

2023 Pecan Update

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Why So Many Green Shucks?

Green Shucks

- poorly developed kernels
- vivipary/rot
- Few good kernels

Cause

- Heavy crop load increased water demand
- Shucks need adequate water during Sept/Oct to open properly
- Shucks didn't separate from shell properly and shucks retained moisture inside warm shuck

		Rainfall
Sept 15-Nov. 9 2022		1.03"
Normal Avg Sept -Nov		8.58"



Be On the Lookout for Winter Injury

- Temps <20 degrees in December
- Young trees---especially those that were fertilized late (after July)



How Do We Keep Pecans Profitable?

	2018	2019	2020	2021	2022
Stuart	\$1.44	\$1.55	\$1.05-\$1.30	\$1.85-\$2.25	\$1.20-\$1.55
Desirable	\$2.20-\$2.40	\$2.40	\$1.70-\$1.90	\$2.30-\$2.40	\$1.50-\$1.85

- As long as cheap Mexican pecans flow into U.S., this will not change without new markets
- Can't control price you receive, nor cost of fertilizer, chemicals, fuel, etc.



Current Situation

	GA State Yield (lbs)	Avg Yield/Acre	Avg Price	Gross/Acre	Variable Cost of Production	Net
2020	147.5 M	1100	1.27	\$1397	\$1485.88	-\$88.88
2021	88.6 M	642	2.06	\$1322.52	\$1485.88	-\$163.36
2022	125.5 M	870	1.64	\$1426.80	\$1807.27	-\$380.47

- All you control is what you do in the orchard
- Short-Term and Long-Term Plans
 - Be Precise with Fertilizer Needs
 - Don't spray everything like it's a Desirable
 - Hedge Prune
 - Inter-plant highly productive/scab resistant cultivars



2005 Soil Sample Results

	Desired Range (lbs/A)	Mean (lbs/A)	% Low	% High	Sample Range (lbs/A)
Soil P	30-60	98.3	0	90	48-183
Soil K	100-150	153	0	34	94-361
Soil Ca	400-900	988	3	48	192-2241
Soil Mg	90-100	184	7	90	35-436
Soil S	10-50	26.6	3	0	4-41
Soil Fe	12-25	22.6	3	24	8-76
Soil Zn	15-20	25	28	55	3.9-55.3
Soil B	0.5-1.0	0.99	41	14	0.22-6.0
Soil Cu	0.5-1.5	1.1	14	10	0.2-7.2
Soil Mn	15-40	31.9	28	7	13-45
Soil Ni ¹	?	1.26	N/A	N/A	1-7
pH	6.0-6.5	5.96	41	12	5.3-7.0

2020 and 2021 Orchard Soil Survey

		Soil Nutrient Analysis ²				
Year	Site ^x	pH	P (lbs/a)	K (lbs/a)	Zn (lbs/a)	Ca (lbs/a)
	Desired Target	6.0-6.5	40	125	15	900
2020	1-4 yr.	6.25 a	49.1 c	159.8 a	7.9 c	931 c
	5-10 yr.	6.34 a	44.9 c	145.2 a	13.5 bc	1039 c
	11-20 yr.	6.65 a	72.8 b	152.6 a	16.7 b	1532 b
	>20 yr.	6.53 a	103 a	144 a	55.3 a	2377 a
2021	1-4 yr.	6.51 a	39.3 c	134.8 a	9.9 b	1106.6 c
	5-10 yr.	6.44 a	59.3 b	134.7 a	32.9 a	1073 c
	11-20 yr.	6.47 a	59.0 b	165.8 a	15.8 b	1328 b
	>20 yr.	6.54 a	111.9 a	147.7 a	45.7 a	2184.8 a

^x1-4 yr. = Pecan Orchards 1-4 years old; 5-10 yr. = Pecan Orchards 5-10 years old; 11-20 yr. = Pecan Orchards 11-20 years old; >20 yr. = Pecan Orchards >20 years old.

²Soil pH (pH); Phosphorus (P); Potassium (K); Zinc (Zn); Magnesium (Mg); Calcium (Ca); Sulfur (S); Boron (B); Manganese (Mn); Iron (Fe); Copper (Cu)



Simplifying Soil Fertilizer Decisions

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

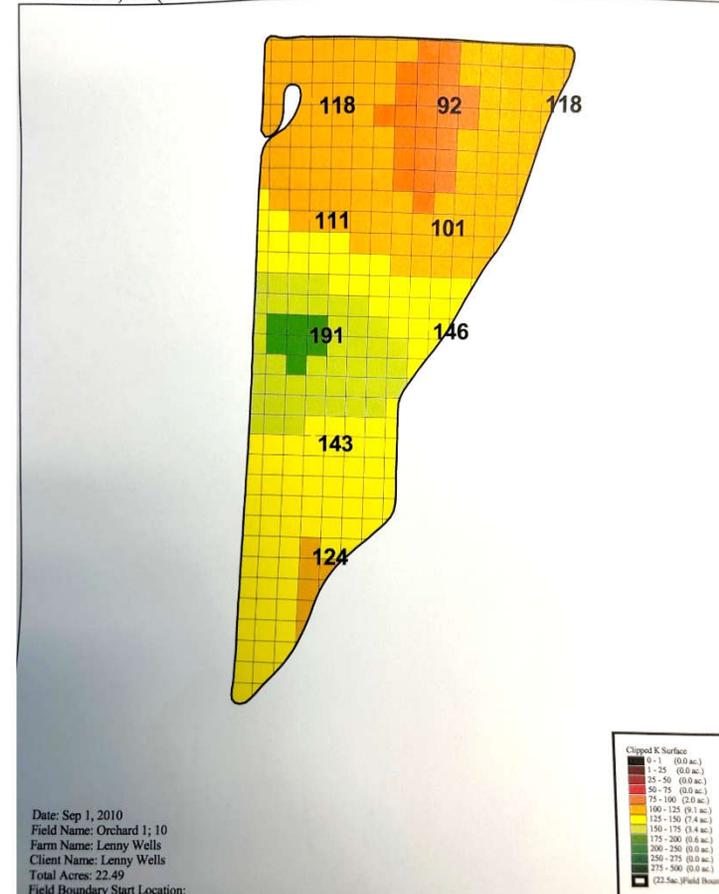


POTENTIAL SAVINGS OF \$101.80 at 2022 fert. prices

Grid Sampling

- Identify locations in field where nutrients are needed and apply only to those areas
- Sampling cost higher but usually more than offset by fertilizer cost

Orchard 1; 10 (22.49 ac.) - 2011 Soil Samples - K



Nitrogen Form

- No difference in pecan response to AN, AS, and Urea
- No More than 100-125 lbs N/acre
- Split N applications (75% in April)
On year = additional in June/late August

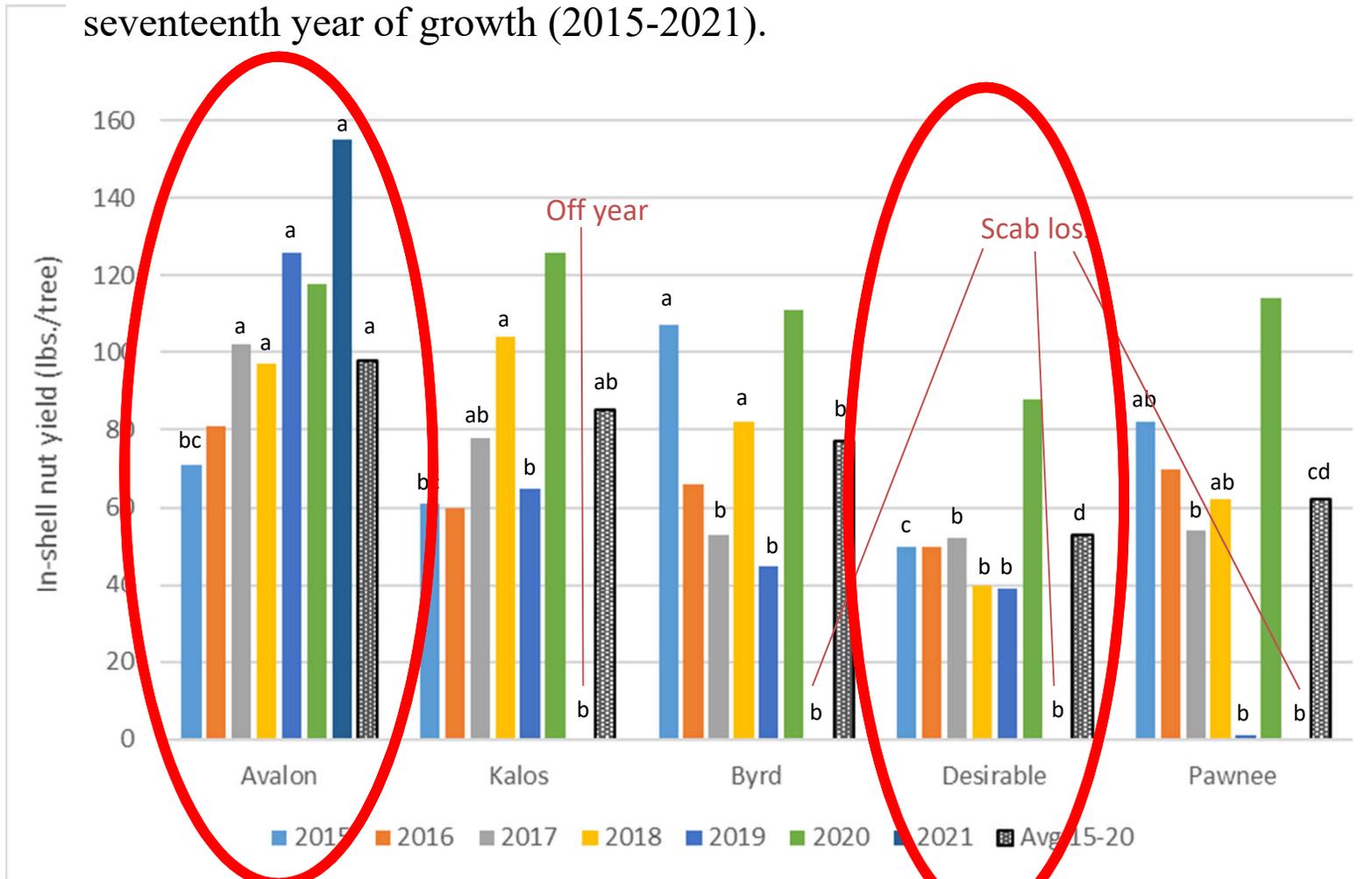


For SE Pecans to Compete:

- We need scab resistance and need yield volume = 1500-2000 lbs range
- Can't have consistent heavy yield without managing crop load to an extent



In-shell yield (lbs./tree) of pecan cultivars in Tift Co. in the eleventh through seventeenth year of growth (2015-2021).



40' x 40' Spacing

Avg. Yields 11-16

Avalon – 98 lbs.
 Kalos – 85 lbs.
 Byrd – 77 lbs.
 Des – 53 lbs.
 Pawnee – 62 lbs.

What to Plant?

High Production and/or Disease Resistance

- Avalon
- Zinner
- Caddo
- Creek
- Pawnee
- **Lakota**
- **Excel**



KEEPERS

- Cape Fear
- Sumner
- Elliott
- Oconee

HEDGE YOUR TREES



- Better Spray Coverage
- Increased Nut size and % Kernel
- Manages Crop Load
- Better Water Efficiency
- 60% reduction in wind damage

Thank You

- Georgia Agricultural Commodity Commission for Pecans
- Georgia Pecan Growers Association

