

# Update on the UGA Pecan Breeding Program



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# New UGA cultivar release: 'Byrd'

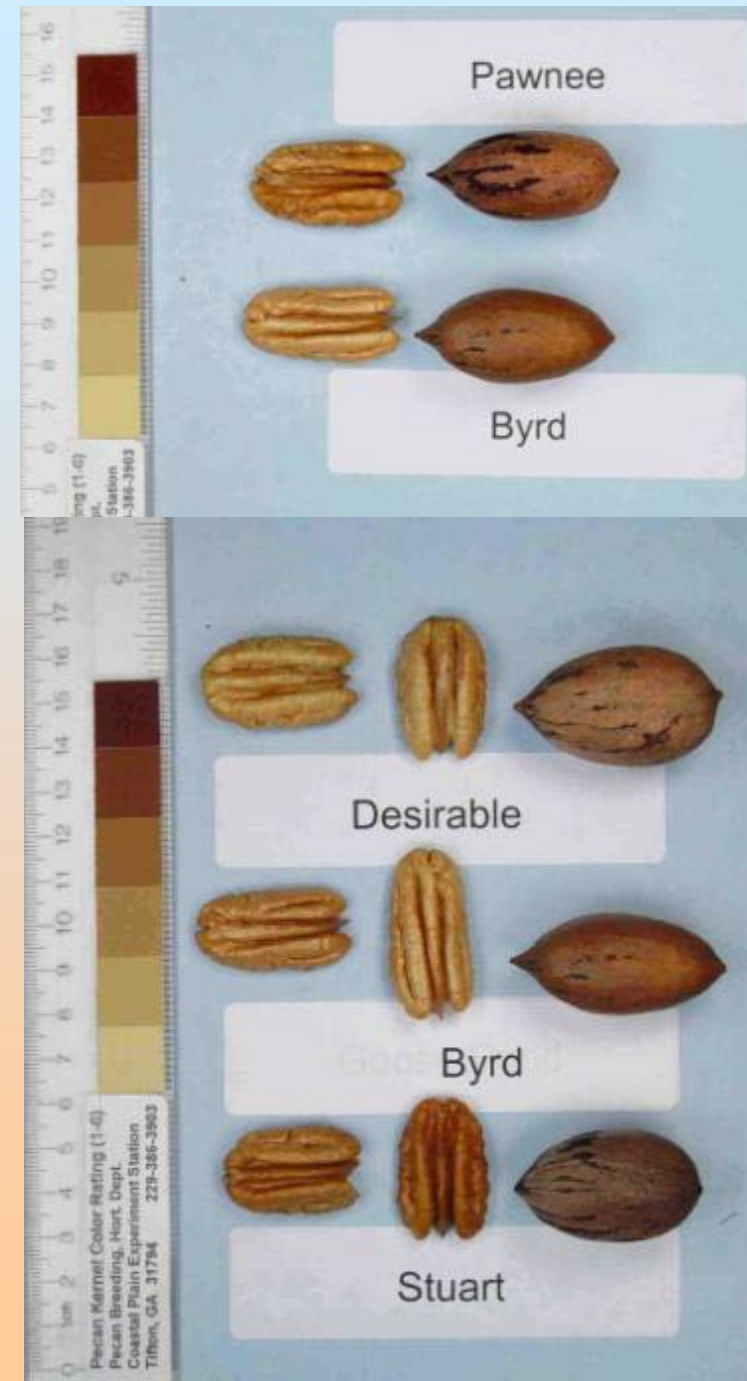
- Parentage: 'Pawnee' x 'Desirable'
- Cross made by Dr. Darrell Sparks in 1989.
- Released in 2008.
- 46 nuts / lb
- 62% kernel

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



# 'Byrd'

- Advantages
  - Large nut with high % kernel
  - Very early harvest date, similar to 'Pawnee'.
  - Better kernel quality than 'Pawnee' or 'Mandan'.
  - Good scab resistance.
- Limitations
  - Thin shell with potential for water split.
  - Will likely need fruit thinning.
  - Lack of long term trials.



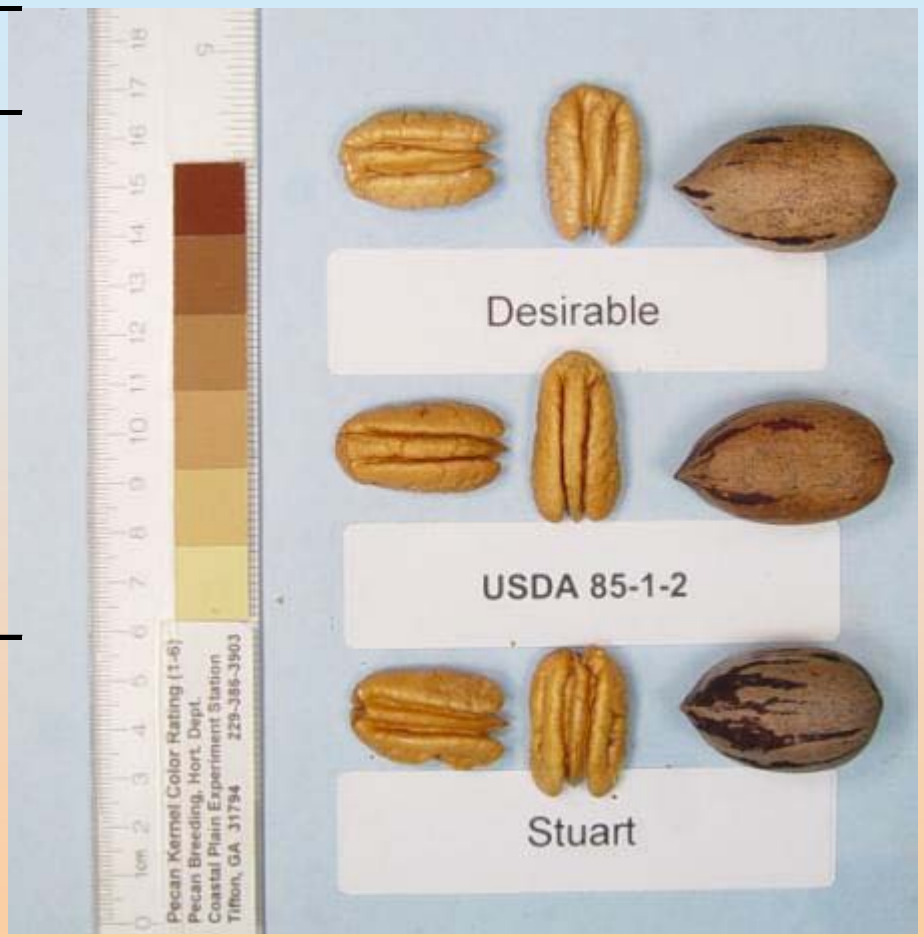
# New USDA cultivar release: 'Mandan'

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



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

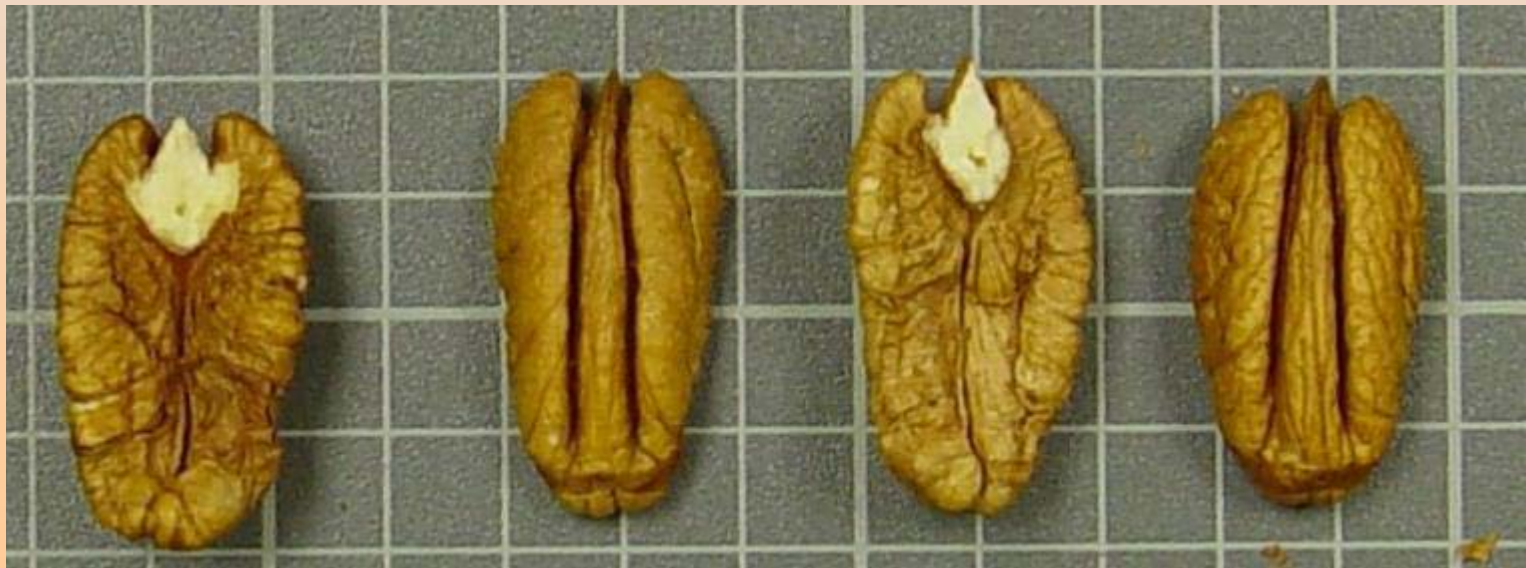
	Mandan	Desirable	Stuart
Yield (year 5)	3.4	2.7	0.6
% Kernel	57	51	49
Nuts/Lb	49	47	50
Leaf Scab	1.5	3	2
Nut Scab	1.7	3	2.3



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.



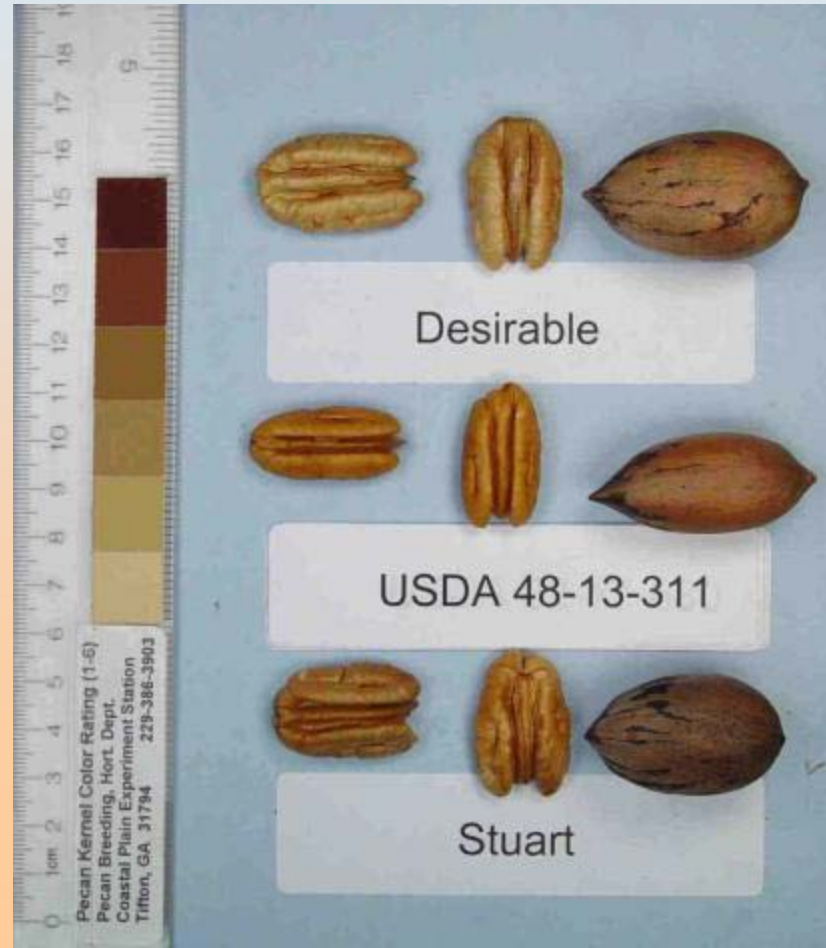
# New USDA cultivar release: 'Apalachee'

- Parentage: 'Moore' x 'Schley'
- 85 nuts/lb
- 55% kernel
- Extensively tested at Muckalee plantation in Albany.
- Flowering similar to 'Desirable'.



# 'Apalachee'

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





# Breeding Program

- 142 crosses made, 18,000 seedlings produced.
- Selections evaluated from 1999, 2000, 2001, 2002, 2003 progenies.
- 11 seedlings selected for replicated testing.



# Selections Propagated in 2009

<b>Selection</b>	<b>Female parent</b>	<b>Male parent</b>	<b>Nuts/lb</b>	<b>% Kernel</b>	<b>Harvest date</b>	<b>Scab resistance</b>
99-2-28	Elliott	Oconee	55	60	Early-Mid	Susceptible
99-3-22	Kiowa	Oconee	56	55	Early	Susceptible
99-7-55	Desirable	Elliott	67	59	Mid	Excellent
99-10-3	Oklahoma	Kiowa	53	59	Mid-Late	Excellent
99-12-20	Forkert	Pawnee	61	64	Early-Mid	Fair
00-6-34	Gloria	Caddo	63	53	Early-Mid	Excellent
00-7-75	Gloria	Barton	63	59	Mid	Excellent
00-9-14	Forkert	Caddo	52	65	Mid	Excellent
00-9-32	Forkert	Caddo	66	60	Early-Mid	Good
00-10-15	Forkert	Jackson	60	61	Early-Mid	Excellent
03-6-32	Sioux	Desirable	46	60	Early	Good

