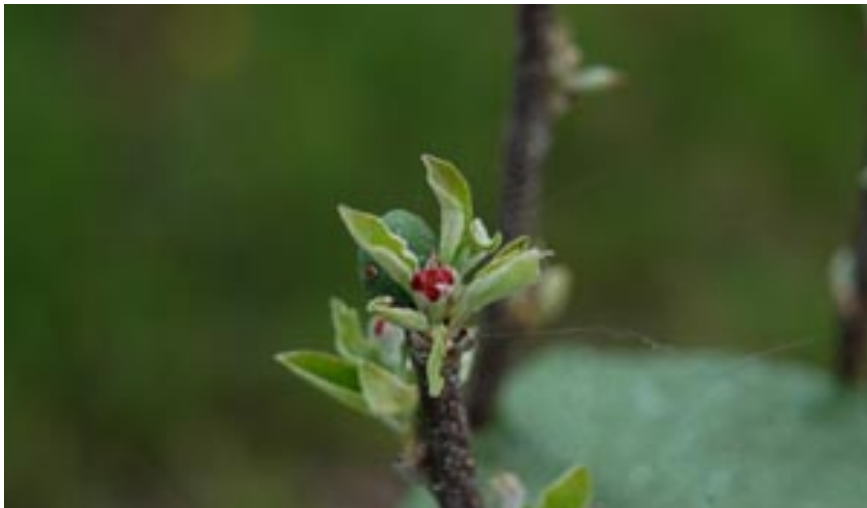
Tree Fruit IPM Educator

What is top-working?

- Top-working is the process of changing a tree from one variety to another by means of grafting.

What is Top-working?





http://www.uvm.edu/~fruit/?Page=treefruit/tf_horticulture/HowTo/howtotopgraft.html



(Richard Lehnert/Good Fruit Grower)

Reasons to Top-work vs. whole block renewal

- Changing individual 'off-trees' that may have been included with your tree order so that they match the rest of the variety block.
- Changing an entire block of trees to get rid of an unproductive variety or to introduce a better one.
- Creating a variety test area in an orchard.
- Even if there is a reason to consider topworking, you must first weigh the advantages and disadvantages in order to decide whether it will be right for you and your operation.

Advantages

- Replace varieties with better ones.
- Shorter time for trees to come into bearing
- Less costly
- Avoidance of replant problems
- Established root system
- Weed management and irrigation programs are already in-place.
- Grafting is a simple operation that is easy to learn and to teach to others.

Disadvantages

- Stuck with spacing
- Trees need to be 'healthy'
- Poor site issues remain (drainage, pH)
- Requires unique skill set for success
- Short window to get it done
- Grafts are tender
- 'Newer-better' variety could be a dud
- Not a free pass - patented cultivars require propagation agreements.

Considerations and challenges with top-working

- Cost/Economics of topworking
- Planning for the future
- What's your vision for this block
- Is it worth topworking semidwarf or push out and start over
- Topworking related to nutrition and winter hardiness
- Virus, disease, and rootstock consideration
- Challenges with getting trees

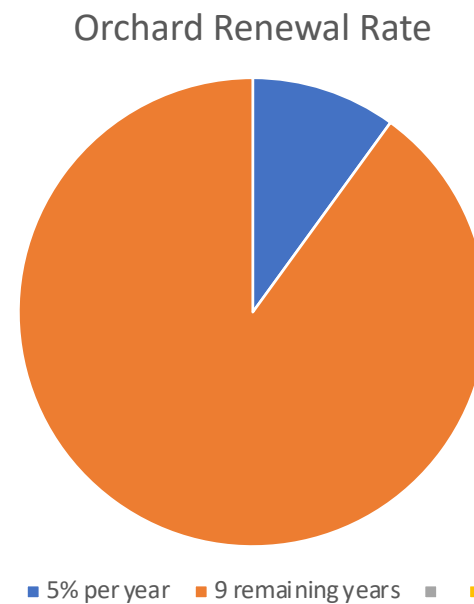
Cost and Economics of Topworking

- Average cost is \$1/stick
 - Does not include prep work, topping
 - Does not include nurse limb removal & training
- New varieties on modern HD rootstocks avg \$10/tree
- Time to bearing considerations
 - New plantings take time
 - 2 -3 years fallow or alternate crop
 - Replant issues
 - 2 – 3 years to get full crop in HD block

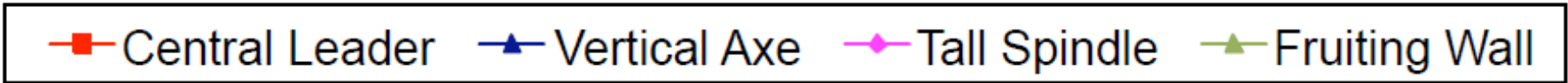
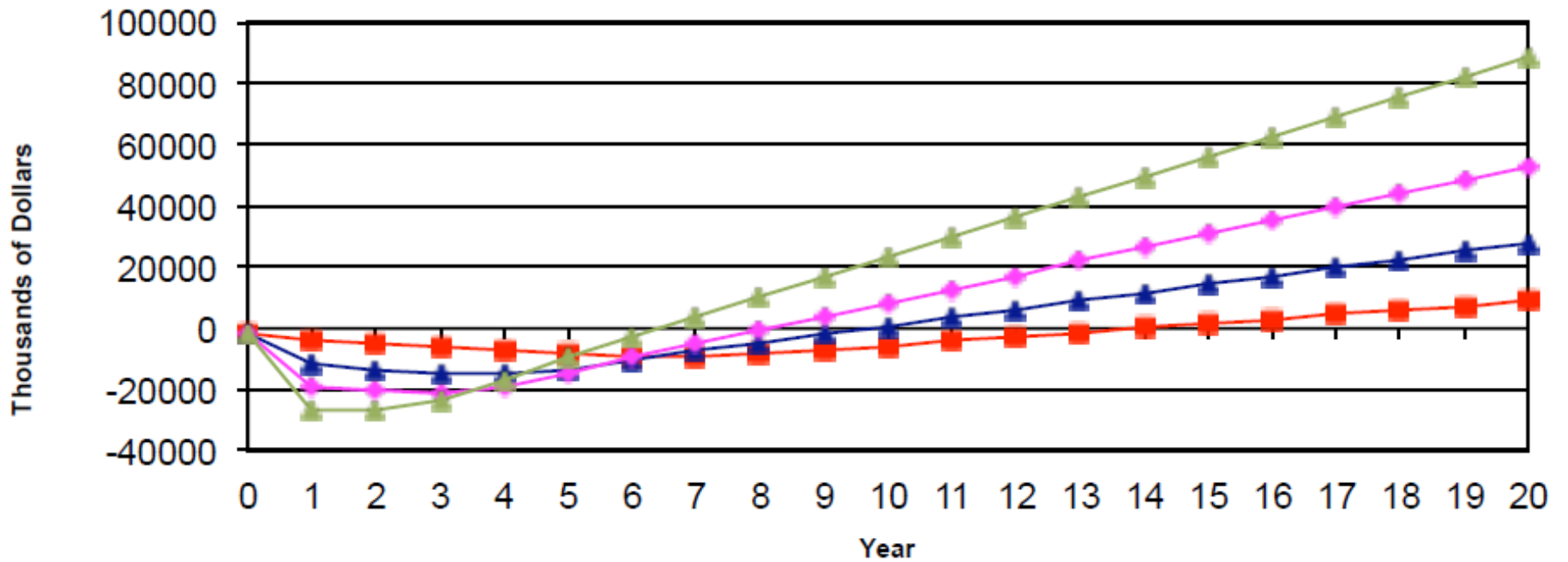


3 Key Factors to Successful Orchard Renewal:

1. Price
2. Yield (When & How Much)
3. Establishment Costs



Profit of Systems













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References:

- **Successful Apple Grafting Techniques for New York**, Stephen A. Hoying, Alison M. DeMarree and Mario Miranda Sazo, Cornell University - <https://cpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/d/3767/files/2015/02/12-3-Hoying-NYFQ-grafting-28tz2tf.pdf>
- **Pictorial Guide to Top-Grafting an Orchard**, M. Elena Garcia, Renae E. Moran, Lorraine P. Berkett, Terence L. Bradshaw, Sarah Kingsley-Richards, Heather M. Darby, Robert L. Parsons, John P. Hayden, and Morgan L. Cromwell - http://www.uvm.edu/~fruit/?Page=treefruit/tf_horticulture/HowTo/howtotopgraft.html