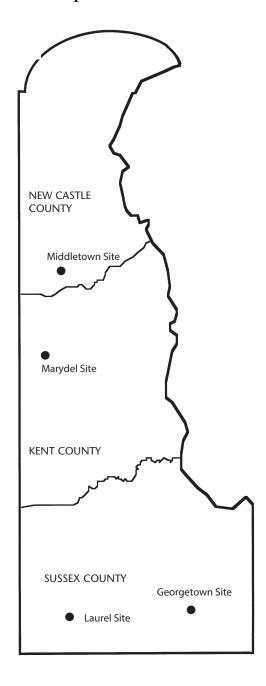
DELAWARE HYBRID FIELD CORN PERFORMANCE TRIALS





University of Delaware
College of Agriculture and Natural Resources
Agricultural Experiment Station
Cooperative Extension
Newark, DE 19716-2170

Test plot locations





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Teclemariam Weldekidan

Scientist
Department of Plant and Soil Sciences

Dr. Randall J. WisserAssociate Professor
Department of Plant and Soil Sciences

University of Delaware College of Agriculture and Natural Resources Agricultural Experiment Station Cooperative Extension Newark, DE 19716-2170



DELAWARE HYBRID FIELD CORN PERFORMANCE TRIALS - 2017

The 2017 Delaware hybrid field corn trials were conducted jointly by the University of Delaware's Agricultural Experiment Station and the Delaware Cooperative Extension Service, College of Agriculture and Natural Resources. Forty-three hybrids were evaluated at four locations: Emerson Farms at Middletown, DE (dryland), Thomas Family Farms at Marydel, DE (center pivot irrigation), Plum Creek Farms, LLC at Laurel, DE (center pivot irrigation) and Davis Farms at Georgetown, DE (center pivot irrigation). Hybrids were divided into three maturity groups; early (19 entries), early-medium (15 entries) and medium (9 entries). Plans and rules for entering these trials are available upon request.

Methodology

A randomized, complete block design with four replications was used in all tests. Four-row plots (experimental units) were planted with a Monosem air planter. The center two rows of each plot were harvested with a small plot combine. Tillage and cultural practices are noted in Table 1. Temperature and rainfall information is taken from DEOS (http://www.deos.udel.edu) and summarized in Tables 2 and 3, respectively. Data were analyzed by analysis of variance and hybrids were ranked by yield in each test.

Traits Measured

- Yield was recorded in bushels per acre on the basis of 56 lb/bu and adjusted to 15.5% moisture.
- % moisture is the actual percentage of grain moisture at harvest determined by a grain analysis computer (HarvestMaster Classic GrainGage from Juniper Systems).
- Yield/Moisture (Y/M) is the yield in bu/A (adjusted to 15.5% moisture) divided by the grain harvest moisture.
- Test weight is measured in pounds per bushel determined by a grain analysis computer (HarvestMaster Classic GrainGage from Juniper Systems).
- Final population is the plant population extrapolated from plot data for each hybrid to an acre scale taken at flowering time.
- % stalk lodging is the percentage of plants that were broken below the ear.
- % root lodging is the percentage of plants that had lodged more than 30°.

C.V. and L.S.D.

The coefficient of variation, or C.V., is a measurement of the amount of uncontrollable variability due to differences in the soil, weather, fertility, etc. Coefficient of variation's below 15% is considered good. Please note that the C.V. is expected to be higher at dryland locations.

The least significant difference, or L.S.D., (computed at a 5% level of probability) is a tool to determine if two average values are significantly different. The difference between two hybrids must exceed the L.S.D. value to be considered significantly different from one another. Example for yield: L.S.D. = 25 bu/A, hybrid X = 120 bu/A, hybrid Y = 150 bu/A. The difference between X and Y (30 bu/A) exceeds the L.S.D. (25 bu/A). Therefore, hybrid X has a significantly lower yield performance than hybrid Y.

Note

When reviewing the enclosed data it is important to note moisture percentages when comparing hybrids within the same maturity group. Comparisons should <u>not</u> be made between hybrids of different maturity groups since these are separate tests. These results are based on one year's data only and should be considered as preliminary results. Hybrid performance may vary from location to location and from year to year because of differences in rainfall, temperature, soil type, soil fertility, diseases, insects, and a variety of other factors. Growers will obtain the best estimate of individual hybrid performance by looking at performance data over several years and across locations. We have provided a column for each maturity group that calculates the average performance of hybrids over all locations.

HOW TO BEST USE CORN HYBRID PERFORMANCE TRIAL INFORMATION:

Information presented in this summary may be useful in selecting corn hybrids for production in Delaware. To maximize the usefulness of this information, follow these suggestions:

1. Select the test location that best represents your production location(s). Generally, corn hybrids are widely adapted across Delaware but certain soil or climatic conditions, cultural practices, or insect/disease problems may limit the choice of an entry.

- 2. Multiple-year average (means) across the greatest number of years are the best predictors of performance. Refer to previous test reports for information to evaluate corn hybrids which are of interest to you. Comparison between your selected hybrid and the grand mean for that maturity group will be helpful in identifying superior hybrids. When evaluating test results across years or locations, we recommend that you give preference to trials with coefficients of variation less than 15%. Growers should also consider the cultural practices used for each trial.
- 3. Check the grand mean for the long-term averages and compare with your own production experience. If your yields have been consistently below these grand mean levels, you should evaluate each part of your management system for potential areas of improvement.
- 4. Using long-term averages, select the hybrid or hybrids with which you are best acquainted or are currently using on your farm. Use these hybrids as "bench marks" when comparing new hybrids. Identify those hybrids which have over years produced yields higher than your selected bench mark hybrid. Hybrids with high stalk and root lodging percentages should be avoided.
- 5. Beginning with the 2014 growing season, we are including one or more corn hybrids to act as 'Check' hybrids for producers. We have tried to select check hybrids which will represent the newest and best genetics coming out of commercial programs.

Summary of Results

The 2017 growing season was characterized by cool weather during planting and the early growing season. In April, rainfall totals were 3.21, 3.51 and 3.35 inches for Georgetown, Dover and Townsend, DE, respectively, while the average temperature in April was 60.5, 59.7 and 58.5°F. for the three locations, respectively. Growers experienced cool temperatures during May, but over the month the average temperature for Georgetown, Dover and Townsend was 63.1, 62.3 and 61.5°F., respectively (Tables 2 and 3). Low nighttime temperatures fell into the low forties and fifties during the 3rd to 16th of May. The April and early May temperatures delayed planting by many growers.

May had four days with daily high temperatures greater than or equal to 80°F. at Georgetown and Dover and five days at Townsend. In June Georgetown, Dover and Townsend had 23, 23 and 21 days with daily high temperature greater than 80°F. and 15,16 and 13 days greater than 85°F. respectively. In July Dover and Townsend had 26 and

Georgetown 27 days with daily high temperature greater than 80°F. July had eleven, nine and six days with daily high temperature greater than 90°F. at Georgetown, Dover and Townsend, respectively. August had cool temperatures with one day at Georgetown and Townsend and three days at Dover with daily high temperature of 90°F. Overall, 2017 temperatures for the months of June through August were quite favorable for corn production, particularly the warm weather in June favored rapid plant growth.

Rainfall totals for May was at the long-term monthly average with 5.53, 6.51 and 5.84 inches received in Georgetown, Dover and Townsend, respectively. June rainfall for the three locations was 2.08, 2.43 and 2.16 inches, respectively, while July rainfall totaled 6.88, 4.89 and 8.40 inches and August totaled 5.30, 8.84 and 5.10 inches, respectively. The Townsend (Middletown) no-till location that had received 5.84 inches of rainfall in May and the low temperatures recorded have been marginally impacted germination since the soil there is a silt loam with a much higher water holding capacity than the soils at the other testing locations.

In June at the three locations there was a lengthy period (June 1-18) without a significant drop of rain. During this period a total of less than 0.34 inches of rainfall was received. The worst days without a drop of rain at Georgetown, Dover and Townsend locations were June 10-18, 7-16 and 8-15, respectively. The Townsend station (Middletown dryland) location, received only 0.11, 0.91, and 0.11 inches of rain from June 7-18, July 7-22, and August 19-28. In July, the longest period without a half inch of rainfall was only seven days at all locations. All locations received a one day rain in July 14 and then continued without half inch of rain for another eight days in Georgetown and nine days in Dover and Townsend. The worst month for drought conditions without a significant rain at all the locations also occurred in August 19-28. The cooler than normal temperatures in August and early September affected the corn dry down.

Yields at Middletown (Emerson Farms), New Castle County dryland no-till location averaged 195, 200 and 204 bu/A for the early, early-medium and medium maturity groups, respectively, compared to the check means of 182, 197 and 184 bu/A, respectively (Tables 4, 5, and 6). There were significant differences among hybrids in yield, grain moisture, yield/moisture, test weight and stalk lodging for the early and early-medium maturity groups. There was also a significant difference among hybrids in plant population for the early-medium maturity group. For the medium maturity group there were significant differences among hybrids in grain moisture, yield/moisture and test weight. There was none root lodging in all the maturity groups.

Yields at Marydel (Thomas Family Farms), Kent County irrigated location averaged 238, 257 and 258 bu/A for the early, early-medium and medium maturity groups, respectively, compared to the check means of 226, 257, and

247 bu/A, respectively (Tables 7, 8, and 9). There were significant differences among hybrids for yield, grain moisture, yield/moisture, test weight and plant population across all maturity groups. There was none root lodging in all the maturity groups and minor stalk lodging in the early and medium maturity groups.

Yields at Laurel (Plum Creek Farms, LLC), Sussex County irrigated location averaged 245, 248 and 256 bu/A for the early, early-medium and medium maturity groups, respectively, compared to the check means of 244, 233 and 240 bu/A, respectively (Tables 10, 11, and 12). There were significant differences among hybrids for yield, grain moisture, yield/moisture and test weight across all maturity groups. Plant population was significantly different among hybrids only in the early-medium maturity group. There was none root lodging and minor stalk lodging at this testing location.

Yields at Georgetown (Davis Farms), Sussex County irrigated location averaged 214, 221 and 232 bu/A, for the early, early-medium and medium maturity groups, respectively, compared to the check means of 208, 213 and 220 bu/A, respectively (Tables 13, 14, and 15). There were significant differences among hybrids in yield, grain moisture, yield/moisture, test weight and plant population across all maturity groups. There were also significant differences among hybrids in the early and early-medium maturity groups for stalk lodging. There was none root lodging in all the maturity groups.

The grain yield rankings of hybrids across locations are provided in each table. A pooled yield average and yield ranks are also provided for each hybrid. There are a few hybrids that had high yield rankings across locations. We encourage growers to give strong consideration to hybrids with high average performance across locations and years and to use such hybrids as benchmarks for future hybrid decisions. However, growers should recognize that the relative performance of some hybrids might differ across environments. Careful hybrid selection should help stabilize yield performance in Delaware.

TABLE 1. EXPERIMENTAL DETAILS AND CULTURAL PRACTICES.

Number of entries Number of maturities Target Population plants/A Row length Number of rows harvested Number of replications Planting date	(Dryland) 43 3 28,000 17.4' Center two rows 4 May 10	(Irrigated) 43 3 32,000 17.4' Center two rows	(Irrigated) 43 3 34,000 17.4' Center two rows	(Irrigated) 43 3 32,000 17.4' Center two rows
Number of maturities Target Population plants/A Row length Number of rows harvested Number of replications	3 28,000 17.4' Center two rows	3 32,000 17.4' Center two rows	34,000 17.4' Center two rows	3 32,000 17.4' Center two rows
Target Population plants/A Row length Number of rows harvested Number of replications	28,000 17.4' Center two rows	32,000 17.4' Center two rows	34,000 17.4' Center two rows	32,000 17.4' Center two rows
plants/A Row length Number of rows harvested Number of replications	17.4' Center two rows	17.4' Center two rows	17.4' Center two rows	17.4' Center two rows
Number of rows harvested Number of replications	Center two rows	Center two rows	Center two rows	Center two rows
Number of replications	4			
replications		4	A	
Planting date	May 10		4	4
_		May 1	May 9	April 28
Harvest date	October 6	September 28	September 27	September 21
Soil type	Matapeake silt loam	Sandy loam	Sandy loam	Rosedale loamy sand
Previous crop	Soybean	Soybean	Sweet potato	Corn
Cover crop	None	None	None	None
Tillage practices	No till	Disked, ripped, field cultivator	Disked, ripped, field cultivator	Disked, chisel plow & final disking
Cultivation	None	None	None	None
Fertilization sta	2 gallons/A of 20-10-0 (N-P ₂ O ₅ -K ₂ O) tarter 2"x2" (25 lb N & 13 lb P). At V4 V5 stage side-dressed with 60 gallons/A of 30% UAN solution (195 lb N).	3 tons/A of chicken manure plus 12 gallons/A of 20-10-0 (N-P ₂ O ₅ -K ₂ O) starter 2"x2" (25lb N & 13 lb P). At V4-V5 stage side-dressed with 60 gallons/A of 30% UAN solution (195 lb N).	12 gallons/A of 20-10-0 (N-P ₂ O ₅ -K ₂ O) starter 2"x2" (25 lb N & 13 lb P). At V4 –V5 stage side-dressed with 60 gallons/A of 30% UAN solution (195 lb N) and 30 lb of 32% N fertigated	3 tons poultry manure/A plus 12 gallons/A of 20-10-0 (N-P ₂ O ₅ -K ₂ O) starter 2"x2" (25 lb N & 13 lb P). At V4 –V5 stage side-dressed with 60 gallons/A of 30% UAN solution (195 lb N).
	exar 3.5 qt/A (mesotrione), atrazine and imazine, dual + Princep 1 qt/A	Lexar 3 qt/A (mesotrione), atrazine and simazine, dual + Princep 1 qt/A	Lexar 3 qt/A (mesotrione), atrazine and simazine, dual + Princep 1 qt/A. Impact 1 oz/A + Atrazine 1 qt/A + 30% UAN 2.5% V/V+ Crop oil 1% v/v	Lexar 3 qt/A (mesotrione), atrazine and simazine, dual + Princep 1 qt/A
Insecticide Sniper LFR 5 floz/A at planting		Sniper LFR 5 floz/A at planting	Sniper LFR 5 floz/A at planting	Sniper LFR 5 floz/A at planting
Irrigation	None	Center pivot	Center pivot	Center pivot

TABLE 2. DAILY TEMPERATURE AT OR NEAREST TEST LOCATIONS FOR THE 2017 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS DURING MAY AND JUNE.

Date			I	May			June								
of	Geor	getown	D	over	Tow	nsend	Geor	getown	D	over	Tov	nsend			
Month	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN			
1	84.3	57.5	82.9	56.4	83.9	53.9	82.8	63.1	82.8	59.8	80	58.4			
2	77.1	57.1	75.4	59.5	75.9	60	82	57.6	81.1	56.3	79.1	54.2			
3	67.1	49.2	64.4	47.6	64.2	44.5	77.9	53.5	77.4	52	76.4	50.9			
4	63.5	46.7	60.9	44.1	61	40.8	86	53.1	86.7	52.5	84.7	51.8			
5	68.5	58.3	70.9	57.5	70.1	53.9	74.4	63.7	77.3	65.8	74.2	64.3			
6	67.4	51.3	67.6	49.9	66.8	49.5	74.7	59.7	73	58.5	76.9	56.8			
7	61.9	46.4	62.1	45.4	59.5	44.9	65.3	52.3	66.8	52.3	66	52.6			
8	60.3	44.0	60.6	39.6	60.1	42.6	65.8	49.1	68.1	48.4	68.9	47.3			
9	64.4	43.8	63.6	39.8	62.4	37.3	81.8	47.8	83.3	47.7	81.4	47.6			
10	72.4	44.2	70.9	42.7	69.2	40.6	86.6	60.3	88.9	61.2	86.2	58.6			
11	58.2	50.2	58.3	50.2	55.7	50.3	92.9	66	93.8	66.5	91.1	65			
12	56.4	49.0	57.8	50.3	58.1	48.2	93.2	71.3	93.7	70.2	91.8	67.3			
13	56.7	50.3	54.9	50	54.2	47.6	94.2	72.9	95.7	72.4	93.7	69.8			
14	76.3	46.5	75.3	45	74	43.7	84.5	65.4	82.8	67.9	84.5	65.4			
15	72.2	51.5	72.3	50.3	72.5	48.5	77.9	60.8	77.3	60.7	80.1	59.9			
16	78.9	47.3	78	45.8	78.1	45.1	87.4	67.2	81.9	68.7	80.5	66.2			
17	92.4	58.3	91.4	59.4	90.6	55.7	89.6	70.9	89.3	70.9	87.1	69.7			
18	89.6	72.4	89	70.8	90.6	70.4	88.6	73.9	89.5	74.5	88.8	73.9			
19	91.3	72.1	89.9	68.7	90.9	69.3	90.6	70.7	89.1	70	89	69.7			
20	74.7	52.2	71.9	54.8	72.3	53.4	82.2	70.1	86	70.2	85.4	69.9			
21	64.9	47.7	65.1	50.8	65	49.7	83.9	69.8	88.3	68.2	86.5	65.8			
22	69.5	58.9	67.9	56.3	65.8	54.8	87.2	71.2	87.7	67.2	85.9	65.4			
23	65.0	55.9	66.4	56.7	66.7	54.6	86.6	71.9	89.2	72.2	86.8	72.1			
24	65.2	55.7	68.3	56	67.9	55.3	86.6	68.7	87.5	68.5	84.4	68.9			
25	78.4	55.1	79	55.4	74.7	54.5	85.6	64.3	86.1	64.1	83.2	63.2			
26	75.5	58.9	76.2	58.4	74.6	57.1	82.1	62.3	81.8	60.2	79	57.6			
27	77.9	60.5	75.7	57.1	72.4	55	81.1	62.7	81.1	59.4	78.4	57.5			
28	75.0	59.6	72.5	58.9	73.2	56.4	79.5	54.8	79.9	53.7	78.9	52			
29	67.9	58.1	65.8	58.5	66.5	58.5	85.7	61.5	87.2	61.4	85.7	62.4			
30	67.8	57.2	63.8	58	62.8	57.2	87.5	68.9	90.7	71.1	89.3	71.1			
31	78.9	62.0	79	62.2	80.1	61.5									
AVG.	71.6	54.1	70.9.	53.4	70.3	52.1	83.5	63.5	84.1	63.1	82.8	61.8			

TABLE 2. DAILY TEMPERATURE AT OR NEAREST TEST LOCATIONS FOR THE 2017 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS DURING JULY AND AUGUST (continued).

Date		100031		uly					Au	gust		
of	Georg	getown	Do	over	Tow	nsend	Geor	getown	De	over	Tow	nsend
Month	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	87.3	74	89.7	71.5	88	71	89.7	64.6	91	64.8	88.3	64.6
2	91.9	69	90.6	69.8	89	69.8	86.8	69.1	89.2	67.4	88.2	67.9
3	91.7	72.4	91.2	69.2	89.1	68.1	86.8	66.8	86.1	65.3	86.9	65.2
4	90.5	69.7	90.2	70.1	89.7	69.1	86.7	68.3	88.7	68.6	88	68.6
5	81.8	70.4	83.3	71.4	86.6	69.4	78.6	62.7	77.5	62	76.2	61.6
6	81.2	72.5	76.1	73.1	74.2	70.9	82.5	59.1	79.8	59.3	77.3	57.8
7	85.4	70.8	85.7	71.9	84.6	71.2	76.7	66.5	71.7	66	71.3	64.8
8	88.4	68.4	87.4	67.2	85.3	67.4	77.3	63.1	78.1	62.5	77.1	61.6
9	85.2	66	83.3	62.9	80.7	62.5	83.3	58.6	84.8	58.5	84.4	57
10	88.6	63.4	88.3	62.1	88	62.3	81.2	58.4	82.7	58.6	82.8	57.5
11	91.2	74.2	91.3	74.3	89.2	72	82.5	62.7	83.6	63.3	81.5	62.9
12	94.4	75.8	91.4	74.5	88.7	73.4	80.4	70.4	82.4	68.9	81.3	68.5
13	95	78.6	93.4	75.2	91.7	76.3	84.3	67.9	84.1	65	81.8	63.2
14	94	71.9	89.3	72.1	91	72.5	81.3	64.5	81.9	61.5	80.7	59.1
15	86.4	71.9	86	68.9	84.8	67.5	80.9	71.5	77	70.3	76	68.7
16	85.6	66.4	86.8	64.5	84.9	62.7	88.2	72.3	86.9	69.3	85.7	67.7
17	84.4	68.6	87.2	67.3	88.4	67.6	85.7	70.1	86.4	65.5	86.7	63.3
18	89.1	68.9	89.6	68.8	90.1	67.2	90.6	72.5	90.3	72.2	90.3	71.7
19	91.5	72.5	90.6	71.4	90.9	70.2	87	72.6	86.6	71.1	85.4	67.7
20	94.4	72.8	93.5	74	91.6	73.8	84.1	65.9	82.5	64.8	82	62.6
21	92.8	77.4	92.8	75.9	91.1	75.4	86.2	63.5	86.2	63.2	85.6	61.6
22	90.8	74.1	92.5	74.7	90.5	74.5	89.2	74.3	90	73.3	89.6	71.2
23	87.9	72.8	90.1	73	87.3	73.5	83.2	68.7	82	64.4	81	62.2
24	86	74.7	87.7	70.1	87	70.3	81.7	62.5	80.4	60.3	79.5	58.8
25	79.6	67.8	80	68.7	79.3	67	79.4	61	78.9	61.5	77.7	61
26	78.1	65.7	77.7	67.4	79.2	66.4	78.7	59.8	80.4	58.9	78.8	58.3
27	82.8	65.8	84.3	66.5	83.1	66.7	76.5	57.1	77.2	56.4	75.8	54.1
28	86.4	69.8	79.7	69.7	80.2	67.4	75.6	55.5	75.4	55.8	74.6	53.5
29	73.4	67.7	74	67.8	72.6	62.1	69.3	64.9	68.2	62.3	65.9	60.9
30	78.7	59.1	81	57.7	81.2	55	75.8	61.5	75.9	59.6	75	57.6
31	85	55.8	86.7	56.3	84.9	55.4	83.4	62.2	82.7	62.3	82.5	61.1
AVG.	87.1	70.0	86.8	69.3	85.9	68.3	82.4	65.1	82.2	64.0	81.2	62.7

TABLE 3. DAILY RAINFALL (INCHES) AT OR NEAREST TEST LOCATIONS FOR THE 2017 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS

Date		May			June			July		August			
of Month	Georgetown	Dover	Townsend										
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.01	0.00	0.00	0.00	
2	0.17	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.35	0.54	
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.51	0.05	
4	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	
5	1.43	1.08	1.06	0.30	0.12	0.10	0.00	0.01	0.01	0.00	0.05	0.04	
6	0.01	0.06	0.08	0.01	0.05	0.13	0.57	1.14	2.94	0.00	0.00	0.00	
7	0.12	0.02	0.01	0.00	0.00	0.04	0.00	0.00	0.08	1.50	2.73	1.56	
8	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	
9	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.01	0.00	0.00	0.00	
11	0.30	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.04	
12	0.30	0.09	0.08	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.66	0.01	
13	0.85	1.53	1.52	0.00	0.00	0.00	0.00	0.21	0.00	0.19	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	1.29	0.22	0.71	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.69	0.68	0.84	
16	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.15	0.06	0.00	0.01	0.04	0.00	0.22	0.02	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	1.50	1.01	
19	0.00	0.04	0.01	1.23	1.20	0.50	0.01	0.15	0.00	0.00	0.01	0.06	
20	0.00	0.01	0.01	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.20	0.54	0.85	0.00	0.00	0.00	0.00	0.34	0.00	
22	0.59	1.88	0.56	0.00	0.00	0.00	0.28	0.26	0.07	0.00	0.00	0.00	
23	0.16	0.00	0.00	0.17	0.18	0.10	0.51	0.04	0.34	0.00	0.00	0.00	
24	0.15	0.07	0.03	0.10	0.19	0.23	0.00	0.76	1.51	0.00	0.00	0.00	
25	0.76	1.01	1.91	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.01	0.05	
26	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	
27	0.00	0.10	0.27	0.02	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.38	0.44	0.07	0.00	0.00	0.00	1.11	0.37	0.54	0.00	0.00	0.00	
29	0.09	0.04	0.04	0.00	0.00	0.00	2.40	0.80	2.14	0.00	0.70	0.82	
30	0.20	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.01	0.00	0.01				0.00	0.00	0.00	0.02	0.00	0.06	
Total	5.53	6.51	5.84	2.08	2.43	2.16	6.88	4.89	8.40	5.30	8.84	5.10	

DELAWARE FIELD CORN PERFORMANCE TRIALS HYBRID ENTRIES

Early season hybrids

<u>Brand</u>	<u>Hybrid</u>	<u>Trait</u>	Relative maturity days
ARMOR	0303	Pro2 RR	103
ARMOR	0909	Pro2 RR	109
ARMOR	AX6 7109	Pro2 RR	109
ARMOR	AXC7110	Pro2 RR	110
Augusta	4959	3110GT	109
Augusta	5162	3000GT	112
Augusta	1564	GTCBLL	114
Augusta	5065	Conventional	115
MorCorn	MC3966	Genuity VT2P	109
Phoenix	5352A4 Artesian	Agrisure 3111	109
Doebler's®	RPM® 4417AMXT™	AcreMax Above	104
Doebler's®	RPM® 4917AM™	AcreMax Above	109
Doebler's®	RPM® 5018AM™	AcreMax Above	110
TA Seeds	TA536-22 DPRIP	VT2P RIB	104
TA Seeds	TA618-22DPRIB	SSX RIB	110
ProHarvest	6540	SmartStax RIB	104
ProHarvest	6734	VT2Pro RIB	107
ProHarvest	6886	VT2Pro RIB	108
ProHarvest	8074	SmartStax RIB	110
DeKalb	DKC62-20RIB (Check)	GENSS	112
DeKalb	DKC54-40RIB (Check)	GENVT2P	104

Early-Medium season hybrids

Brand	<u>Hybrid</u>	<u>Trait</u>	Relative maturity days
Augusta	1166	VT2Pro RIB	116
MorCorn	MC4319	Genuity VT2P_RIB	113
MorCorn	MC4377	Genuity DGVT2P	113
Phoenix	5832A4 Artesian	Agrisure 3111	111
Phoenix	6190 Artesian	Agrisure 3111	112
Doebler's®	RPM® 5125AM™	AcreMax Above	111
Doebler's®	RPM® 5315AM™	AcreMax Above	113
TA Seeds	TA736-22DP RIB	VT2P RIB	113
NK	N66V-3120	BL, CB	111
NK	N76A-3000GT	CB, CRW	114
ProHarvest	8265	3000GT	112
ProHarvest	8277	SmartStax RIB	112
ProHarvest	8312	SmartStax RIB	113
ProHarvest	8404	VT2Pro RIB	114
ProHarvest	X15782	VT2Pro RIB	113
DeKalb	DKC64-69RIB (Check)	GENVT3P	114
DeKalb	DKC64-35RIB (Check)	GENVT2P	114

Medium season hybrids

<u>Brand</u>	<u>Hybrid</u>	<u>Trait</u>	Relative maturity days
Doebler's®	RPM® 5518AM™	Agrisure 3000GT	115
Doebler's®	RPM® 5818AM™	Agrisure 3000GT	118
TA Seeds	TA758-28 RIB	SSX RIB	115
NK	N83D-3111	BL, CB, CRW	118
ProHarvest	8522	SmartStax RIB	115
ProHarvest	X15851	SmartStax RIB	116
ProHarvest	X16852	SmartStax RIB	116
ProHarvest	X17850	SmartStax RIB	116
ProHarvest	X16831	VT2Pro RIB	118
DeKalb	DKC65-71RIB (Check)	GENDGVT2P	115
DeKalb	DKC67-72RIB (Check)	GENVT3P	117

Hybrid genetic traits and description

Trait name Description

Trait Harris	Description
AcreMax	Refuge in the bag hybrid
AcreMax Above	Herculex® XTRA (HXX) Insect Protection and YieldGard® Corn Borer (YGCB) for above-ground protection +
	refuge in the bag
Agrisure®3000GT	Triple stack trait (Corn borer+corn rootworm + Inbred tolerance to glyphosate & glufosinate)
Agrisure Viptera 3111	Broad spectrum of lepidopteran corn pests (earworm, black cutworm, fall armyworm & Western bean
	cutworm
BVR	Roundup Ready + Corn borer + Root worm
СВ	Corn Borer
CL	Clear field
GENSS	Above & below ground insect control (European corn borer & corn rootworm + tolerance to Roundup® &
	Liberty
GENVT3P	Genuity triple pro (corn earworm + European & Southern corn borers and fall armyworm + corn rootworm)
GENDGVT2P	Genuity® DroughtGard® with VT Double Pro
Genuity VT2Pro RIB	Double-stacked (corn earworm + fall armyworm)
Genuity SmartStax RIB	Above & below ground insect control (Earworm + Fall armyworm + Northern corn rootworm + western bean
	cutworm + European corn borer)
GT/CB/LL	Triple stack trait (Glyphosate-resistant + corn borer + LibertyLink® herbicide)
HX	Herculex
HXT	Herculex XTRA
LL	Liberty Link
PL	YieldGard Plus
PLRR	YieldGard Plus + Roundup Ready
RB	Roundup Ready + Corn borer
RHXT	Roundup Ready + Liberty Link + Herculex XTRA
RR2/YGCB	Roundup Ready 2 + YieldGard + Corn borer
RRRW	Roundup Ready + Root worm
SmartStax & GENSS	8 traits stacked - 6 for insect resistance (Bt) & 2 for herbicide (Roundup & Liberty)
Viptera 3111	Multi-pest control and tolerance to glyphosate and glufosinate herbicide
VT2P RIB	Contains dual models of action (corn earworm, European & Southwestern corn borers & fall army warm)
VT2Pro	Contains RR2 gene and YieldGard corn stalk borer gene
VT3	YieldGard VT Triple (corn borer + root worm + glyphosate herbicide tolerance)
XRR	Roundup Ready
13V	YieldGard + Corn borer + Root worm + Roundup Ready
2110CT	Glyphosate and glufosinate tolerance herbicides in addition to having protection from Western, Northern,
3110GT	

Table 4. Dryland Corn Hybrid Performance Summary
Emerson Farms (New Castle County) Middletown, Delaware

Planted 5/10/2	017 & Harvested October 6, Ea	ly Hybrids							P		Pool				
								% Relative							
		Yield	%	Yield/	Test	F: 15	% Stalk	Yield to	Middletown		Georgetown	Marydel	Yield Avg.		Two Year Yield
Brand	Hybrid	Bu/A ¹	Moisture	Moisture	Weight	Final Pop	Lodging	Check Avg.	Dry land	Laurel Irrigated	Irrigated	Irrigated	Bu/A	Rank	Ave. Bu/A
Augusta	5065	230.8	21.6	10.7	58.9	25625.0	0.0	126.8	1	3	1	5	247.8	2	4
Doebler's®	RPM® 5018AM™	222.6	17.0	13.1	58.0	26375.0	0.0	122.3	2	1	4	1	252.9	1 5	
ARMOR	AXC7110	219.0	19.5	11.2	59.6	26375.0		120.3	3	5	6	11	236.0	-	
ARMOR	AX6 7109	218.4	19.5	11.2	60.6	25750.0	2.1	120.0	4	11	16	14	224.8	10	
Augusta	1564	217.9	16.4	13.3	53.9	23750.0	1.1	119.7	5	6	3	2	243.9	3	
hoenix	5352A4 Artesian	212.7	19.6	10.8	57.5	26250.0	3.3	116.9	6	8	9	8	230.3	8	
ProHarvest	6886	211.0	16.9	12.4	59.3	26750.0	4.7	115.9	7	9	8	4	232.6	7	225.5
DeKalb	DKC62-20RIB (Check)	206.6	18.4	11.3	58.5	26500.0	1.0	113.5	8	2	5	12	235.0	6	
Doebler's®	RPM® 4917AM™	204.6	19.3	10.7	58.5	25500.0	2.2	112.4	9	4	2	3	240.3	4	233.8
Augusta	4959	197.8	20.7	9.6	59.0	26250.0	6.1	108.7	10	13	20	15	214.9	15	219.4
ProHarvest	6734	193.2	16.7	11.6	58.3	26625.0	6.1	106.2	11	10	7	6	227.6	9	
Augusta	5162	190.9	19.9	9.6	59.4	26000.0	1.0	104.9	12	7	13	10	223.5	11	
ARMOR	0909	188.5	16.2	11.7	57.5	24500.0	5.5	103.6	13	16	15	7	218.4	13	
MorCorn	MC3966	185.3	17.8	10.5	57.6	24250.0	2.5	101.8	14	12	10	13	219.1	12	
oebler's®	RPM® 4417AMXT™	183.9	17.3	10.7	59.8	26625.0	0.0	101.0	15	15	14	9	216.5	14	
ProHarvest	8074	179.3	17.7	10.1	59.6	25750.0	1.9	98.5	16	14	11	16	213.9	16	213.2
A Seeds	TA536-22 DPRIP	175.5	17.3	10.1	60.5	25375.0	0.5	96.4	17	19	18	20	201.0	19	
ProHarvest	6540	169.5	16.1	10.5	60.0	24375.0	3.4	93.1	18	18	12	18	207.6	17	
ARMOR	0303	166.6	16.1	10.4	59.0	25500.0	0.0	91.5	19	21	19	21	194.7	21	
A Seeds	TA618-22DPRIB	163.6	16.8	9.8	58.8	22000.0	4.9	89.9	20	17	17	17	206.5	18	
DeKalb	DKC54-40RIB (Check)	157.4	16.6	9.5	60.9	25750.0	1.0	86.5	21	20	21	19	194.9	20	
	Check Avg.	182.0	17.5	10.4	59.7	26125.0	1.0								
	Test Avg.	195.0	18.0	10.9	58.8	25517.9	2.3								
	LSD (0.05)	24.7	0.9	1.3	1.1	NS	3.6								
	% C.V.	7.3	3.0	7.4	1.0	7.8	96.2								
	Check Avg. + LSD (0.05)	206.7													
The bold text a	and darker shading indicate that	the yield of t	he hybrids is	not statistic	cally differe	nt from the t	op yielding	hybrid							
NS = not statisti	ically significant at a 5% probab	ility level													
	•	•	ile Hybrida is	inot statistic	any uniteres	it irom the t	op yielding	Пубпа							

Table 5. Dryland Corn Hybrid Performance Summary Emerson Farms (New castle County) Middletown, Delaware

Planted 5/10/2	017 & Harvested October 6, Earl	/-Medium Hy	/brids			P	erformance Rank	ing for		Poole					
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk	% Relative Yield to Check Avg.	Middletown Dry land	Laurel Irrigated	Georgetown Irrigated	Marydel Irrigated	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5125AM™	217.7	18.2	12.1	57.9	27750.0	0.5	110.3	1	4	6	2	246.0	3	238.5
Doebler's®	RPM® 5315AM™	217.5	20.2	10.8	57.1	27500.0	6.4	110.2	2	6	5	1	247.3	2	233.9
Augusta	1166	215.9	17.9	12.1	55.7	26125.0	1.9	109.4	3	1	10	3	248.2	1	
NK	N76A-3000GT	210.7	16.3	13.0	52.9	23625.0	3.1	106.8	4	11	1	8	241.0	5	
ProHarvest	X15782	208.3	19.6	10.6	57.3	26625.0	0.0	105.6	5	8	4	10	237.5	8	
MorCorn	MC4319	206.9	21.3	9.7	57.3	26500.0	0.5	104.9	6	7	7	5	239.4	7	
ProHarvest	8404	205.1	21.4	9.6	57.6	23375.0	0.0	103.9	7	5	8	9	237.3	9	228.1
DeKalb	DKC64-35RIB (Check)	203.0	20.3	10.0	59.5	25750.0	2.4	102.9	8	9	9	7	235.5	10	
Phoenix	5832A4 Artesian	200.6	20.0	10.1	56.4	25125.0	2.0	101.7	9	13	13	13	221.6	11	
MorCorn	MC4377	199.5	19.7	10.2	55.5	26000.0	2.0	101.1	10	2	2	6	245.5	4	
DeKalb	DKC64-69RIB (Check)	191.6	20.2	9.5	59.0	25375.0	0.0	97.1	11	17	17	12	214.2	15	
NK	N66V-3120	191.1	17.4	11.0	57.3	25875.0	8.2	96.9	12	14	16	11	220.3	12	
TA Seeds	TA736-22DPRIB	190.0	20.1	9.5	58.9	25000.0	1.9	96.3	13	12	15	14	218.4	13	221.6
ProHarvest	8277	188.6	20.3	9.3	58.0	26750.0	12.0	95.6	14	3	3	4	239.9	6	
Phoenix	6190 Artesian	187.5	16.6	11.4	54.9	28500.0	1.7	95.0	15	16	14	17	210.7	17	
ProHarvest	8312	185.1	19.0	9.8	57.0	24375.0	12.3	93.8	16	10	12	16	218.2	14	227.0
ProHarvest	8265	174.8	19.5	9.0	59.3	21625.0	0.0	88.6	17	15	11	15	213.0	16	
	Check Avg.	197.3	20.3	9.7	59.3	25562.5	1.2								
	Test Avg.	199.6	19.3	10.4	57.2	25639.7	3.2								
	LSD (0.05)	24.3	1.0	1.2	0.7	2818.8	8.3								
	% C.V.	7.2	3.1	7.0	0.8	7.1	87.0								
	Check Avg. + LSD (0.05)	221.6													
¹ The bold text a	and darker shading indicate that	he yield of the	he hybrids is	not statistic	ally differer	nt from the to	op yielding	hybrid							

Table 6. Dryland Corn Hybrid Performance Summary Emerson Farms (New Castle County) Middletown, Delaware

-1					Line	3011 1 011113 (1	TOW CUSTIC	country) what	letown, Delawa					1.01.	
Planted 5/10/2	017 & Harvested October 6, Me	dium Hybrids		1		T			P	erformance Rank	ing for		Pool	ed Sites	
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Middletown Dry land	Laurel Irrigated	Georgetown Irrigated	Marydel Irrigated	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
NK	N83D-3111	226.4	23.3	9.7	54.8	25500.0	0.0	123.4	1	6	9	3	243.6	4	
ProHarvest	X16831	214.4	22.0	9.8	54.6	25750.0	0.0	116.8	2	2	6	5	244.0	3	
ProHarvest	X15851	212.5	22.3	9.6	54.6	26375.0	0.5	115.8	3	5	5	9	237.7	7	
Doebler's®	RPM® 5818AM™	208.9	21.0	10.0	56.2	26000.0	0.0	113.9	4	4	1	2	248.3	2	
Doebler's®	RPM® 5518AM™	208.5	21.2	9.9	56.2	26000.0	0.0	113.6	5	1	2	1	251.0	1	
ProHarvest	X17850	207.3	23.6	8.8	57.2	26375.0	0.0	113.0	6	3	4	4	242.3	5	
ProHarvest	X16852	203.8	19.6	10.4	55.5	24375.0	0.0	111.1	7	7	10	8	233.1	8	
TA Seeds	TA758-28 RIB	200.2	22.7	8.8	55.8	23250.0	0.0	109.1	8	10	7	10	228.5	9	
ProHarvest	8522	192.8	21.4	9.0	58.5	22875.0	0.6	105.1	9	8	3	6	239.8	6	
DeKalb	DKC67-72RIB (Check)	190.4	21.7	8.8	55.2	27000.0	0.5	103.7	10	9	11	11	222.1	11	
DeKalb	DKC65-71RIB (Check)	176.6	18.7	9.4	55.1	25125.0	1.0	96.2	11	11	8	7	223.1	10	
	Check Avg.	183.5	20.2	9.1	55.1	26062.5	0.7								
	Test Avg.	203.8	21.6	9.5	55.8	25329.6	0.2								
	LSD (0.05)	NS	1.9	1.1	1.2	NS	NS								
	% C.V.	8.7	5.8	7.3	1.4	7.5	65.0								
	Check Avg. + LSD (0.05)	211.1													
NS = not statist	ically significant at a 5% probabi	lity level													

Table 7. Irrigated Corn Hybrid Performance Summary	
Thomas Family Farms (Kent County) Marydel, Delaware	

Planted 5/1/20	017 & Harvested September 28,	Early Hybrids			Po	erformance Rank	ing for		Pool						
_		Yield	%	Yield/	Test		% Stalk	% Relative Yield to	Marydel	Georgetown		Middletown	Yield Avg.		Two Year Yield
Brand	Hybrid	Bu/A ¹	Moisture	Moisture	Weight	Final Pop	Lodging	Check Avg.	Irrigated	Irrigated	Laurel Irrigated	Dry land	Bu/A	Rank	Ave. Bu/A
Doebler's®	RPM® 5018AM™	272.6	20.2	13.5	56.3	30000.0	0.0	120.6	1	4	1	2	252.9	1	
Augusta	1564	265.0	19.2	13.8	52.4	29625.0	0.5	117.2	2	3	6	5	243.9	3	
Doebler's®	RPM® 4917AM™	260.5	21.0	12.4	57.2	30375.0	0.0	115.2	3	2	4	9	240.3	4	233.8
ProHarvest	6886	248.8	19.5	12.8	56.2	31250.0	0.4	110.0	4	8	9	7	232.6	7	225.5
Augusta	5065	248.5	23.0	10.8	57.0	30000.0	0.0	109.9	5	1	3	1	247.8	2	
ProHarvest	6734	247.1	18.0	13.9	57.9	29125.0	0.0	109.3	6	7	10	11	227.6	9	
ARMOR	0909	245.3	18.9	13.1	56.0	30000.0	0.0	108.5	7	15	16	13	218.4	13	
Phoenix	5352A4 Artesian	241.1	20.6	11.7	56.7	30750.0	0.0	106.6	8	9	8	6	230.3	8	
Doebler's®	RPM® 4417AMXT™	240.5	19.6	12.3	59.4	30625.0	0.0	106.3	9	14	15	15	216.5	14	
Augusta	5162	239.6	21.1	11.4	57.7	29750.0	0.9	106.0	10	13	7	12	223.5	11	
ARMOR	AXC7110	238.0	19.9	12.0	58.4	30375.0	0.0	105.3	11	6	5	3	236.0	5	
DeKalb	DKC62-20RIB (Check)	237.9	20.1	11.8	57.2	29750.0	0.0	105.2	12	5	2	8	235.0	6	
MorCorn	MC3966	237.2	20.3	11.7	55.9	28125.0	0.0	104.9	13	10	12	14	219.1	12	
ARMOR	AX6 7109	232.3	19.6	11.9	58.5	28875.0	0.0	102.7	14	16	11	4	224.8	10	
Augusta	4959	228.8	21.6	10.6	58.2	29250.0	7.2	101.2	15	20	13	10	214.9	15	219.4
ProHarvest	8074	227.8	19.9	11.4	58.1	31375.0	0.0	100.7	16	11	14	16	213.9	16	213.2
TA Seeds	TA618-22DPRIB	227.2	19.8	11.5	56.9	28250.0	0.0	100.5	17	17	17	20	206.5	18	
ProHarvest	6540	219.7	18.0	12.2	59.6	28000.0	0.0	97.2	18	12	18	18	207.6	17	
DeKalb	DKC54-40RIB (Check)	214.4	16.5	13.0	60.5	30375.0	0.4	94.8	19	21	20	21	194.9	20	
TA Seeds	TA536-22DPRIP	212.8	17.8	12.0	60.2	29750.0	0.0	94.1	20	18	19	17	201.0	19	
ARMOR	0303	206.9	16.1	12.8	58.9	30625.0	0.0	91.5	21	19	21	19	194.7	21	
	Check Avg.	226.1	18.3	12.4	58.8	30062.5	0.2								
	Test Avg.	237.7	19.5	12.2	57.6	29821.4	0.4								
	LSD (0.05)	18.1	0.9	1.1	0.7	1910.2	NS								
	% C.V.	4.8	2.8	5.6	0.7	4.2	46.1								
	Check Avg. + LSD (0.05)	244.2													
¹ The bold text	and darker shading indicate that	t the yield of tl	he hybrids is	not statistic	ally differer	nt from the to	op yielding	hybrid							
NS = not statis	tically significant at a 5% probab	ility level													

Table 8. Irrigated Corn Hybrid Performance Summary	
Thomas Family Farms (Kent County) Marydel Delaware	

Planted 5/1/20	17 & Harvested September 28, E	arly-Medium	Hybrids						P	erformance Rank	ing for		Pool		
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk	% Relative Yield to Check Avg.	Marydel Irrigated	Georgetown Irrigated	Laurel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5315AM™	278.0	22.4	12.5	54.7	31125.0	0.0	108.3	1	5	6	2	247.3	2	233.9
Doebler's®	RPM® 5125AM™	276.8	20.8	13.3	56.8	31500.0	0.0	107.8	2	6	4	1	246.0	3	238.5
Augusta	1166	276.0	22.9	12.1	53.7	30500.0	0.0	107.5	3	10	1	3	248.2	1	230.3
ProHarvest	8277	270.3	22.2	12.2	54.9	31625.0	0.0	105.3	4	3	3	14	239.9	6	
MorCorn	MC4319	269.3	23.2	11.7	55.8	29750.0	0.0	104.9	5	7	7	6	239.4	7	
MorCorn	MC4377	266.2	22.4	11.7	54.2	29875.0	0.0	104.9	6	2	2	10	245.5	4	
DeKalb	DKC64-35RIB (Check)	265.5	21.3	12.5	58.1	27875.0	0.0	103.7	7	9	9	8	235.5	10	
NK	N76A-3000GT	262.6	20.0	13.2	51.5	28125.0	0.0	102.3	8	1	11	4	241.0	5	
ProHarvest	8404	260.4	23.0	11.4	55.8	29125.0	0.0	101.4	9	8	5	7	237.3	9	228.1
ProHarvest	X15782	254.2	22.2	11.5	55.2	31750.0	0.0	99.0	10	4	8	5	237.5	8	220.2
NK	N66V-3120	252.4	20.4	12.4	54.9	30875.0	0.0	98.3	11	16	14	12	220.3	12	
DeKalb	DKC64-69RIB (Check)	247.9	21.4	11.6	57.2	30625.0	0.0	96.6	12	17	17	11	214.2	15	
Phoenix	5832A4 Artesian	242.9	21.6	11.3	55.0	29500.0	0.0	94.6	13	13	13	9	221.6	11	
TA Seeds	TA736-22DP RIB	240.7	21.9	11.1	55.9	27750.0	0.0	93.8	14	15	12	13	218.4	13	221.6
ProHarvest	8265	238.3	21.6	11.1	56.6	29375.0	0.0	92.8	15	11	15	17	213.0	16	
ProHarvest	8312	235.6	21.8	10.8	54.3	29375.0	0.0	91.8	16	12	10	16	218.2	14	227.0
Phoenix	6190 Artesian	225.6	19.6	11.6	54.1	31125.0	0.0	87.9	17	14	16	15	210.7	17	
	Check Avg.	256.7	21.3	12.0	57.6	29250.0									
	Test Avg.	256.6	21.7	11.9	55.2	29992.7									
	LSD (0.05)	16.0	0.9	0.9	0.8	2358.8									
	% C.V.	3.7	2.6	4.9	0.9	4.5									
	Check Avg. + LSD (0.05)	272.7													
¹ The bold text	and darker shading indicate that	the yield of t	he hybrids is	not statistic	cally differer	nt from the to	op yielding	hybrid							

Table 9. Irrigated Corn Hybrid Performance Summary	
Thomas Family Farms (Kent County) Marydel Delaware	

Planted 5/1/20:	17 & Harvested September 28, N	ledium Hybrid	ds			Po	erformance Rank	ing for		Poole					
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Marydel Irrigated	Georgetown Irrigated	Laurel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5518AM™	270.6	24.7	10.9	53.7	30750.0	0.8	109.6	1	2	1	5	251.0	1	
Doebler's®	RPM® 5818AM™	266.8	26.1	10.3	53.9	30250.0	0.0	108.0	2	1	4	4	248.3	2	
NK	N83D-3111	266.6	25.1	10.6	53.5	29500.0	0.0	107.9	3	9	6	1	243.6	4	
ProHarvest	X17850	265.4	26.3	10.1	55.7	30500.0	0.0	107.4	4	4	3	6	242.3	5	
ProHarvest	X16831	263.6	23.5	11.2	55.0	30125.0	0.8	106.7	5	6	2	2	244.0	3	
ProHarvest	8522	262.7	24.3	10.8	55.2	29750.0	0.0	106.3	6	3	8	9	239.8	6	
DeKalb	DKC65-71RIB (Check)	254.6	22.3	11.5	54.2	30500.0	0.4	103.1	7	8	11	11	223.1	10	
ProHarvest	X16852	254.4	23.0	11.0	52.9	29500.0	0.0	103.0	8	10	7	7	233.1	8	
ProHarvest	X15851	248.4	25.2	9.9	53.1	30375.0	0.0	100.6	9	5	5	3	237.7	7	
TA Seeds	TA758-28 RIB	243.0	23.8	10.2	55.2	27500.0	0.0	98.4	10	7	10	8	228.5	9	
DeKalb	DKC67-72RIB (Check)	239.4	24.5	9.8	52.5	30875.0	0.0	96.9	11	11	9	10	222.1	11	
	Check Avg.	247.0	23.4	10.6	53.4	30687.5	0.2								
	Test Avg.	257.7	24.4	10.6	54.1	29965.9	0.2								
	LSD (0.05)	14.3	0.9	0.7	1.5	1540.0	NS								
	% C.V.	3.3	2.5	4.6	1.5	3.3	54.5								
	Check Avg. + LSD (0.05)	261.3													
¹ The bold text a	nd darker shading indicate that	the yield of t	he hybrids is	not statistic	ally differen	nt from the t	op yielding	hybrid							
NS = not statisti	ity level														

Table 10. Irrigated Corn Hybrid Performance Summary Plum Creek Farms, LLC (Sussex County) Laurel, Delaware

Planted 5/9/2	017 & Harvested September 27, E	arly Hybrids							Performance Ranking for Pooled Sites						
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Laurel Irrigated	Georgetown Irrigated	Marydel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5018AM™	290.0	19.5	14.9	55.2	33000.0	0.0	119.1	1	4	1	2	252.9	1	
DeKalb	DKC62-20RIB (Check)	269.5	20.1	13.4	56.2	33625.0	0.0	110.7	2	5	12	8	235.0	6	
Augusta	5065	266.7	23.5	11.4	56.5	30875.0	0.0	109.5	3	1	5	1	247.8	2	
Doebler's®	RPM® 4917AM™	261.4	20.5	12.8	56.0	30375.0	0.0	107.3	4	2	3	9	240.3	4	233.8
ARMOR	AXC7110	261.1	19.8	13.2	57.5	31875.0	0.0	107.2	5	6	11	3	236.0	5	
Augusta	1564	259.0	17.8	14.6	51.4	29500.0	0.0	106.4	6	3	2	5	243.9	3	
Augusta	5162	253.9	20.6	12.4	56.8	32250.0	0.4	104.3	7	13	10	12	223.5	11	
Phoenix	5352A4 Artesian	248.4	21.0	11.8	54.8	31000.0	0.8	102.0	8	9	8	6	230.3	8	
ProHarvest	6886	248.3	19.3	12.9	55.4	31250.0	0.4	102.0	9	8	4	7	232.6	7	225.5
ProHarvest	6734	246.3	17.9	13.9	55.5	32000.0	0.4	101.1	10	7	6	11	227.6	9	
ARMOR	AX6 7109	245.8	20.5	12.0	57.5	30500.0	0.0	100.9	11	16	14	4	224.8	10	
MorCorn	MC3966	240.7	20.7	11.6	54.1	30750.0	0.0	98.9	12	10	13	14	219.1	12	
Augusta	4959	240.4	22.4	10.8	57.0	28500.0	0.5	98.7	13	20	15	10	214.9	15	219.4
ProHarvest	8074	236.7	20.2	11.7	56.9	32125.0	0.0	97.2	14	11	16	16	213.9	16	213.2
Doebler's®	RPM® 4417AMXT™	235.9	19.6	12.0	58.3	31500.0	0.4	96.9	15	14	9	15	216.5	14	
ARMOR	0909	233.9	19.3	12.2	55.0	28875.0	0.0	96.1	16	15	7	13	218.4	13	
TA Seeds	TA618-22DPRIB	233.0	20.6	11.4	55.0	27125.0	0.0	95.7	17	17	17	20	206.5	18	
ProHarvest	6540	231.4	18.7	12.5	58.3	31000.0	0.4	95.0	18	12	18	18	207.6	17	
TA Seeds	TA536-22 DPRIP	220.3	18.6	12.0	58.0	32500.0	0.0	90.5	19	18	20	17	201.0	19	
DeKalb	DKC54-40RIB (Check)	217.4	16.5	13.2	59.1	31000.0	0.0	89.3	20	21	19	21	194.9	20	
ARMOR	0303	210.5	17.9	11.9	57.1	27625.0	0.0	86.4	21	19	21	19	194.7	21	
	Check Avg.	243.5	18.3	13.3	57.6	32312.5	0.0								
	Test Avg.	245.3	19.7	12.5	56.3	30821.4	0.2								
	LSD (0.05)	15.4	1.3	1.2	0.8	NS	NS								
	% C.V.	4.0	3.7	6.1	0.9	8.8	66.7								
	Check Avg. + LSD (0.05)	258.9													
NS = not statis	stically significant at a 5% probab	ility level													

Table 11. Irrigated Corn Hybrid Performance Summary	
Plum Creek Farms TTC (Sussex County) Laurel Delaware	

Planted 5/9/20	017 & Harvested September 27, E	arly-Medium	Hybrids			Pe	erformance Rank	ing for		Pool	ed Sites				
Brand	Hybrid	Yield Bu/A ¹	%	Yield/	Test Weight	Final Pop	% Stalk	% Relative Yield to		Georgetown Irrigated	Manualallania	Middletown	Yield Avg. Bu/A	D-ul-	Two Year Yield Ave. Bu/A
Augusta	1166	278.1	Moisture 20.6	Moisture 13.5	54.6	33750.0	Lodging 0.0	119.6	Laurel Irrigated	10	Marydel Irrigated	Dry land	248.2	Rank 1	Ave. bu/A
MorCorn	MC4377	275.1	20.9	13.2	54.0	31750.0	0.4	118.3	2	2	6	10	245.5	4	
ProHarvest	8277	262.9	20.6	12.8	55.0	32500.0	0.0	113.1	3	3	4	14	239.9	6	
Doebler's®	RPM® 5125AM™	261.9	20.1	13.0	57.0	33500.0	0.0	112.6	4	6	2	1	246.0	3	238.5
ProHarvest	8404	258.9	22.4	11.6	55.5	29125.0	0.0	111.4	5	8	9	7	237.3	9	228.1
Doebler's®	RPM® 5315AM™	258.9	20.2	12.8	55.0	32625.0	0.0	111.3	6	5	1	2	247.3	2	233.9
MorCorn	MC4319	256.4	22.8	11.3	55.5	29875.0	0.0	110.3	7	7	5	6	239.4	7	
ProHarvest	X15782	252.2	20.5	12.4	56.2	32750.0	1.6	108.5	8	4	10	5	237.5	8	
DeKalb	DKC64-35RIB (Check)	250.2	21.0	11.9	58.0	31500.0	0.0	107.6	9	9	7	8	235.5	10	
ProHarvest	8312	245.1	20.5	12.0	54.8	32250.0	0.4	105.4	10	12	16	16	218.2	14	227.0
NK	N76A-3000GT	239.2	17.0	14.1	52.2	30625.0	0.4	102.9	11	1	8	4	241.0	5	
TA Seeds	TA736-22DP RIB	238.9	20.2	11.9	57.2	32500.0	0.4	102.8	12	15	14	13	218.4	13	221.6
Phoenix	5832A4 Artesian	236.5	20.8	11.4	56.3	32000.0	0.4	101.7	13	13	13	9	221.6	11	
NK	N66V-3120	234.9	18.2	13.0	55.5	28500.0	1.0	101.0	14	16	11	12	220.3	12	
ProHarvest	8265	229.0	20.4	11.2	57.5	32000.0	0.4	98.5	15	11	15	17	213.0	16	
Phoenix	6190 Artesian	224.9	17.5	12.9	54.3	31750.0	0.0	96.7	16	14	17	15	210.7	17	
DeKalb	DKC64-69RIB (Check)	214.8	21.2	10.2	57.0	29250.0	1.3	92.4	17	17	12	11	214.2	15	
	Check Avg.	232.5	21.1	11.0	57.5	30375.0	0.7								
	Test Avg.	248.1	20.3	12.3	55.6	31544.1	0.4								
	LSD (0.05)	18.3	1.0	1.1	0.8	3093.9	NS								
	% C.V.	5.0	3.0	5.7	0.9	6.1	97.7								
	Check Avg. + LSD (0.05)	250.8													
¹ The bold text	and darker shading indicate that	the yield of the	he hybrids is	not statistic	cally differer	nt from the t	op yielding	hybrid							
NS = not statist	tically significant at a 5% probabi														

Table 12. Irrigated Corn Hybrid Performance Summary	
Plum Creek Farms, LLC (Sussex County) Laurel, Delaware	

Planted 5/9/20	17 & Harvested September 27, N	ledium Hybrid	ds			Pe	erformance Rank	ing for		Poole					
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Laurel Irrigated	Georgetown Irrigated	Marydel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5518AM™	272.5	21.2	12.9	55.6	31750.0	0.0	113.4	1	2	1	5	251.0	1	
ProHarvest	X16831	270.2	21.5	12.6	56.1	30625.0	0.4	112.5	2	6	5	2	244.0	3	
ProHarvest	X17850	265.4	22.8	11.7	56.6	31125.0	0.0	110.5	3	4	4	6	242.3	5	
Doebler's®	RPM® 5818AM™	263.8	21.7	12.2	56.2	30000.0	0.4	109.8	4	1	2	4	248.3	2	
ProHarvest	X15851	259.1	20.8	12.5	55.0	29250.0	0.0	107.9	5	5	9	3	237.7	7	
NK	N83D-3111	259.0	23.2	11.2	54.2	32125.0	0.0	107.8	6	9	3	1	243.6	4	
ProHarvest	X16852	252.7	19.2	13.2	54.6	31375.0	0.0	105.2	7	10	8	7	233.1	8	
ProHarvest	8522	252.5	21.1	12.0	56.8	31000.0	0.0	105.1	8	3	6	9	239.8	6	
DeKalb	DKC67-72RIB (Check)	245.1	20.6	11.9	56.2	31750.0	0.9	102.1	9	11	11	10	222.1	11	
TA Seeds	TA758-28 RIB	245.0	21.1	11.6	56.6	30625.0	0.0	102.0	10	7	10	8	228.5	9	
DeKalb	DKC65-71RIB (Check)	235.4	18.2	13.0	56.1	32500.0	0.0	98.0	11	8	7	11	223.1	10	
	Check Avg.	240.2	19.4	12.4	56.1	32125.0	0.4								
	Test Avg.	256.4	21.0	12.2	55.8	31102.3	0.2								
	LSD (0.05)	19.1	1.1	1.0	1.1	NS	NS								
	% C.V.	4.7	3.3	5.5	1.2	7.0	54.5								
	Check Avg. + LSD (0.05)	259.3													
¹ The bold text a	The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid														
NS = not statistically significant at a 5% probability level															

Table 13. Irrigated Corn Hybrid Performance Summary	
Davis Farms (Sussex County) Georgetown, Delaware	

Planted 4/28/2017 & Harvested September 21, Early Hybrids									P	erformance Rank	ing for		Pool		
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Marydel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Augusta	5065	245.5	22.3	11.0	57.4	27250.0	0.0	117.9	1	3	5	1	247.8	2	
Doebler's®	RPM® 4917AM™	234.7	20.3	11.6	56.7	28375.0	1.3	112.7	2	4	3	9	240.3	4	233.8
Augusta	1564	233.7	15.9	14.7	51.9	28125.0	0.0	112.2	3	6	2	5	243.9	3	
Doebler's®	RPM® 5018AM™	226.6	18.1	12.6	55.9	28500.0	0.5	108.8	4	1	1	2	252.9	1	
DeKalb	DKC62-20RIB (Check)	226.1	20.4	11.1	56.3	28875.0	0.0	108.6	5	2	12	8	235.0	6	
ARMOR	AXC7110	225.7	19.4	11.7	57.8	29625.0	0.0	108.4	6	5	11	3	236.0	5	
ProHarvest	6734	223.9	18.0	12.4	56.5	26750.0	0.0	107.5	7	10	6	11	227.6	9	
ProHarvest	6886	222.3	17.6	12.7	55.9	28375.0	1.3	106.8	8	9	4	7	232.6	7	225.5
Phoenix	5352A4 Artesian	219.1	19.9	11.0	55.7	29875.0	1.3	105.2	9	8	8	6	230.3	8	
MorCorn	MC3966	213.3	19.5	11.0	56.6	29250.0	0.0	102.5	10	12	13	14	219.1	12	
ProHarvest	8074	212.0	19.3	11.0	57.2	29375.0	0.0	101.8	11	14	16	16	213.9	16	213.2
ProHarvest	6540	209.9	18.6	11.3	58.8	27000.0	0.0	100.8	12	18	18	18	207.6	17	
Augusta	5162	209.5	19.8	10.6	57.0	28750.0	0.9	100.6	13	7	10	12	223.5	11	
Doebler's®	RPM® 4417AMXT™	205.9	19.2	10.8	58.5	28875.0	0.0	98.9	14	15	9	15	216.5	14	
ARMOR	0909	205.7	17.4	11.9	55.5	26250.0	0.6	98.8	15	16	7	13	218.4	13	
ARMOR	AX6 7109	202.7	18.7	10.9	57.7	29000.0	0.0	97.4	16	11	14	4	224.8	10	
TA Seeds	TA618-22DPRIB	202.3	18.9	10.8	56.1	28375.0	0.0	97.1	17	17	17	20	206.5	18	
TA Seeds	TA536-22 DPRIP	195.3	17.9	11.0	58.7	28625.0	0.5	93.8	18	19	20	17	201.0	19	
ARMOR	0303	194.8	16.2	12.0	57.4	29125.0	0.0	93.5	19	21	21	19	194.7	21	
Augusta	4959	192.8	21.0	9.2	57.4	28625.0	35.7	92.6	20	13	15	10	214.9	15	219.4
DeKalb	DKC54-40RIB (Check)	190.4	15.9	12.0	59.0	29750.0	0.0	91.4	21	20	19	21	194.9	20	
	Check Avg.	208.2	18.1	11.5	57.7	29312.5	0.0								
	Test Avg.	213.9	18.8	11.5	56.9	28511.9	2.0								
	LSD (0.05)	15.6	1.3	1.0	0.7	2062.7	5.7								
	% C.V.	4.8	4.2	5.4	0.8	4.6	65.5								
	Check Avg. + LSD (0.05)	223.8													
¹ The bold text	and darker shading indicate that	the yield of t	he hybrids is	not statistic	ally differer	nt from the to	op yielding	hybrid							

Table 14. Irrigated Corn Hybrid Performance Summary
Davis Farms (Sussey County) Georgetown Delaware

Planted 4/28/2017 & Harvested September 21, Early-Medium Hybrids										Performance Ranking for					
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Marydel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
NK	N76A-3000GT	251.7	16.8	15.1	51.4	28000.0	0.5	118.3	1	11	8	4	241.0	5	
MorCorn	MC4377	241.5	20.7	11.7	54.3	28500.0	0.0	113.5	2	2	6	10	245.5	4	
ProHarvest	8277	237.8	21.0	11.4	55.4	30125.0	2.5	111.7	3	3	4	14	239.9	6	
ProHarvest	X15782	235.3	20.2	11.7	56.1	28875.0	0.0	110.6	4	8	10	5	237.5	8	
Doebler's®	RPM® 5315AM™	234.9	21.3	11.1	53.5	28625.0	0.0	110.4	5	6	1	2	247.3	2	233.9
Doebler's®	RPM® 5125AM™	227.7	19.4	11.8	56.8	29125.0	0.0	107.0	6	4	2	1	246.0	3	238.5
MorCorn	MC4319	225.0	21.8	10.4	56.9	28625.0	0.0	105.7	7	7	5	6	239.4	7	
ProHarvest	8404	224.8	21.5	10.5	57.1	28250.0	0.5	105.6	8	5	9	7	237.3	9	228.1
DeKalb	DKC64-35RIB (Check)	223.2	20.0	11.2	59.1	31500.0	0.4	104.9	9	9	7	8	235.5	10	
Augusta	1166	222.7	19.9	11.2	55.6	28750.0	0.4	104.7	10	1	3	3	248.2	1	
ProHarvest	8265	210.0	19.9	10.6	57.3	27750.0	0.0	98.7	11	15	15	17	213.0	16	
ProHarvest	8312	207.2	19.7	10.6	55.6	28875.0	0.8	97.4	12	10	16	16	218.2	14	227.0
Phoenix	5832A4 Artesian	206.6	19.2	10.8	56.9	31250.0	0.0	97.1	13	13	13	9	221.6	11	
Phoenix	6190 Artesian	204.6	17.7	11.6	53.6	29000.0	0.0	96.1	14	16	17	15	210.7	17	
TA Seeds	TA736-22DP RIB	204.0	19.9	10.3	57.7	27250.0	0.0	95.9	15	12	14	13	218.4	13	221.6
NK	N66V-3120	202.9	16.4	12.4	56.1	28875.0	8.9	95.4	16	14	11	12	220.3	12	
DeKalb	DKC64-69RIB (Check)	202.5	20.6	9.8	57.2	29000.0	0.0	95.2	17	17	12	11	214.2	15	
	Check Avg.	212.8	20.3	10.5	58.2	30250.0	0.2								
	Test Avg.	221.3	19.8	11.3	55.9	289632	0.8								
	LSD (0.05)	16.7	1.1	0.9	0.6	1495.0	4.0								
	% C.V.	4.8	3.4	4.9	0.7	3.3	77.4								
	Check Avg. + LSD (0.05)	229.5													
¹ The bold text	and darker shading indicate that	the yield of t	he hybrids is	not statistic	ally differer	nt from the t	op yielding	hybrid							

Table 15. Irrigated Corn Hybrid Performance Sumn	nary
Davis Farms (Sussex County) Georgetown Delawa	are

Planted 4/28/2	2017 & Harvested September 21,	Medium Hybr	rids		P	ing for	Pool								
Brand	Hybrid	Yield Bu/A ¹	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Marydel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
Doebler's®	RPM® 5818AM™	253.8	22.8	11.1	54.9	27625.0	0.0	115.5	1	4	2	4	248.3	2	
Doebler's®	RPM® 5518AM™	252.6	21.0	12.0	55.5	29625.0	0.0	114.9	2	1	1	5	251.0	1	
ProHarvest	8522	251.1	22.0	11.4	56.5	28125.0	0.0	114.2	3	8	6	9	239.8	6	
ProHarvest	X17850	231.1	23.4	9.9	56.5	28625.0	0.0	105.1	4	3	4	6	242.3	5	
ProHarvest	X15851	230.6	21.6	10.7	54.5	29625.0	1.3	104.9	5	5	9	3	237.7	7	
ProHarvest	X16831	228.0	22.2	10.3	55.5	26250.0	0.0	103.7	6	2	5	2	244.0	3	
TA Seeds	TA758-28 RIB	225.9	22.2	10.2	56.3	28125.0	0.0	102.8	7	10	10	8	228.5	9	
DeKalb	DKC65-71RIB (Check)	225.9	21.2	10.7	54.4	29875.0	0.4	102.8	8	11	7	11	223.1	10	
NK	N83D-3111	222.3	23.8	9.3	52.6	27500.0	1.3	101.1	9	6	3	1	243.6	4	
ProHarvest	X16852	221.7	20.1	11.1	53.8	29500.0	0.4	100.9	10	7	8	7	233.1	8	
DeKalb	DKC67-72RIB (Check)	213.6	20.1	10.7	55.9	30375.0	0.0	97.2	11	9	11	10	222.1	11	
	Check Avg.	219.8	20.6	10.7	55.2	30125.0	0.2								
	Test Avg.	232.4	21.8	10.7	55.1	28659.1	0.3								
	LSD (0.05)	13.8	0.8	0.8	0.8	2285.0	NS								
	% C.V.	3.6	1.6	4.4	0.8	5.3	66.1								
	Check Avg. + LSD (0.05)	233.6													
¹ The bold text	and darker shading indicate that	the yield of t	he hybrids is	not statistic	ally differer	nt from the to	op yielding	hybrid							
NS = not statis	tically significant at a 5% probabi	ility level													