

Pecan Management Update 2022

Lenny Wells

Professor/Extension Specialist, Pecans

UGA Extension



UNIVERSITY OF GEORGIA
EXTENSION

Fertilizer---The least important and now most expensive input for growing pecans!

	Current Price	% Increase
Urea	\$918/ton (99 cents/unit N)	240% increase
28%	\$557/ton (99.5 cents/unit N)	
19%	\$465/ton (97 cents/unit N)	
MAP	\$912/ton (91 cents/unit P)	78% increase
Potash	\$758/ton (63 cents/unit K)	61% increase
Zn Sulfate	\$1700/ton (\$2.40/unit Zn)	380% increase



Fertilizer

- Nitrogen
 - Inject 19% or 28% UAN
 - Broadcast band direct to herbicide strip
 - Herbicide tank liquid apps not as effective
 - Clover/Litter
- If soil P is less than 30 lbs per acre, broadcast P
- If soil K drops below 100 lbs/acre: broadcast K
- If soil Zn drops below 15 lbs per acre, broadcast Zn
- Uptake problems will not be eliminated with maintenance broadcast app



Pre-Emerge Herbicides

- **USE PRE-EMERGE HERBICIDES!**
- **PRIOR TO Bud-Break use Pindar**
 - 1.5-3 pts/acre – on trees in ground \geq 9 months
- **AFTER Budbreak Use:**
- **ALION-**
 - 1st time using = 5 oz per acre in spring and again late summer
 - Otherwise, 3.5 oz per acre in spring and late summer
- **Flumioxazen** (Chateau, Tuscany)
- Surflan, Simazine, Diuron, Prowl H20, Rimsulfuron





UNIVERSITY OF GEORGIA
EXTENSION

When to start hedging?

30 ft or less between rows--- 7 years old



40 ft or more between rows--- 12-15 years old



UNIVERSITY OF GEORGIA
EXTENSION

Hedging and Tree Spacing

Top trees at height consistent with row spacing

Top no higher than 40' regardless of tree spacing



21.5 ft between tree driplines

35'

Row-width = 35'

Cut 6-7' from trunk



UNIVERSITY OF GEORGIA
EXTENSION



January 2020



May 2020



January 2021



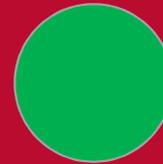
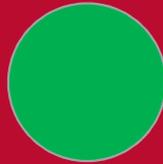
May 2021



UNIVERSITY OF GEORGIA
EXTENSION

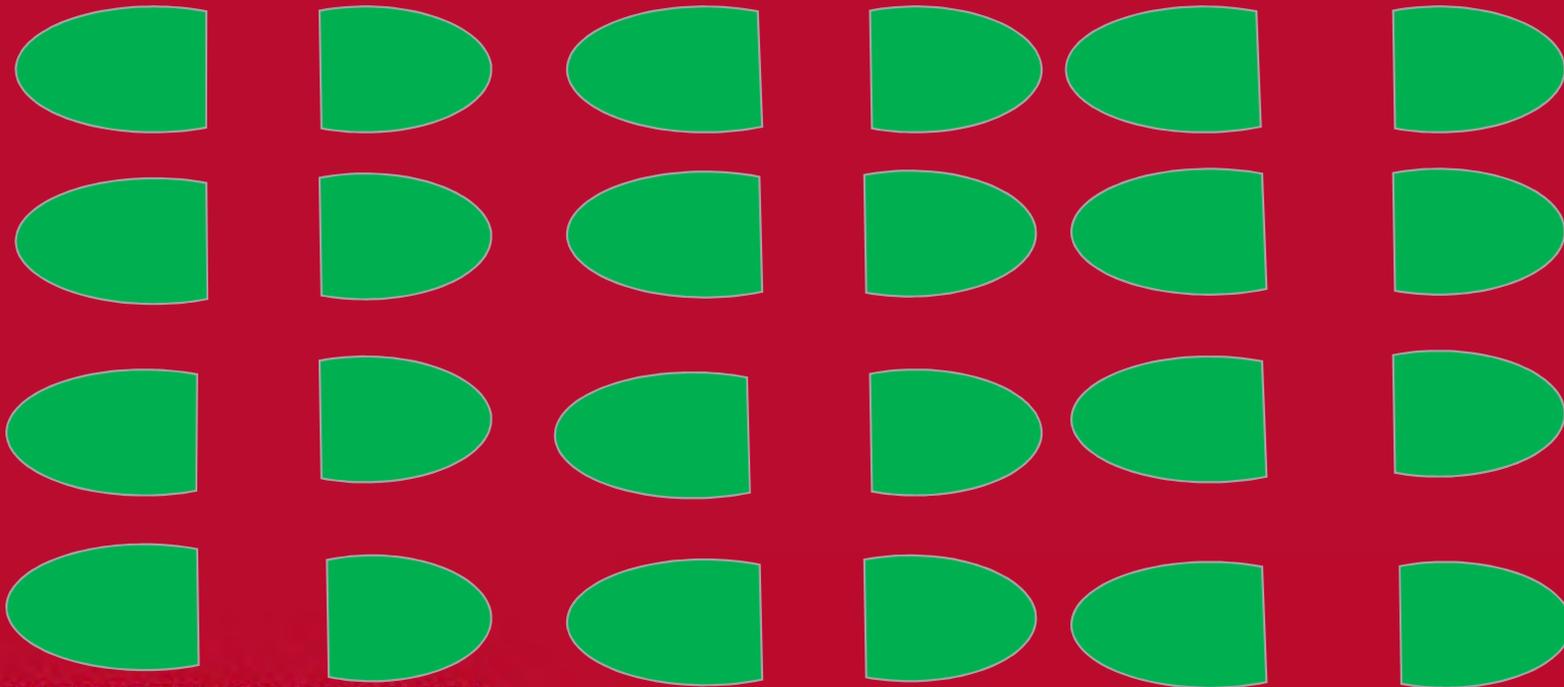
Every 4th Row

•



UNIVERSITY OF GEORGIA
EXTENSION

Every Other Middle



UNIVERSITY OF GEORGIA
EXTENSION

Mechanical Pruning: Direction

Table 3. Influence of row orientation on yield and nut quality characteristics of continuous canopy pruned ‘Wichita’ and ‘Western Schley’ pecan trees (CCHP/1 + T/1) on a 1-year pruning cycle.^z

Cultivar	Row ^y orientation	In-shell ^x yield (lb/acre)	Shellout ^w (%)	Premium ^v kernel (%)	Choice ^v kernel (%)	Nuts ^u / lb (no.)
Wichita	N-S	3121 b	61.7	78.7	17.0	51
Wichita	E-W	1973 a	61.2	85.4	12.5	49
Western Schley	N-S	2536 b	55.9	55.9	40.5	65
Western Schley	E-W	1459 a	57.9	55.4	39.5	64

^zCanopies hedge pruned to about 3.5 ft (1.07 m) from row center and pruned at 4 ft (1.2 m) in subsequent years. 1 lb/acre = 1.12 kg·ha⁻¹.

^yRows running either north-south (N-S) or east-west (E-W).

^xMeans followed by different letters are statistically different at $P = 0.05$ with main effects and interactions tested using resampling techniques using bootstrapping with hypothesis testing at 10,000 iterations for determining confidence limits of $P = 0.05$ for main effects and $P = 0.10$ for interactions.

^wPercentage kernel.

^vPercentage of kernels rating a premium or choice grade.

^u1 nut/lb = 2.2 nuts/kg.



Hedge Pruning Effect on Pecan Scab



- ❑ Under the same fungicide regime hedge pruning cannot be said to increase or decrease scab severity in the canopy up to 40 ft (12.5 m)
- ❑ There is an increasing advantage to hedging as more of the fruit are within reach of effective fungicide coverage & inoculum removed

So, although more susceptible tissue, the effect is offset by better fungicide coverage

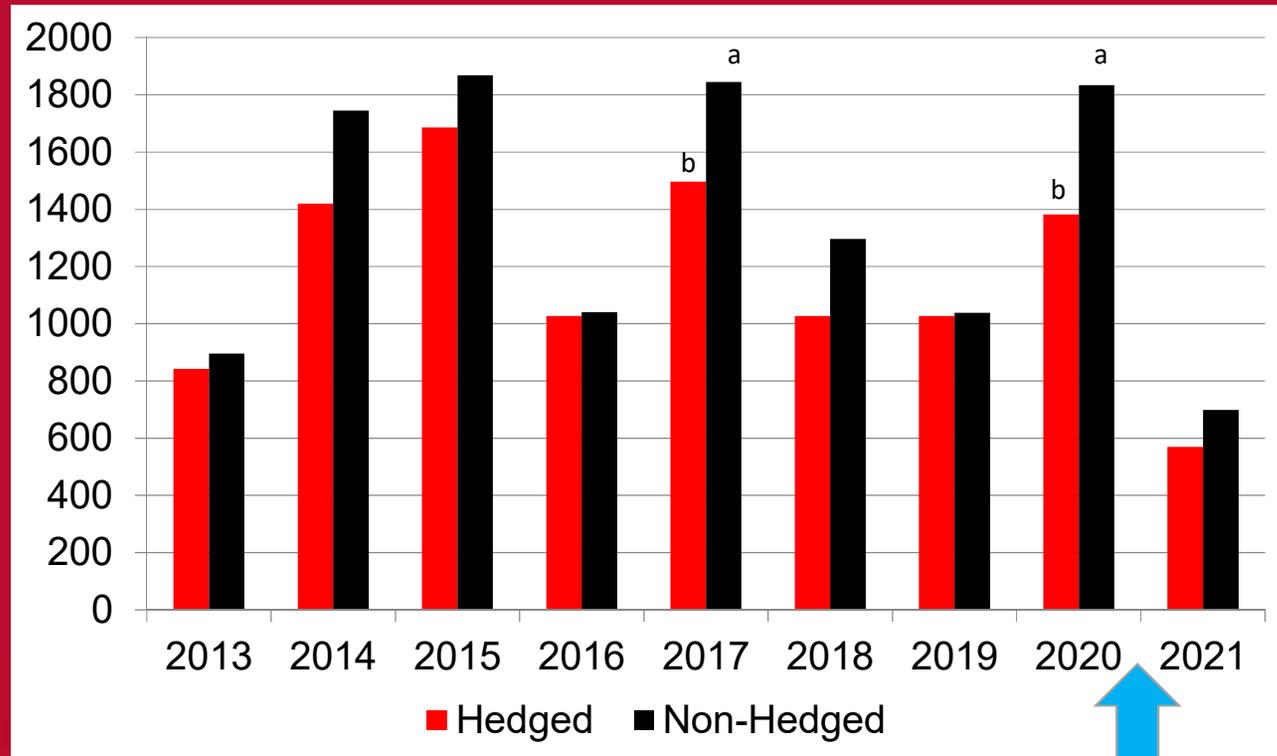


UNIVERSITY OF GEORGIA
EXTENSION

Clive Bock, USDA

Dormant Hedging Trial Yields

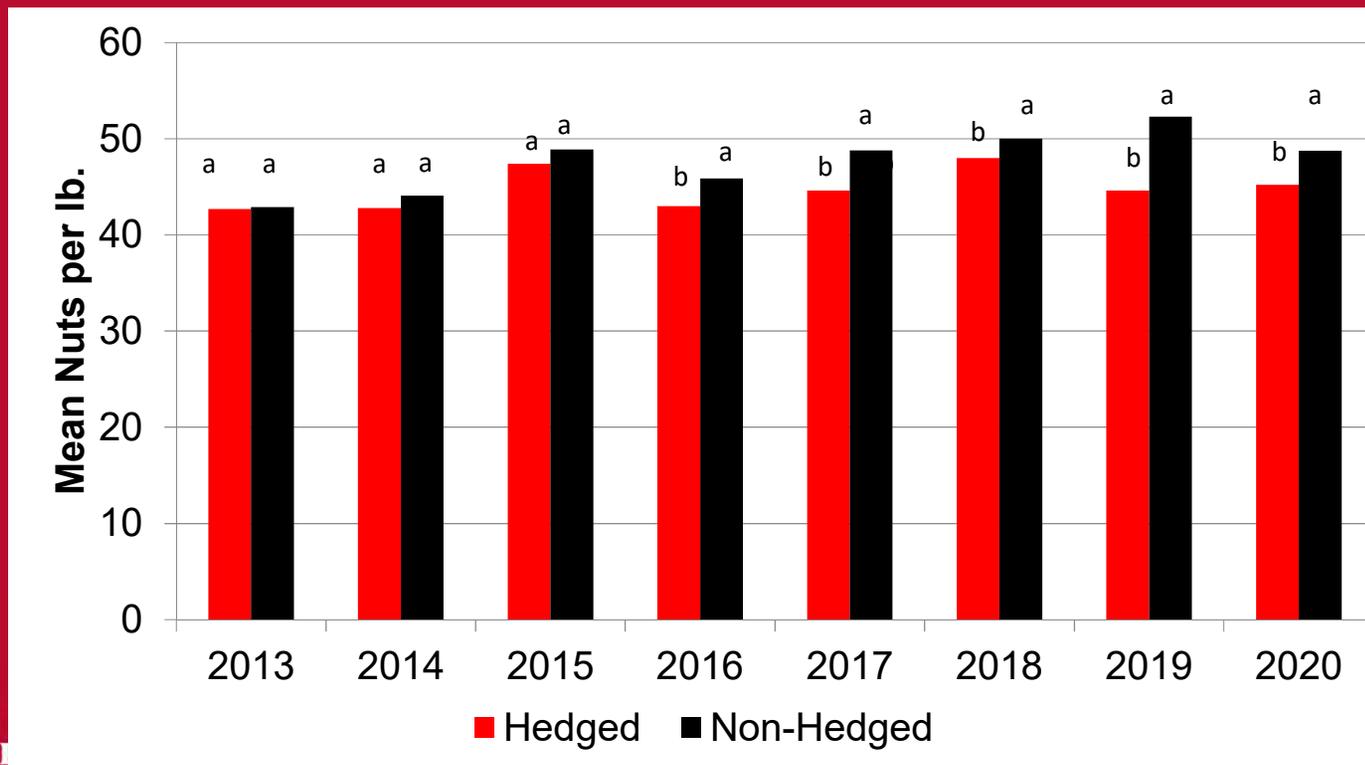
Desirable
Planted 1996



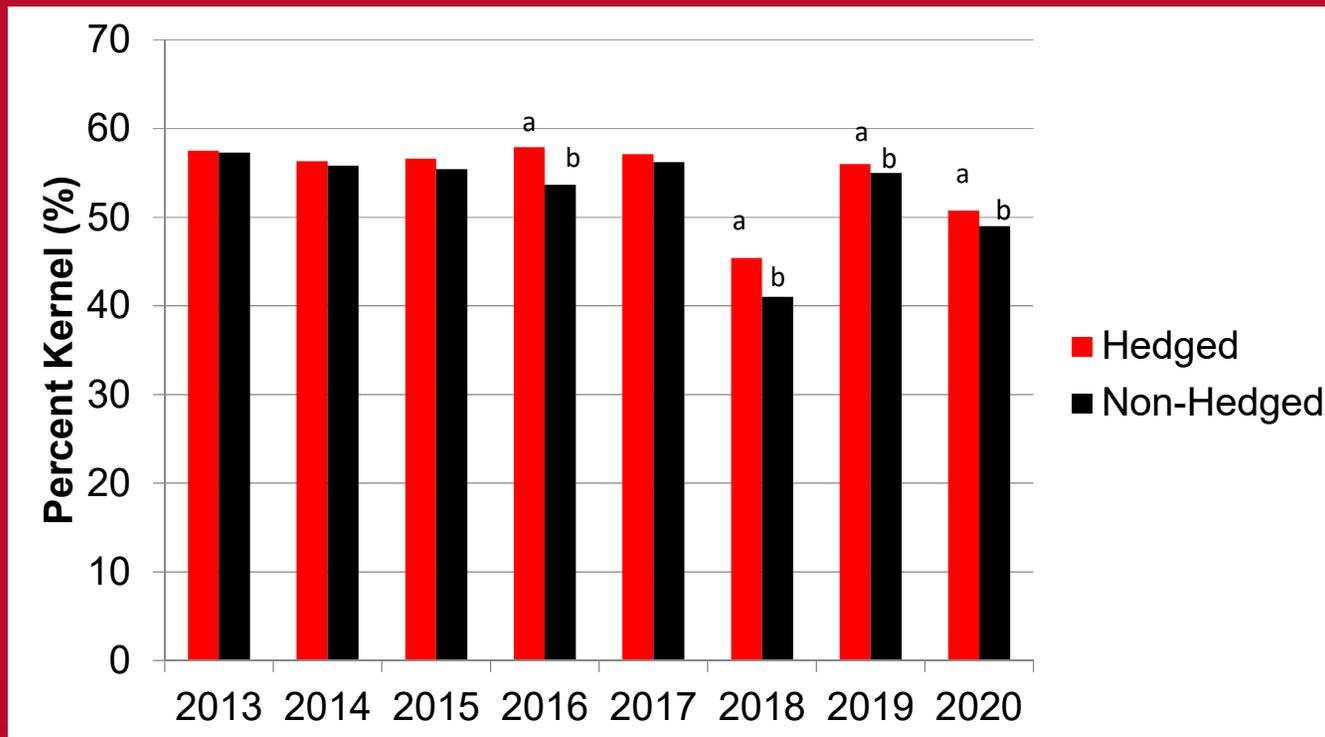
UNIVERSITY OF GEORGIA
EXTENSION

40% of trees removed in Non-Hedged Plots

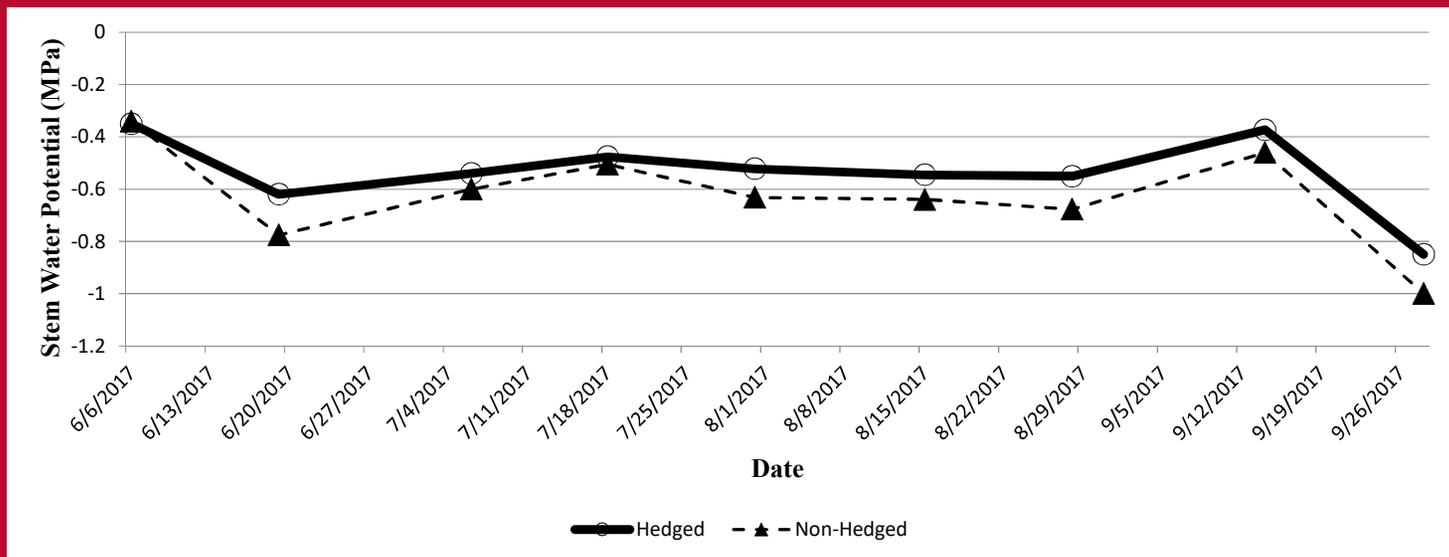
Hedging Quality—Desirable Nut Size



Hedging Quality—Desirable Percent Kernel

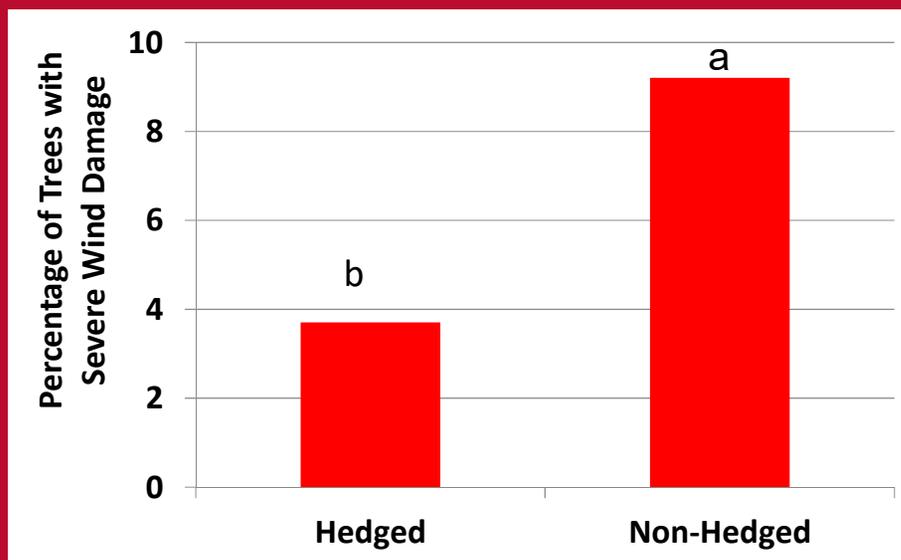


Water Stress in Hedged vs. Non Hedged Trees 2017



UNIVERSITY OF GEORGIA
EXTENSION

Hedging and Wind Damage Following Hurricane Irma, September 2017



Wind Speed = 50 mph



UNIVERSITY OF GEORGIA
EXTENSION

Summer (June) Hedge Pruning



June 2020



July 2020



Spring 2021

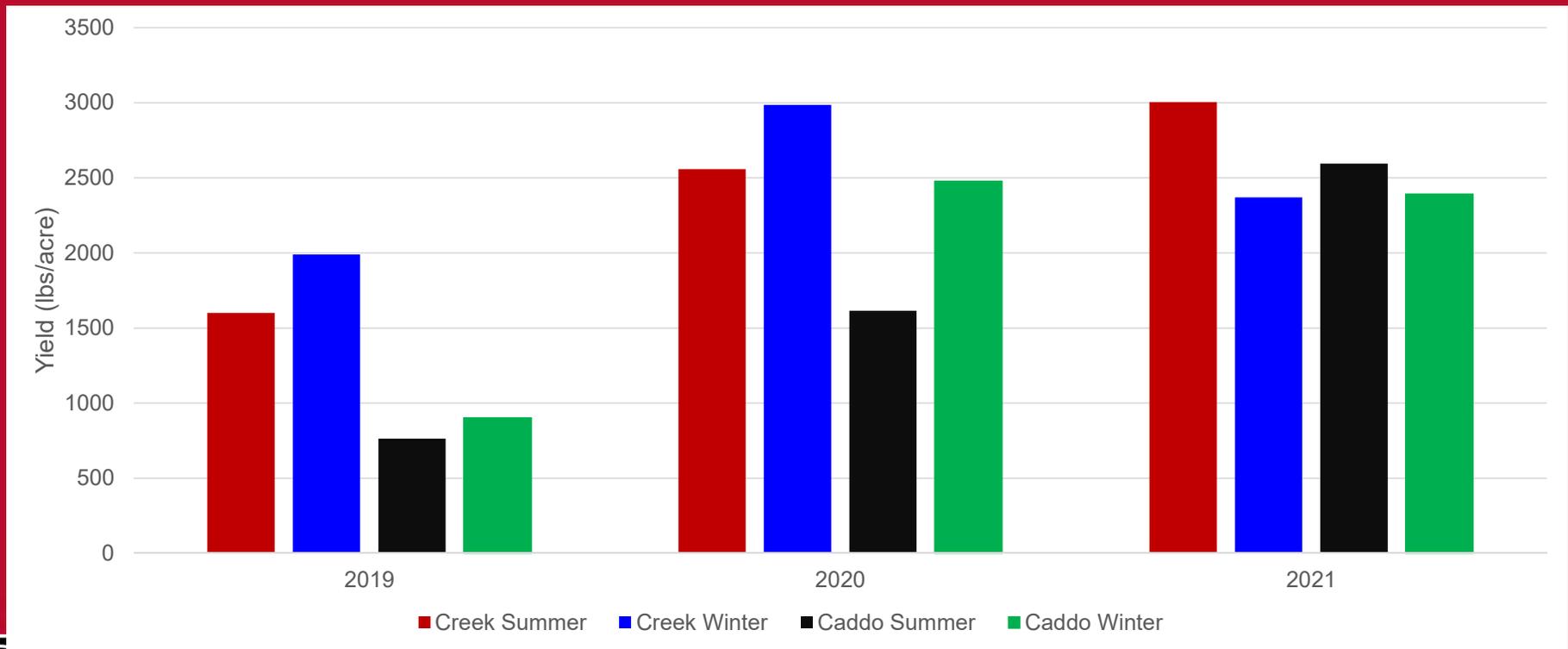


May 2021

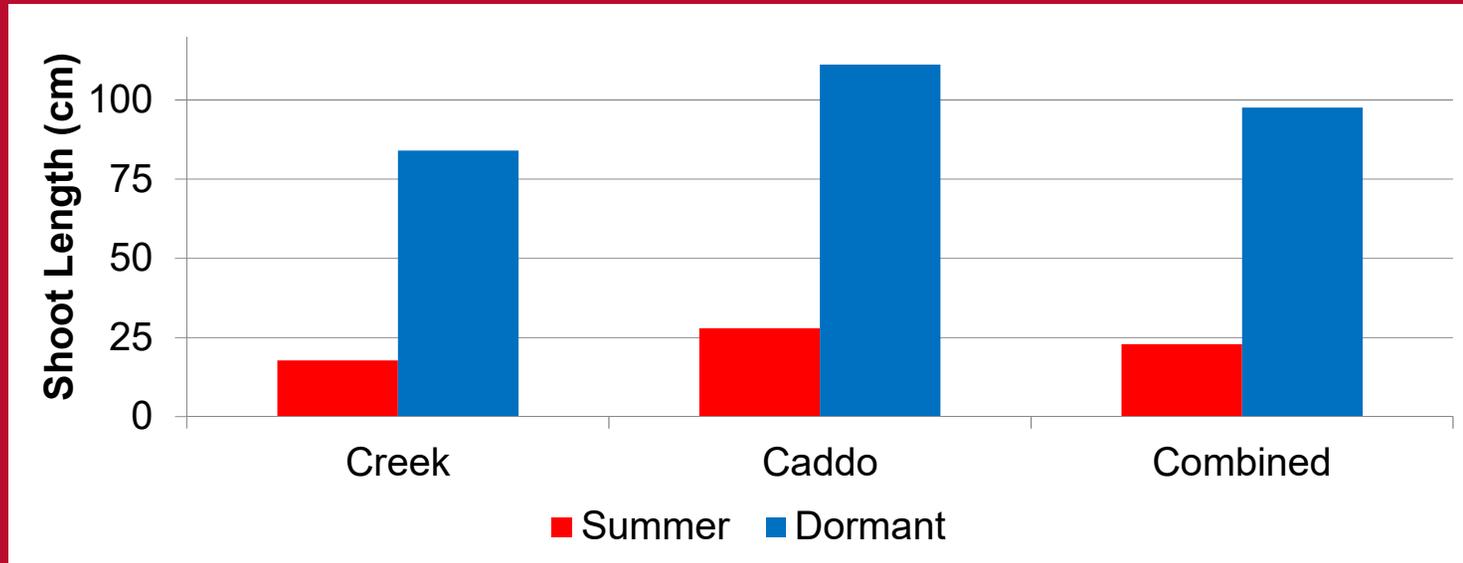


UNIVERSITY OF GEORGIA
EXTENSION

Summer Vs Dormant Hedging Yields



Summer vs Dormant Hedging



- The only advantage to summer hedging is reduced shoot re-growth and crop evaluation before removal of additional crop load in heavy year
- Creates logistical problem with debris



Hedging Summary

- Most controlled studies have shown no increase in yield from hedging
 - Variety Specific--Where increases were observed you had high light intensity and trees that fruit on the inside of the canopy
- All studies show hedging helps to even out alternate bearing
- All recent studies show increase in nut quality
- In SE, hedging enhances spray coverage
 - But pest pressure likely increased
- **Increased nut size and quality likely a result of increased water efficiency of hedged trees**
- **Reduction in wind damage**



UNIVERSITY OF GEORGIA
EXTENSION