



CLEMSON UNIVERSITY
CORN HYBRID
DEMONSTRATION TRIALS
RESULTS



COOPERATIVE EXTENSION
College of Agriculture, Forestry and Life Sciences

Corn Hybrid Demonstration Trials

Clemson University Cooperative Extension would like to thank all our farmer cooperators from the 2021 On-Farm Corn Hybrid Demonstration Trials. We thank you for your time and willingness to cooperate with Clemson in the implementation, management, and harvest of these plots on your farm.

The 2021 Cooperator List is as follows:

Joe and Joey Oswald – Allendale County – Irrigated
Josh Johnson and Bates Houck – Calhoun County – Irrigated
David Tindal – Clarendon County – Irrigated
Thomas and JD Chaplin – Darlington County – Dryland
Mark and Tim Jolly – Horry County – Dryland
Jimmie Lee Shaw and John Long – Newberry County – Dryland
Dean and Richard Hutto – Orangeburg County – Dryland

Clemson University Cooperative Extension would also like to thank all our industry sponsors and seedsman who were integral in the implementation of these trials and hybrid selection.

The 2021 Industry Participant List is as follows:

Agra-Tech Seed – David Grabow
Bayer CropScience (DeKalb) – David Trainer
Corteva Agriscience (Pioneer) – Garrett Lloyd
Nutrien Ag Solutions (Dyna-Gro) – Dick Thomas
Syngenta (NK) – Kelly Price

The Corn Hybrid Demonstration Trial Coordinator would also like to thank the Clemson University Cooperative Extension Agronomic Agents for all the help with cooperator selection, trial implementation, data collection, and harvest.

Participating Clemson Agronomists:

Joe Varn – Allendale County	William Hardee – Horry County
Charles Davis – Calhoun County	Jay Crouch – Newberry County
Hannah Mikell – Clarendon County	Jonathan Croft – Orangeburg County
Rich Byrd – Darlington County	

Summary:

To provide South Carolina corn growers with up-to-date hybrid information, the Clemson University Cooperative Extension Service conducted on-farm corn hybrid demonstrations in the 2021 growing season. This year we invited companies to participate and enter a commercially available hybrid into irrigated and non-irrigated on-farm demonstrations throughout South Carolina. The objective of the trial is to assist growers with hybrid selection, as well as, to generate non-biased, hybrid information from a production setting that can be shared throughout the region. The number of hybrid entries allowed per company was determined by market share and at the discretion of the trial coordinator. As it stands Dekalb and Pioneer were allowed three submissions each, Dyna- Gro, Northrup King, and Agra-Tech were allowed two submissions each.

Methodology:

In 2021, eight locations (four irrigated and four non-irrigated) of the trial were implemented on-farm across South Carolina. Each location served as one replication of the test for both the irrigated and non-irrigated trials with approximately 4 reps each. Companies could select and submit different hybrids depending on what hybrid they wished to include in the irrigated or non-irrigated locations.

Management of the trial was left solely to the cooperators so that management is consistent with local production practices. Harvest was conducted using the cooperators combine and weights were measured using an SC Department of Agriculture certified and calibrated grain cart. A sample of each harvested hybrid was collected for moisture and test weight. Yield calculations were corrected to 15.5% moisture for all hybrids.

Plant height and ear height data were also collected at each location prior to harvest and are reported in the final report.

Contact Information:

Dr. Michael Plumblee, Extension Corn and Soybean Agronomist at Clemson University, is the Corn Hybrid Demonstration Trial coordinator. If you have any questions, please contact him directly at mplumbl@clemson.edu.

If you are a seed company/representative that would like more information on these trials or wish to receive our invitation to participate and have not already been contacted, please let us know.

Acknowledgments:

We would also like to thank Tyler Soignier, Kyle Smith, and Bill Bonnette for their assistance with these trials.

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CORN & SOYBEAN AGRONOMY

2021 Corn Hybrid Demonstration Results - Allendale

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Allendale – Irrigated -**Soil Texture:** Loamy sand

Clemson Agronomist: Michael Plumblee

Planting Date: 3/28/2021 - **Harvest Date:** 9/10/2021

Grower: Joe Oswald

Row Spacing: 30-inch (Strip-till) – **Seed Rate:** 28.5k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
DeKalb	DKC 69-99	10.13	4.73	16.2	61.9	221.96
Pioneer	P1870YHR	10.60	4.83	16.2	61.6	220.37
Pioneer	P1847VYHR	10.23	4.45	14.8	64.7	215.20
DeKalb	DKC 63-91	8.25	3.16	15.0	60.2	212.84
DeKalb	DKC 68-69	9.60	4.52	16.2	61.6	212.67
Dyna-Gro	DG 54VC14	9.43	3.95	15.1	60.9	209.92
Dyna-Gro	DG 58VC65	9.41	4.01	15.2	62.0	207.74
Northrup King	NK 1748	9.78	3.32	16.0	59.5	205.08
Agra-Tech	AT 68VT2P	9.11	3.50	15.2	62.0	200.47
Agra-Tech	AT 85VT2P	10.26	3.95	15.0	61.8	199.69
Pioneer	P1506YHR	9.70	4.03	15.3	61.9	199.53
Northrup King	NK 1677	10.37	4.10	15.4	60.5	196.16

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2021 Corn Hybrid Demonstration Results - Cameron

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Cameron – Irrigated – **Soil Texture:** Loamy sand

Clemson Agronomist: Charles Davis

Planting Date: 4/5/2021 - **Harvest Date:** 8/23/2021

Grower: Bates Houck and Josh Johnson

Row Spacing: 30-inch (Conv. Till) – **Seed Rate:** 32k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
Pioneer	P1870YHR	10.05	4.40	20.5	57.4	259.17
DeKalb	DKC 68-69	9.43	4.28	21.7	56.5	258.60
DeKalb	DKC 69-99	9.34	4.32	20.9	59.7	254.76
DeKalb	DKC 63-91	8.72	4.11	19.8	56.2	253.89
Dyna-Gro	DG 54VC14	9.23	3.78	20.3	56.3	253.04
Pioneer	P1847VYHR	10.23	4.55	22.1	57.1	251.57
Pioneer	P1506YHR	8.88	3.78	20.6	57.4	245.87
Agra-Tech	AT 68VT2P	9.03	3.83	20.4	58.0	244.69
Dyna-Gro	DG 58VC65	9.38	4.05	20.3	58.0	242.09
Northrup King	NK 1748	10.13	4.39	22.6	53.8	239.52
Northrup King	NK 1677	9.95	3.95	21.3	54.1	236.78
Agra-Tech	AT 85VT2P	9.36	4.13	19.8	58.9	234.20

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2021 Corn Hybrid Demonstration Results – Holly Hill

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Holly Hill – Dryland – **Soil Texture:** Loamy sand

Clemson Agronomist: Jonathan Croft

Planting Date: 3/24/2021 - **Harvest Date:** 9/1/2021

Grower: Dean and Richard Hutto

Row Spacing: 36-inch (Strip-till) – **Seed Rate:** 22.5k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
DeKalb	DKC 69-99	5.56	2.08	16.4	62.3	139.11
DeKalb	DKC 63-57	5.71	1.88	14.6	62.8	137.69
Pioneer	P1847VYHR	6.36	2.20	15.4	62.0	134.35
Pioneer	P1506YHR	5.96	2.06	15.3	63.3	132.73
Pioneer	P1464VYHR	5.33	1.69	14.8	61.8	131.70
DeKalb	DKC 68-69	5.46	2.03	16.0	64.0	130.76
Northrup King	NK 1748	6.85	2.16	16.1	60.2	129.53
Dyna-Gro	DG 54VC14	5.55	1.73	15.1	61.1	125.43
Northrup King	NK 1082	4.82	1.80	14.1	61.1	125.36
Agra-Tech	AT 85VT2P	5.76	2.18	15.5	63.7	121.95
Dyna-Gro	DG 58VC65	5.66	1.98	15.6	61.3	118.96
Agra-Tech	AT 68VT2P	5.26	2.09	15.3	61.6	113.48

2021 Corn Hybrid Demonstration Results - Pinewood

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Pinewood – Irrigated – **Soil Texture:** Loamy coarse sand

Clemson Agronomist: Hannah Mikell

Planting Date: 3/28/2021 - **Harvest Date:** 8/28/2021

Grower: David Tindal

Row Spacing: 30-inch (Strip-till) – **Seed Rate:** 31k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
Pioneer	P1870YHR	9.03	3.83	19.0	-	249.84
Dyna-Gro	DG 54VC14	8.86	4.00	16.8	-	245.37
DeKalb	DKC 63-91	8.46	3.92	16.4	-	244.59
Dyna-Gro	DG 58VC65	9.40	4.13	17.2	-	240.91
DeKalb	DKC 69-99	9.15	4.63	18.5	-	240.56
DeKalb	DKC 68-69	8.43	3.93	18.8	-	240.31
Pioneer	P1506YHR	9.08	4.30	17.8	-	236.53
Northrup King	NK 1677	9.45	4.48	18.2	-	236.04
Agra-Tech	AT 68VT2P	8.63	3.86	16.7	-	231.38
Pioneer	P1847VYHR	9.85	4.36	19.0	-	230.72
Agra-Tech	AT 85VT2P	9.97	4.75	17.8	-	229.53
Northrup King	NK 1748	10.28	4.65	18.1	-	225.83

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2021 Corn Hybrid Demonstration Results - Loris

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Conway – Dryland – **Soil Texture:** Loamy fine sand

Clemson Agronomist: William Hardee

Planting Date: 4/5/2021 - **Harvest Date:** 9/29/2021

Grower: Mark and Tim Jolly

Row Spacing: 36-inch (Strip-till) – **Seed Rate:** 28k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
DeKalb	DKC 68-69	6.47	2.55	15.7	62.0	193.78
DeKalb	DKC 63-57	6.44	2.55	15.5	60.8	191.64
Pioneer	P1847VYHR	7.47	2.52	15.6	61.7	190.03
Dyna-Gro	DG 54VC14	7.22	2.77	15.4	61.5	187.65
Pioneer	P1464VYHR	7.20	2.78	15.0	60.4	187.53
Northrup King	NK 1748	6.72	2.33	15.9	59.4	178.06
DeKalb	DKC 69-99	7.55	3.33	15.5	62.3	177.31
Northrup King	NK 1082	6.56	2.39	15.2	57.6	174.23
Agra-Tech	AT 68VT2P	6.80	2.47	14.6	60.7	170.85
Agra-Tech	AT 85VT2P	7.36	2.08	14.9	61.8	169.39
Pioneer	P1506YHR	6.46	1.75	15.5	60.7	168.65
Dyna-Gro	DG 58VC65	6.33	2.36	15.4	61.1	163.71

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2021 Corn Hybrid Demonstration Results - Newberry

Coordinator: Dr. Michael Plumblee, Corn and Soybean Specialist

Location: Newberry – Dryland – **Soil Texture:** Sandy loam

Clemson Agronomist: Jay Crouch

Planting Date: 4/16/2021 - **Harvest Date:** 10/13/2021

Grower: Jimmie Lee Shaw and John Long

Row Spacing: 30-inch (Min-till) - **Seed Rate:** 25k seed/acre

Brand	Hybrid Name	Plant Height (Feet)	Ear Height (Feet)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac) – Adjusted to 15.5%
Agra-Tech	AT 85VT2P	8.36	3.26	16.9	59.6	180.64
Northrup King	NK 1082	9.03	3.38	16.3	58.1	174.03
DeKalb	DKC 63-57	8.81	4.16	16.6	59.9	167.16
Agra-Tech	AT 68VT2P	7.75	3.05	17.2	61.0	165.92
Dyna-Gro	DG 54VC14	8.78	4.10	16.1	61.9	165.36
DeKalb	DKC 69-99	8.50	4.00	18.1	61.2	164.57
Pioneer	P1847VYHR	9.05	3.68	16.4	64.1	164.48
DeKalb	DKC 68-69	9.42	4.13	17.6	62.3	158.20
Pioneer	P1464VYHR	9.52	4.27	16.2	61.5	144.81
Dyna-Gro	DG 58VC65	8.87	3.52	16.8	60.8	144.04
Pioneer	P1506YHR	7.66	2.97	16.9	60.2	135.97
Northrup King	NK 1748	9.20	3.53	16.9	59.0	132.55