

New Cultivar Options for Georgia Orchards



Dr. Patrick Conner
University of Georgia
Horticulture Dept.

New UGA cultivar release: 'Byrd'

- Parentage: 'Pawnee' x 'Desirable'
- Cross made by Dr. Darrell Sparks in 1989.
- Released in 2008.
- 46 nuts / lb
- 62% kernel

Flowering: Similar to 'Desirable' and 'Pawnee', early pollen shed and late pistil receptivity.



'Byrd'

- Advantages
 - Large nut with high % kernel
 - Very early harvest date, 2 days after 'Pawnee'.
 - No kernel spotting like 'Pawnee'
 - Good scab resistance.
- Limitations
 - Thin shell with potential for water split.
 - Will likely need fruit thinning.
 - Lack of long term trials.



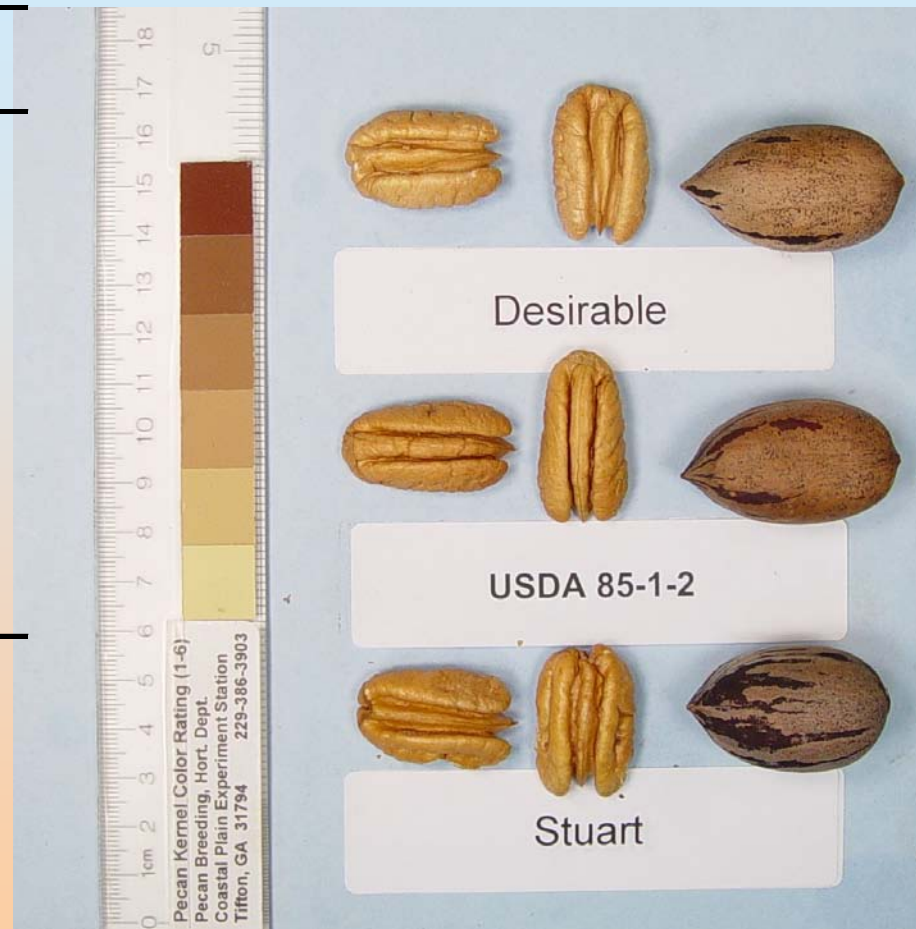
New USDA cultivar release: 'Mandan'

- Parentage – 'Osage' x BW-1
- Cross made in 1985
- Released for all growing regions
- Harvest 1 week before 'Pawnee'



'Mandan' performance years 1-5 (2002-2006)

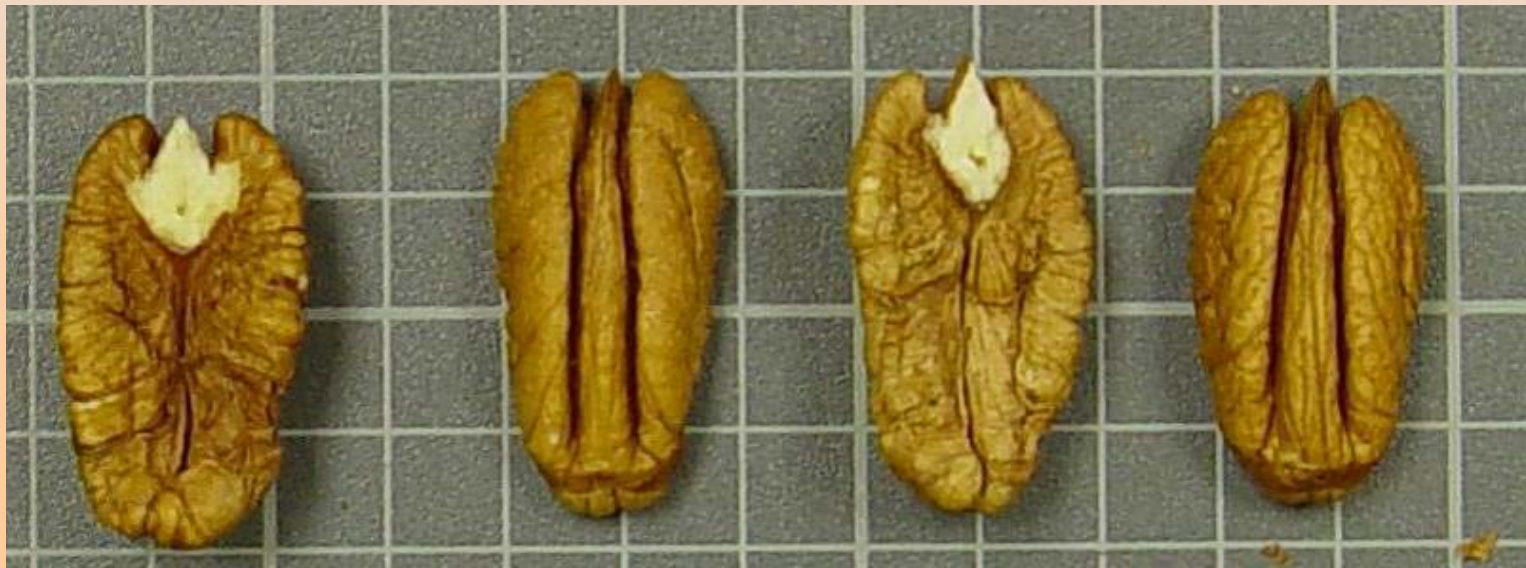
	Mandan	Desirable	Stuart
Yield (year 5)	3.4	2.7	0.6
% Kernel	57	51	49
Nuts/Lb	49	47	50
Leaf Scab	1.5	3	2
Nut Scab	1.7	3	2.3



Flowering: Similar to 'Desirable' and 'Pawnee', early pollen shed and late pistil receptivity.

'Mandan'

- Advantages
 - Early harvest, 2-4 days before 'Pawnee'
 - Good size and % kernel.
 - Better scab resistance than 'Desirable' and 'Pawnee'
- Limitations
 - Despite high % kernel often did not fill kernel tips.
 - Dark kernel color and spotting.
 - Kernel cupping.





Mandan



Byrd



Pawnee

2009 'Pawnee',
'Mandan', 'Byrd'

	Nuts / Lb	% Kernel
Pawnee	56	57
Mandan	48	57
Byrd	54	62

Which to plant?

'Pawnee' – No, scab is too severe, spotting and veining is bad in some years.



2005 sprayed Pawnee nuts.



Off-color Pawnee

Which to plant?

- 'Mandan' vs. 'Byrd' – Too soon to know, I would plant some of both.
- Need a pollinator, 'Mandan' and 'Byrd' will not pollinate each other.



New USDA cultivar release: 'Lakota'

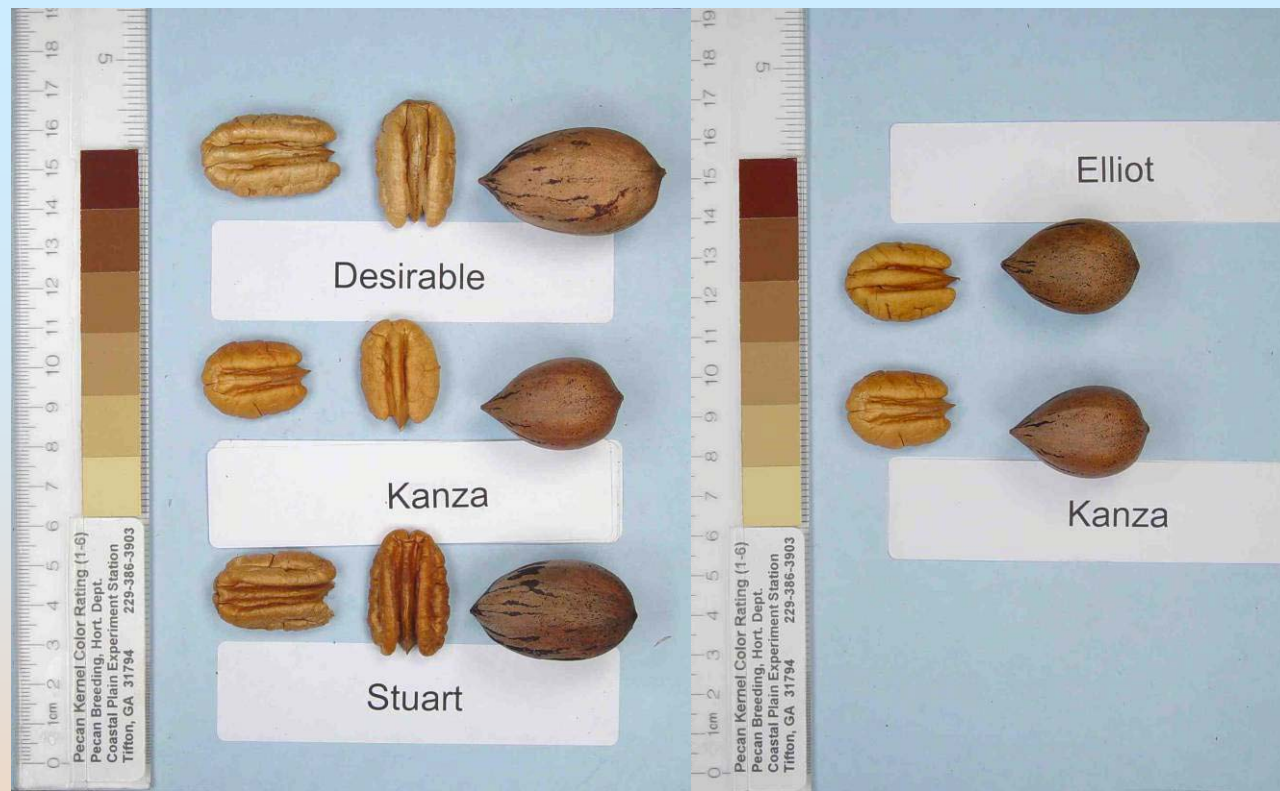
- Parentage: 'Mahan' x 'Major'
- 67 nuts/lb
- 57% kernel
- Excellent scab resistance
- Harvest 1 week after 'Pawnee'
- Will pollinate and be pollinated by 'Desirable', 'Pawnee', 'Byrd', 'Mandan'



‘Kanza’

68 nuts / lb.

51% kernel



- Advantages

- Similar nut to ‘Elliot’
- Cold hardy
- Early harvest similar to 'Pawnee'

- Limitations

- Small nut size
- Tends to alternate

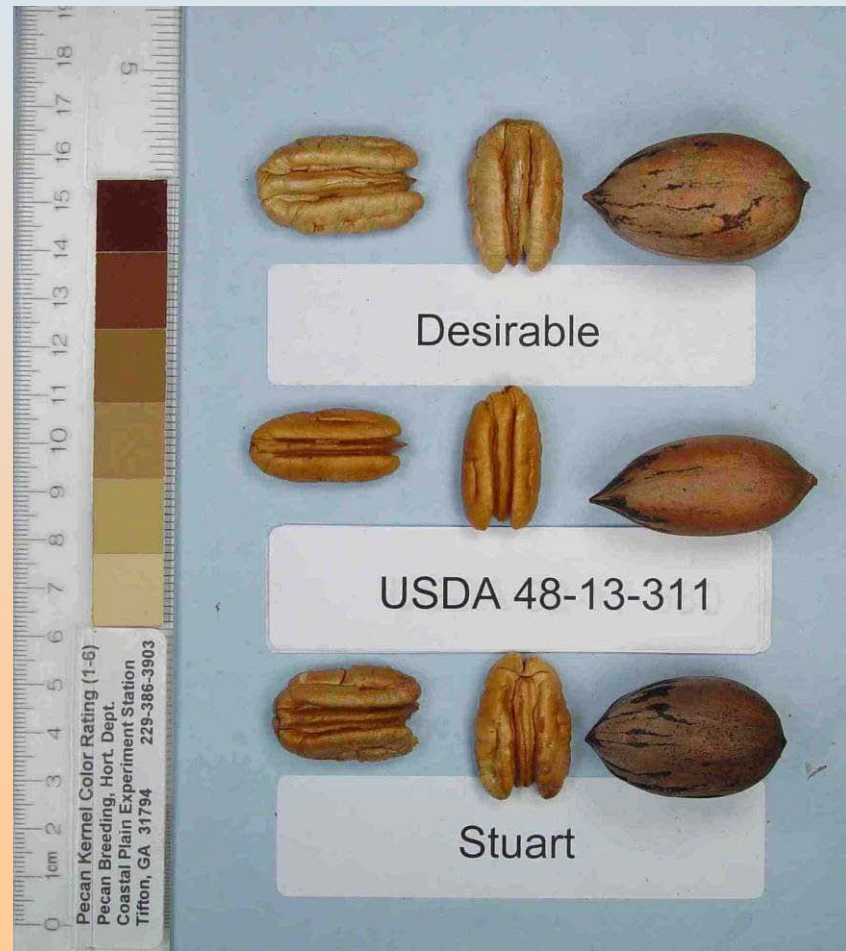
New USDA cultivar release: 'Apalachee'

- Parentage: 'Moore' x 'Schley'
- 85 nuts/lb
- 55% kernel
- Extensively tested at Muckalee plantation in Albany.
- Flowering similar to 'Desirable'.
- Early mid-season harvest. 3 weeks after 'Pawnee'



'Apalachee'

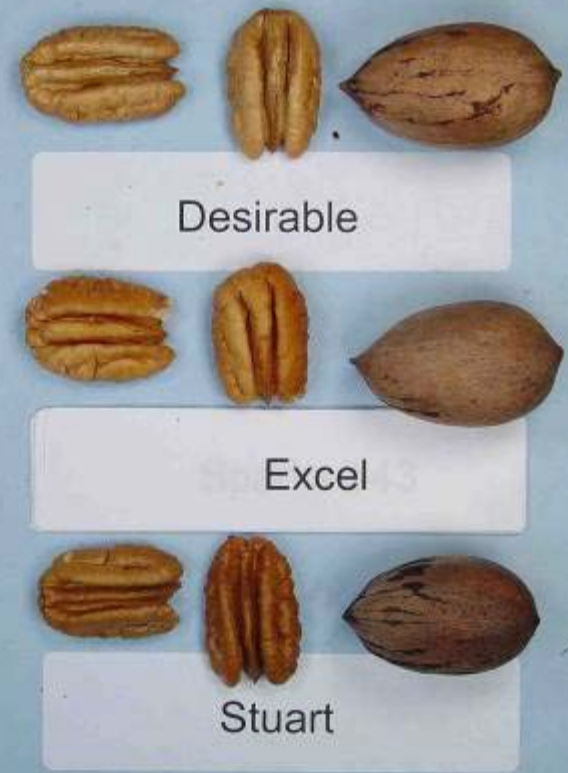
- Advantages
 - Precocious and consistently productive.
 - Good % kernel and shell out.
 - Strong tree form.
- Limitations
 - Smaller nut size than most growers want.



Excel

Quality for years 1-8.

	Yield	Nuts/lb	% Kernel
Excel	6.9	45	51
Desirable	6.8	52	53
Stuart	7.2	52	45



- Georgia seedling
- Large size
- Low % kernel (thick shell)
- Hard to shell without chipping



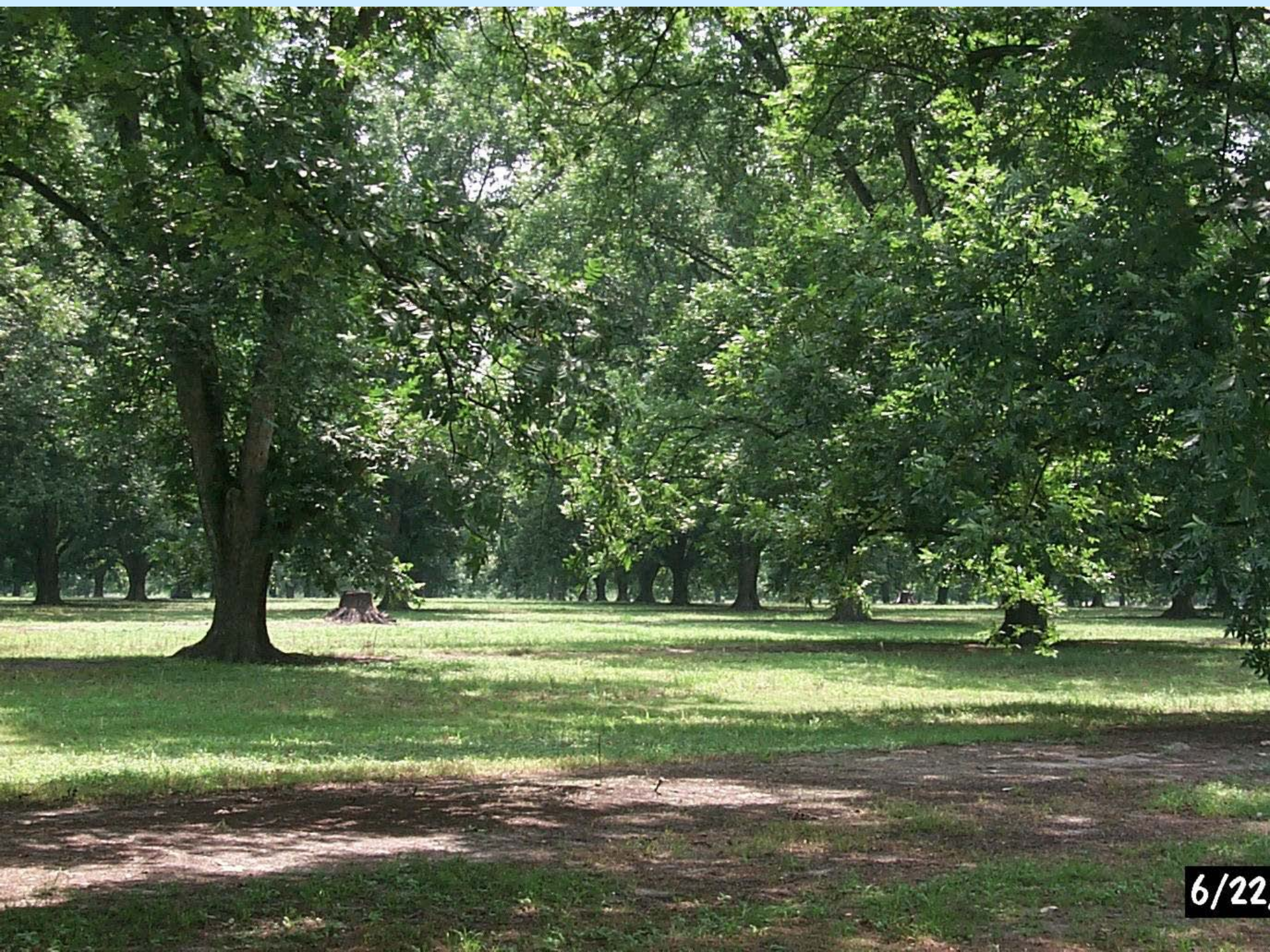
Excel

- No scab so far.
- Clean tree.
- Bright pretty kernel



Pest resistance years 2003-2006.

	Leaf Scab	Nut Scab	Black Aphid
Excel	1.0	1.0	1.3
Desirable	3.0	2.8	1.5
Stuart	1.9	2.0	2.0



6/22