

2024 Soybean Variety Trial Report

Agricultural Research Consultants



The soybean variety trials presented in this report were conducted at four locations in eastern North Carolina. Two Trials were conducted. One as a Maturity Group 3.7 to 4.4, and the second as a Maturity Group 4.6 to 5.1. The data is presented as a comparison summary, and as each location.

We thank the seed companies who sponsored this trial, and for their interest and support.

2024 Soybean MG 3.7-4.4 Summary Dry Yield 13.0% (bu/A)

Variety	Maturity Group	IMPACT Agronomics	Fowler Crop Consulting	Tidewater Agronomics	Protech
AG41XF2	4.3	56.3	52	73.6	35.6
P38A28E	3.8	68.3	46.9	79.5	35.3
P42A96X	4.2	57.2	42.5	77.3	37.2
37EG23	3.7	58.2	37.6	54.4	40.5
41EG20	4.1	60.5	45.8	76.2	38.2
43EG29	4.3	56.2	44.2	69.5	39.8
Grand Mean		59.47	44.82	71.76	37.77
Standard Deviation		5.27	11.05	3.75	8.36
CV		8.86	24.66	5.22	22.14
Top 20% by location.					

2024 Soybean MG 4.6-5.2 Summary Dry Yield 13.0% (bu/A)

Variety	Maturity Group	IMPACT Agronomics	Fowler Crop Consulting	Tidewater Agronomics	Protech
AG49XF3	4.9	55.8	56.6	74	53.8
DM46F54S	4.6	58.3	55	71.2	54.3
DM48F53	4.8	55.8	45.3	73.3	52.5
46EG92	4.6	56.9	42.7	79.3	55.3
49EE21	4.9	52.3	46.4	74.6	49.3
51EG23	5.1	59.5	50.8	67	49.6
52EG09	5.2	58.8	51	69.1	51.2
P46A90LX	4.6	56.8	54.3	80.1	53.7
P48A14E	4.8	58.2	52.8	85.5	52.5
Grand Mean		56.95	50.54	74.9	52.46
Standard Deviation		3.45	5.2	5.09	4.26
CV		6.06	10.29	6.8	8.13
Top 15% by location.					

Pantego Overview (Hyde Loam)

This trial was planted at IMPACT Agronomics' research farm in Pantego, NC. The site was at the Pike Road location having a Hyde loam soil type. The plant date for the 3.7-4.4 trial was April 24, 2024 and the 4.6-5.2 trial was planted on June 26, 2024. Rainfall totals during the season were 3.24 inches in May, 2.88 inches in June (with only 0.4 inches falling before June 24), 7.26 inches in July, and 7.06 inches in August. The 3.7-4.4 trial was harvested on September 25, 2024 and the 4.6-5.2 trial was harvested on October 22, 2024.

IMPACT Agronomics Soybean MG 3.7-4.4 Variety Trial Pantego, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG41XF2	4.3	18.6	53.5	56.3	b
P38A28E	3.8	22.6	53.8	68.3	a
P42A96X	4.2	19	54.1	57.2	b
37EG23	3.7	19.2	53.4	58.2	b
41EG20	4.1	20.1	53.7	60.5	b
43EG29	4.3	18.7	53.7	56.2	b
LSD P=.10		1.07	0.36	7.8	
Standard Deviation		0.72	0.24	5.27	
CV		5.48	0.46	8.86	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
Planting Date: April 24, 2024 Seeding Rate: 110,000 Row Spacing: 36" Soil Type: Hyde Loam					

IMPACT Agronomics Soybean MG 4.6-5.2 Variety Trial Pantego, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG49XF3	4.9	14.5	53.2	55.8	
DM46F54S	4.6	15.8	53	58.3	
DM48F53	4.8	13	53.3	55.8	
46EG92	4.6	13.1	53.9	56.9	
49EE21	4.9	15	51.5	52.3	
51EG23	5.1	17.8	51.1	59.5	
52EG09	5.2	16.3	53.4	58.8	
P46A90LX	4.6	11.5	53.4	56.8	
P48A14E	4.8	14.1	53.6	58.2	
LSD P=.10		2.9-3.19	0.99	4.92	
Standard Deviation		1.74	0.69	3.45	
CV		7.78	1.31	6.06	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
*No statistically significant differences observed					
Planting Date: June 26, 2024 Seeding Rate: 170,000 Row Spacing: 36" Soil Type: Hyde Loam					

Jackson Overview (Wickham)

The site was at the Holly Ridge location having a Wickham soil type. The plant date for both trials was June 6, 2024. Rainfall totals were: May 4.55", June .67", July 9.46", August 4.09". The soybeans were harvested on November 17, 2024.

Fowler Crop Consulting Soybean MG 3.7-4.4 Variety Trial Jackson, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG41XF2	4.3	16.6	59.3	52	a
P38A28E	3.8	17.3	58.4	46.9	a
P42A96X	4.2	17.3	58.7	42.5	a
37EG23	3.7	17	58.9	37.6	a
41EG20	4.1	17.3	58.5	45.8	a
43EG29	4.3	16.2	59.6	44.2	a
LSD P=.10		2.47	2.54	20.11	
Standard Deviation		1.36	1.4	11.05	
CV		8	2.37	24.66	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
Planting Date: June 6, 2024 Seeding Rate: 130,000 Row Spacing: 36" Soil Type: Norfolk					

Fowler Crop Consulting Soybean MG 4.6-5.2 Variety Trial Jackson, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG49XF3	4.9	16.5	59.4	56.6	a
DM46F54S	4.6	17.9	58.2	55	a
DM48F53	4.8	16.4	59.6	45.3	a
46EG92	4.6	16.4	59.4	42.7	a
49EE21	4.9	16.7	59.5	46.4	a
51EG23	5.1	16.3	59.6	50.8	a
52EG09	5.2	17.5	59.1	51	a
P46A90LX	4.6	16.4	59.6	54.3	a
P48A14E	4.8	17.2	58.6	52.8	a
LSD P=.10		1.81	1.4	9	
Standard Deviation		1.05	0.81	5.2	
CV		6.24	1.45	10.29	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
Planting Date: June 6, 2024 Seeding Rate: 130,000 Row Spacing: 36" Soil Type: Norfolk					

PROTECH Overview (Lumber Bridge)

This trial was planted at PROTECH's research farm in Lumber Bridge, NC having a Duplin soil type. The plant date was May 23. Rainfall totals were: May 2.93", June .57", July 6.83", & Aug 1.09". High temperature periods were June 21-25 – 94.5 deg, June 29-30 – 96 deg, July 4-9 – 94.8 deg. The trial was harvested on November 12, 2024.

Protech Soybean MG 3.7-4.4 Variety Trial Lumber Bridge, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG41XF2	4.3	12.2	54.5	35.6	a
P38A28E	3.8	11.9	52.9	35.3	a
P42A96X	4.2	12.6	53.7	37.2	a
37EG23	3.7	12.4	54.4	40.5	a
41EG20	4.1	11.9	53.8	38.2	a
43EG29	4.3	12.7	54.8	39.8	a
LSD P=.10		1.02	2.53	7.8	
Standard Deviation		0.56	1.39	5.27	
CV		4.54	2.57	8.86	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
Planting Date: May 23, 2024 Seeding Rate: 130,000 Row Spacing: 36" Soil Type: Duplin					

Protech Soybean MG 4.6-5.2 Variety Trial Lumber Bridge NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG49XF3	4.9	12.5	55.7	53.8	a
DM46F54S	4.6	12.3	55.3	54.3	a
DM48F53	4.8	12.9	55	52.5	a
46EG92	4.6	12.9	57.4	55.3	a
49EE21	4.9	12.6	55.4	49.3	a
51EG23	5.1	12.6	55.1	49.6	a
52EG09	5.2	12.9	56.1	51.2	a
P46A90LX	4.6	12.9	55.2	53.7	a
P48A14E	4.8	12.7	55.2	52.5	a
LSD P=.10		0.7	1.4	7.38	
Standard Deviation		0.4	0.81	4.26	
CV		3.18	1.45	8.13	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety					
Planting Date: May 23 Seeding Rate: 130,000 Row Spacing: 36" Soil Type: Duplin					

Belvidere Overview (Portsmouth Loam)

This trial was planted at Tidewater Agronomics' research farm in Belvidere, NC at the Turnpike Road location having a Portsmouth loam soil type. The plant date was May 3, 2024. Rainfall totals were: May 2.93", June .57", July 6.83", & Aug 1.09". The soybeans were harvested on October 23, 2024.

Tidewater Agronomics Soybean MG 3.7-4.4 Variety Trial Belvidere, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG41XF2	4.3	14.7	57.5	73.6	a
P38A28E	3.8	14.3	57.6	79.5	a
P42A96X	4.2	14	57.9	77.3	a
37EG23	3.7	14.5	57.6	54.4	b
41EG20	4.1	13	58.4	76.2	a
43EG29	4.3	14.2	57.7	69.5	a
LSD P=.10		1.77	0.75	6.18	
Standard Deviation		0.97	0.41	4.3	
CV		6.89	0.71	5.94	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety		Not significantly different from highest yielder			
Planting Date : May 3, 2024 Seeding Rate: 110,000 Row Spacing: 38" Soil Type: Portsmouth					

Tidewater Agronomics Soybean MG 4.6-5.2 Variety Trial Belvidere, NC

Variety	Maturity Group	% Moisture	Test Weight	Dry Yield (13%)	
AG49XF3	4.9	14.3	57.7	74	ab
DM46F54S	4.6	13.8	58.2	71.2	b
DM48F53	4.8	13.9	58.4	73.3	ab
46EG92	4.6	12.7	58.8	79.3	ab
49EE21	4.9	12.1	59.6	74.6	ab
51EG23	5.1	13.2	58.2	67	b
52EG09	5.2	14.8	57.2	69.1	b
P46A90LX	4.6	13.8	58	80.1	ab
P48A14E	4.8	12	59.6	85.5	a
LSD P=.10		2.47	0.21	4.35	
Standard Deviation		1.43	0.15	3.02	
CV		10.66	0.26	4.67	
Means followed by same letter or symbol do not significantly differ (P=.10, Student-Newman-Keuls).					
Highest yielding variety		Not significantly different from highest yielder			
Planting Date: May 3, 2024 Seeding Rate: 110,000 Row Spacing: 38" Soil Type: Portsmouth					

Seed Company Information

We would like to thank the listed seed companies that sponsored hybrids in these four trials this year. We look forward to continuing and expanding our hybrid testing next year.

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