

PECAN CULTIVAR TRIAL SCAB RATINGS IN A WET EAR



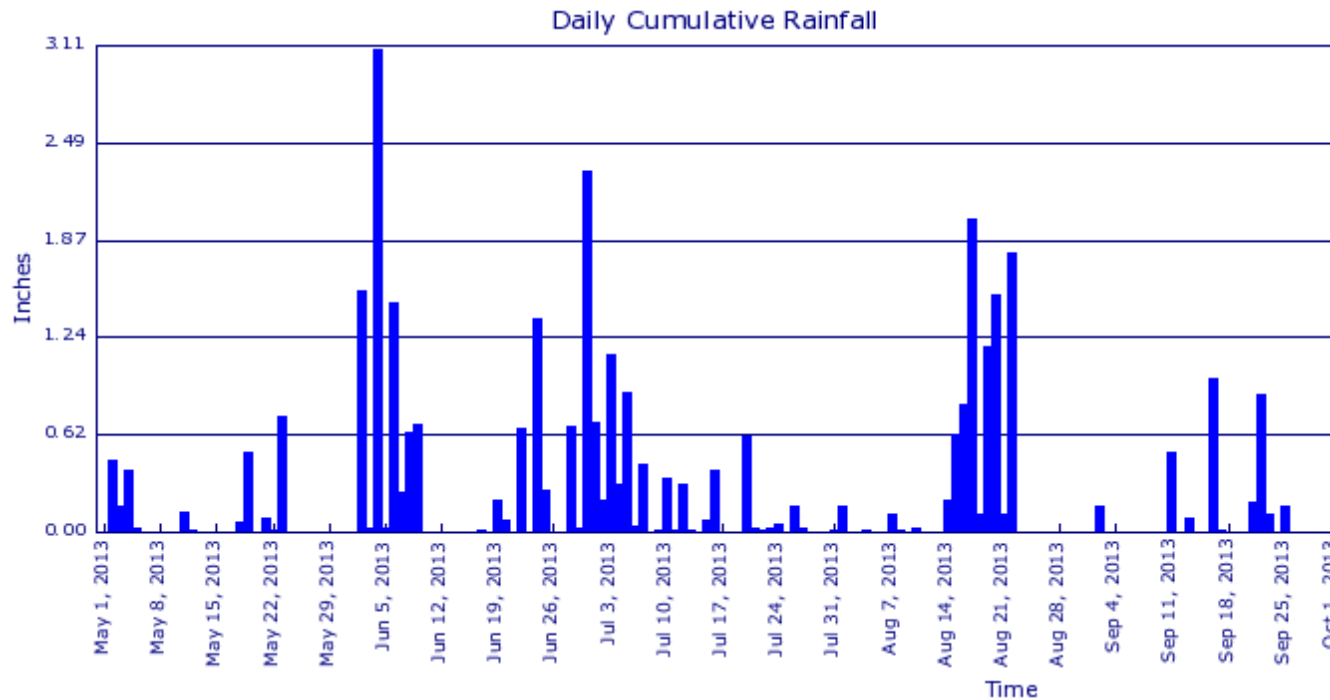
Dr. Patrick Conner
University of Georgia – Tifton Campus



THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL &
ENVIRONMENTAL SCIENCES®



Rainfall was frequent in 2013



May 1 – Oct. 1, 2013

- 73 rainy days
- 33.5 inches

May 1 – Oct. 1, 1912-2003 avg.

- 49 rainy days
- 21.7 inches





Ponder Farm (Tift Co.) Variety Test Spray Schedule

- 1) 4/23 – Stratego 10 oz./acre
- 2) 5/7 – Tebuconazole 6oz. + SuperTin 6oz./acre
- 3) 5/22 – Absolute 5 oz./acre
- 4) 6/4 – Absolute 5 oz./acre
- 5) 6/14 – Elast 25 oz. + SuperTin 6 oz./acre
- 6) 6/27 – Elast 25 oz. + SuperTin 6 oz./acre
- 7) 7/8 – Elast 25 oz. + SuperTin 6 oz./acre
- 8) 7/18 – Elast 25 oz. + SuperTin 6 oz./acre

- 9) 9/11 – Elast 25 oz. + SuperTin 6 oz./acre





Nut Scab Rating Scale

- 1) No scab, clean
- 2) A few stray spots
- 3) Obvious scab, 1-10% shuck coverage
- 4) 11-50% shuck coverage
- 5) 51-100% shuck coverage, nut drop.



*Rated Maximum observed and average for each tree.





Standard Cultivars

Cultivar	Avg. scab 2013 1=Best 5=Worst	Max. scab 2013 1=Best 5=Worst
Desirable	4.0	5.0
Stuart	1.4	3.2
Pawnee	1.0	3.0
Sumner	1.0	1.3

Rating the worst scab on the tree gives a more appropriate rating of the resistance level.



Older Large Trees

Cultivar	Max. nut scab 2013 1=Best 5=Worst	Overall avg. 2005- 2013 1=Best 5=Worst
Desirable	5.0 a*	2.9 a
Stuart	3.2 b	1.5 b
Zinner	3.0 b	1.3 b
Cherryle	2.0 c	1.2 bc
Excel	1.0 d	1.0 c
McMillan	1.0 d	1.0 c

*Means with a different letter significant at $P=0.05$.



Younger Large Trees

Cultivar	Max. scab 2013 1=Best 5=Worst	Overall avg. 2009-2013 1=Best 5=Worst
Desirable	5.0 a*	3.8 a
Giftpack	3.7 b	2.1 b
Pawnee	3.0 bc	1.9 b
Byrd	2.5 c	2.2 b
Sumner	1.3 d	1.0 c
Amling	1.0 d	1.0 c
Gafford	1.0 d	1.0 c
Headquarters	1.0 d	1.0 c

*Means with a different letter significant at $P=0.05$.



Young Small Trees – Some sprays missed.

Cultivar	Max. nut scab 2013 1=Best 5=Worst	Leaf scab 2012-2013 1=Best 4=Worst
Morrill	2.5	4.0 a
Mandan	3.8	3.8 a
Byrd	3.3	3.2 b*
Pawnee	4.0	3.2 b
Treadwell	2.0	2.8 b
Lakota	1.6?	1.0 c

*Means with a different letter significant at $P=0.05$.

These were small trees, some trees had a crop and some didn't.



Unsprayed Blocks

Cultivar	Avg. nut scab 2013 1=Best 5=Worst	Max. nut scab 2013 1=Best 5=Worst	Max. leaf scab 2013 1=Best 4=Worst
Desirable	5	5	4
Pawnee	5	5	1
Stuart	5	5	4
Zinner	5	5	4
Cape Fear	4	5	3
Sumner	3	4	3
Elliott	1	1	1
Gafford	1	1	1
Headquarters	1	1	1
Excel	1	1	1
McMillan	1	1	1

Only 1-2 trees
for most
cultivars, this is
observational
data.



Conclusions:

- ‘Desirable’ is at the limit of what we can grow in a wet year. I would not plant more ‘Desirable’ in south Georgia.

- Substitutions (Large nut, midseason, high quality):

Currently available: ‘Oconee’, ‘Forkert’, ‘Kiowa’

Soon to be available: ‘Zinner’, ‘Huffman’, ‘Ellis’



Conclusions:

- Early harvest cultivars:
 - ‘Byrd’, ‘Pawnee’, ‘Mandan’, ‘Morrill’, ‘Treadwell’ all fairly susceptible.
 - Only ‘Lakota’ has good resistance.



Conclusions:

- ‘Zinner’ is susceptible and will need full season fungicides, resistance looks similar to ‘Stuart’.



Conclusions:

- ‘Zinner’ is susceptible and will need full season fungicides, resistance looks similar to ‘Stuart’.
- Resistance of ‘Sumner’ and ‘Cape Fear’ is fading, these are no longer good low-input cultivars.



Conclusions:

- ‘Zinner’ is susceptible and will need full season fungicides, resistance looks similar to ‘Stuart’.
- Resistance of ‘Sumner’ and ‘Cape Fear’ is fading, these are no longer good low-input cultivars.
- ‘Amling’, ‘Elliott’, ‘Excel’, ‘Gafford’, ‘Headquarters’, ‘McMillan’, ‘Lakota’ still look good.

Research Was Funded in Part by the
Georgia Agricultural Commodity Commission for Pecan – Thank You.



Dr. Patrick Conner
University of Georgia – Tifton Campus



THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL &
ENVIRONMENTAL SCIENCES