On-Farm Testing Results in North Carolina from Peanut Trials in 2021-2023

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Wide turns only!
Check bolts on tongue before transport!
Keep eye on hydraulic lines and basket!
Make sure weigh cells are protected during transport in the field and on the road!
Make sure stands are all the way up and the basket all the way down before unhooking from tractor!
NORTH CAROLINA PEANUTS
NUTRITIOUS & FLAVORFUL
MENU
RICE LAKE

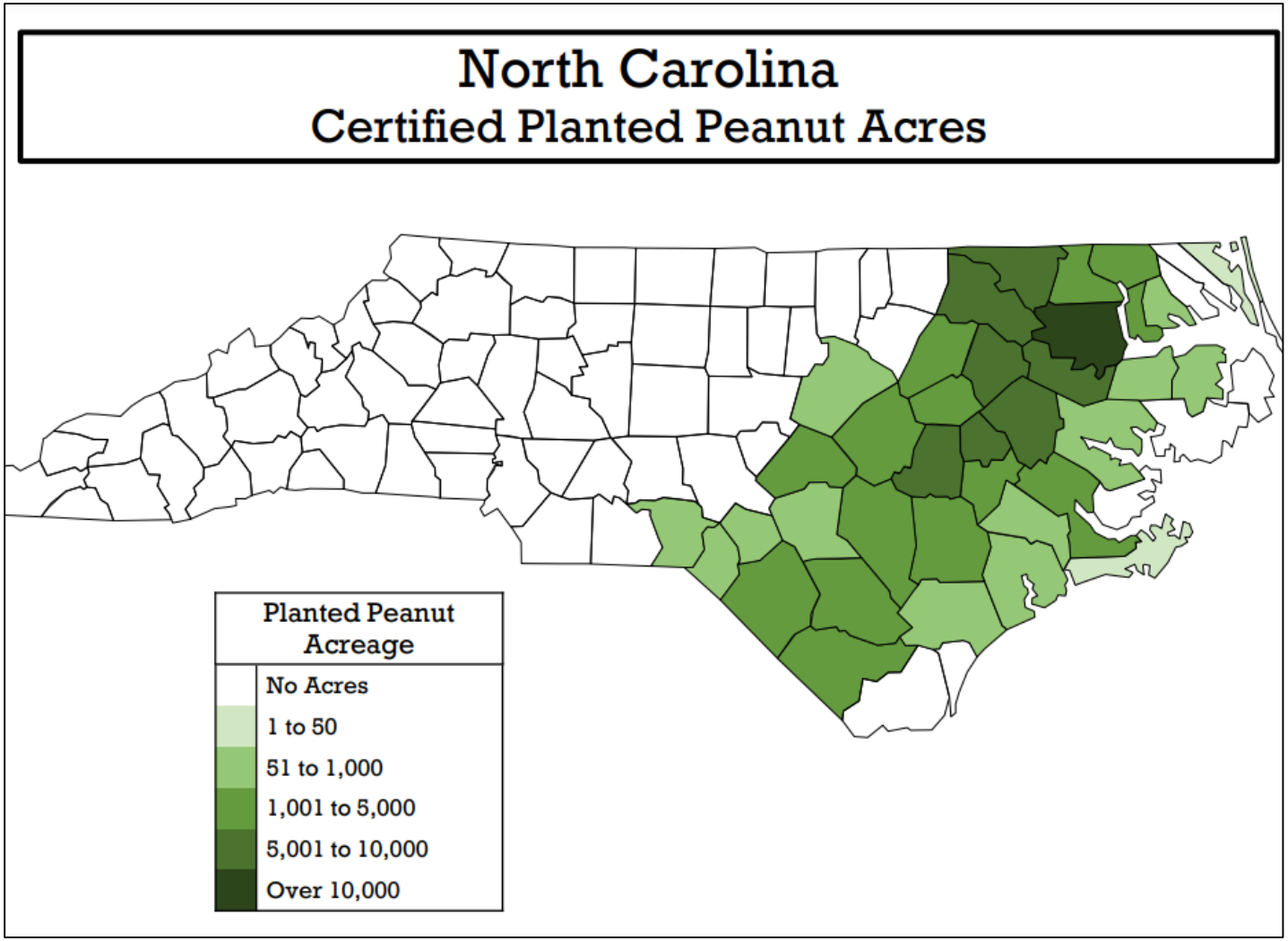

Image provided by Ashley Collins, NCPGA

Virginia Market Types

Walton | Sullivan | Emery | Bailey II

2021

10 on-farm trials

2022

15 on-farm and research station trials

2023

31 trials (on-farm, CHROME, NE AG EXPO, Peanut Field Days at Lewiston and Columbus County)

Results for trials (2021-2023) are presented in Chapter 14 of *2024 Peanut Information*

Table 2-2. Percentage of Acres of Varieties Certified in North Carolina, 2015 – 2023

Variety	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bailey	64.7	47.4	40.5	36.6	32.1	13.0	0	0	0
Gregory	2.1	0	0.4	2.7	0	0	0	0	0
Sugg	9.7	1.9	0.1	0	0	0	0	0	0
Sullivan	4.8	28.7	40.2	46.1	49.9	28.9	23.8	19.8	11.8
Wynne	5.3	13.5	7.5	5.2	3.6	3.9	2.9	3.4	0
Emery	0	0	0.1	0.2	2.4	5.9	6.5	12.2	16.5
Bailey II	0	0	0	0.3	3.8	43.6	57.1	57.3	70.1
Georgia 09B	9.9	6.2	10.5	5.0	1.1	0	0	0	0
TUFRunner 511					2.9	0.1	3.1	3.8	0
TUFRunner 297					4.6	3.6	3.5	0	0
FLORUN 331							2.0	0	0
Walton							0.3	3.1	1.4
Georgia-Valencia/HO								0.4	0.1

Peanut Variety Trials

Pod maturity of Bailey II, Emery, and Sullivan is about the same, allowing a single digging date of yield comparison

2021 RESULTS

Table 14-1. Peanut Yield from Variety Trials Conducted in North Carolina with Farmers and NC State Extension Agents in 2021 [a]

Variety	Counties, NC State Extension Agents, and Farms				Average
	Bertie Billy Barrow David Leggett	Chowan Matthew Leary Beech Fork Farms	Columbus Lydia Miles Ellis Jordan	Martin Lance Grimes Ben Cowin	
Bailey II	6006 a	5335 a	5967 a	6567 a	5969 a
Emery	6112 a	4991 a	6026 a	6566 a	5924 a
Sullivan	5973 a	4990 a	5924 a	6646 a	5883 a
Walton	6105 a				
Wynne	6118 a				

[a] Means followed by the same letter in a type of trial and county are not statistically different.

2022 RESULTS

Table 14-5. Peanut Yield from Variety Trials Conducted in North Carolina with Farmers and NC State Extension Agents and Research Stations in 2022 [a]

Variety	Counties, NC State Extension Agents, and Farms and Research Station Personnel							Average
	Bertie Brian Stevens Ivy Lanier Billy Barrow	Chowan Matthew Leary Beech Fork Farms	Columbus Lloyd Ransom	Martin Lance Grimes John David Williams	Edgecombe Michael Brake Creig Deal	Wayne Daryl Anderson Bryant Ballance	Northampton Craig Ellison Jacob Burgess	
Bailey II	4476 a	6188 a	4446 a	5910 a	4877 a	4344 a	7240 a	5355 a
Emery	4169 a	5874 b	4314 a	5733 a	5150 a	4655 a	7494 a	5343 a
Sullivan	4255 a	6320 a	4540 a	5650 a	5177 a	4403 a	7329 a	5382 a
Walton	4378 a		4463 a		4970 a	4423 a	7525 a	
Tif-Jumbo	4022 a							

[a] Means followed by the same letter in a type of trial and county are not statistically different.

2023 RESULTS

Table 14-10. Peanut Yield in Pounds per Acre from Variety Trials Conducted in North Carolina with Farmers and NC State Extension Agents and on Research Stations in 2023 [a]

	Counties, NC State Extension Agents, and Farms and Research Station Personnel												
Variety	**Bertie County Brian Stevens Ivy Lanier Field B3**	**Bertie County Brian Stevens Ivy Lanier Field F2**	**Bertie County Billy Barrow Charles Carter Hardin**	**Bertie County Billy Barrow Brad Brown**	**Bladen County Matthew Strickland Chris White** [b]	**Columbus County Lloyd Ransom**	**Columbus County Lydia Miles Ellis Jordan**	**Edge-combe County Michael Brake Creig Deal**	**Hertford County Dylan Lilley Beasley Farms**	**Martin County Lance Grimes Geoffrey Corey and Sons, Inc.**	**North-ampton County Craig Ellison Jacob Burgess**	**Wayne County Daryl Anderson Bryant Ballance**	**Average**
Bailey II	3921 a	2941 a	5622 a	5104 a	5212	4846 a	NA [c]	4873 a	6019 b	4783 ab	6445 a	5088 b	4987 a
Emery	3774 a	2793 a	5672 a	5057 a	4124	4773 a	NA	4685 a	6407 a	4663 b	6407 a	5551 a	4900 a
Sullivan	3656 a	2801 a	6047 a	5200 a	4316	4501 a	NA	5213 a	6078 b	4859 a	6361 a	5445 ab	4953 a
Walton	3777 a	2620 a	5454 a								6255 a	5285 ab	
Tif-Jumbo	3252 b	2679 a											
P>F	0.0050	0.1187	0.3120	0.7088		0.7292		0.3844	0.0312	0.0683	0.6167	0.1359	0.7328
Soil Moisture													
June	Poor	Poor	Irrigated	Good	Poor	Poor	Moist	Irrigated	Irrigated	Poor	Poor	Poor	
July	Poor	Poor	Irrigated	Good	Moist	Moist	Moist	Irrigated	Irrigated	Good	Poor	Good	
August	Poor	Poor	Irrigated	Good	Moist	Moist	Moist	Irrigated	Irrigated	Poor	Good	Good	
September	Moist	Moist	Irrigated	Good	Moist	Moist	Moist	Irrigated	Irrigated	Good	Good	Good	

[a] Means within a column followed by the same letter are not statistically different.

[b] Treatments were not replicated at harvest.

[c] Data were not available due to late harvest and printing deadlines for the production guide.

Managing Vine Growth with Prohexadione Calcium
Importance of Research in Large Plots

Table 14-11. Peanut Yield in Pounds per Acre from Apogee Trials Conducted in North Carolina with Farmers and NC State Extension Agents and at the Upper Coastal Plain Research Station in 2023 [a]

	Counties, NC State Extension Agents, and Farms		
Apogee	**Edgecombe County Michael Brake Creig Deal**	**Columbus County Lydia Miles Ellis Jordan**	**Duplin and Sampson Counties Della King and Zachary Parker Jart and Pelmon Hudson**
No sprays	4499 b	NA[b]	4590 a
One spray	5042 a	NA	4064 a
Two sprays	5185 a	NA	4081 a
P>F	0.0111	NA	0.1070
Soil Moisture			
June	Irrigated	Good	Poor
July	Irrigated	Good	Poor
August	Irrigated	Good	Poor
September	Irrigated	Good	Good

[a] Means within a column followed by the same letter are not statistically different.

[b] Data were not available due to late harvest and printing deadlines for the production guide.

These peanuts needed applied nitrogen earlier in the year.

What about ammonium sulfate and potassium when deficiency symptoms are not obvious?

Some growers are asking this question.

Table 14-15. Peanut Yield in Pounds per Acre with Fertilizer Applied Early to Mid-Season with Farmers and NC State Peanut Extension Agents in 2023 [a]

Treatment	Counties, NC State Extension Agents, and Farms	
	Johnston County Tim Britton Blake Adams	**Martin Martin Lance Grimes Geoffrey Corey and Son, Inc.**
No Fertilizer	5193 a	4885 a
100 lb/acre (21-0-0-24) 100 lb/acre (Kmag)	5400 a	
100 lb/acre (21-0-0-24)	5345 a	
100 lb/acre (Kmag)	5300 a	
Ammonium sulfate at 130 lb/acre		5000 a
P>F	0.1745	0.6368
Soil Moisture		
June	Good	Poor
July	Good	Good
August	Good	Poor
September	Good	Good

[a] Means within a column followed by the same letter are not statistically different.

Southern corn rootworm control without chlorpyrifos?

Table 14-19. Peanut Injury Caused by Southern Corn Rootworm and Peanut Yield in Pounds per Acre With and Without Three Sequential Sprays of the Insecticide Steward Applied Bi-Weekly from Late June through July with Farmers and NC State Peanut Extension Agents in 2023 [a]

	Counties, NC State Extension Agents, and Farms						
	Gates County Paul Smith Lewis Farm Partnership[b]	Bertie County Billy Barrow Charles Carter Hardin[b]	Northampton County Craig Ellison Jeffery Coggins		Bladen County Matthew Strickland Dan and Wilbur Ward		Bladen County Matthew Strickland Wade Byrd[b]
Treatment	**Pod Scarring (%)**	**Pod Scarring (%)**	**Pod Scarring (%)**	**Yield (lb/acre)**	**Pod Scarring (%)**	**Yield (lb/acre)**	**Pod Scarring (%)**
No Steward	14 a	7 a	1 a	5077 a	12 a	5212 a	1 a
Three Steward Sprays Applied Bi-Weekly from Late June Through July	3 b	6 a	0 a	5368 a	7 b	5465 a	1 a
P>F	0.1020	0.8830	0.3910	0.3109	0.0654	0.7653	0.4226
Risk of damage[c]	High	High	Moderate		High		High
Soil Moisture							
June	Irrigated	Irrigated	Poor		Good		Irrigated
July	Irrigated	Irrigated	Poor		Good		Irrigated
August	Irrigated	Irrigated	Good		Good		Irrigated
September	Irrigated	Irrigated	Good		Good		Irrigated

[a] Means within a column followed by the same letter are not statistically different.
[b] Yields not recorded.
[c] Risk based on Southern Corn Rootworm Risk Index found in Chapter 4 "Insect and Mite Management."

*See Brandenburg poster for additional trials

Multiple insecticide sprays and spider mites?

Yield from Small Plots Versus Large Plots

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