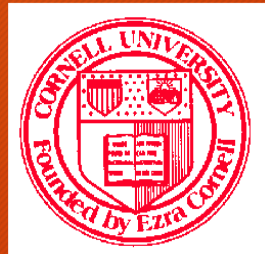
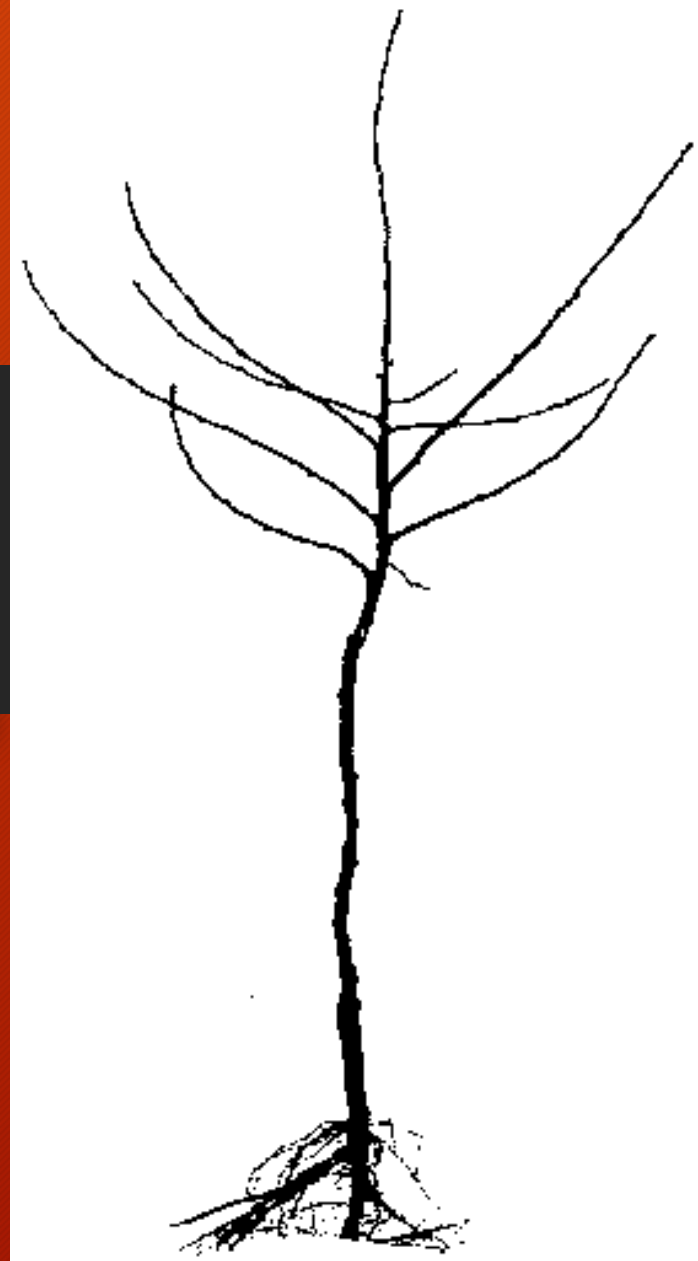
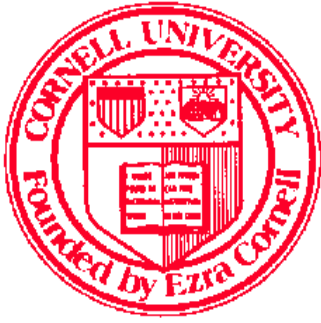


A Visual Guide for Pruning of Young and Semi-Young High Density Apple Plantings



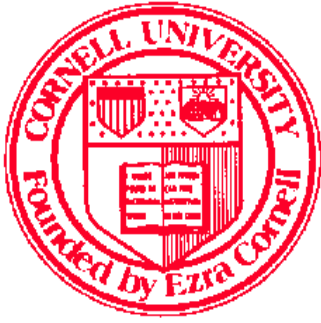
Mario Miranda Sazo
Lake Ontario Fruit Program
Cornell Cooperative Extension



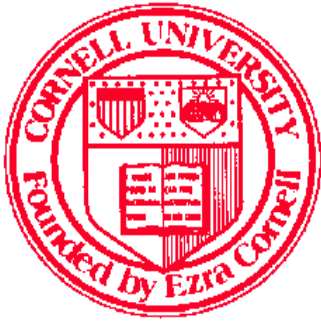


As you plant closer and closer in the in-row spacing, always leave horizontal (planar) one-year old laterals of medium length and with a terminal floral bud

Prune anything that is too vertical, vigorous, too long

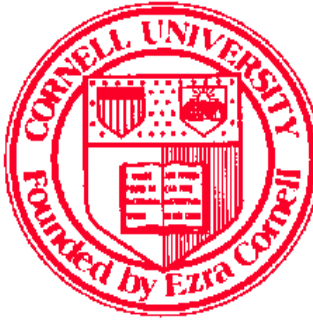


Prune to favor the development of planar, semi-long fruiting units (16-18" long) along the entire canopy, giving a thin wall of fruit of uniform color and quality from the top to the bottom at harvest



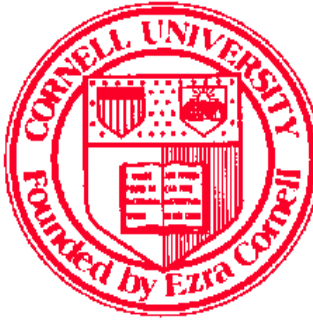
Detailed pruning for young Gala

Pruning a Gala tree “left-behind” for maximum growth



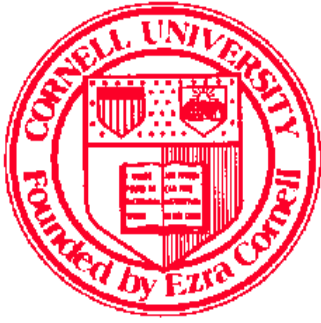
Pruning
detail next
slide

Pruning detail





Prune anything that is out of balance, too big, too narrow, too long and convert it into a future fruiting unit of 16-18" long





Help the tree to grow and produce well balanced lateral shoots via pruning





Two branches that
were close
together and were
chocking the upper
part of the tree

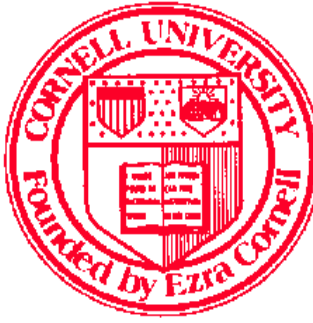


Prune any vigorous branch on the middle part of the tree to secure further development of shoots and maximum vertical growth

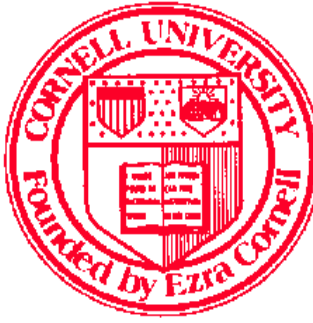


- Too many shoots that were growing upright
- Leave or favor the shoots that are well spaced along the trunk
- Also select planar, horizontal, more open shoots to secure the production of fine fruiting units





Pruning detail
next slide



Prune, select,
and leave more
horizontal
fruiting units

“Open” the tree!



A photograph of a Gala apple tree trunk and its branches. The trunk is light-colored, weathered wood, showing vertical grain and some knots. Several thin, reddish-brown branches emerge from the trunk and spread outwards. The background is a blurred landscape with green grass and bare trees under a grey sky. The text 'Gala tops tend to produce too many shoots' is overlaid in white, bold, sans-serif font in the center of the image.

Gala tops tend to
produce too many
shoots



Single the leader

Prune 2-3 shoots
below the 'ring' and
always leave a stub

Ring

Before Pruning

After Pruning

1

2

3



Before Pruning

After Pruning

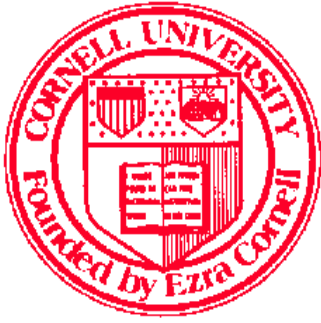
1

2

3



Leave single, fine, narrow Gala tops after pruning

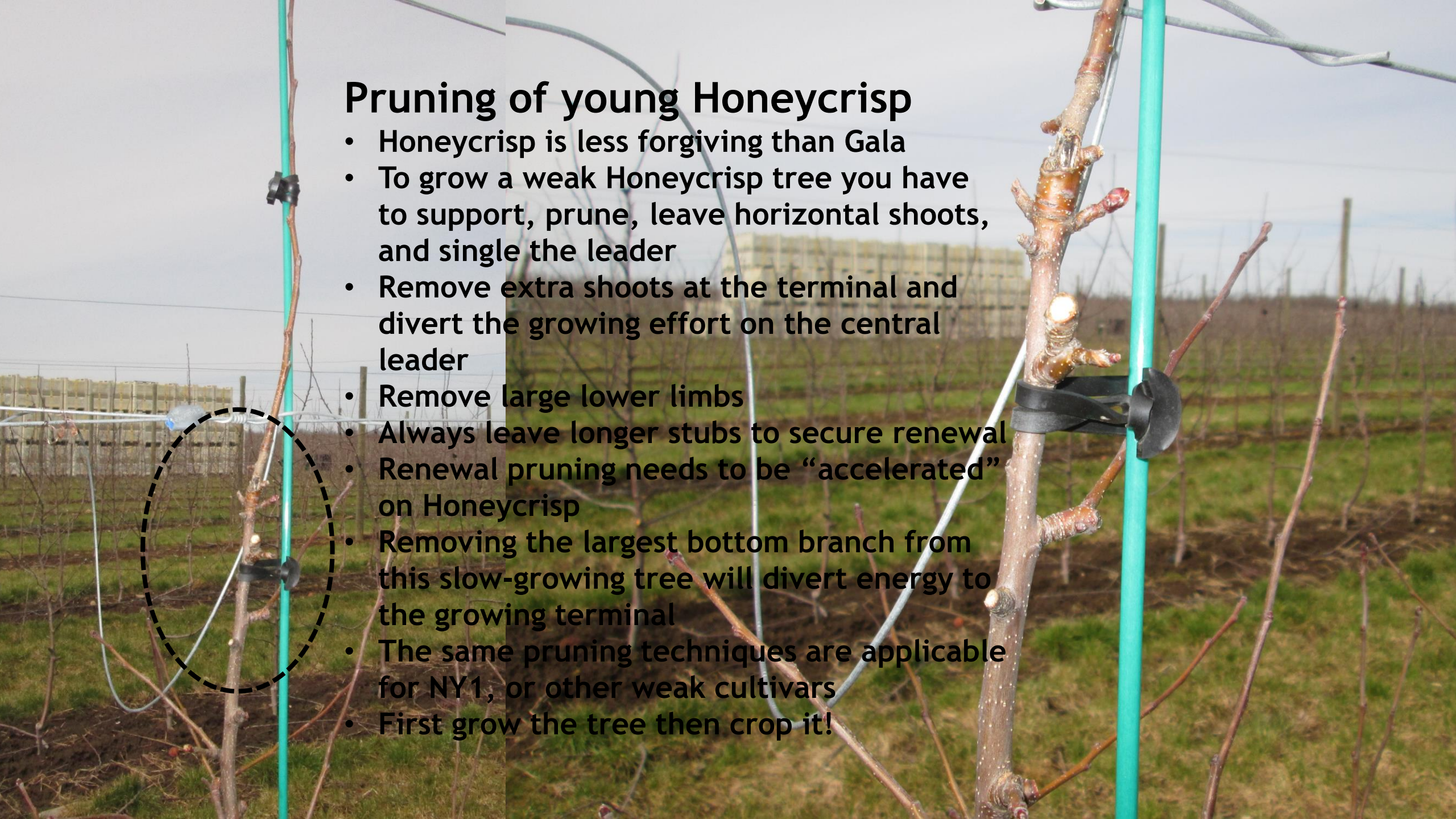


After Pruning



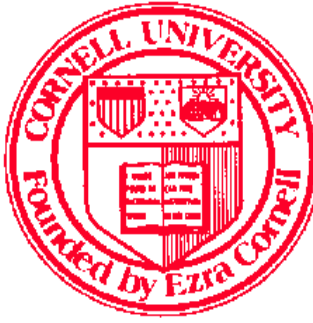
Pruning of young Honeycrisp

- Honeycrisp is less forgiving than Gala
- To grow a weak Honeycrisp tree you have to support, prune, leave horizontal shoots, and single the leader
- Remove extra shoots at the terminal and divert the growing effort on the central leader
- Remove large lower limbs
- Always leave longer stubs to secure renewal
- Renewal pruning needs to be “accelerated” on Honeycrisp
- Removing the largest bottom branch from this slow-growing tree will divert energy to the growing terminal
- The same pruning techniques are applicable for NY1, or other weak cultivars
- First grow the tree then crop it!



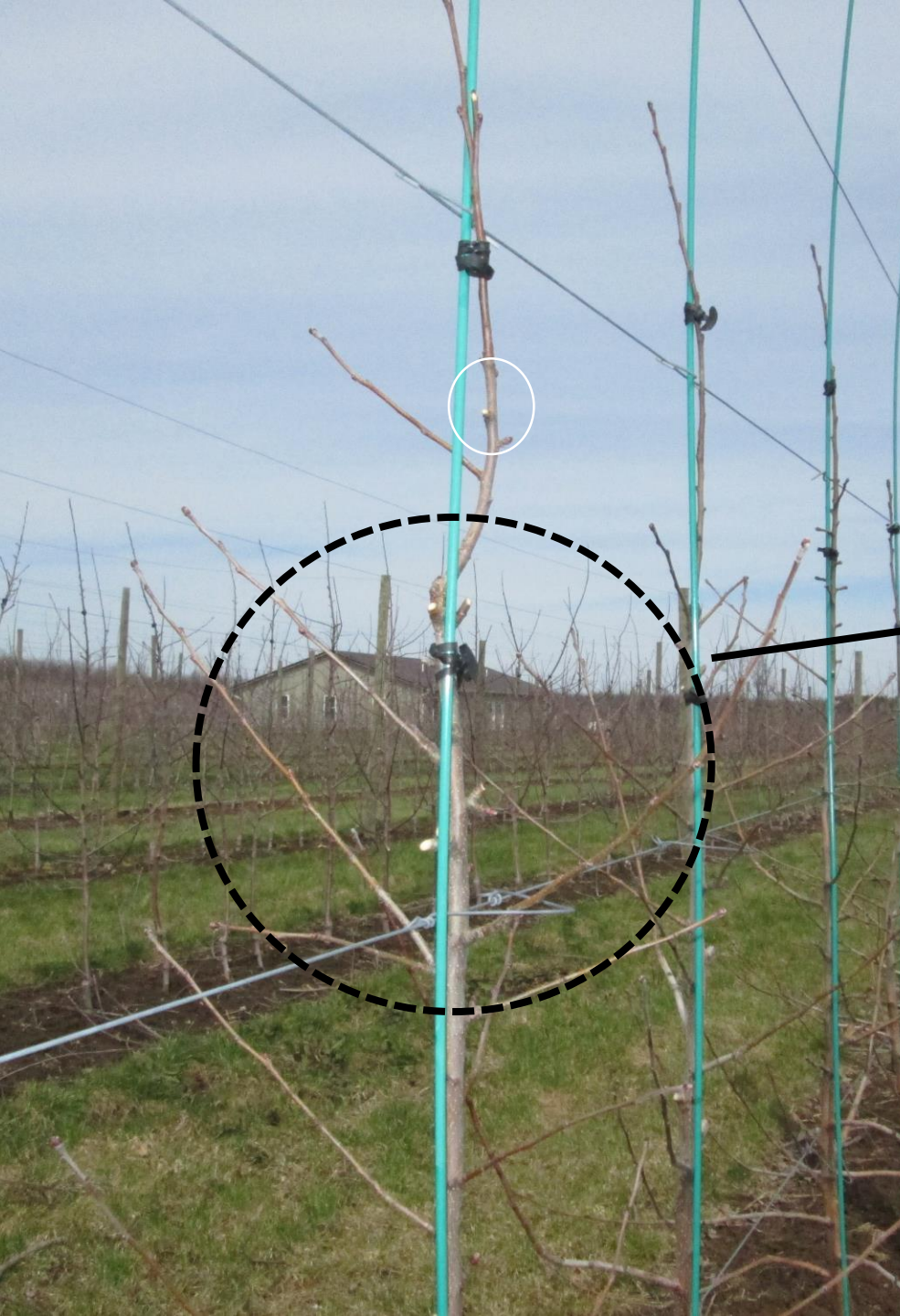


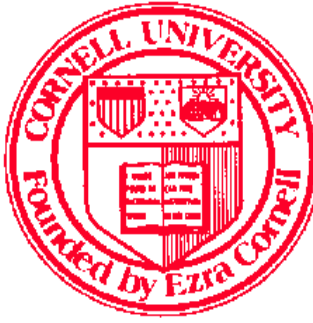




Pruning
detail next
slide

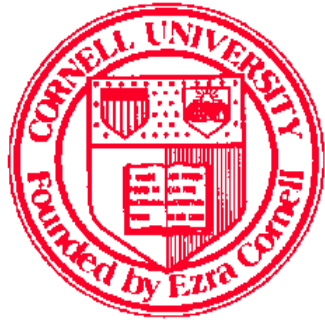




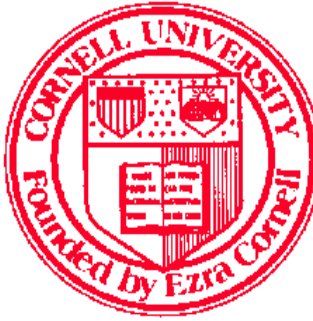


If limb bending was not conducted after planting, you need to remove whole lower limbs before they become too big (see new slide)

Detailed pruning for young Fuji



Don't leave big branches at the bottom of the tree for too long. They will "suck" energy and will delay the production of fine fruiting units needed for a thin wall



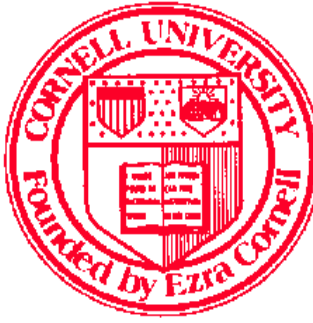
Upper section

Be vigilant and carefully look for strong, “out of balance” shoots

By pruning strong shoots to “2 finger” short stubs you will get new, weaker, and more horizontal shoots that will develop to form fruiting units

Lower section

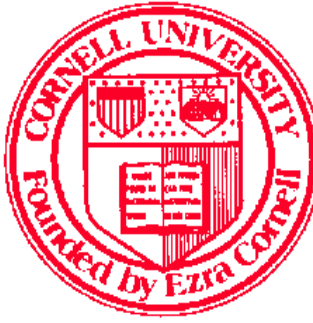
Pruning details
next two slides

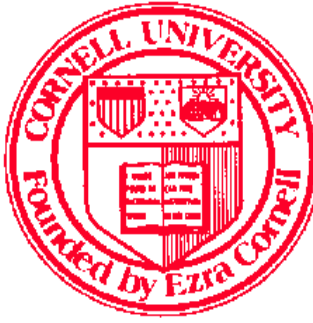


Lower section



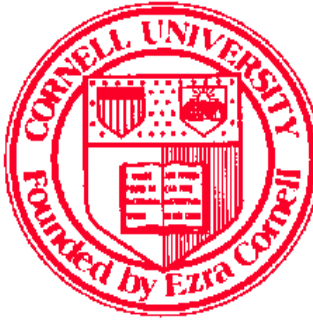
Upper section

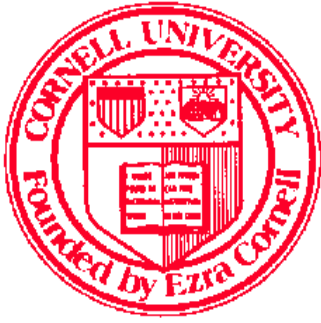




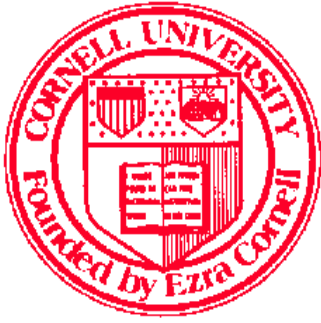
Pruning detail
next slide

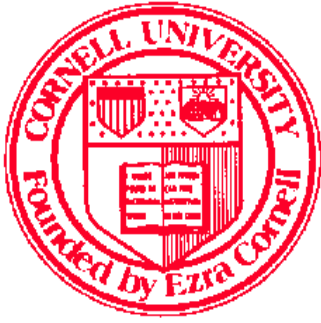
Allow the tree's canopy to develop to its full potential with young fruiting units





Pruning detail
next slide

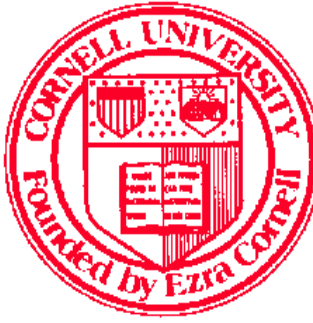


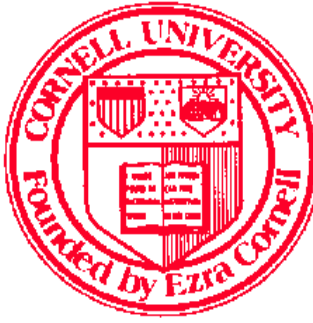


A more vigorous Fuji situation managed through pruning

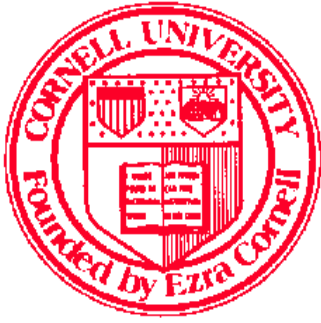


Cut strong shoots and
don't wait any longer



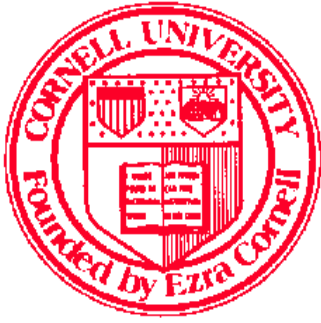


Cut strong shoots and
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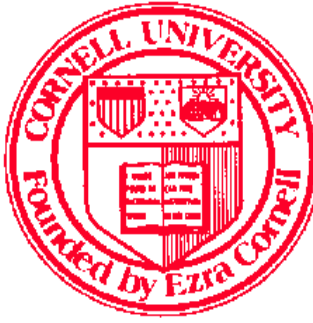


Leave planar, horizontal, more open
one-year old shoots that will secure
the production of fine fruiting units

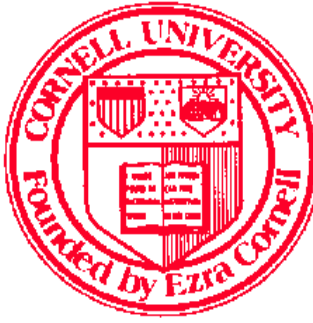




Big branches will “suck” energy and will delay the production of fine fruiting units needed for a thin wall

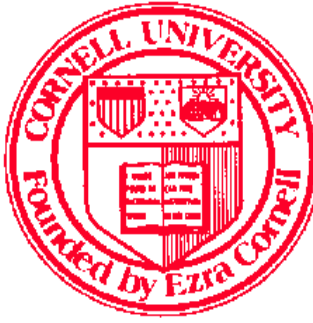


Big branches will “suck” energy and will delay the production of fine fruiting units needed for a thin wall

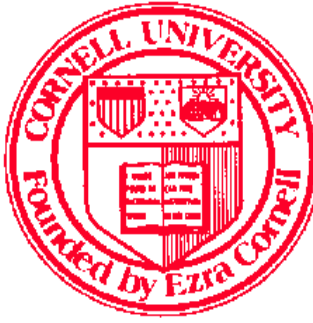


Another Fuji canopy

- well textured
- fine fruiting units

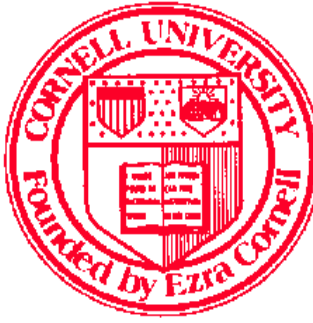


Congrats! Your Fuji trees are now calm
Just keep conducting the needed renewal pruning of any big branch




Red Delicious

- Developing fine fruiting units through pruning




As you plant closer and closer in the in-row spacing, always leave horizontal (planar) one-year old laterals of medium length and with a terminal floral bud

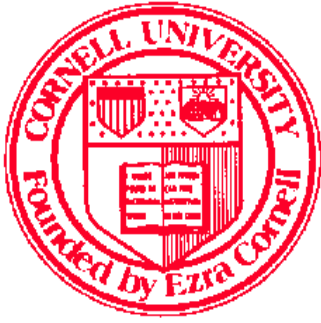
Prune anything that is too vertical, vigorous, too long

A photograph of a young tree in a field. The tree has several thin, vertical branches. A text overlay in the top right corner reads: "When pruning, always select and leave horizontal one-year old shoots of medium length and ideally, with a terminal floral bud".

When pruning, always select and leave horizontal one-year old shoots of medium length and ideally, with a terminal floral bud

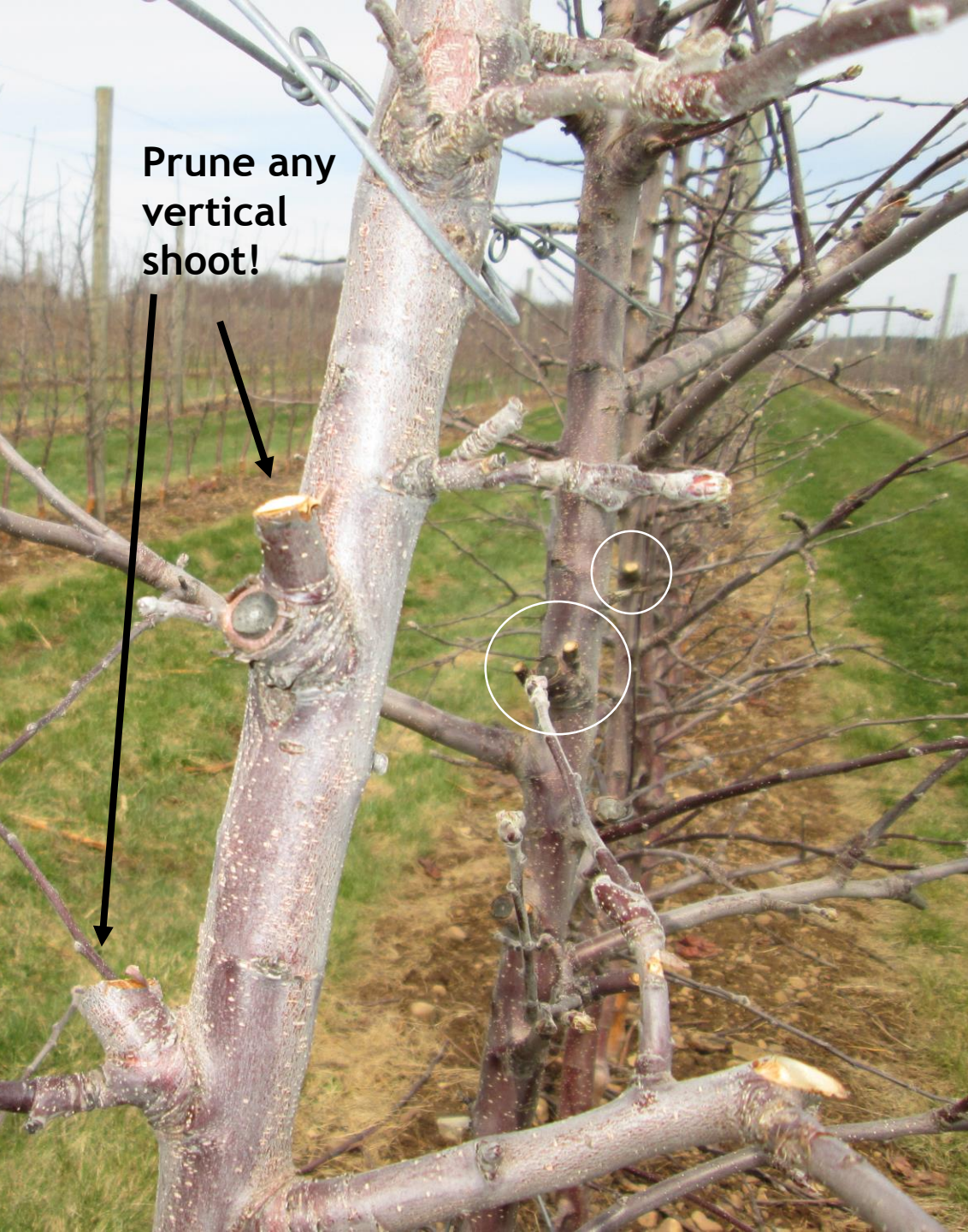
A photograph of a young tree in a field. The tree has several thin, vertical branches. A text overlay in the top right corner reads: "When pruning, always select and leave horizontal one-year old shoots of medium length and ideally, with a terminal floral bud". A diagram in the bottom left corner shows a dashed line representing the ground level. Two circles are drawn on the branches of the tree, one at a lower height and one at a higher height. A text overlay at the bottom left reads: "Prune competitive branches located 24-28 inches above the ground".

Prune competitive branches located 24-28 inches above the ground



Good textured
trees with
horizontal/planar
fruiting units and
strong shoots
pruned at the
bottom

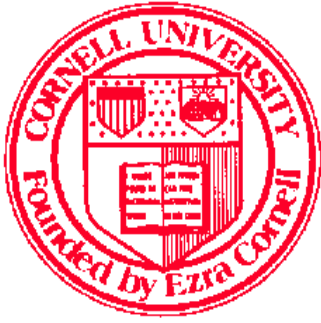


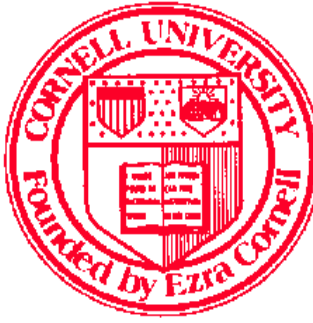




Don't leave big branches at the bottom of the tree for too long. They will "suck" energy and will delay the production of fine fruiting units needed for a thin wall



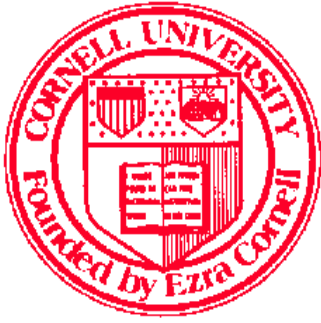


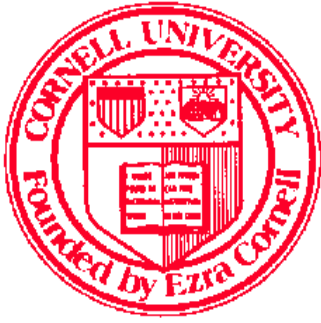


Ginger Gold

- Developing fine fruiting units through pruning







Red Delicious

Ginger Gold

Prune to favor the development of planar, semi-long fruiting units (16-18" long) along the entire canopy, giving a thin wall of fruit of uniform color and quality from the top to the bottom