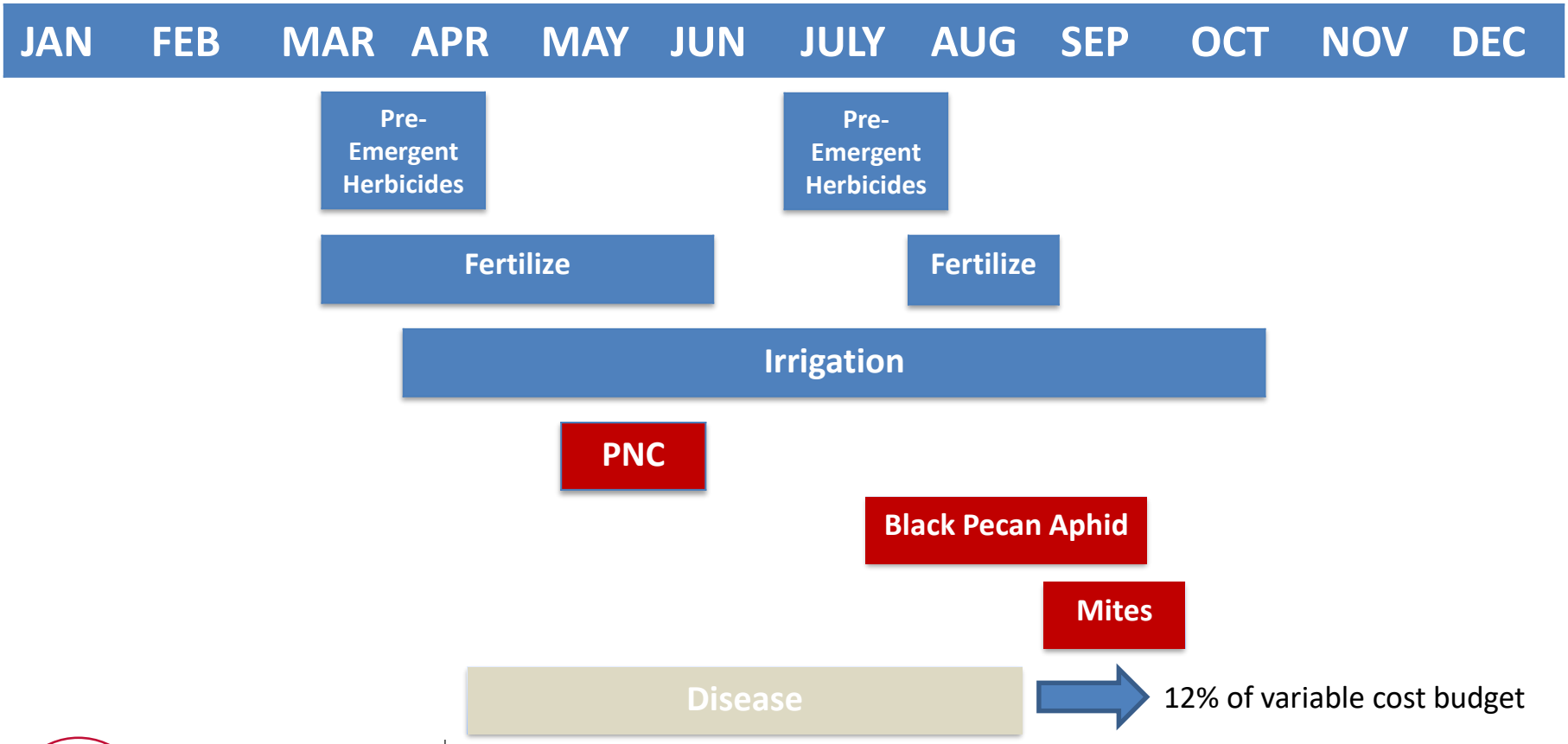
Mature Pecan Tree Management

University of Georgia

Pecan Team

Mature Tree Management



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Disease Management | Insect Management | Production Practice

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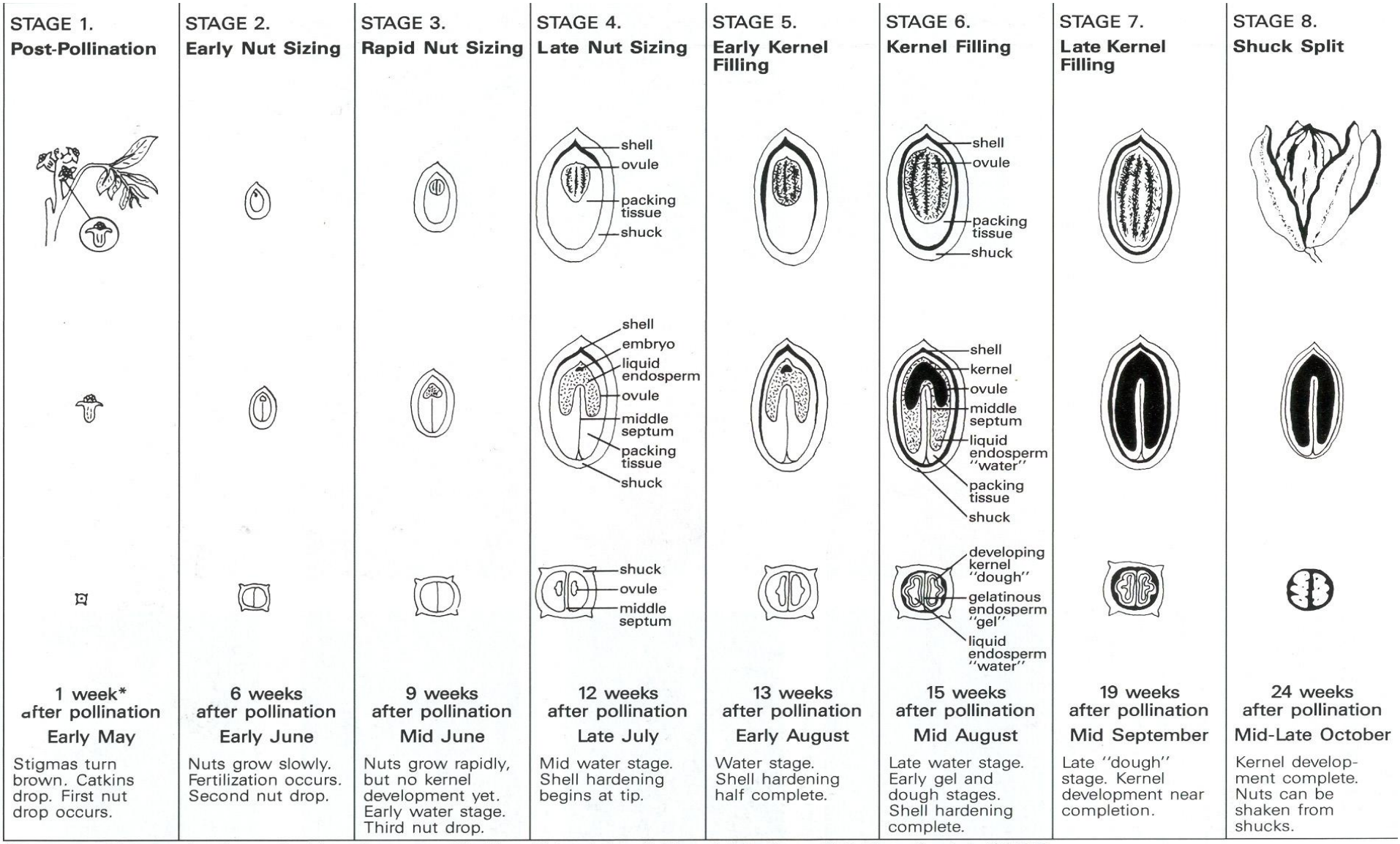
Pecan Development



*Dates vary with season, location, and cultivar. Diagrams modified from Wolstenholme, B. N., and J. B. Storey, 1970. Pecan Quarterly 4(4):15-19.

Nitrogen

- Apply 75-125 total lbs N
- Inject liquid N
  - 3 applications beginning in April (10 day intervals)
  - 1 application in June
    - 1 application in late August/early September if heavy crop
  - No more than 25 lbs N/acre/injection

- Direct broadcast applications toward herbicide strip
  - Base total acreage applied on width of spread, *not on total size of orchard*
  - Use rate of 75-125 lbs/acre *on treated area only*

- Eliminate late season applications of N with:
  - Poultry Litter Application in Feb/March or
  - Establishment of good clover stand for 3 yrs

Sandy Soils: Increase rates by 25% and use multiple applications

Dry-Land /Neglected Orchards:
Split March/June

Crimson Clover

- Advantages
  - Cool season legume
  - N, beneficials, builds organic matter, CEC
  - Re-seeds well
  - Relatively tolerant of low pH

- Disadvantages
  - May need re-seeding in 3-5 years
  - May not grow well on sandy soils
  - Intolerant to drought

Chicken Litter

- 1 ton/A of poultry litter -- February
- 1 ton applied - May
- “On Year” -Additional 50-80 lbs N/A applied as synthetic fertilizer in late August or split between early August and early September
- Have sample analyzed
- 60% (36 lbs N/ton) is available for crop uptake during the season.
- Use BROILER litter and NOT LAYER litter
  - *Ca/Mg*

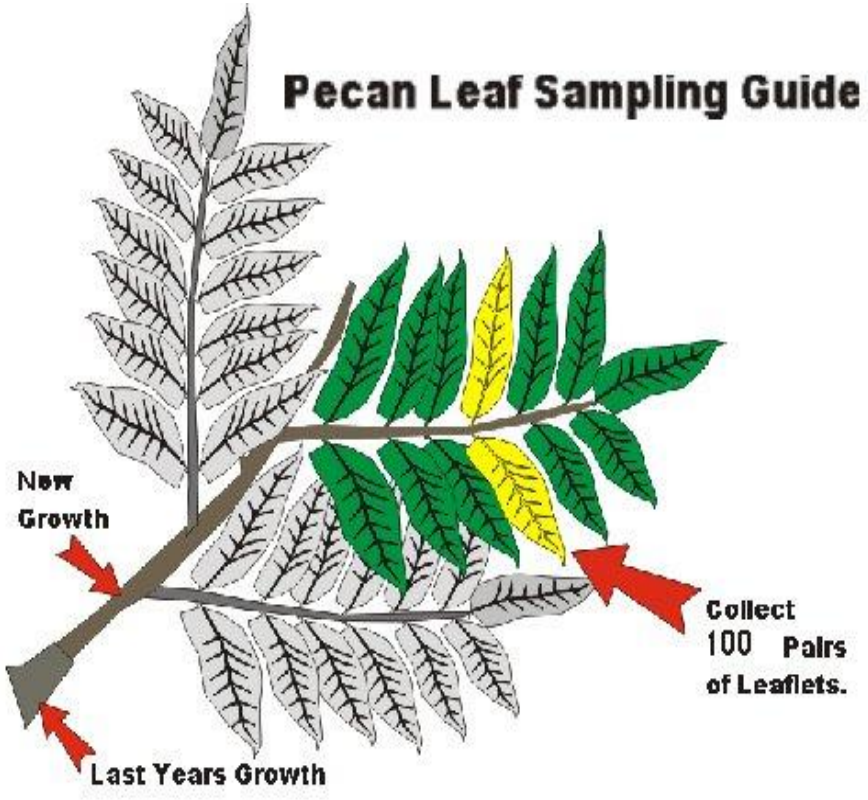
Pecan Soil Fertilizer

Nutrient	Soil	Leaf	Decision
Phosphorus	<40 lbs/acre	----	Broadcast
Phosphorus	>40 lbs/acre	<0.12	Narrow Band
Phosphorus	>40 lbs/acre	>0.12	Do Not Apply
Potassium	<125 lbs/acre	----	Broadcast
Potassium	>125 lbs/acre	<1.1 %	Narrow Band
Potassium	>125 lbs/acre	>1.1%	Do Not Apply
Zinc	<15 lbs/acre	----	Broadcast
Zinc	>15 lbs/acre	<50 ppm	Inject Zn EDTA
Zinc	>15 lbs/acre	>50 ppm	Do Not Apply
Soil pH	>6.0	----	Do Not Apply

POTENTIAL SAVINGS OF $101.80 at 2022 fert. prices

Leaf Sampling

- Sample trees between July 7th and August 7th.
- Use terminal shoots exposed to the sun.
- Collect leaflets from all sides of the tree.
- Avoid leaflets damaged by insects and diseases.



Pecan Irrigation Schedule for Bearing Orchards

Month	% Full Capacity	Gallons/acre/day	
April	6.4%	**231**	= 4 hrs/wk
Early May	12.8%	**462**	= 8 hrs/wk
Late May	27%	**936 – 1080**	
June	33%	**1188 – 1320**	
July	40%	**1440 – 1600**	
August – Mid Sept	100%	**3600 – 4000**	
Late Sept	36%	**1296 – 1440**	
October	36%	**1296 – 1440**	

Sandy Soils=Use higher end of rate
Clay Soils=Use lower end of rate

*If you receive 1" or more of rain from bud-break to the onset of kernel-filling, turn the system off for 3 days.

*Throughout the kernel filling period, apply irrigation daily regardless of rain events up to 2". With a 2" rain during kernel filling, turn the irrigation off for 3 days.

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Scab Susceptibility Groups

Low	Moderate	Mod/High	High
Avalon	Creek	Caddo	Byrd
Elliott	Kiowa	Cape Fear	Carroll
Excel	Oconee	Huffman	Desirable
Kanza	Sumner	Schley	Morrill
Lakota	Zinner	Stuart	Pawnee
McMillan		Tanner	Treadwell
		Tom	
		Whiddon	

Low Scab Potential (0-3)

1) Phosphite ~ mid-April
   or 11 + 3

2) Phosphite ~ mid-to-late May
   or 11 + 3

3) 11 + 3 mix ~ mid-late June
   or Miravis Top

Moderate Scab Potential (5-7)

1)	Phosphite	~ mid April	
2)	Phosphite OR 11+3	~ mid May	Pre-pollination
3)	Miravis Top	~ mid June	Post-pollination
4)	Elast+Tin OR phosphite	~ late June	
5)	Miravis Top	~ mid July	
6)	Tin OR Elast+Tin	~ late July	

High Scab Potential (≥ 8)

1) phosphite
2) phosphite
3) 11 + 3 mix

Pre-pollination

Post-pollination

4) Miravis Top + phosphite
5) Elast + Tin
6) Miravis Top
7) Elast + Tin
8) Miravis Top

Example Herbicide Program for Pecan Orchards

Trees 3 Yrs and Up:

At budbreak:
Glufosinate ***or*** Paraquat + Alion (5 oz)*

July/August
Glyphosate **+** Glufosinate +Alion (5 oz)

Rotate in Alternate Years With:

At budbreak:
Glufosinate ***or*** Paraquat + Flumioxazin

July/August
Glyphosate **+** Glufosinate +Flumioxazin

September (if needed)
Paraquat

After 1st season using Alion drop down to 3.5 oz rate

Economics of Pre-Emergent Herbicide 90 Days After Treatment – VOVRC

			% Control*	Cost / acre*
1.	Mission (2.8 oz)		75.0	$54.98
2.	Alion (3.5 oz)		65.0	$84.02
3.	Chateau (12 oz)		61.6	$51.75
4.	Centrus 2023, BrakeOn 2024, No herbicide 2025		59.0	$0
5.	Mission (2.8 oz) + Simazine (2 qt)		58.3	$77.12
6.	Centrus (3 oz)		55.0	$97.23
7.	Chateau (6 oz)		45.0	$39.99
8.	Simazine (bh Alion)	3 qt	45.0	$50.37
9.	BrakeOn (21 oz) + Matrix (4 oz)		28.3	$83.27**
10.	**Glyphosate 2qt + Glufosinate 24oz**		**-----**	**$121.16**

*UGA Ag Econ Department prices for 2025 includes glyphosate + glufosinate @ $24.34 per acre and fuel + labor cost ($3.89) per acre

**Includes only glyphosate at $16.02 per acre

Pecan Aphids

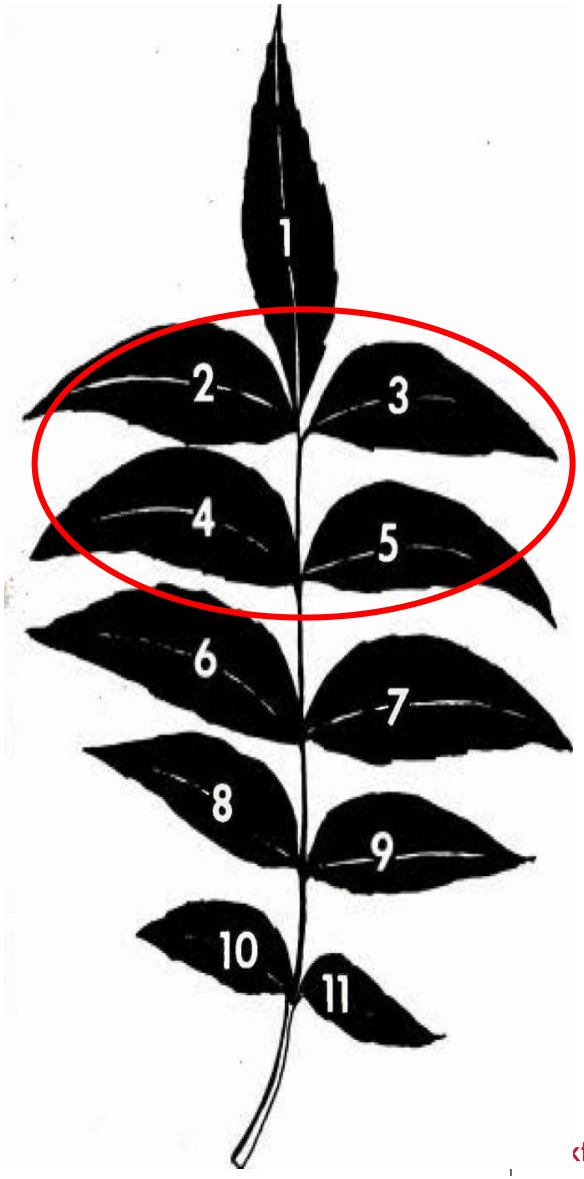
1. **Don't use** any broad spectrum insecticides
2. Ignore yellow aphids
3. Ignore black aphids before June

If you have susceptible varities:

Sumner/Gloria Grande/Schley

1. Apply imidacloprid via drip in early/mid June
   OR Pro Gibb 3x, every 10 days, starting July
2. If black aphids flare up in 3-4 wks, apply Closer, Carbine, PQZ, Safina -- ***ROTATE***
3. Use Nexter late season if needed for black aphids when mites build

Mites



- Mites are not usually a problem until around August/September
- THRESHOLD: When you ***start*** to see damage and there are 40-50 mites per leaflet, spray.
- CONTROL
  - **Abamectin (label)**
  - **Acramite (24 oz)**
  - **Envidor (18 oz)**
  - **Nexter (7.5 – 17 oz)**
  - **Magister (36 oz)**
  - **Portal (2 pt)**