

TIFTON PECAN TRIAL UPDATE



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THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL &
ENVIRONMENTAL SCIENCES



Byrd

Nut Quality

- Large nut with a thin shell.
- About 10 days after 'Pawnee' harvest.
- Large clusters at an early age.

Average nut quality of test trees, 2006-2012, Tifton Ga.

Cultivar	Nuts / pound	% Kernel	Harvest
Byrd	47	59	Sept. 21
Desirable	40	50	Oct. 10
Pawnee	45	56	Sept. 10



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Byrd

Tree Productivity

- Extremely precocious and productive.
- Will REQUIRE crop thinning.



Yield (pounds / tree) of 'Byrd' each year, 2006-2012, Tifton, Ga.

Cultivar	1	2	3	4	5	6	7	Avg.
Byrd	0	0	0	0.2	9	14	30	7.5
Desirable	0	0	0	0	1	4	16	2.9
Pawnee	0	0	0	0	0	8	16	3.3





‘Byrd’ **MUST** be crop thinned!





Byrd

Adaptability

- Will scab and needs regular sprays.
- Upright tree form.
- Type I (protandrous) pollination.

Pest damage from a sprayed Tifton trial, 2006-2012

Cultivar	Leaf scab 1= none 4=worst	Nut scab 1=none 5=worst	Black aphid 1=none 4=worst
Byrd	1.0 (1.0)*	2.0 (2.4)	1.3 (2.4)
Desirable	2.1 (4.0)	3.4 (4.8)	1.4 (2.7)
Pawnee	1.0 (1.0)	1.5 (2.0)	1.6 (2.0)

*Avg. (worst)

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Byrd

Of Note:

I have examined a large number of fruiting trees at NILO Plantation in Albany. Under a very good spray program I did not see scab.

An unsprayed orchard nearby showed severe scab on unsprayed Byrd trees. Unsprayed Byrd trees in Tifton had significant scab.

It appears that Byrd will need scab control, but right now scab is easily controlled with fungicides. A history of 'Pawnee' in the orchard may make scab more likely.





Pawnee vs. Byrd

Of Note:

- ‘Pawnee’ is at least a week earlier, but ‘Byrd’ opens more evenly.
- ‘Byrd’ has a higher percent kernel due to a thinner shell.
- ‘Byrd’ is likely more precocious and productive than ‘Pawnee’, but requires more crop thinning.
- ‘Byrd’ has marginally better kernel color, but can show some of the same veining as ‘Pawnee’.



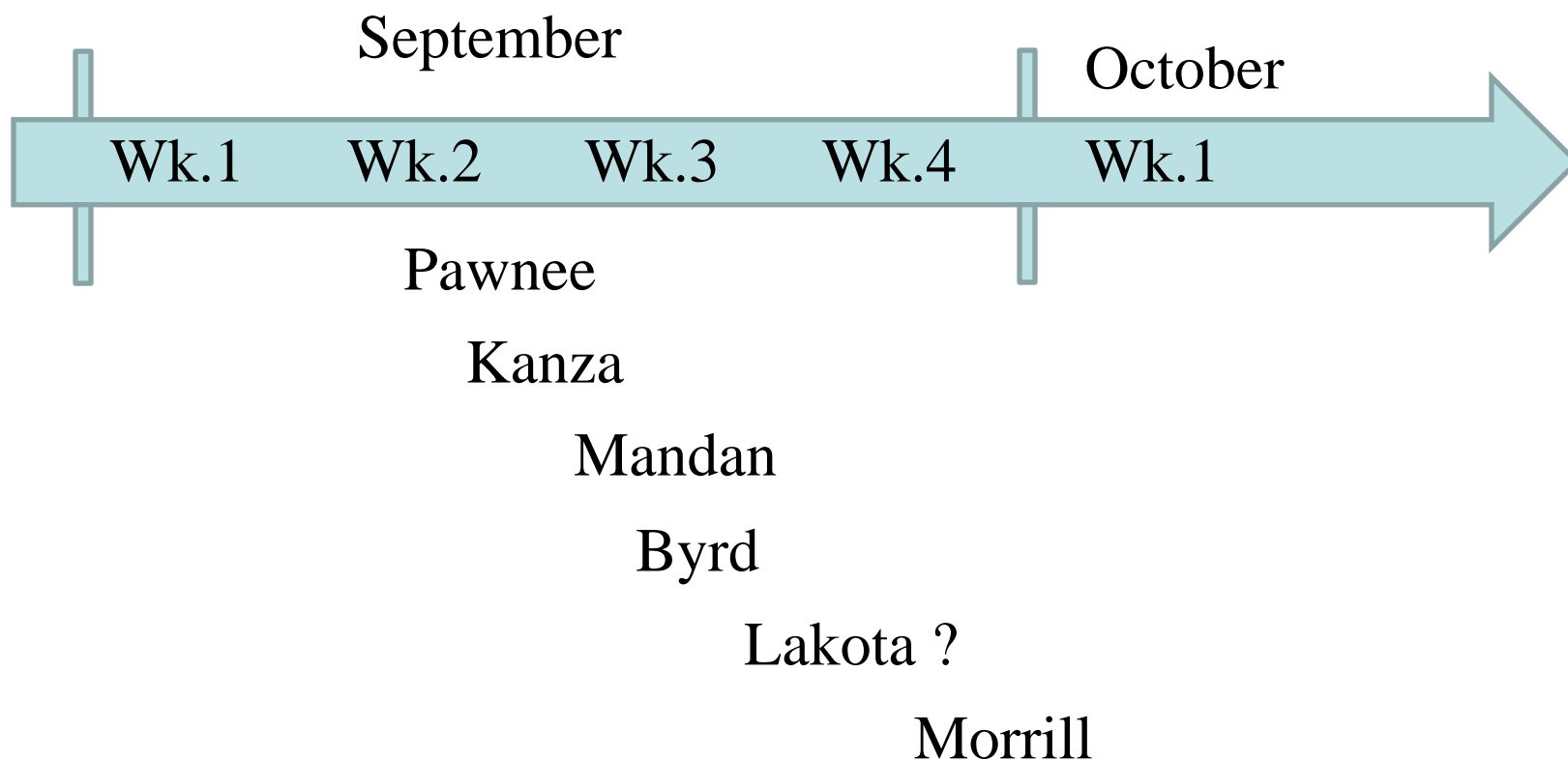


Byrd





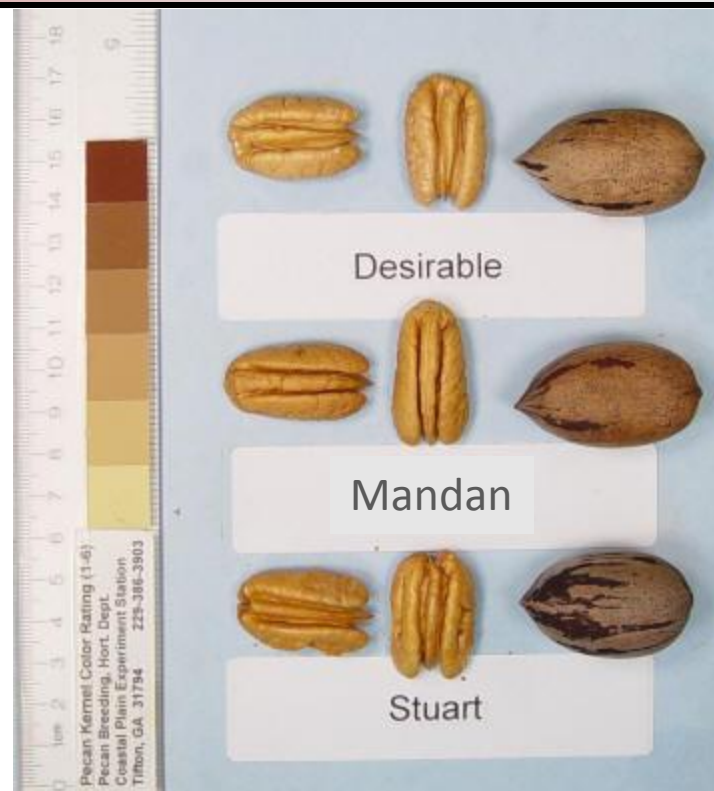
Early Harvest Cultivars





Mandan

- Released by USDA in 2009 (BW-1 x Osage).
- Harvest 1 week after 'Pawnee', Mid-Sept.
- Questionable kernel quality some years.
- Limited testing in Southeast.
- Will scab, questionable how much.





Mandan

Probably more scab resistant than 'Pawnee' or 'Byrd'.

Later than 'Pawnee', slightly earlier than 'Byrd'.

Kernel quality not as nice as either 'Byrd' or 'Pawnee'.



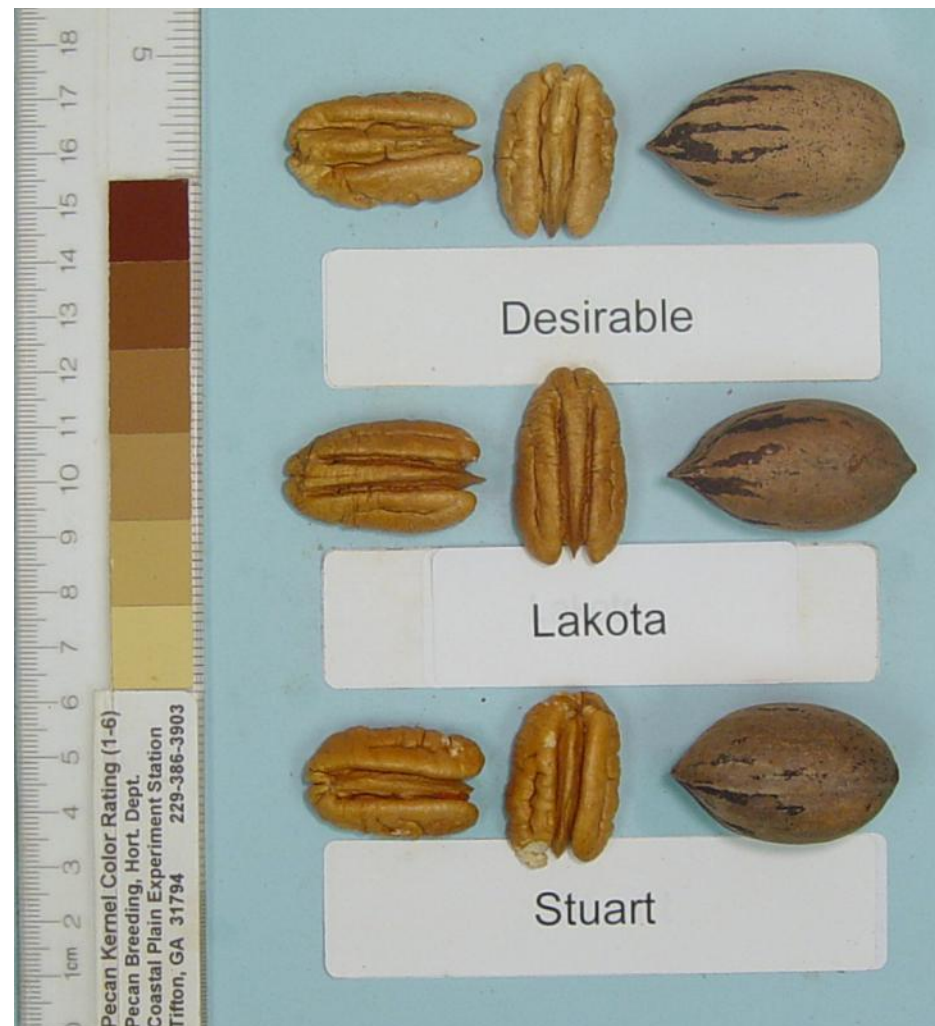
Preliminary data from Tifton trials.

Cultivar	Nuts / pound	% Kernel	Harvest
Mandan	49	57	Sept. 18
Byrd	47	59	Sept. 21
Pawnee	45	56	Sept. 10



Lakota

- 2007 USDA release. (Mahan x Major)
- Good scab resistance so far.
- Harvest end of Sept.
- Medium sized nut?
- Some variability in nut size.
- 54 nuts/lb. 60% kernel
- Bred for northern regions.
- Little testing in this region.
- Some reports of low quality.
- Good tree vigor.
- Type II (protogynous)





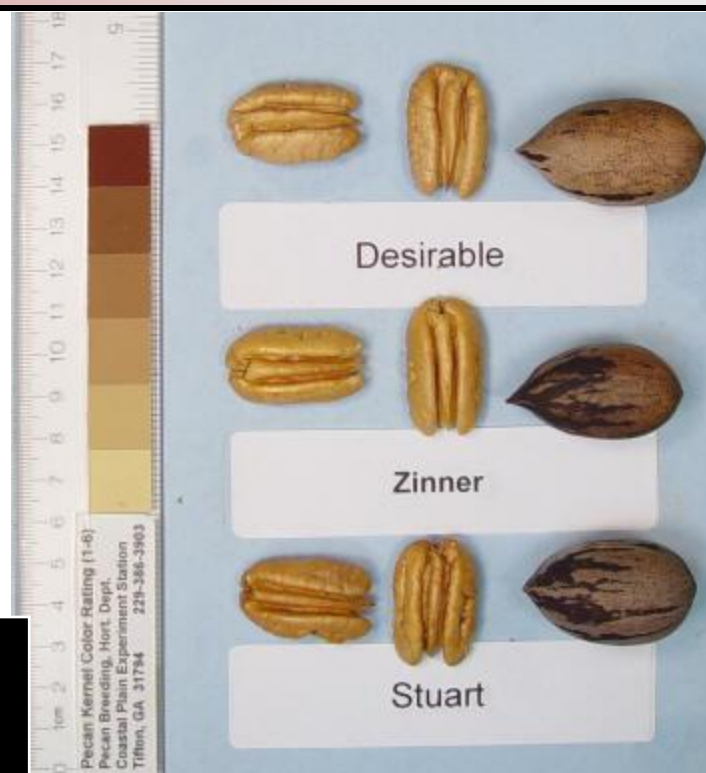
Zinner

Nut Quality

- Size similar to 'Stuart'.
- Excellent kernel quality.
- Midseason harvest date.

Average nut quality of test trees, 2006-2012, Tifton Ga.

Cultivar	Nuts / pound	% Kernel	Harvest
Zinner	48	56	Oct. 12
Desirable	43	52	Oct. 14
Stuart	47	45	Oct. 20





Zinner

Tree Productivity

Productivity very similar to ‘Desirable’ and ‘Stuart’. Less need of summer fruit thinning than many new cultivars.



Yield (pounds / tree) of ‘Zinner’ each year, 2002-2012, from planting at Tifton, GA.

Cultivar	4	5	6	7	8	9	10	11	Avg.
Zinner	0.1	1	7	20	22	55	53	52	19
Desirable	0.5	3	11	23	24	44	53	45	19
Stuart	0	1	7	20	30	54	48	58	20





Zinner

Adaptability

- Will scab, but less damage than ‘Desirable’, similar to ‘Stuart’.
- Black aphid damage similar to ‘Stuart’.
- Upright tree form.
- Type II (protogynous) pollination.

Pest damage from a sprayed Tifton trial, 2002-2012

Cultivar	Leaf scab 1= none 4=worst	Nut scab 1=none 5=worst	Black aphid 1=none 4=worst
Zinner	1.4 (3.2)*	1.1 (2.0)	2.2 (3.7)
Desirable	2.0 (4.0)	2.6 (4.8)	1.7 (2.7)
Stuart	1.4 (2.8)	1.1 (3.5)	2.2 (3.8)

*Avg. (worst)



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Zinner

Of Note:

Has shown a high number of latent infections by anthracnose (similar to 'Desirable'). I have not observed problems with anthracnose in the 12 years we have been testing 'Zinner'.





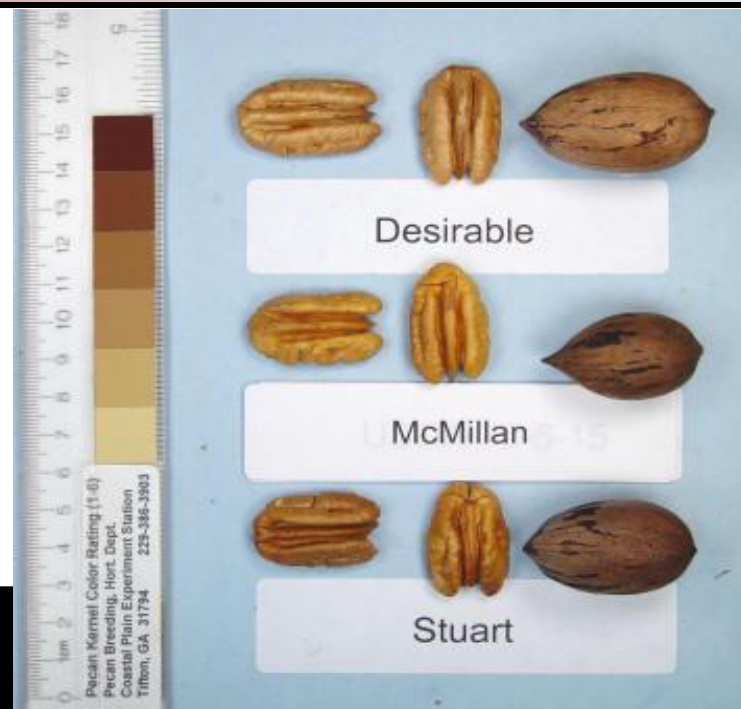
McMillan

Nut Quality

- 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.

Average nut quality of test trees, 2006-2012, Tifton Ga.

Cultivar	Nuts / pound	% Kernel	Harvest
McMillan	51	50	Oct. 12
Desirable	43	52	Oct. 14
Stuart	47	45	Oct. 20





'McMillan'

48 nuts / lb.

49% kernel



'Stuart'

44 nuts / lb.

43% kernel



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



McMillan

Tree Productivity

- Precocious and productive.
- Beginning to alternate.
- Would likely benefit from crop thinning.

Yield (pounds / tree) of 'McMillan' each year, 2002-2012, from planting at Tifton, GA.

Cultivar	4	5	6	7	8	9	10	11	Avg.
McMillan	0.8	2.9	17.7	24	63	35	90	32	24
Desirable	0.5	3	11	23	24	44	53	45	19
Stuart	0	1	7	20	30	54	48	58	20





McMillan

Adaptability

- No scab in our sprayed orchard.
- Will scab in high pressure situations, but should be controlled easily.
- Fairly wide canopy.
- Type II (protogynous) pollination.



Pest damage from a sprayed Tifton trial, 2002-2012

Cultivar	Leaf scab 1= none 4=worst	Nut scab 1=none 5=worst	Black aphid 1=none 4=worst
McMillan	1.0 (1.0)*	1.0 (1.0)	1.5 (2.2)
Desirable	2.0 (4.0)	2.6 (4.8)	1.7 (2.7)
Stuart	1.4 (2.8)	1.1 (3.5)	2.2 (3.8)

*Avg. (worst)

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ALL THIS INFORMATION AND MORE IS ON OUR WEBSITE.

SEARCH FOR US UNDER "UGA PECAN BREEDING".



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Excel

Nut Quality

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

Average nut quality of test trees, 2002-2012, Tifton Ga.

Cultivar	Nuts / pound	% Kernel	Harvest
Excel	44	49	Oct. 13
Desirable	43	52	Oct. 14
Stuart	47	45	Oct. 20





Excel

Tree Productivity

- Average productivity.
- Beginning to alternate.
- Would likely benefit from crop thinning (if possible).



Yield (pounds / tree) of 'Excel' each year, 2002-2012, from planting at Tifton, GA.

Cultivar	4	5	6	7	8	9	10	11	Avg.
Excel	0.1	2.6	8.4	17	37	37	58	33	17
Desirable	0.5	3	11	23	24	44	53	45	19
Stuart	0	1	7	20	30	54	48	58	20





Excel

Adaptability

- No scab anywhere.
- Aphids not a problem.
- Weepy canopy.
- Very late budbreak.
- Type II (protogynous) pollination.

Pest damage from a sprayed Tifton trial, 2002-2012

Cultivar	Leaf scab 1= none 4=worst	Nut scab 1=none 5=worst	Black aphid 1=none 4=worst
Excel	1.0 (1.0)*	1.0 (1.0)	1.3 (2.2)
Desirable	2.0 (4.0)	2.6 (4.8)	1.7 (2.7)
Stuart	1.4 (2.8)	1.1 (3.5)	2.2 (3.8)



*Avg. (worst)



Morrill

- 2nd UGA release by Darrell Sparks
- 'Wichita' x 'Pawnee'
- Harvest early October.
- Really large, pretty nut.
- 42 nuts / lb., 65% kernel (young tree).
- Will need crop thinning.
- Will need scab control.

