

## CULTIVAR OPTIONS FOR GEORGIA ORCHARDS



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THE UNIVERSITY OF GEORGIA  
COLLEGE OF AGRICULTURAL &  
ENVIRONMENTAL SCIENCES®

# THERE IS NO PERFECT VARIETY

Look at strengths vs. weaknesses.

Trade-offs will need to be made.

- Scab resistance vs. nut quality
- Early production vs. stable production
- Proven performance vs. new varieties
- Scab resistance vs. aphid susceptibility



# Scab Resistance

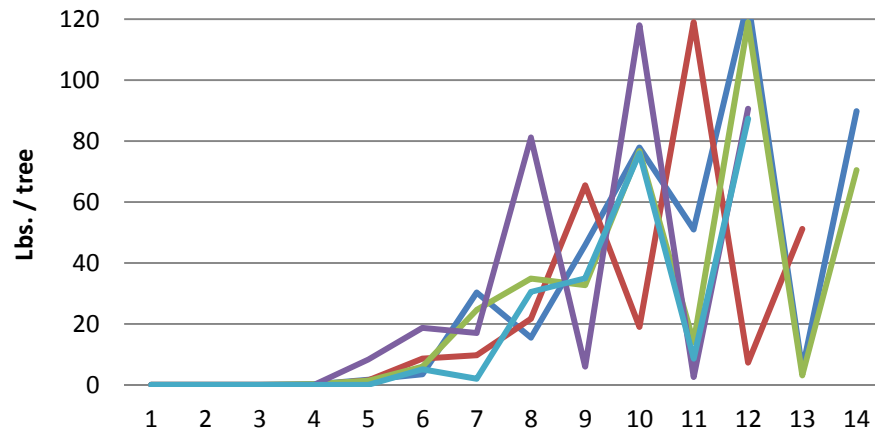
- A primary factor in cultivar choice.
- The resistance of a pecan cultivar will be influenced by the races present where it is grown.
- There tends to more scab pressure as you go south and east.
- Do not plant a susceptible cultivar if you can not spray.



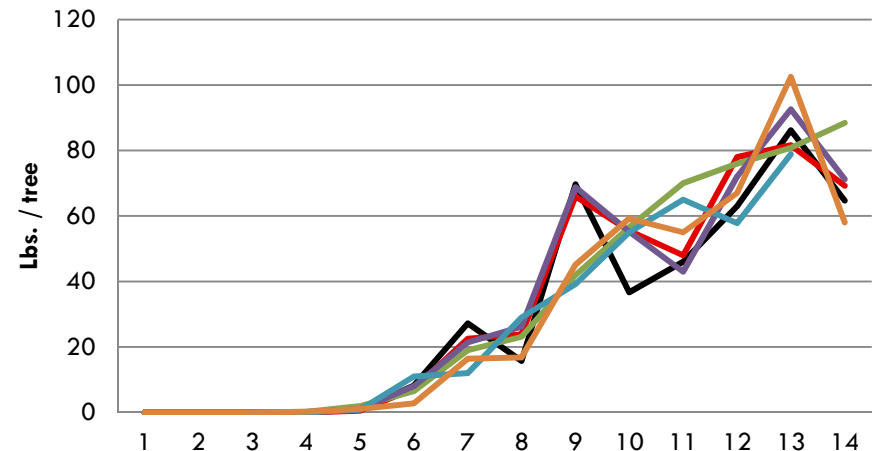
# Alternate Bearing

- Mature trees tend to bear alternately.
- Generally, precocious cultivars bear alternately more as mature trees.
- Will you summer shake to reduce your crop?

**Excel - Av. 26 lbs.**



**Zinner - Avg. 31 lbs.**



# Harvest Date

- Early nuts often have a price advantage.
- Will you be able to harvest the nuts before the crows?
- Will the trees be in a large solid block?
- Will the equipment be ready on time?
- What is the harvest date of your other cultivars?



# What not to base your selection on.

*“That’s all the nursery had left.”*

- Talk to the nursery at least a year in advance, trees are in short supply.
- Some cultivars will not be widely available.



Its better to wait a year and get all your tree rows and irrigation ready than to plant a year earlier and live with a sub-optimal cultivar for decades!



# Cultivars with Excellent Scab Resistance.

## Recommended

Caddo  
Desirable  
Elliott  
Forkert  
Kanza  
Oconee  
Pawnee  
Sumner  
Zinner

## Recommend Conditionally

Cape Fear  
Creek  
Kiowa  
McMillan

## Recommended for Trial

Amling  
Byrd  
Excel  
Lakota  
Morrill

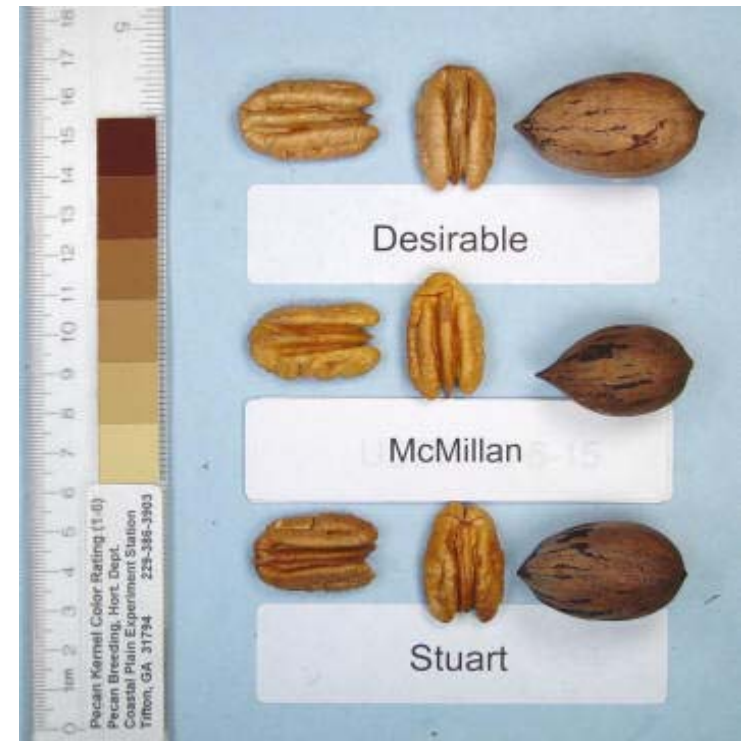


# McMillan

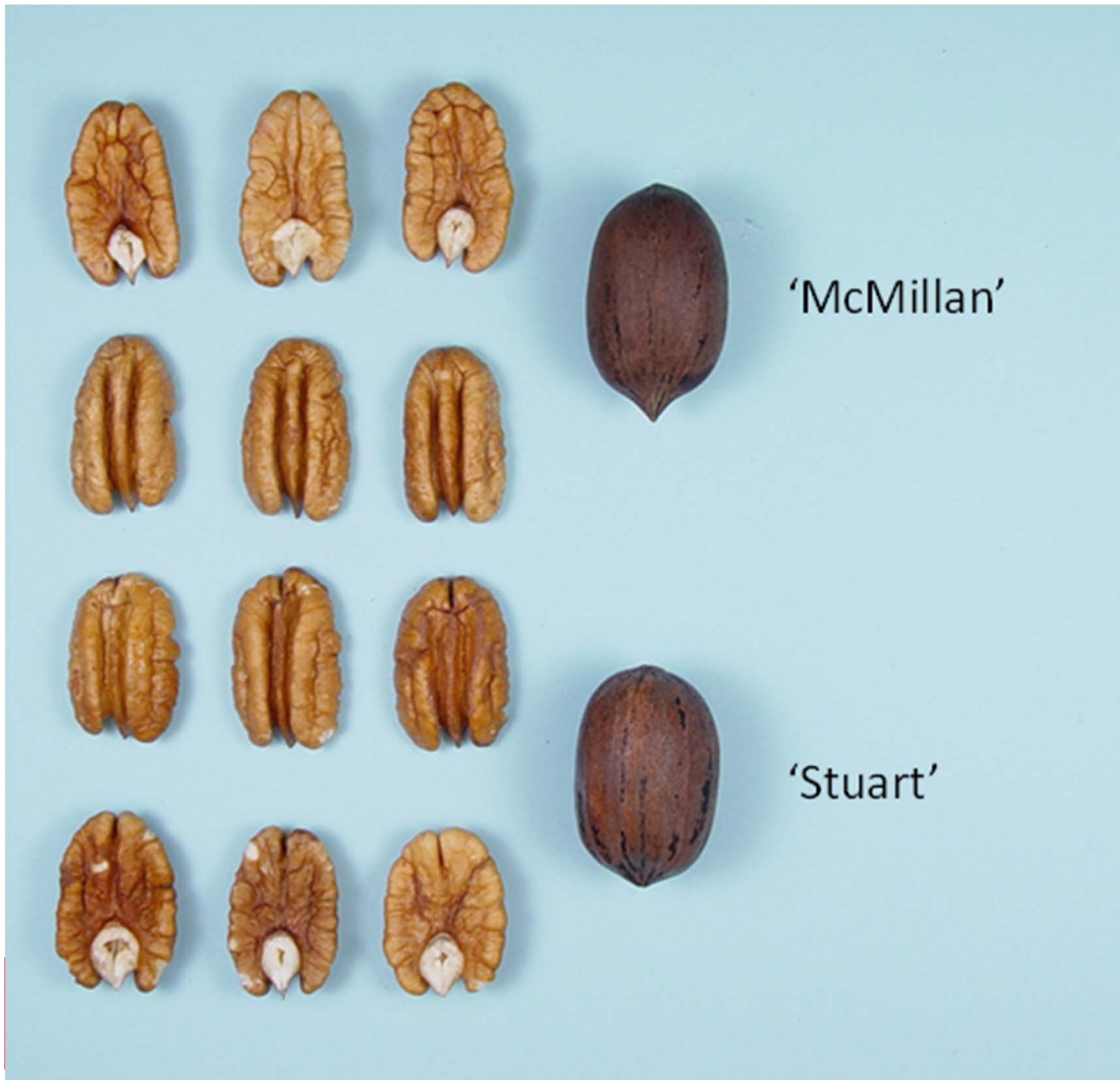
51 nuts/lb.

50% kernel

- Thick shell limits % kernel.
- Color was dark in some years.
- Looks like a good quality ‘Stuart’.
- Doesn’t have the kernel “fuzz” that ‘Stuart’ does.
- Vigorous, productive tree.



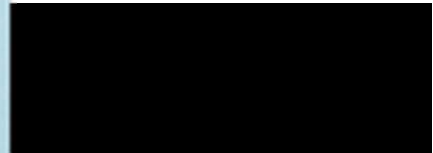




'McMillan'

'Stuart'

'McMillan' nut and kernel in comparison to 'Stuart' in 2012.



# McMillan

## Adaptability

- **No scab in our sprayed orchard.**
- Will scab in high pressure situations, but should be controlled easily.
- Fairly wide canopy.



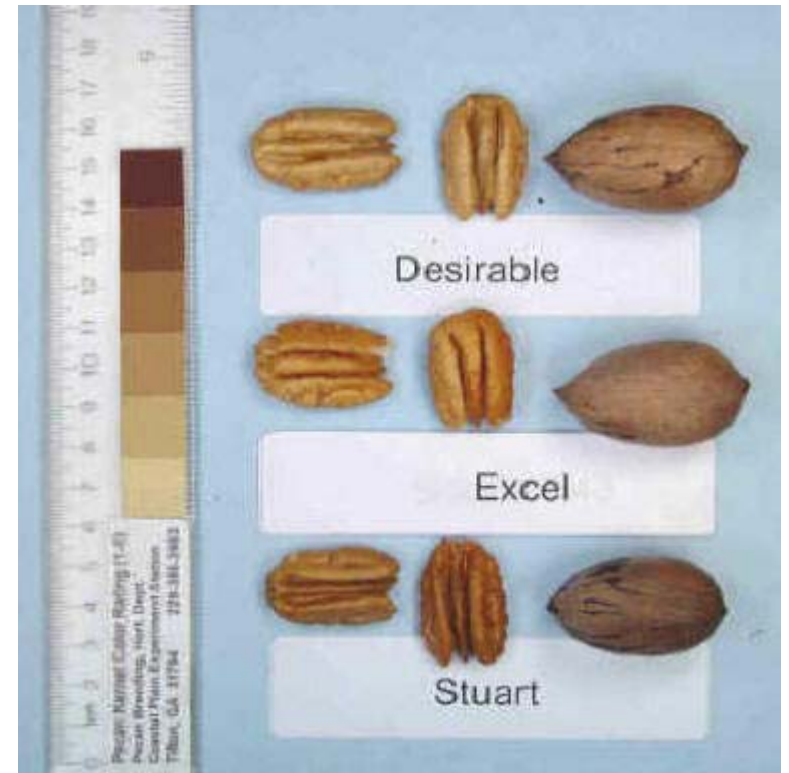


# Excel

45 nuts/lb.

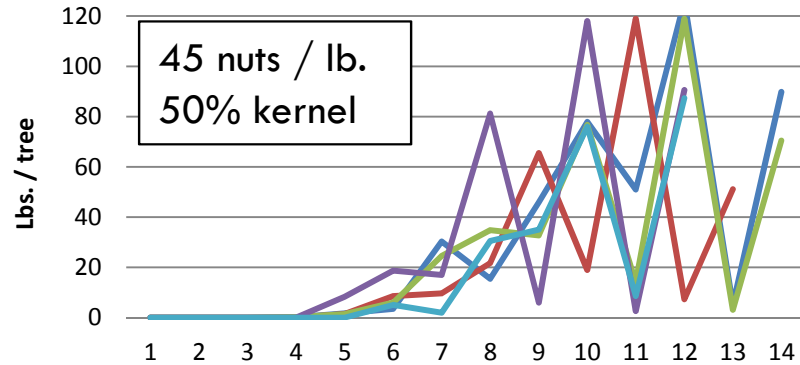
50% kernel

- Very thick shell limits % kernel.
- Excellent kernel color.
- Good size.

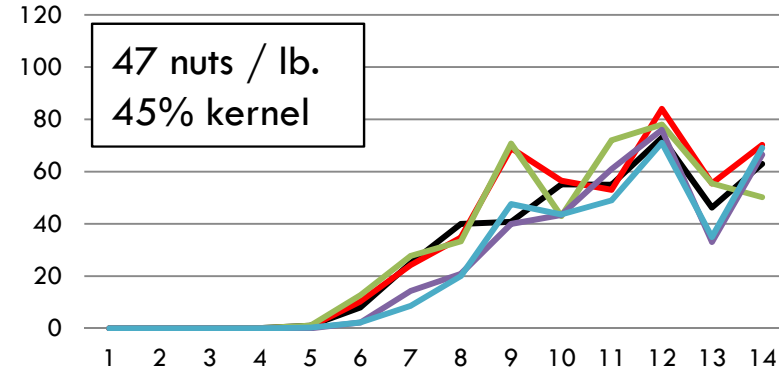


# 'Excel' Productivity 2002- 2015

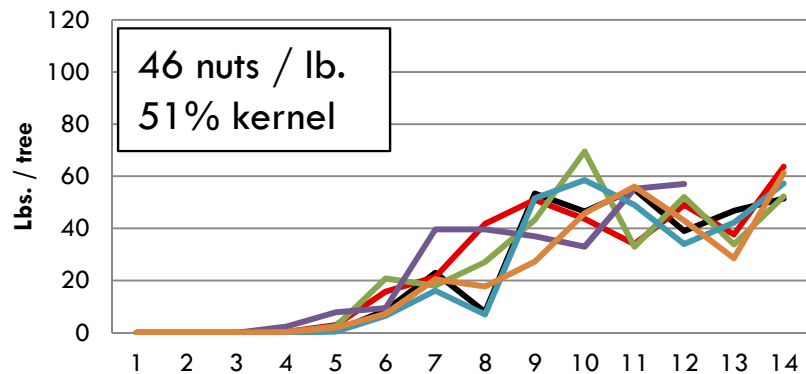
**Excel - Av. 26 lbs.**



**Stuart - Avg. 29 lbs**



**Desirable - Avg. 24 lbs.**



'Excel' needs summer shaking  
in the ON year or it will  
alternate.





# Excel

## Adaptability

- No scab in sprayed orchard.
- Aphids not a problem.
- Weepy canopy.
- Very late budbreak.



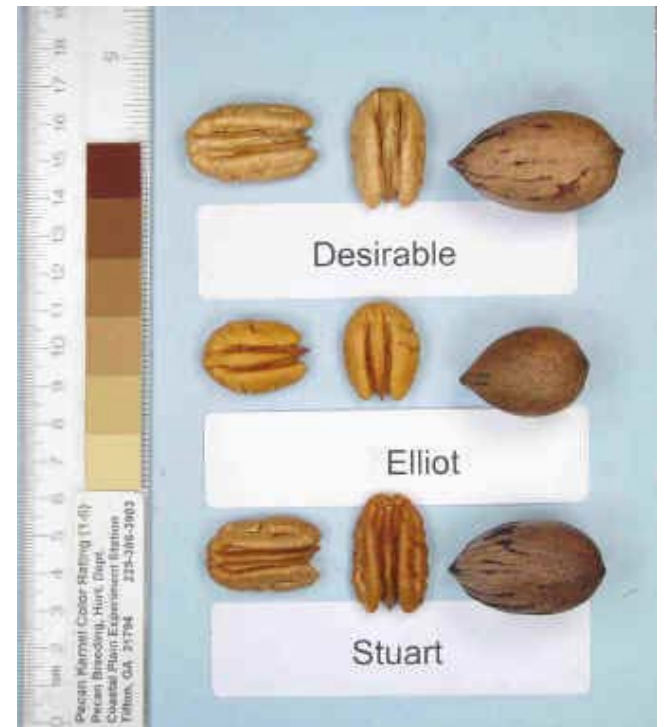


# Elliott

77 nuts/lb.

51% kernel

- Excellent resistance.
- Good quality kernel.
- Well-known to buyers.
- Alternates.
- Small nut size.
- Freeze damage in north.
- Yellow aphids a common pest.



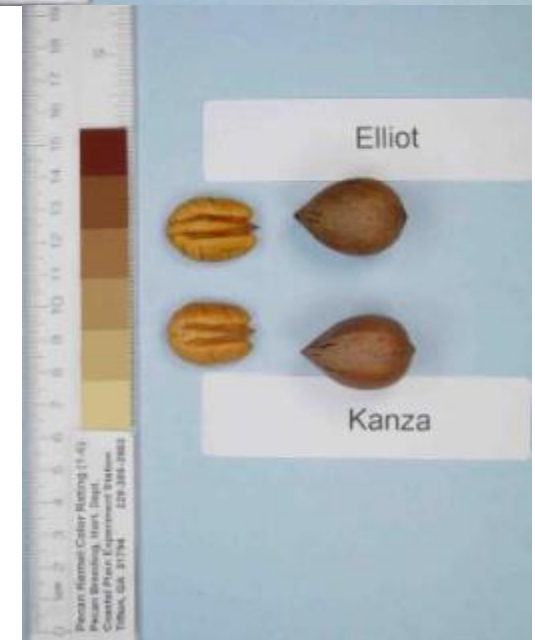
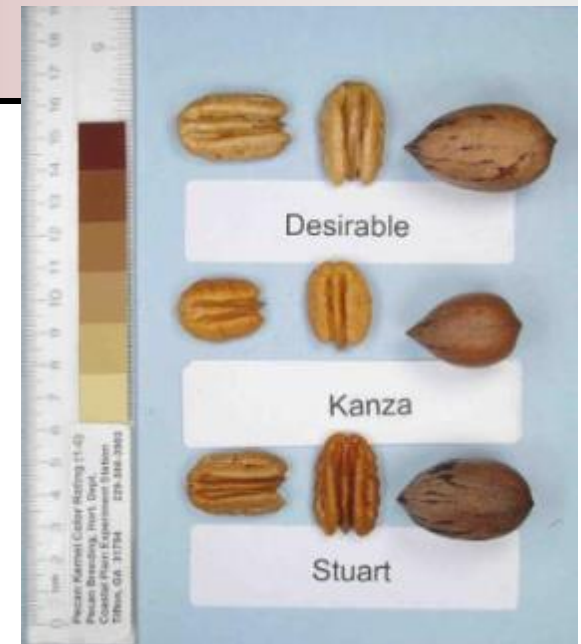


# Kanza

68 nuts/lb.

51% kernel

- Excellent resistance.
- Similar nut to ‘Elliott’.
- Cold hardy.
- Early harvest data, end of September.
- Small nut size.
- Tends to alternate.



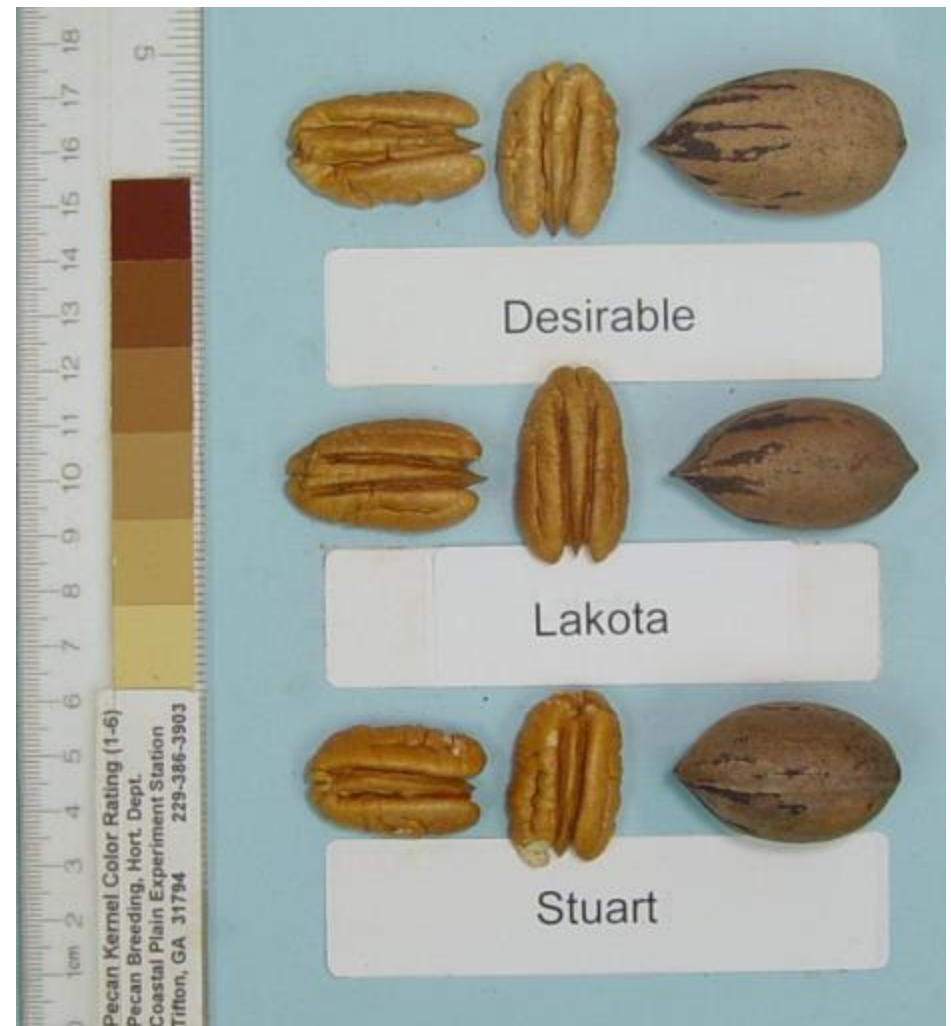


# Lakota

51 nuts/lb.

57% kernel

- 2007 USDA release. (Mahan x Major)
- Excellent scab resistance so far.
- Harvest end of Sept.
- Some variability in nut size.
- Little testing in this region.
- Some reports of low quality.
- Good tree vigor.
- **Will need crop thinning!!**



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# Amling

61 nuts/lb.

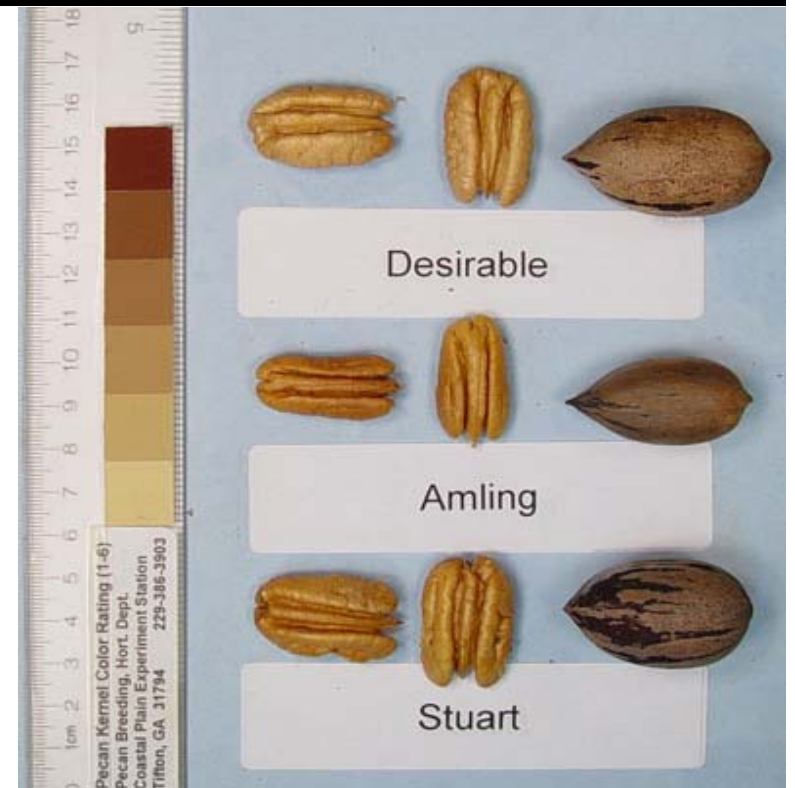
55% kernel

Excellent overall pest resistance.

Medium sized nut.

Pretty, oily kernel.

Protandrous (Type I) flowering.



Can pollinate 'McMillan',  
'Excel', 'Elliott', 'Kanza',  
and 'Lakota'.



# Cultivars with Good Resistance

## Recommended

Caddo  
Desirable  
Elliott  
Forkert  
Kanza  
Oconee  
Pawnee  
Sumner  
Zinner

## Recommend Conditionally

Cape Fear  
Creek  
Kiowa  
McMillan

## Recommended for Trial

Amling  
Byrd  
Excel  
Lakota  
Morrill



# Sumner

54 nuts/lb.

52% kernel

Nut similar to 'Schley'.

Good scab resistance.

Late harvest date.

Preferred by black aphids.

Can overbear as a mature tree.

Very popular in Georgia as a scab resistant cultivar.



# Creek

55 nuts/lb.

48% kernel

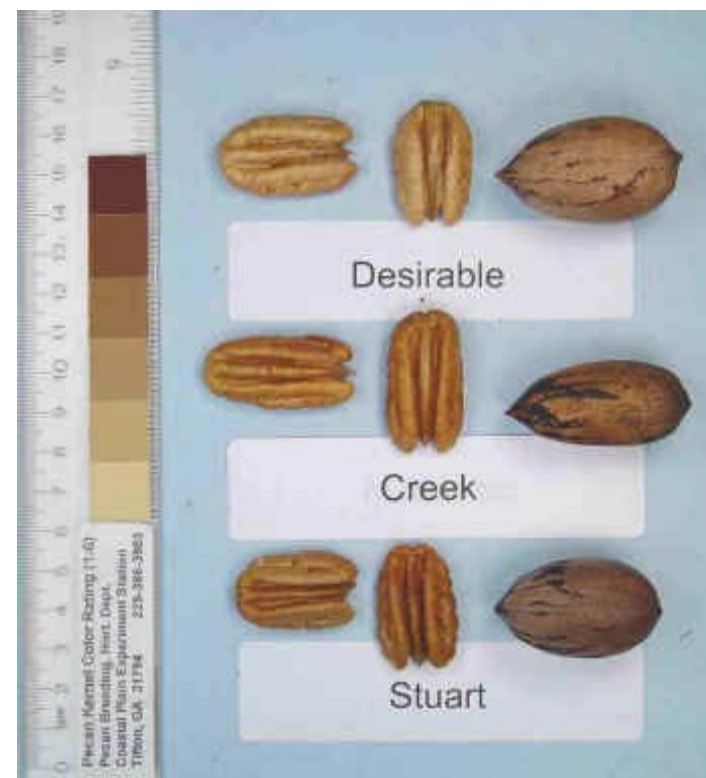
Fairly early harvest.

Overloads badly, needs crop thinning.

Upright strong tree.

Reported to bear well in competition.

Only plant it if you will crop thin!



# Cultivars with Mediocre Resistance

## Recommended

Caddo  
Desirable  
Elliott  
Forkert  
Kanza

## Oconee

Pawnee  
Sumner  
Zinner

## Recommend Conditionally

Cape Fear  
Creek  
Kiowa  
McMillan

## Recommended for Trial

Amling  
Byrd  
Excel  
Lakota  
Morrill



# Oconee

48 nuts/lb.

53% kernel

Large nut size and good quality.

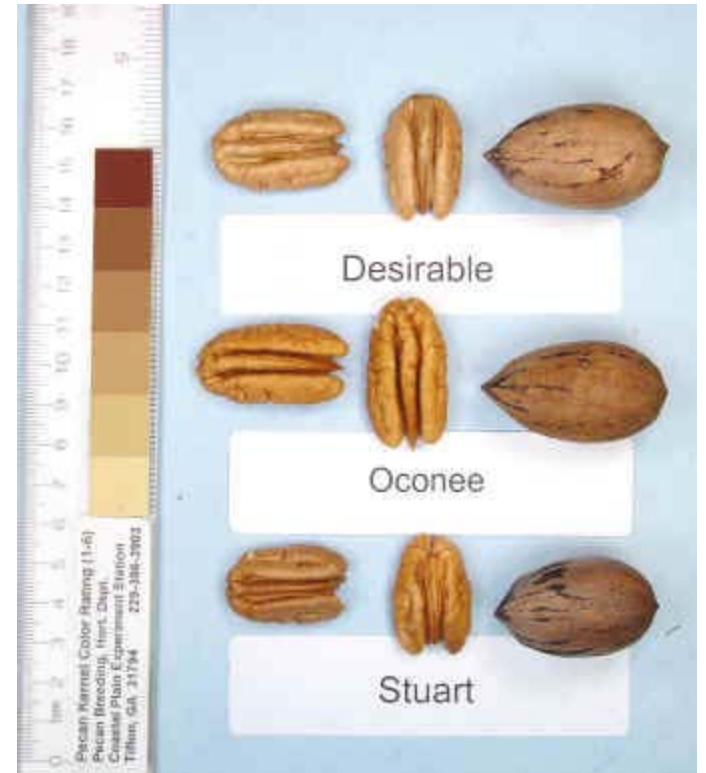
Variable scab resistance.

Vigorous tree is precocious.

Does not like to be shaded.

Preferred cultivar for black aphids.

Problems with kernel rot in 2015.



# Cape Fear

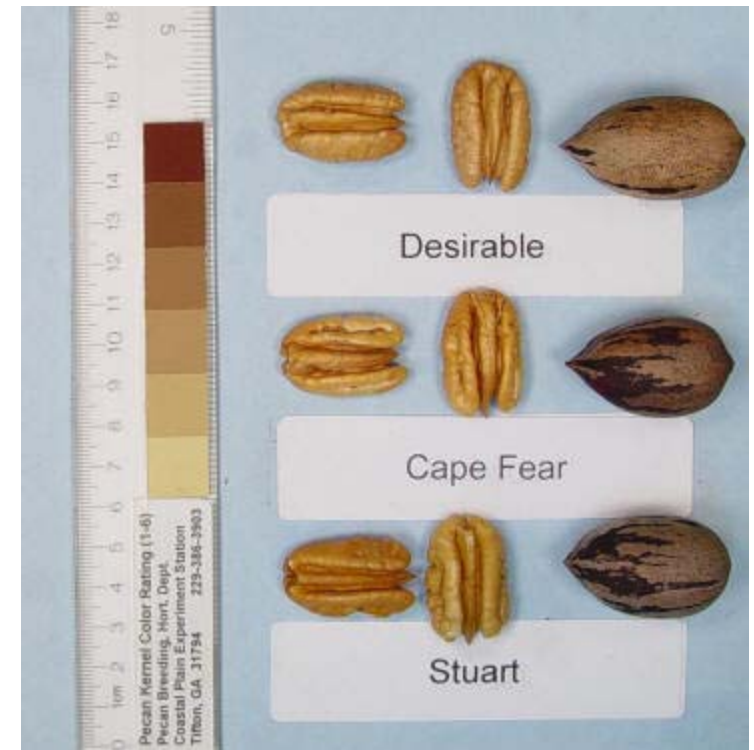
55 nuts/lb.

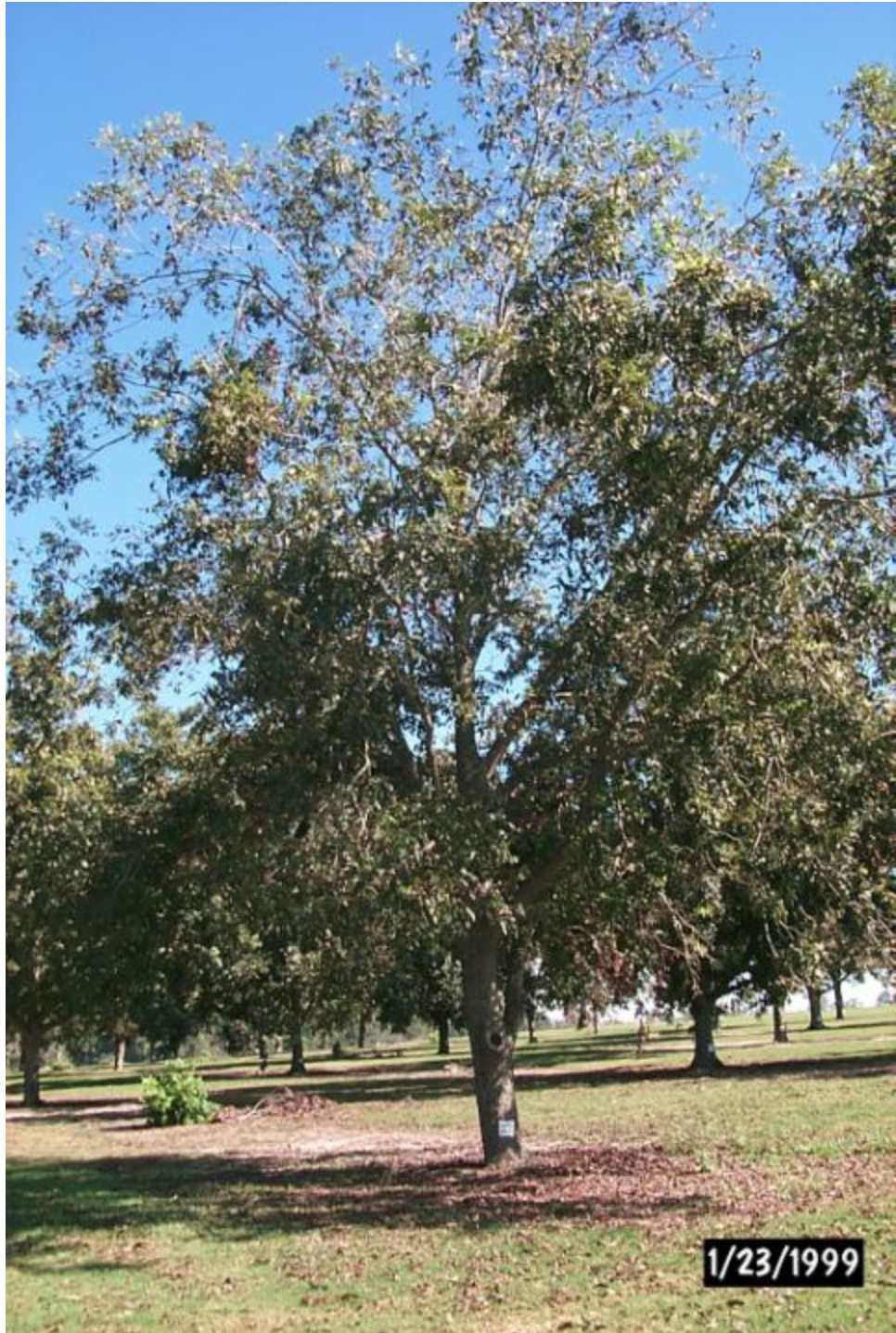
51% kernel

Precocious and needs crop thinning.

Scabs badly in some locations.

Susceptible to bacterial leaf scorch.





Cape Fear showing  
defoliation from bacterial  
leaf scorch.

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# Kiowa

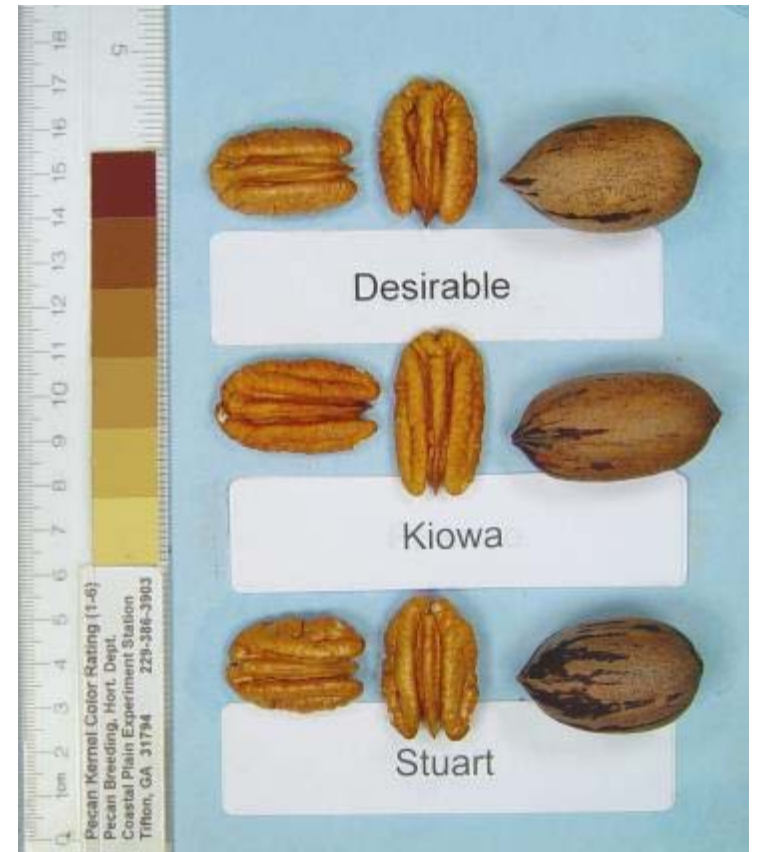
48 nuts/lb.

53% kernel

Precocious and needs crop thinning.

Variable resistance.

Somewhat similar to Desirable.



# Zinner

48 nuts/lb.

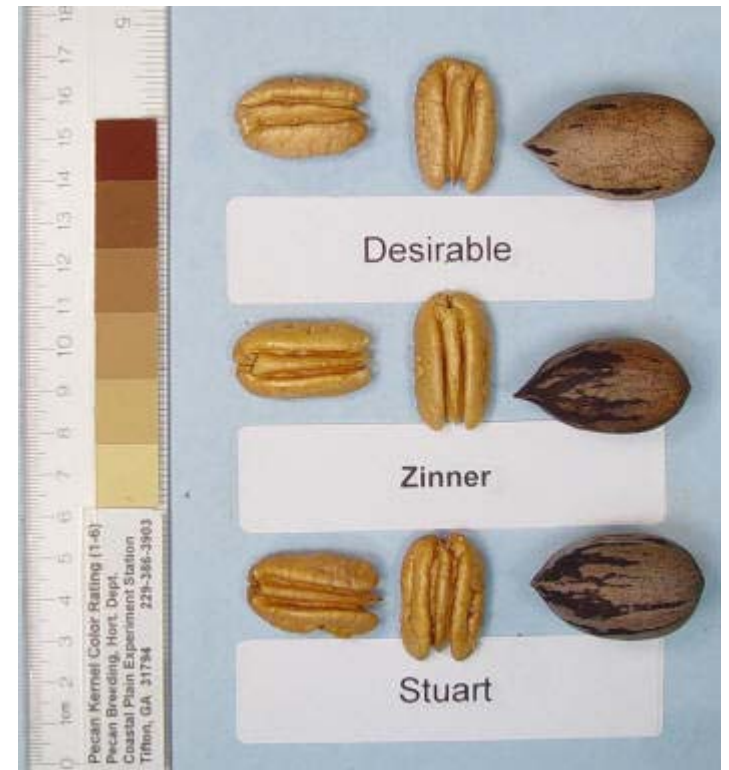
56% kernel

Consistent good production.

Size similar to 'Stuart'.

Excellent kernel quality.

Early-midseason harvest date.



# Cultivars with Low Scab Resistance.

## Recommended

Caddo

## Desirable

Elliott

Forkert

Kanza

Oconee

## Pawnee

Sumner

Zinner

## Recommend Conditionally

Cape Fear

Creek

Kiowa

McMillan

## Recommended for Trial

Amling

## Byrd

Excel

Lakota

## Morrill



# Desirable

46 nuts/lb.

51% kernel

#1 Cultivar in Georgia.

**Extremely** susceptible to scab, must be sprayed often.

Consistent bearing from year to year.

Easier to grow in middle Georgia, not recommended south of Hwy. 280.



# Pawnee

46 nuts/lb.

57% kernel

Ready to shake in Mid-September.

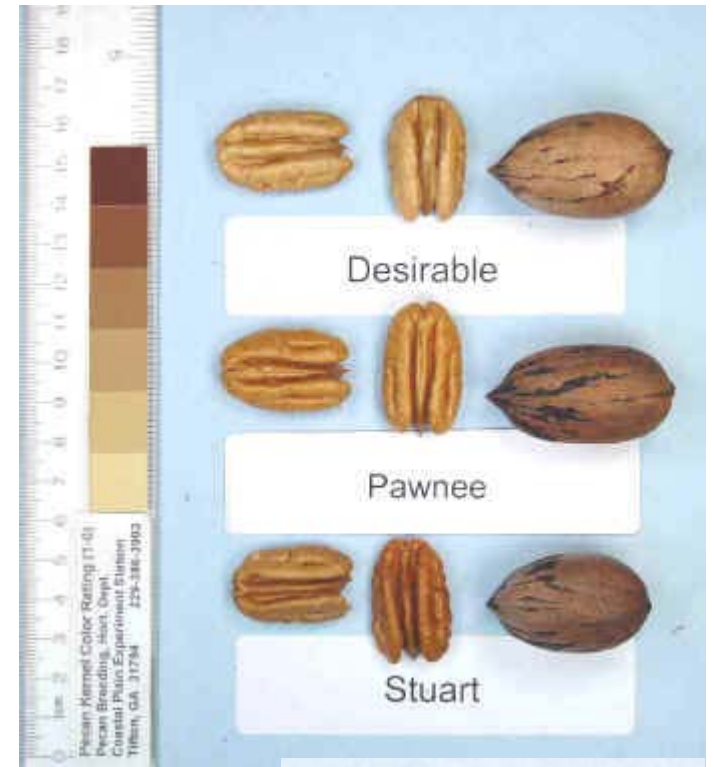
Large, high quality nut.

Will need to shake twice.

Susceptible to scab.

Easier to grow in middle Georgia.

Veining and spotting is common in some years.



# New UGA Releases

## **Byrd, Morrill, Cunard**

Low levels of scab resistance.

Very precocious cultivars, will need top quality management.

Not recommended for new growers.

## **Huffman, Whiddon, Tanner, Tom**

All are new, have only been released a few years.

Less precocious.

Not clear what level of scab resistance will be.

Recommend for trial only.



# Stuart

48 nuts/lb.

45% kernel

Well known, but no compelling reason  
to plant this cultivar any more.

Marginal nut quality at best.

Old trees can be profitable.



# My picks for small low-input plantings.

McMillan – Favorite choice.

Excel – If you need a larger nut than McMillan, must crop thin.

Lakota – Trial only, must crop thin.

Kanza – In northern areas to replace Elliott.

Amling – (pollinator)





# My picks for sprayed plantings.

Pawnee – Early harvest, good quality, sell it fast.

Zinner – Steady bearing, high quality.

McMillan – Insurance for wet years.

Oconee – Large nut, good pollinator.

Sumner – Late harvest, good quality, good resistance.



# Where to get more information.

Pecan Grower's Handbook.

Pecan Breeding Website : Google for 'UGA Pecan Breeding'



