



How to make your orchard more low-input

Michael Polozola II, PhD

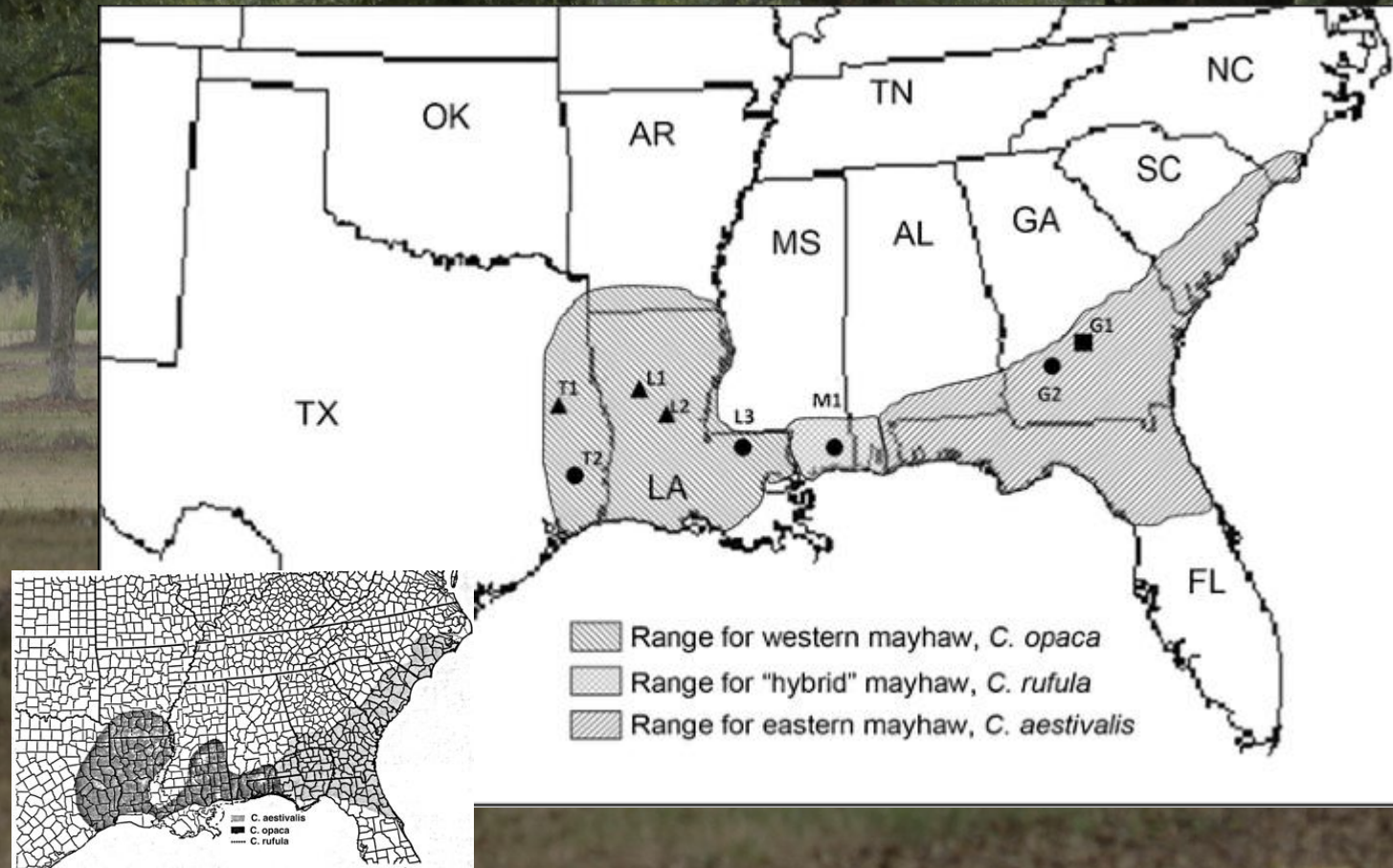
A lush green landscape featuring a row of large, mature trees with dense foliage. In the foreground, a dark wooden fence runs across the frame. The scene is bright and sunny, with dappled light filtering through the leaves.

*Plant the Right Thing to
Start With*

Cultivar Selection

- When deciding when to plant this is what to consider:

- 1) Disease Resistance/
Tolerance
- 2) Where is it from or been tested?
- 3) Tree health and longevity
- 4) Production Potential
- 5) Fruit Quality

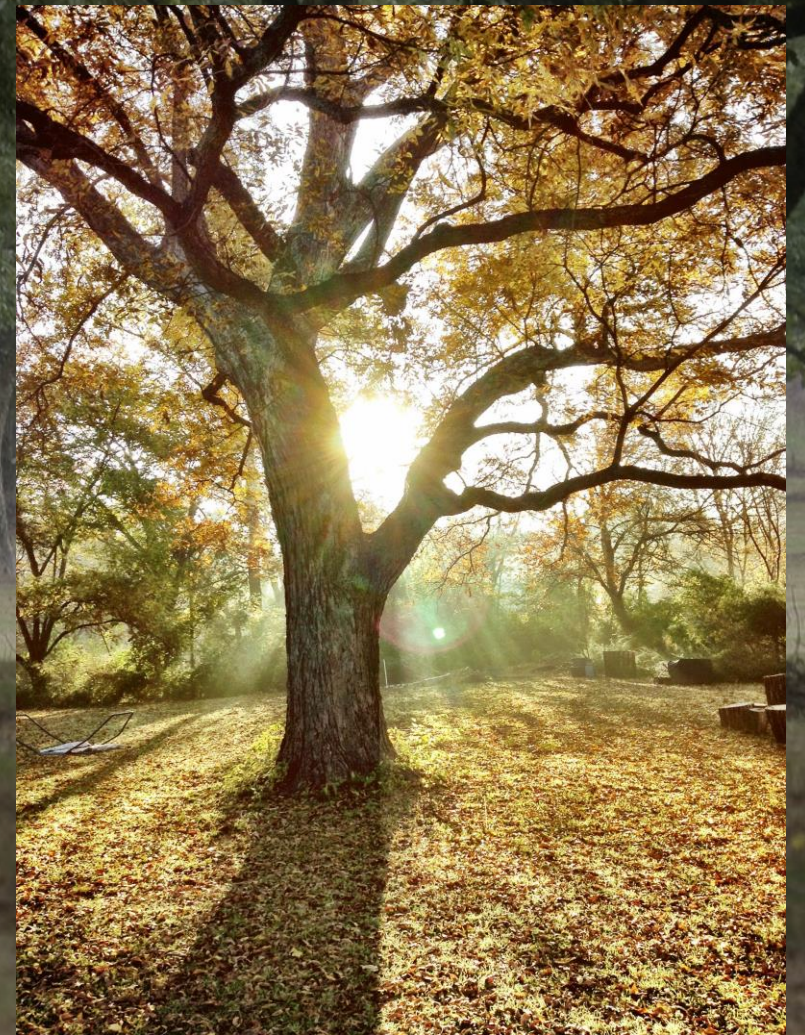


A lush green landscape featuring a row of trees in the middle ground and a wooden fence in the foreground. The scene is bright and sunny, with dappled light on the grass. The title 'Proper Tree Spacing' is overlaid in a white, cursive font on a semi-transparent dark band across the top half of the image.

Proper Tree Spacing

Proper Tree Spacing

- A wider tree spacing allows for greater sunlight penetration and can reduce disease pressure by facilitating better airflow.
- Foliar applications are much more effective when trees are properly spaced.
- Wider spacing encourages better branch angles.
- Further spacing also reduces fertilizer inputs.



Proper Tree Spacing

- Greater sunlight penetration and airflow can reduce the number of pathogen favorable environments in an orchard.
- In pecan orchards, a wide spacing can mean the difference between having to spray every 2 weeks to only 3 times a season for scab



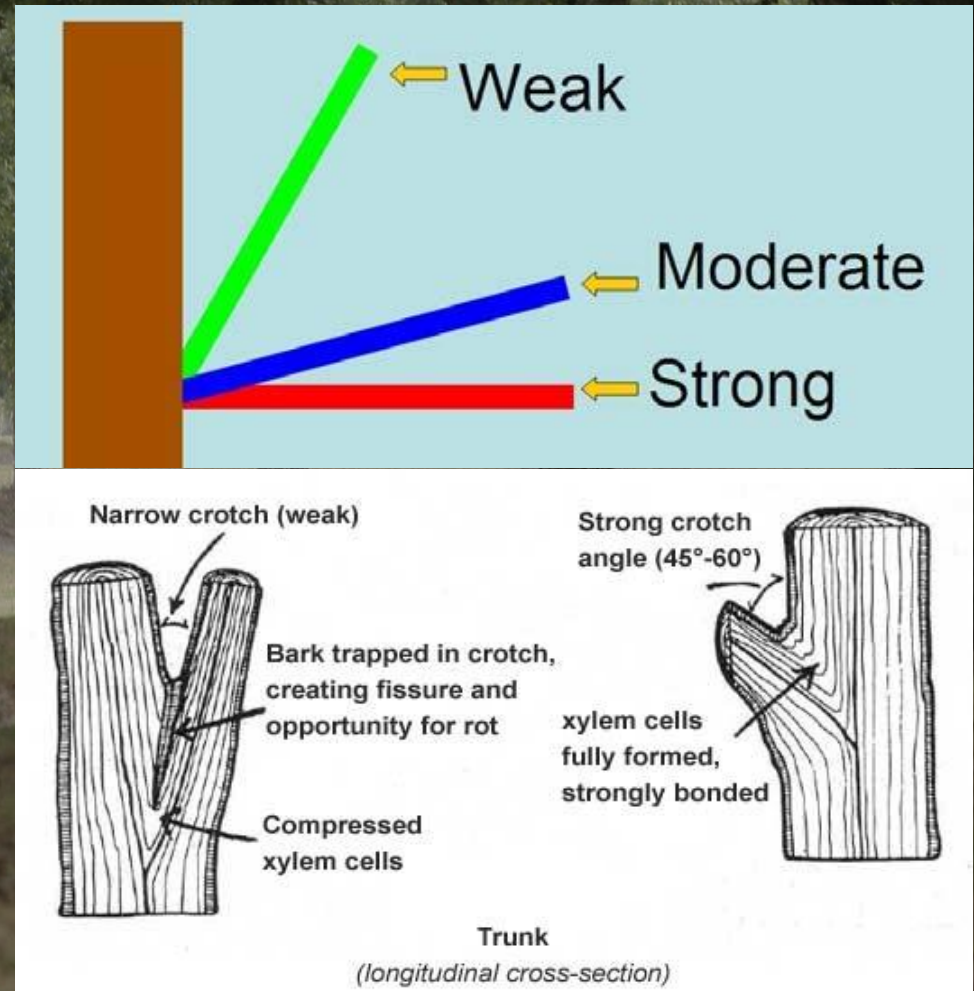
Proper Tree Spacing

- Trees at a wider spacing are easier to spray thoroughly.
- Tight trees will have pockets that spray applications will miss.
- You might require aerial support!



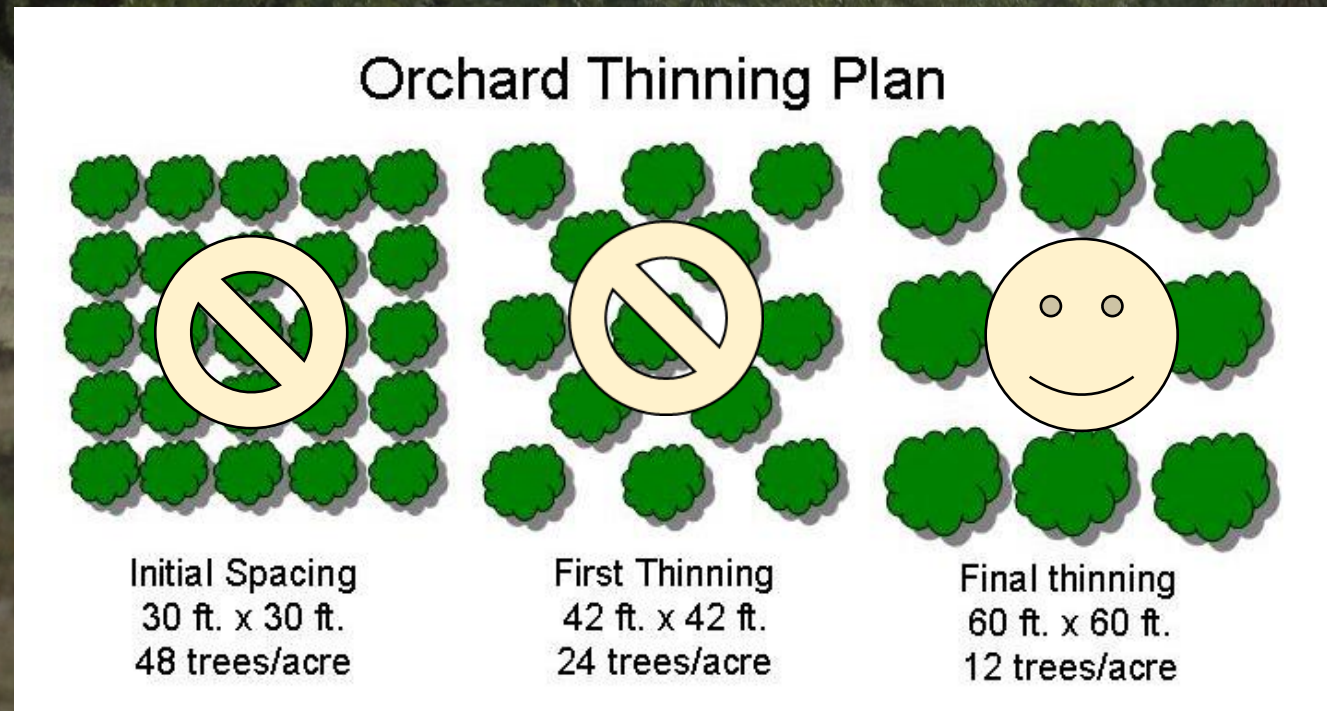
Proper Tree Spacing

- Trees planted too close together will have weaker branch angles. This makes them less resistant to weather events and more prone to breakage.
- Trees at a wider spacing will create more strong branch angles.



Proper Tree Spacing

- Pecan average maturity size: 70 to 100 ft tall with a 40 to 75 ft spread.
- I have never had anyone tell me they wish they had planted their trees closer together



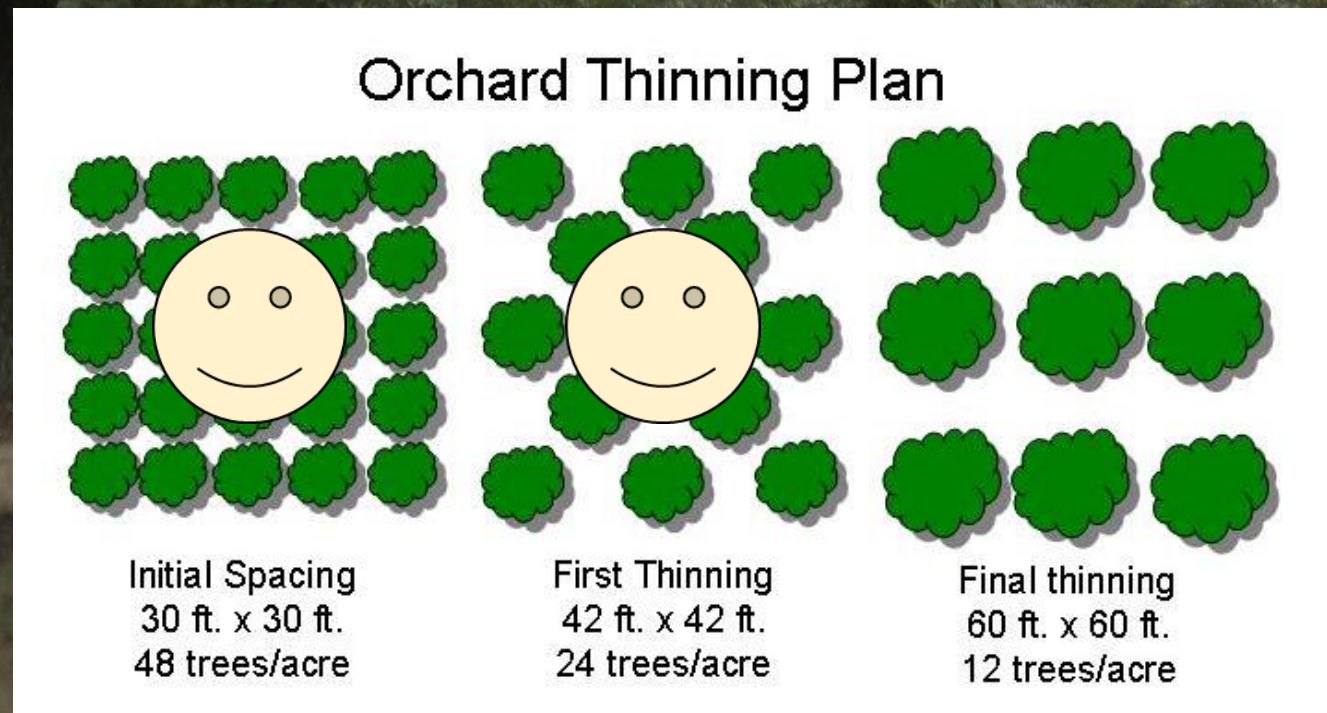
Proper Tree Spacing

- Consider planting your trees at more mature spacing so you won't have to worry about thinning later.
- For pecans, 60 by 60 has is what many growers wish they had started with

Tree Spacing Within Rows (ft.)	Tree Spacing Between Rows (ft.)									
	20	30	35	40	45	50	60	70	80	100
20						44	36	31	27	22
30						29	24	21	18	15
35						25	21	18	16	12
40						22	18	16	14	11
45					22	19	16	14	12	10
50				22	19	17	15	12	11	9
60				18	16	15	12	10	9	7
70				16	14	12	10	9	8	6
80				14	12	11	9	8	7	5
100				11	10	9	7	6	5	4

Proper Tree Spacing

- Mayhaw average maturity size: 30 ft tall by 30 ft wide.



A row of large, mature trees with thick trunks and dense green foliage stands in a grassy field. The scene is viewed through a dark wooden fence in the foreground. The lighting is bright, suggesting a sunny day, with dappled light on the grass.

Proper Tree Training

Proper Tree Training

- If you want your trees to have a long and productive life, you need to train them.



Proper Tree Training

- Trees that fork too low to the ground have a greatly reduced longevity.



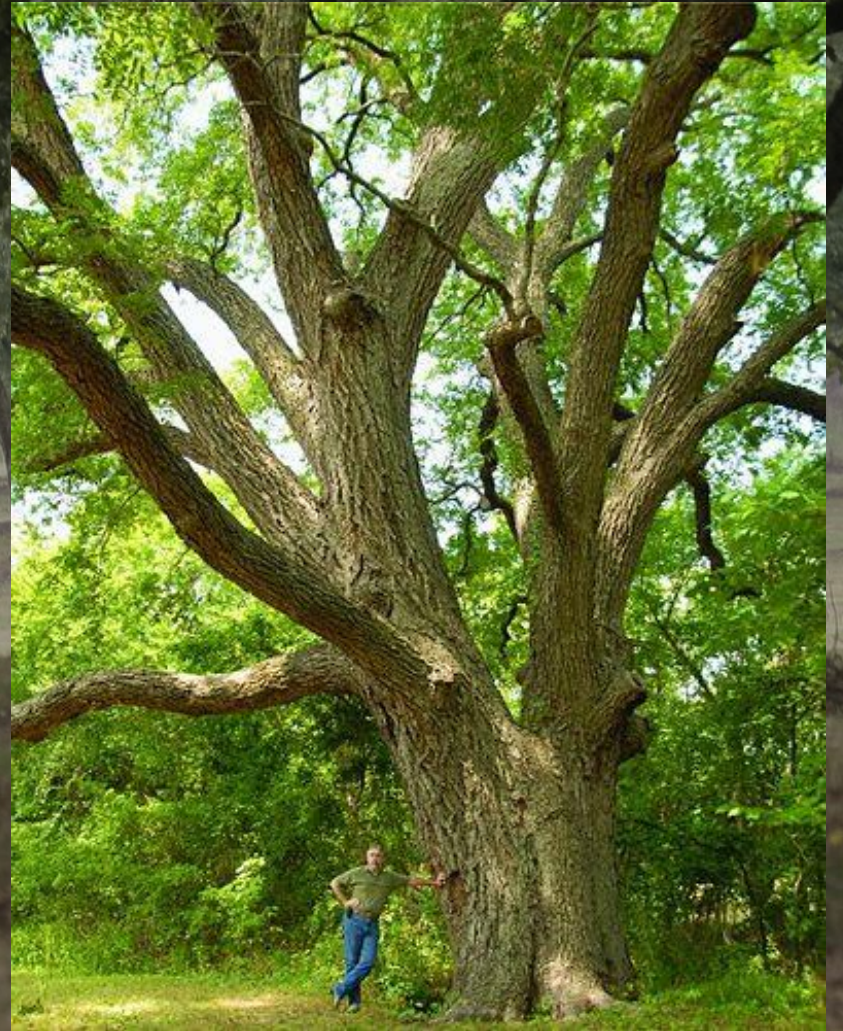
Proper Tree Training

- Trees that fork close to the ground also create issues with maintaining the orchard floor and mobility of spray equipment.



Proper Tree Training

- You want to slowly prune up trees as they age to push the fork up to as high as you can.
- When possible, encourage ones with good branch angles.
 - Wider = good
 - Narrow = not so good.
- Never too late to start but recovery time is longer in older trees.



Proper Tree Training

- It is best to train the tree to a central leader as long as possible.
- Every year, remove some lower limbs until you have pushed the forking up the tree beyond reach.

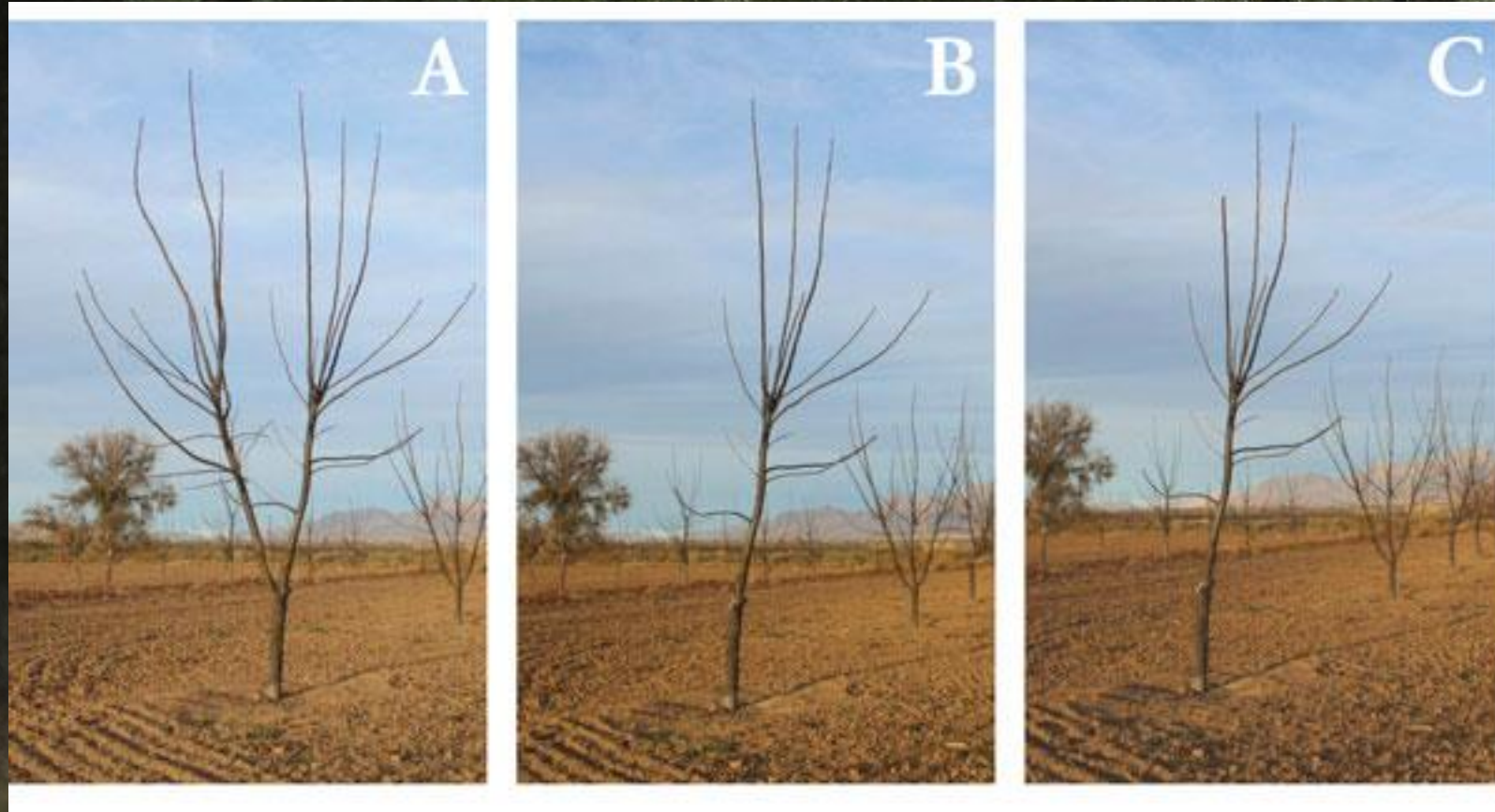


Proper Tree Training

- Ideally, all pruning cuts should be done when they are still small enough to be cut easily by hand.
- Larger cuts take longer to heal over.

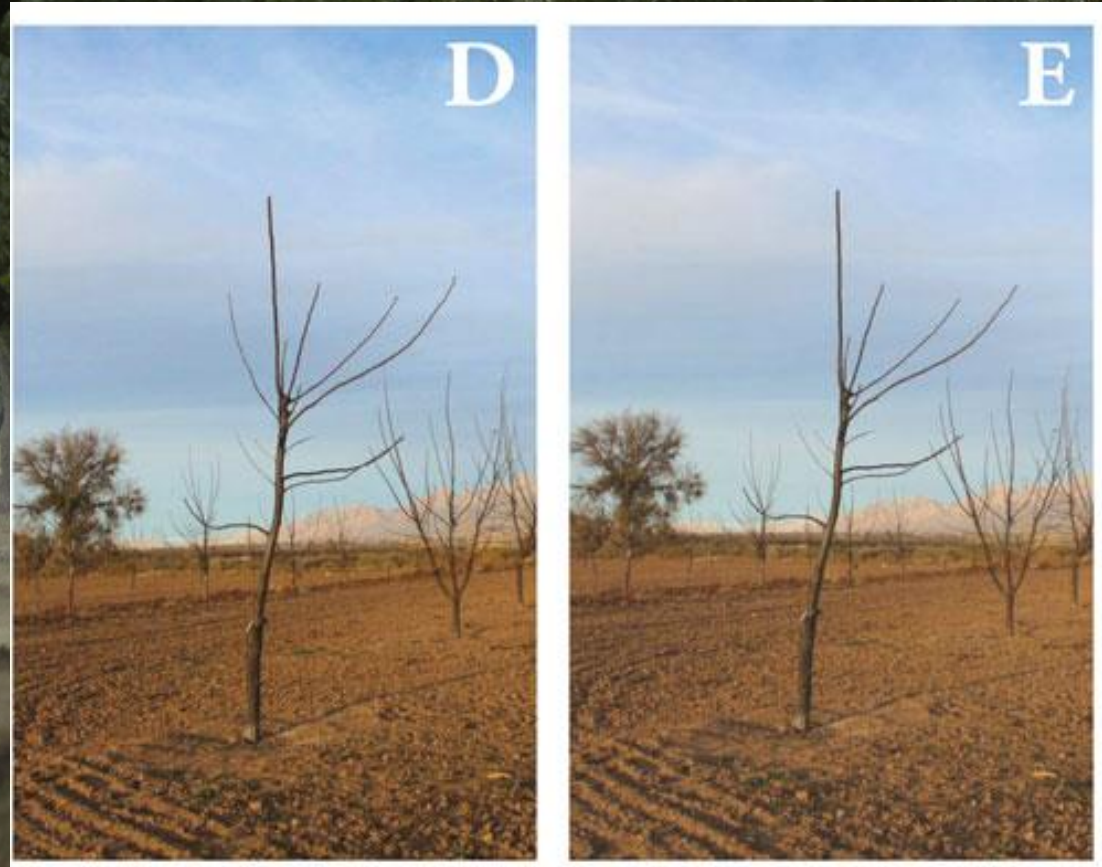


Proper Tree Training



- Don't be afraid to prune back heavily if needed and the tree is well established

Proper Tree Training



- Don't be afraid to prune back heavily if needed and the tree is well established

The image features a title slide for 'Orchard Floor Management'. The background is a lush green orchard with rows of trees and a wooden fence in the foreground. The title is written in a white, elegant cursive font and is centered within a horizontal, semi-transparent grey band that spans the width of the image.

Orchard Floor Management

The image features a title card for 'Orchard Floor Management'. The background is a lush orchard with rows of mature trees and a green field. A dark wooden fence is visible in the foreground. The title is written in a white, elegant script font, centered on a horizontal band that spans the width of the image. The band has a subtle gradient and is set against the darker foliage of the trees.

Orchard Floor Management

Orchard Floor Management

- Don't let your orchard get overgrown with weeds.
- Weeds are more efficient at water and nutrient uptake.
- When possible, keep the orchard floor down to ~6 inches unless you are growing clover.



Orchard Floor Management

- Sometimes you have no choice but to let things grow up because you can't cut your orchard....
- It may be worthwhile to investigate options to increase drainage or sometimes cover cropping with desired vegetation is a more practical option.



Orchard Floor Management

- Growing clover is a great way to add nitrogen and organic matter to the soil.
- A great way to reduce mowing in the early part of the year.
- If you can't get a good start of clover, you likely are not getting enough sunlight penetration.



Orchard Floor Management

- Clover can be a great way to incorporate slow-release nitrogen in a mayhaw orchard to reduce incidences of Fireblight that can spike in fast release formulations.



Orchard Floor Management

- Weed free areas maintained through herbicide are not the right solution for everyone, especially those with wet orchards.
- I only recommend it for high to medium input settings and when the terrain is suitable for it.



A lush green landscape featuring a row of large, mature trees with dense foliage. In the foreground, a dark wooden fence runs horizontally across the frame. The scene is brightly lit, suggesting a sunny day, with sunlight filtering through the leaves and casting shadows on the grass. The overall atmosphere is peaceful and natural.

Fertilize Smarter not Harder!

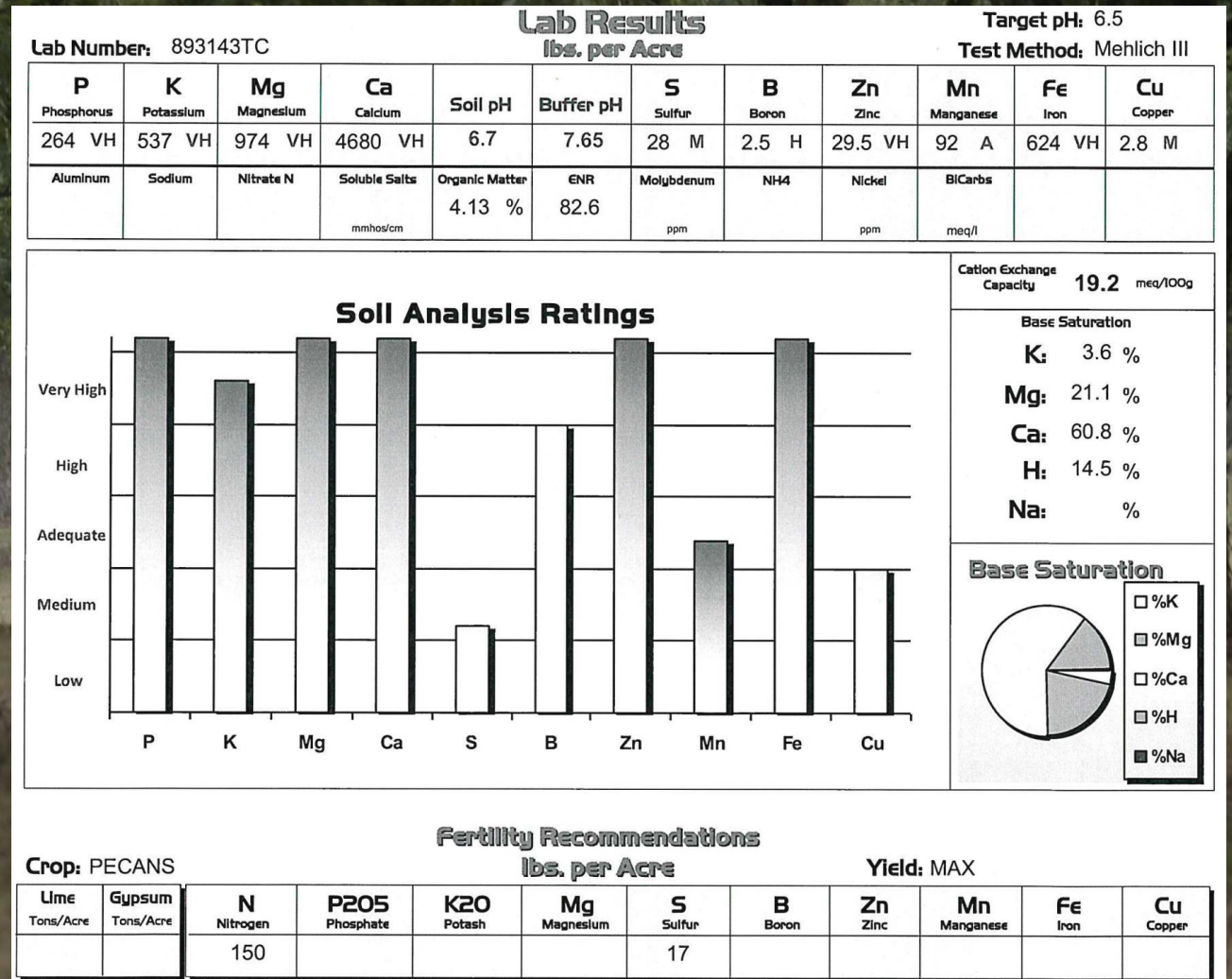
Fertilize Smarter not Harder!

- If your orchard floor is super saturated every Spring, that may not be the best time for you to fertilize.
- You may want to fertilize later in the year once it dries up a bit.



Fertilize Smarter not Harder!

- Don't fertilize blind. Get your soil tested.
- Soil tests can be done any time of the year.
- Soil tests can give information on most important nutrients but are not useful for determining Nitrogen needs.



Fertilize Smarter not Harder!

- Foliar applications of fertilizer are a great way to correct a deficiencies quickly but
- If you are doing foliar fertilizations, you should consider a ground application as well for long term mediation.



Questions

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