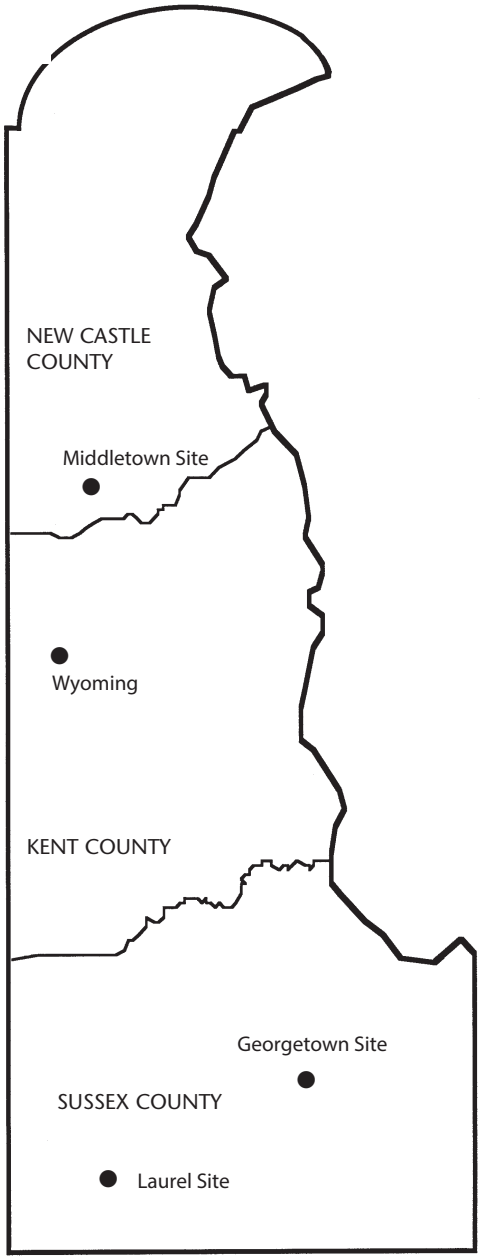
COOPERATIVE BULLETIN

DELAWARE HYBRID FIELD CORN PERFORMANCE TRIALS

2016

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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DELAWARE HYBRID FIELD CORN PERFORMANCE TRIALS - 2016

The 2016 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. Thirty eight hybrids were evaluated at four locations: Baker Farms at Middletown, DE (dryland); Thomas Family Farms at Wyoming, 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 (14 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 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 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.
- Yield/Moisture (Y/M) is the yield in bu/A (adjusted to 15.5% moisture) divided by the grain harvest moisture.
- Final population is the plant population per acre 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^{o}.

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 C.V.'s are expected to be higher at dryland locations particularly in drought years due to lower yields.

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. 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 Y has a significantly higher yield performance than hybrid X.

Note

When reviewing the enclosed data it is important to note moisture percentages when comparing hybrids within the same maturity. Comparisons should not 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 excessive ear drop and high 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 2016 growing season was characterized by cold conditions during planting and the early growing season. In April, rainfall totals were 3.91, 1.75, and 1.93 inches for Georgetown, Dover, and Townsend, DE, respectively, while the average temperature in April was 52.6, 53.5, and 52.2° F. for the three locations, respectively. Growers experienced cold temperatures during the first to the third week of May but over the month the average temperature for Georgetown, Dover, and Townsend was 61.2, 61.7, and 60.9° F., respectively (Tables 2 and 3). Nightly low temperatures fell into the thirties during the 16th of May and into the upper forties and low fifties from about May 1st to May 20th. Corn does not emerge when soil temperatures are less than 50° F. and the April and early May temperatures delayed planting by many growers. May had seven days with daily high temperatures greater than or equal to 80°F. at all locations. At the three reporting stations, June averaged 19 days with the high temperature greater than 80°F. and had nine, ten, and eight days greater than 85°F. at Georgetown, Dover, and Townsend, respectively. July and August were quite warm with 27 to 30 days with a high temperature greater than 80°F. July had nine to thirteen days greater than 90°F. but August had just six to ten days greater than 90°F. across the test sites. The high temperature exceeded 90°F. in August for four, seven, and six days at the Georgetown, Dover, and

Townsend locations, respectively. Overall, temperatures were quite favorable for the months of June through August for corn production in 2016.

Rainfall totals for May was at the long-term monthly average with 7.04, 5.34, and 6.87 inches received in Georgetown, Dover, and Townsend, respectively. June rainfall for the three locations was 4.05, 2.59, and 2.51 inches, respectively, while July rainfall totaled 5.72, 6.6, and 7.01 inches and August totaled 2.93, 3.14, and 3.69 inches, respectively. The Townsend (Middletown) location that had received 6.87 inches of rainfall in May and the low temperatures recorded have been marginally impacted since the soil there is a silt loam soil with a much higher water holding capacity than the soils at the other testing locations.

In June, July, and August at the three locations there were sometimes lengthy periods without significant rainfall (0.5 inches or more). In June, this period was 16, 10, and 10 days, respectively for the Georgetown, Dover, and Townsend (Middletown) locations. In July, the longest period without a half inch of rainfall was only nine days at all locations but occurred early in the month at the Georgetown location and in the middle of the month for the other locations. The worst month for drought conditions was August when nine day periods without rain occurred at Georgetown (August 7-15) and ten days (August 22-31) with an additional 17 day period from September 2-19). At the Dover location, there were too long periods with less than 0.5 inches of rain with a 15 day period from August 2-16 and a 28 day period from August 22-September 19. The Townsend (Middletown dryland) location, received only 0.01 inches of rain from August 2-13 and no rain occurred for a 28 day period that extended from August 22-September 19.

Yields at Middletown (Baker Farms) dryland location averaged 189, 201, and 172 bu/A for the early, early-medium, and medium maturity groups, respectively, compared to the check means of 190, 220, and 186 bu/A, respectively (Tables 4, 5, & 6). Two reps from the analysis were dropped from the early-medium and one rep from the medium maturity groups due to low yield as a result of standing water in those reps. There were significant differences among hybrids in yield, grain moisture, yield/moisture, and test weight for the early and early-medium maturity groups. There was also a significant difference among hybrids in plant population and root lodging for the early group. Stalk lodging differences were significant for the early-medium hybrids. For the medium maturity group there were significant differences among hybrids in grain moisture, yield/moisture, test weight, plant population, and stalk lodging.

The Kent County irrigated site at Wyoming (Thomas Family Farms) was excellent with an average yield of 230, 240, and 251 bu/A for the early, early-medium, and medium maturity groups, respectively, compared to the check means of 242, 255, and 246 bu/A, respectively (Tables 7, 8, & 9). There were significant yield, grain moisture, yield/moisture, and test weight differences among hybrids across all maturity groups. There were significant

differences among hybrids in the early-medium and medium maturity groups for plant population. There were significant differences among hybrids for stalk lodging in the early and medium maturity groups. In addition, there were significant hybrid differences for root lodging in the early and early-medium maturity groups. There were some hybrids with heavy root lodging as a result of heavy rain and wind that occurred close to the harvest time.

Yields at Laurel (Plum Creek Farms, LLC) irrigated no-till location averaged 215 bu/A for all the maturity groups, compared to the check means of 204, 220, and 210 bu/A, for the early, early-medium, and medium maturity groups, respectively (Tables 10, 11, & 12). There were significant differences among hybrids in grain moisture, yield/moisture, and test weight across all maturity groups. Yield was significantly different only among the early and early-medium hybrids and not significant for the medium hybrids. There were significant differences among hybrids in the early and medium maturity groups for plant population. There was no root lodging and only minor stalk lodging at this testing location.

Georgetown testing location experienced very wet and cold weather right after planting and germination was very late. Yields averaged 214, 225, and 233 bu/A, for the early, early-medium, and medium maturity groups, respectively, at Georgetown (Davis Farms) irrigated location compared to the check means of 212, 227, and 225 bu/A, respectively (Tables 13, 14, & 15). There were significant differences among hybrids in yield, grain moisture, yield/moisture, and test weight across all maturity groups. There were also significant differences among hybrids in the early maturity group for plant population, stalk and root lodging.

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.

	Baker Farms - Middletown (Dryland)	Thomas Family Farms - Wyoming (Irrigated)	Plum Creek Farms, LLC – Laurel (Irrigated)	Davis Farms, Georgetown (Irrigated)
Number of entries	38	38	38	38
Number of maturities	3	3	3	3
Target Population plants/A	24,000	30,000	30,000	30,000
Row length	17.4'	17.4'	17.4'	17.4'
Number of rows harvested	Center two rows	Center two rows	Center two rows	Center two rows
Number of replications	4	4	4	4
Planting date	May 10	May 10	May 9	April 25
Harvest date	October 4	October 6	September 23	September 14
Soil type	Matapeake silt loam	Sandy loam	Sandy loam	Rosedale loamy sand
Previous crop	Soybean	Soybean	Corn followed by corn	Soybean
Cover crop	None	None	None	None
Tillage practices	Disked, ripped, field cultivator	Disked, ripped, field cultivator	No-till	Disked, chisel plow & final disking
Cultivation	Yes	None	None	Yes
Fertilization	12 gallons/A of 20-10-0 (N-P_2O_5-K_2O) starter 2"x2" (25 lb N & 13 lb P). At V4 –V5 stage, 50 gallons/A of 30% UAN solution (162 lb N) was side-dressed.	3 tons/A of chicken manure plus 12 gallons/A of 20-10-0 (N-P_2O_5-K_2O) starter 2"x2" (25lb N & 13 lb P). At V4-V5 stage, 55 gallons/A of 30% UAN solution (180 lb N) was side-dressed.	12 gallons/A of 20-10-0 (N-P_2O_5-K_2O) starter 2"x2" (25 lb N & 13 lb P). At V4 –V5 stage, 50 gallons/A of 30% UAN solution (162 lb N) was side-dressed. 60lb N fertigated	300 lbs/A of 0-0-60 applied in spring. 12 gallons/A of 20-10-0 (N-P_2O_5-K_2O) starter 2"x2" (25 lb N & 13 lb P). At V4 –V5 stage 55 gallons/A of 30% UAN solution (180 lb N) was side-dressed.
Herbicide	Lexar 3 quarts/A + Simazine 1 quart/A with 15 gallons/acre of UAN (48 lb.N)	Lexar 3 quarts/A + Simazine 1 quart/A with 15 gallons/acre of UAN (48 lb.N) .	Lexar 3 quarts/A + Simazine 1 quart/A with 15 gallons/acre of UAN (48 lb.N)	Lexar 3 quarts/A + Simazine 1 quart/A with 15 gallons/acre of UAN (48 lb.N)
Insecticide	5.5 lb/acre Force 3G in seed furrow	5.5 lb/acre Force 3G in seed furrow	5.5 lb/acre Force 3G in seed furrow	5.5 lb/acre Force 3G in seed furrow
Irrigation	None	Center pivot	Center pivot	Center pivot

TABLE 2. DAILY TEMPERATURE AT OR NEAREST TEST LOCATIONS FOR THE 2016 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS DURING MAY AND JUNE.

Date of Month	May						June					
	Georgetown		Dover		Townsend		Georgetown		Dover		Townsend	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	54.3	48.8	53.8	48.6	53.9	46.5	82.7	64.5	84.9	66.0	87.2	62.4
2	77.7	50.9	75.5	50.6	71.7	49.5	71.9	65.5	78.0	66.3	79.9	65.5
3	70.1	50.2	59.9	52.5	58.5	52.6	74.7	64.3	74.6	66.3	76.7	65.4
4	54.2	49.6	54.1	49.1	52.9	48.7	82.2	62.5	80.5	63.5	82.3	63.8
5	52.2	48.4	54.0	48.1	54.5	47.9	85.7	66.1	85.2	67.8	83.7	67.3
6	54.0	47.4	53.4	48.6	52.2	47.9	85.3	70.9	85.3	67.0	85.7	66.1
7	62.3	48.9	62.2	49.0	61.8	47.9	88.1	63.9	85.7	67.7	84.7	65.7
8	71.7	49.0	70.0	48.6	67.2	46.8	74.1	54.3	73.2	54.1	71.7	55.5
9	67.2	43.1	68.2	43.2	65.8	41.8	79.1	50.6	78.9	49.0	77.8	51.2
10	64.4	51.8	61.2	49.5	61.8	48.0	79.1	55.4	77.9	52.1	78.0	53.2
11	70.2	51.4	60.6	48.5	61.8	47.6	89.2	59.2	89.8	57.4	91.1	63.2
12	70.5	56.4	73.4	55.4	73.2	55.9	93.3	68.6	91.2	68.8	90.4	67.6
13	70.1	55.4	71.0	58.7	70.8	57.7	77.8	60.6	77.3	60.7	76.5	59.1
14	76.6	51.7	75.9	51.3	73.3	48.1	79.2	61.9	78.1	60.2	77.4	57.5
15	60.3	47.2	60.0	46.9	58.7	45.9	77.8	56.5	74.6	54.9	74.2	53.6
16	63.1	37.4	64.5	36.9	63.8	36.6	69.9	64.2	69.8	63.0	70.3	63.1
17	63.7	48.7	60.5	49.9	57.9	49.2	78.2	62.4	79.3	62.7	83.2	62.1
18	64.5	51.5	66.5	49.0	67.1	47.4	81.2	56.6	84.2	56.0	84.2	57.2
19	71.9	52.2	73.1	51.6	73.7	51.2	87.9	57.2	88.5	61.7	88.5	60.1
20	75.9	46.2	76.7	46.5	77.0	45.6	89.1	63.7	89.4	66.0	89.4	61.9
21	61.7	53.7	60.5	54.6	59.9	53.5	87.2	67.3	88.3	65.9	86.8	67.1
22	58.5	53.5	62.0	52.4	64.4	51.6	82.4	65.7	83.3	66.7	83.1	67.2
23	68.4	55.0	71.5	55.0	74.8	53.3	80.3	64.4	81.2	65.1	82.1	64.8
24	80.3	56.5	81.6	57.4	79.8	54.7	82.1	68.1	80.3	69.1	79.2	68.6
25	85.8	57.4	86.8	55.2	84.2	52.0	79.9	62.6	82.4	63.4	84.2	63.7
26	89.5	58.3	90.5	58.4	88.7	56.2	80.9	57.0	82.9	58.2	83.9	58.8
27	88.4	68.0	89.6	69.9	88.7	71.2	85.5	60.3	86.3	59.5	85.8	61.8
28	88.1	64.6	89.6	67.8	88.4	67.7	78.7	71.4	83.1	70.5	84.0	69.3
29	83.4	56.9	83.0	59.6	86.1	59.3	85.0	66.1	82.9	66.4	81.8	66.4
30	75.5	67.1	76.2	68.7	78.2	69.4	84.6	62.0	85.1	60.3	84.1	59.7
31	83.6	64.9	86.5	67.4	87.3	65.9						
AVG.	70.3	53.0	70.1	53.2	69.6	52.2	81.8	62.5	82.1	625	82.3	62.3

TABLE 2. DAILY TEMPERATURE AT OR NEAREST TEST LOCATIONS FOR THE 2016 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS DURING JULY AND AUGUST (continued).

Date of Month	July						August					
	Georgetown		Dover		Townsend		Georgetown		Dover		Townsend	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	85.1	68.6	87.8	67.5	87.7	64.5	88.2	72.4	87.0	72.5	84.0	72.7
2	80.4	65.5	78.3	63.0	77.8	61.6	83.7	68.9	83.9	70.5	82.1	69.1
3	70.2	59.5	74.6	62.4	75.5	61.2	79.4	65.7	81.9	65.0	80.9	63.1
4	74.1	62.4	78.0	63.9	78.4	63.9	81.6	61.8	81.8	62.7	82.3	61.8
5	89.8	73.3	87.7	73.0	88.2	72.4	84.8	61.2	85.1	61.8	83.7	60.6
6	90.3	72.4	91.5	71.0	92.4	70.5	88.3	70.8	88.7	71.9	87.6	72.3
7	92.2	74.2	91.0	73.8	91.9	72.8	86.9	67.9	86.3	68.0	84.9	65.1
8	92.7	75.2	92.5	72.6	91.9	72.0	87.9	63.2	90.4	65.3	85.3	65.8
9	89.3	72.4	84.5	72.7	86.0	71.7	85.4	63.7	84.8	63.4	84.4	63.5
10	83.0	69.2	83.4	68.3	84.1	67.3	89.4	73.0	91.4	74.0	88.8	73.1
11	85.1	63.6	84.1	61.3	85.1	59.4	90.0	75.1	93.0	76.9	90.9	76.0
12	85.3	62.6	85.6	62.8	87.4	60.7	90.4	76.9	93.9	78.2	92.5	78.5
13	85.5	69.4	85.8	71.8	84.5	69.0	93.8	78.7	95.7	79.1	93.3	79.0
14	91.6	75.2	92.8	74.1	92.2	73.1	95.4	76.5	94.2	73.1	93.0	71.8
15	91.1	75.0	89.9	74.7	89.2	74.2	94.4	72.4	92.0	71.7	90.5	70.4
16	88.6	72.7	90.2	71.0	91.4	69.3	92.0	72.7	93.6	72.0	91.3	69.8
17	90.1	70.6	89.1	68.6	88.9	68.5	90.6	72.0	89.3	69.8	88.0	70.6
18	92.1	72.2	92.6	70.8	91.7	71.0	86.5	70.6	86.4	70.5	85.6	70.2
19	87.8	71.9	86.8	71.3	87.7	71.0	88.4	69.9	88.2	69.0	86.0	66.6
20	83.8	66.1	83.5	66.2	84.8	65.7	88.7	66.6	90.3	67.0	89.3	64.7
21	87.3	65.6	88.6	63.6	87.9	62.5	88.7	68.9	88.8	70.1	85.0	69.9
22	90.2	70.4	91.0	70.7	89.7	69.0	81.7	63.3	81.1	62.4	80.0	60.5
23	95.0	74.4	93.7	73.6	93.2	73.6	81.9	57.1	81.2	56.4	79.3	54.9
24	93.3	74.4	91.5	68.6	N/A	N/A	84.2	57.1	85.0	59.0	83.3	58.4
25	95.9	76.3	95.6	75.2	94.6	74.1	85.4	60.0	87.6	64.8	84.9	66.3
26	92.6	73.0	91.0	72.5	89.3	71.7	92.7	71.2	90.9	72.4	89.9	69.7
27	93.4	75.9	91.8	75.5	90.5	73.5	86.8	68.9	89.4	67.9	88.5	65.4
28	90.5	72.9	91.1	72.5	92.5	71.5	85.6	64.6	85.6	64.7	85.9	64.7
29	86.1	72.2	88.0	71.7	86.5	70.6	89.1	62.0	89.1	64.5	87.9	63.8
30	87.0	70.5	88.3	71.5	84.8	70.5	89.1	68.6	87.3	67.3	85.9	64.1
31	89.7	73.8	90.0	74.5	87.6	73.0	89.2	65.4	88.6	65.4	88.3	62.4
AVG.	88.0	70.7	88.1	70.0	85.0	66.8	87.7	68.0	88.1	68.3	86.6	67.3

TABLE 3: DAILY RAINFALL (INCHES) AT OR NEAREST TEST LOCATIONS FOR THE 2016 DELAWARE CORN HYBRID VARIETY PERFORMANCE TRIALS

Date of Month	May			June			July			August		
	Georgetown	Dover	Townsend	Georgetown	Dover	Townsend	Georgetown	Dover	Townsend	Georgetown	Dover	Townsend
1	0.49	0.34	0.35	0	0	0	0.09	0	0	0.26	0.48	0.37
2	0.43	0.7	0.76	0	0	0	0	0	0	0	0	0
3	0.3	0.11	0.14	0.01	0.17	0.07	0.32	0.01	0	0	0	0
4	1.1	0.01	0.04	0	0	0	0.04	0.02	0.14	0	0	0
5	0	0	0.01	0.04	0.46	0.27	0	2.05	0.38	0	0	0.01
6	0.66	1.01	1.38	0	0.01	0	0	0	0	0.58	0.12	0
7	0.01	0.04	0.14	0.06	0.01	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0.39	0.02	0	0	0
9	0.01	0	0	0	0	0	0	0	0.01	0	0.02	0
10	0	0	0.01	0	0	0	0	0	0	0	0	0
11	0.37	0.4	0.17	0	0	0	0	0	0	0	0	0
12	0	0.01	0	0	0	0	0	0	0	0	0	0
13	0.15	0.17	0.15	0	0	0	0.56	0.32	1.74	0	0	0
14	0.16	0.21	0.12	0	0	0	0	0	0	0	0	0.13
15	0	0	0	0	0.02	0.01	0	0	0	0	0.36	0.32
16	0	0	0	0.54	0.37	1.24	0	0	0.08	0.4	0.08	0.02
17	0.24	0.3	0.29	0.25	0.14	0.01	0	0	0	0.65	0.69	0.38
18	0	0	0	0	0	0	0.44	0.42	0.4	0.08	0.16	0.18
19	0	0.01	0	0	0	0	0	0	0	0	0.02	0
20	0	0	0	0	0	0	0.45	0.1	0	0	0	0
21	0.92	0.73	1.03	0.87	0.16	0.31	0	0	0	0.96	1.14	2.13
22	0.14	0.25	0.21	0	0	0	0	0	0	0	0	0
23	0.01	0.03	0.09	0.14	0	0.08	0	0.58	0.41	0	0	0
24	0.01	0	0.01	1.98	0.4	0.28	0	0.01	0	0	0	0
25	0	0	0	0	0	0	0.01	0	0	0	0	0
26	0	0	0	0	0	0	1.34	0	0	0	0.07	0
27	0	0	0	0	0	0.08	0.01	0	0	0	0	0
28	0	0	0	0.16	0.85	0.16	2.29	1.61	1.65	0	0	0
29	0.01	0.82	1.71	0	0	0	0.13	0.97	1.46	0	0	0
30	1.8	0.2	0.26	0	0	0	0	0.12	0.61	0	0	0
31	0.23	0	0				0.04	0	0.11	0	0	0.15
Total	7.04	5.34	6.87	4.05	2.59	2.51	5.72	6.6	7.01	2.93	3.14	3.69

DELAWARE FIELD CORN PERFORMANCE TRIALS HYBRID ENTRIES

Early season hybrids

Brand	Hybrid	Trait	Relative maturity days
TA Seeds	TA547-22 DPRIB	VT2P RIB	104
TA Seeds	TA583-22 DPRIB	VT2P RIB	108
Augusta	A1108	VT2Pro	108
Augusta	A4959	3110GT	109
Doebler's®	RPM® 4816AM™	AcreMax Above	108
Doebler's®	RPM® 4917AM™	AcreMax Above	110
Doebler's®	RPM® 5015AM™	AcreMax Above	110
NK	N50D	Agrisure 3010	103
NK	N66V	Agrisure 3000GT	107
ProHarvest Seeds	6565	Genuity SmartStax RIB	105
ProHarvest Seeds	6705	Genuity SmartStax RIB	107
ProHarvest Seeds	6860	Agrisure VIP3111	108
ProHarvest Seeds	6886	Genuity Vt2 Pro RIB	108
ProHarvest Seeds	6101	SmartStax RIB	101
DeKalb	**DKC58-06RIB (Check)**	GENSS	108

Early-Medium season hybrids

Brand	Hybrid	Trait	Relative maturity days
TA Seeds	TA667-31	V.P 3111	111
TA Seeds	TA736-22DP RIB	VT2P RIB	113
Augusta	A5062	3110GT	112
Augusta	A5063	VT2Pro	113
Augusta	A1564	GTCBLL	114
Augusta	A6664	VT2Pro	114
Doebler's®	RPM® 5125AM™	AcreMax Above	111
Doebler's®	RPM® 5315AM™	AcreMax Above	113
Phoenix	5352A4	Viptera 3111	109
NK	N68K	Agrisure Viptera 3111	111
NK	N69D	Agrisure 3000GT	112
ProHarvest Seeds	8074	Genuity SmartStax RIB	110
ProHarvest Seeds	8244	Genuity SmartStax RIB	112
ProHarvest Seeds	8265	Agrisure 3000GT	112
ProHarvest Seeds	8312	Genuity SmartStax RIB	113
DeKalb	**DKC63-33RIB (Check)**	GENSS	113
DeKalb	**DKC63-87RIB (Check)**	GENVT2P	113

Medium season hybrids

Hybrid	Brand	Trait	Relative maturity days
TA Seeds	TA767-22DP RIB	VT2P RIB	116
TA Seeds	TA774-22DP RIB	VT2P RIB	116
Augusta	A1565	GTCBLL	115
Doebler's®	5615GRQ	Agrisure 3000GT	116
Doebler's®	5815GRQ	Agrisure 3000GT	118
NK	N74L	Agrisure 3010	114
NK	N83D	Agrisure 3000GT	118
ProHarvest Seeds	8404	Genuity VT2Pro RIB	114
ProHarvest Seeds	8455	Agrisure 3000GT	114
DeKalb	**DKC65-71RIB (Check)**	GENDGVT2P	115
DeKalb	**DKC65-19RIB (Check)**	GENVT3P	115

Hybrid genetic traits and description

Trait name	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
CB	Corn Borer
CL	Clearfield
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
3110GT	Glyphosate and glufosinate tolerance herbicides in addition to having protection from Western, Northern, Southern and Mexican rootworm and European and Southwestern corn borer.

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

		Planted 5/10/2016 & Harvested October 4, Early Hybrids								Performance Ranking for				Pooled sites		
Brand	**Hybrid**	**Yield Bu/A[1]**	**% Moisture**	**Yield/ Moisture**	**Test Weight**	**Final Pop**	**% Stalk Lodging**	**% Root Lodging**	**% Relative Yield to Check Avg.**	**Middletown Dry land**	**Laurel Irrigated**	**Georgetown Irrigated**	**Wyoming Irrigated**	**Yield Avg. Bu/A**	**Rank**	**Two Year Yield Ave. Bu/A**
NK	**N66V**	**214.5**	20.5	10.5	53.0	23625.0	0.0	2.7	113.0	1	7	2	7	227.2	3	224.0
AUGUSTA	**A1108**	**207.3**	19.1	10.9	54.0	22875.0	0.0	0.0	109.2	2	4	7	6	222.1	5	
DOEBLER'S®	**RPM® 5015AM™**	**206.8**	21.5	9.6	53.9	22250.0	0.5	0.0	109.0	3	6	4	2	227.3	1	221.3
AUGUSTA	**A4959**	**202.2**	21.6	9.4	56.3	21375.0	1.1	3.0	106.5	4	3	3	10	223.8	4	221.2
DOEBLER'S®	RPM® 4917AM™	191.6	22.4	8.6	54.6	20250.0	0.0	0.0	100.9	5	1	1	1	227.2	2	
DeKalb	DKC58-06RIB **(Check)**	189.8	21.7	8.8	55.0	22000.0	0.0	0.0	100.0	6	12	10	4	212.0	9	
TA SEEDS	TA583-22 DPRIB	187.7	18.9	10.0	54.9	21125.0	0.0	0.0	98.9	7	8	8	11	211.6	10	211.2
DOEBLER'S®	RPM® 4816AM™	185.1	20.6	9.0	55.7	20625.0	0.6	0.0	97.5	8	9	9	3	214.9	8	218.8
ProHarvest Seeds	6886	182.5	18.8	9.7	53.5	21500.0	0.0	0.0	96.2	9	2	6	5	218.3	6	
ProHarvest Seeds	6705	182.0	20.4	9.0	56.2	21875.0	0.0	0.0	95.9	10	5	5	9	217.0	7	
TA SEEDS	TA547-22 DPRIB	181.3	20.3	8.9	54.6	21625.0	0.0	0.0	95.5	11	10	11	8	211.1	11	
NK	N50D	180.9	18.8	9.6	56.6	23250.0	1.1	6.2	95.3	12	13	14	15	189.7	14	
ProHarvest Seeds	6565	177.3	19.9	9.0	56.9	22750.0	0.0	0.0	93.4	13	14	13	12	195.3	12	
ProHarvest Seeds	6860	176.4	19.7	9.0	53.8	23250.0	0.5	0.0	92.9	14	11	12	14	194.9	13	
ProHarvest Seeds	6101	169.2	18.4	9.2	56.1	21625.0	0.5	0.0	89.1	15	15	15	13	186.1	15	
	Check Avg.	189.8	21.7	8.8	55.0	22000.0	0.0	0.0								
	Test Avg.	189.0	20.2	9.4	55.0	22000.0	0.3	0.8								
	LSD (0.05)	20.4	1.5	1.0	1.1	1922.3		3.2								
	% C.V.	7.6	5.2	7.8	1.4	6.1	253.1	283.5								
	Check Avg. + LSD (0.05)	210.2														

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

		Planted 5/10/2016 & Harvested October 4, Early-Medium Hybrids								Performance Ranking for				Pooled sites		
Brand	**Hybrid**	**Yield Bu/A[1]**	**% Moisture**	**Yield/ Moisture**	**Test Weight**	**Final Pop**	**% Stalk Lodging**	**% Root Lodging**	**% Relative Yield to Check Avg.**	**Middletown Dry land**	**Laurel Irrigated**	**Georgetown Irrigated**	**Wyoming Irrigated**	**Yield Avg. Bu/A**	**Rank**	**Two Year Yield Ave. Bu/A**
DeKalb	**DKC63-87RIB (Check)**	**226.9**	19.7	11.5	54.8	23250.0	0.6	0.0	103.3	1	10	9	1	230.8	3	233.5
Phoenix	**5352A4**	**214.3**	21.0	10.2	55.1	23000.0	1.1	2.8	97.6	2	8	17	12	217.0	11	
DeKalb	DKC63-33RIB **(Check)**	212.2	21.7	9.8	56.4	22875.0	2.2	0.0	96.6	3	3	7	4	230.1	4	
ProHarvest Seeds	8312	211.6	21.9	9.7	54.7	21625.0	0.6	0.0	96.4	4	1	2	2	235.7	1	
TA SEEDS	TA736-22DP RIB	208.4	22.1	9.5	55.6	23125.0	0.0	0.0	94.9	5	11	8	5	224.8	6	228.7
AUGUSTA	A1564	205.1	18.5	11.1	52.3	23250.0	0.0	0.0	93.4	6	6	3	10	225.9	5	
DOEBLER'S®	RPM® 5125AM™	204.8	20.9	9.8	56.9	23000.0	1.6	0.0	93.3	7	4	1	6	231.0	2	233.8
AUGUSTA	A6664	203.6	21.5	9.5	54.2	22500.0	0.0	0.0	92.7	8	12	4	9	221.9	7	228.6
AUGUSTA	A5063	202.5	21.5	9.4	55.8	22000.0	0.6	0.0	92.2	9	5	5	16	220.3	9	235.4
ProHarvest Seeds	8244	199.7	24.0	8.3	55.8	21875.0	1.2	0.0	90.9	10	7	12	14	217.1	10	
ProHarvest Seeds	8074	198.4	22.8	8.8	55.8	23250.0	1.7	0.0	90.3	11	15	10	15	212.4	16	
NK	N69D	197.2	21.9	9.0	54.9	22875.0	0.0	0.0	89.8	12	14	16	8	213.7	14	
TA SEEDS	TA667-31	196.7	22.4	8.8	54.6	23750.0	0.0	0.0	89.6	13	13	15	7	214.6	13	
AUGUSTA	A5062	193.9	23.0	8.4	57.1	22750.0	1.1	1.7	88.3	14	17	6	13	215.3	12	
ProHarvest Seeds	8265	178.2	21.4	8.4	54.3	21250.0	0.0	0.0	81.1	15	9	13	11	212.6	15	
DOEBLER'S®	RPM® 5315AM™	177.8	20.0	8.9	56.2	23000.0	3.9	0.0	81.0	16	2	11	3	220.5	8	234.1
NK	N68K	177.6	19.9	9.0	52.0	23125.0	0.0	0.0	80.9	17	16	14	17	201.0	17	
	Check Avg.	219.6	20.7	10.7	55.6	23062.5	1.4	0.0								
	Test Avg.	200.5	21.4	9.4	55.1	22735.3	0.9	0.3								
	LSD (0.05)	14.7	1.4	0.8	1.4		2.0									
	% C.V.	5.1	4.5	6.1	1.8	4.8	161.3	606.2								
	Check Avg. + LSD (0.05)	234.3														

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/10/2016 & Harvested October 4, Medium Hybrids										Performance ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Middletown Dry land	Laurel Irrigated	Georgetown Irrigated	Wyoming Irrigated	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DeKalb	DKC65-19RIB (Check)	189.8	21.6	8.8	58.1	22375.0	1.1	0.0	101.9	1	10	10	10	213.3	9	214.1
DeKalb	DKC65-71RIB (Check)	182.7	19.7	9.3	56.3	22250.0	0.0	0.0	98.1	2	5	5	7	220.7	4	
DOEBLER'S®	5815GRQ	177.4	22.1	8.1	55.9	22750.0	0.0	0.6	95.3	3	2	1	3	226.5	1	233.5
NK	N74L	177.3	19.2	9.2	52.2	23750.0	0.0	0.0	95.2	4	3	9	11	214.9	8	
ProHarvest Seeds	8455	174.9	21.6	8.1	52.8	22875.0	0.0	0.0	93.9	5	7	8	6	216.9	7	
TA SEEDS	TA767-22DP RIB	171.7	19.2	8.9	55.5	22250.0	3.4	0.0	92.2	6	11	2	1	220.8	3	
ProHarvest Seeds	8404	170.6	20.9	8.1	56.6	21750.0	0.0	0.6	91.6	7	6	6	2	218.8	5	
TA SEEDS	TA774-22DP RIB	167.4	21.2	7.9	56.0	20125.0	0.0	0.0	89.9	8	9	11	5	210.6	10	223.4
AUGUSTA	A1565	166.6	19.5	8.5	53.2	21750.0	0.0	0.0	89.5	9	4	4	9	218.1	6	
NK	N83D	160.8	22.7	7.1	54.2	21250.0	0.6	0.0	86.4	10	1	3	4	221.4	2	
DOEBLER'S®	5615GRQ	149.0	21.6	6.9	52.5	22375.0	0.5	0.0	80.0	11	8	7	8	210.1	11	215.8
	Check Avg.	186.2	20.7	9.0	57.2	22312.5	0.5	0.0								
	Test Avg.	171.6	20.8	8.3	54.8	22136.4	0.5	0.1								
	LSD (0.05)		1.0	0.9	1.0	1635.0	1.8									
	% C.V.	8.9	3.2	7.6	1.2	5.1	249.2	476.8								
	Check Avg. + LSD (0.05)	208.2														

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

Planted 5/10/2016 & Harvested October 6, Early Hybrids										Performance ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Wyoming Irrigated	Georgetown Irrigated	Laurel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DOEBLER'S®	**RPM® 4917AM™**	**249.8**	22.9	11.0	54.1	29000.0	0.0	19.8	103.1	1	1	1	5	227.2	2	
DOEBLER'S®	**RPM® 5015AM™**	**247.7**	21.6	11.5	53.6	29500.0	2.2	0.4	102.2	2	4	6	3	227.3	1	221.3
DOEBLER'S®	**RPM® 4816AM™**	**245.8**	22.7	10.9	53.6	27875.0	0.5	0.5	101.4	3	9	9	8	214.9	8	218.8
DEKALB	**DKC58-06RIB (Check)**	**242.4**	21.6	11.3	54.4	29125.0	0.9	1.8	100.0	4	10	12	6	212.0	9	
ProHarvest Seeds	**6886**	**240.6**	20.3	11.9	52.9	29750.0	2.9	7.2	99.3	5	6	2	9	218.3	6	
AUGUSTA	**A1108**	**240.2**	20.4	11.8	53.6	28625.0	0.4	8.7	99.1	6	7	4	2	222.1	5	
NK	**N66V**	**240.1**	27.5	8.8	51.5	29750.0	0.4	54.7	99.1	7	2	7	1	227.2	3	224.0
TA SEEDS	**TA547-22 DPRIB**	**239.0**	19.8	12.1	54.0	29000.0	0.5	2.6	98.6	8	11	10	11	211.1	11	
ProHarvest Seeds	6705	234.1	20.6	11.4	54.5	29125.0	3.4	6.0	96.6	9	5	5	10	217.0	7	
AUGUSTA	A4959	233.6	23.1	10.1	55.3	28500.0	1.8	18.4	96.4	10	3	3	4	223.8	4	221.2
TA SEEDS	TA583-22 DPRIB	228.3	20.2	11.3	54.3	26500.0	1.9	2.5	94.2	11	8	8	7	211.6	10	211.2
ProHarvest Seeds	6565	211.9	21.0	10.1	56.9	27750.0	1.8	1.4	87.4	12	13	14	13	195.3	12	
ProHarvest Seeds	6101	204.6	19.5	10.5	55.5	28875.0	4.8	0.4	84.4	13	15	15	15	186.1	15	
ProHarvest Seeds	6860	193.3	21.9	8.9	54.0	27375.0	0.0	7.5	79.7	14	12	11	14	194.9	13	
NK	N50D	192.7	21.5	9.0	55.7	25750.0	11.9	54.4	79.5	15	14	13	12	189.7	14	

Check Avg.	242.4	21.6	11.3	54.4	29125.0	0.9	1.8
Test Avg.	229.6	21.6	10.7	54.2	28433.3	111.6	87.0
LSD (0.05)	11.5	1.2	0.8	0.6		2.2	12.4
% C.V.	3.5	3.8	5.1	0.8	7.3	3.5	15.4
Check Avg. + LSD (0.05)	253.9						

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/10/2016 & Harvested October 6, Early-Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Wyoming Irrigated	Georgetown Irrigated	Laurel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DEKALB	**DKC63-87RIB (Check)**	**257.1**	23.7	10.9	52.5	30250.0	0.0	15.4	100.9	1	9	10	1	230.8	3	233.5
ProHarvest Seeds	**8312**	**254.1**	23.1	11.0	52.8	29125.0	0.4	0.8	99.8	2	2	1	4	235.7	1	
DOEBLER'S®	**RPM® 5315AM™**	**252.8**	23.4	10.8	51.7	30375.0	0.4	3.7	99.3	3	11	2	16	220.5	8	234.1
DEKALB	**DKC63-33RIB (Check)**	**252.4**	22.6	11.2	54.2	29500.0	0.0	14.8	99.1	4	7	3	3	230.1	4	
TA SEEDS	**TA736-22DP RIB**	**251.2**	22.9	11.0	54.4	28250.0	0.0	2.2	98.6	5	8	11	5	224.8	6	228.7
DOEBLER'S®	**RPM® 5125AM™**	**248.1**	21.5	11.6	55.6	29750.0	0.9	3.4	97.4	6	1	4	7	231.0	2	233.8
TA SEEDS	**TA667-31**	**244.3**	23.3	10.5	53.5	29375.0	0.4	14.1	95.9	7	15	13	13	214.6	13	
NK	**N69D**	**243.9**	24.0	10.2	53.4	29750.0	0.0	21.4	95.8	8	16	14	12	213.7	14	
AUGUSTA	A6664	241.0	23.4	10.3	53.2	28875.0	0.9	0.9	94.6	9	4	12	8	221.9	7	228.6
AUGUSTA	A1564	239.4	21.2	11.3	50.3	29250.0	0.0	12.7	94.0	10	3	6	6	225.9	5	
ProHarvest Seeds	8265	238.2	23.8	10.1	53.6	28250.0	0.0	11.8	93.5	11	13	9	15	212.6	15	
Phoenix	5352A4	234.4	23.2	10.1	52.7	29375.0	0.0	10.5	92.0	12	17	8	2	217.0	11	
AUGUSTA	A5062	234.2	26.4	8.9	52.4	29750.0	0.0	44.0	92.0	13	6	17	14	215.3	12	
ProHarvest Seeds	8244	228.8	22.9	10.0	55.1	28500.0	0.9	0.8	89.8	14	12	7	10	217.1	10	
ProHarvest Seeds	8074	224.4	22.6	9.9	54.2	29750.0	0.4	0.0	88.1	15	10	15	11	212.4	16	
AUGUSTA	A5063	222.8	23.7	9.4	53.6	27750.0	0.5	16.5	87.5	16	5	5	9	220.3	9	235.4
NK	N68K	209.7	21.4	9.9	50.0	29250.0	0.0	6.4	82.3	17	14	16	17	201.0	17	
	Check Avg.	254.7	23.2	11.0	53.3	29875.0	0.0	15.1								
	Test Avg.	239.8	23.1	10.4	53.1	29242.6	219.0	90.3								
	LSD (0.05)	14.0	1.2	0.9	0.5	1432.4		10.6								
	% C.V.	4.1	3.7	5.9	0.7	3.4	0.9	13.6								
	Check Avg. + LSD (0.05)	268.7														

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/10/2016 & Harvested October 6, Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Wyoming Irrigated	Georgetown Irrigated	Laurel Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
TA SEEDS	**TA767-22DP RIB**	**265.9**	23.6	11.3	50.6	29375.0	0.0	0.4	108.0	1	2	11	6	220.8	3	
ProHarvest Seeds	**8404**	**255.5**	23.6	10.9	53.8	27500.0	0.0	10.0	103.8	2	6	6	7	218.8	5	
DOEBLER'S®	**5815GRQ**	**255.0**	25.7	9.9	52.5	29500.0	0.0	3.8	103.6	3	1	2	3	226.5	1	233.5
NK	**N83D**	**253.7**	25.8	9.8	52.3	30500.0	0.0	5.3	103.0	4	3	1	10	221.4	2	
TA SEEDS	**TA774-22DP RIB**	**253.5**	23.8	10.7	53.1	27250.0	0.5	8.7	103.0	5	11	9	8	210.6	10	223.4
ProHarvest Seeds	8455	250.9	23.9	10.5	52.3	28375.0	1.8	7.4	101.9	6	8	7	5	216.9	7	
DEKALB	DKC65-71RIB **(Check)**	250.3	22.8	11.0	53.2	29250.0	0.4	0.0	101.7	7	5	5	2	220.7	4	
DOEBLER'S®	5615GRQ	249.7	23.9	10.5	52.1	29875.0	0.0	7.1	101.4	8	7	8	11	210.1	11	215.8
AUGUSTA	A1565	246.3	21.8	11.3	52.0	28000.0	0.0	20.7	100.0	9	4	4	9	218.1	6	
DEKALB	DKC65-19RIB **(Check)**	242.2	23.2	10.5	55.6	27250.0	0.0	0.0	98.4	10	10	10	1	213.3	9	214.1
NK	N74L	234.1	20.3	11.6	52.0	29375.0	1.7	5.5	95.1	11	9	3	4	214.9	8	
	Check Avg.	246.2	23.0	10.7	54.4	28250.0	0.2	0.0								
	Test Avg.	250.6	23.5	10.7	52.7	28750.0	0.4	6.3								
	LSD (0.05)	12.6	0.7	0.5	0.6	1796.6	0.8									
	% C.V.	3.5	2.0	3.4	0.8	4.3	139.8	156.2								
	Check Avg. + LSD (0.05)	258.8														

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/9/2016 & Harvested September 23, Early Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Laurel Irrigated	Georgetown Irrigated	Wyoming Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DOEBLER'S®	**RPM® 4917AM™**	**233.7**	21.5	10.9	55.1	28000.0	0.0	0.0	114.4	1	1	1	5	227.2	2	
ProHarvest Seeds	**6886**	**231.0**	20.5	11.3	54.1	28750.0	0.0	0.0	113.1	2	6	5	9	218.3	6	
AUGUSTA	**A4959**	**229.7**	22.7	10.1	57.2	28375.0	0.5	0.0	112.4	3	3	10	4	223.8	4	221.2
AUGUSTA	**A1108**	**226.0**	19.4	11.6	54.5	30000.0	0.0	0.0	110.6	4	7	6	2	222.1	5	
ProHarvest Seeds	**6705**	**225.7**	19.7	11.5	56.4	29375.0	0.4	0.0	110.5	5	5	9	10	217.0	7	
DOEBLER'S®	**RPM® 5015AM™**	**225.4**	21.2	10.6	55.5	29750.0	0.4	0.0	110.3	6	4	2	3	227.3	1	221.3
NK	**N66V**	**222.6**	20.1	11.1	54.2	29125.0	0.0	0.0	109.0	7	2	7	1	227.2	3	224.0
TA SEEDS	TA583-22 DPRIB	216.2	19.4	11.2	56.0	27000.0	0.0	0.0	105.8	8	8	11	7	211.6	10	211.2
DOEBLER'S®	RPM® 4816AM™	214.3	21.6	9.9	55.3	27750.0	0.0	0.0	104.9	9	9	3	8	214.9	8	218.8
TA SEEDS	TA547-22 DPRIB	213.1	18.6	11.5	55.8	28375.0	0.5	0.0	104.3	10	11	8	11	211.1	11	
ProHarvest Seeds	6860	209.9	20.3	10.3	54.7	29125.0	0.0	0.0	102.7	11	12	14	14	194.9	13	
DEKALB	DKC58-06RIB **(Check)**	204.3	20.0	10.2	57.2	29250.0	0.0	0.0	100.0	12	10	4	6	212.0	9	
NK	N50D	197.7	17.0	11.7	57.6	29750.0	0.9	0.0	96.8	13	14	15	12	189.7	14	
ProHarvest Seeds	6565	193.0	20.0	9.7	57.8	28500.0	0.0	0.0	94.5	14	13	12	13	195.3	12	
ProHarvest Seeds	6101	183.2	18.3	10.1	55.8	27875.0	0.0	0.0	89.7	15	15	13	15	186.1	15	

	Check Avg.	204.3	20.0	10.2	57.2	29250.0	0.0
	Test Avg.	215.0	20.0	10.8	55.8	28733.3	0.2
	LSD (0.05)	13.4	1.0	0.8	0.6	1002.0	
	% C.V.	4.4	3.4	5.0	0.8	2.4	285.5
	Check Avg. + LSD (0.05)	217.7					

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/9/2016 & Harvested September 23, Early-Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Laurel Irrigated	Georgetown Irrigated	Wyoming Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
ProHarvest Seeds	**8312**	**233.6**	21.7	10.8	54.3	28875.0	0.9	0.0	106.1	1	2	2	4	235.7	1	
DOEBLER'S®	**RPM® 5315AM™**	**228.7**	22.3	10.3	54.0	29500.0	0.0	0.0	103.9	2	11	3	16	220.5	8	234.1
DeKalb	**DKC63-33RIB (Check)**	**225.4**	21.2	10.6	56.5	28875.0	0.4	0.0	102.4	3	7	4	3	230.1	4	
DOEBLER'S®	**RPM® 5125AM™**	**224.0**	20.2	11.1	56.5	29250.0	0.0	0.0	101.7	4	1	6	7	231.0	2	233.8
AUGUSTA	**A5063**	**222.3**	22.5	9.9	54.6	28000.0	0.0	0.0	101.0	5	5	16	9	220.3	9	235.4
AUGUSTA	**A1564**	**221.7**	20.3	11.0	51.5	29625.0	0.0	0.0	100.7	6	3	10	6	225.9	5	
ProHarvest Seeds	**8244**	**220.6**	22.3	9.9	56.3	28125.0	0.0	0.0	100.2	7	12	14	10	217.1	10	
Phoenix	5352A4	218.2	21.0	10.4	54.1	29500.0	0.0	0.4	99.1	8	17	12	2	217.0	11	
ProHarvest Seeds	8265	215.5	21.6	10.0	54.0	29000.0	0.9	0.0	97.9	9	13	11	15	212.6	15	
DeKalb	DKC63-87RIB **(Check)**	215.0	20.0	10.8	54.8	29125.0	0.0	0.0	97.6	10	9	1	1	230.8	3	233.5
TA SEEDS	TA736-22DP RIB	211.4	21.2	10.0	56.4	28625.0	0.5	0.0	96.0	11	8	5	5	224.8	6	228.7
AUGUSTA	A6664	208.3	20.7	10.1	56.3	28750.0	0.0	0.0	94.6	12	4	9	8	221.9	7	228.6
TA SEEDS	TA667-31	206.1	20.8	9.9	54.7	29125.0	0.0	0.0	93.6	13	15	7	13	214.6	13	
NK	N69D	205.9	21.3	9.7	54.6	28750.0	0.4	0.0	93.5	14	16	8	12	213.7	14	
ProHarvest Seeds	8074	203.3	20.1	10.1	56.6	28750.0	0.0	0.0	92.3	15	10	15	11	212.4	16	
NK	N68K	201.4	18.9	10.7	53.1	28125.0	0.0	0.0	91.5	16	14	17	17	201.0	17	
AUGUSTA	A5062	200.7	21.7	9.3	57.6	29500.0	0.0	0.0	91.1	17	6	13	14	215.3	12	

Check Avg.	220.2	20.6	10.7	55.6	29000.0	0.2	0.0
Test Avg.	215.4	21.0	10.3	55.0	28911.8	0.2	0.0
LSD (0.05)	14.6	1.2	0.7	0.8			
% C.V.	4.8	4.1	4.5	1.0	2.6	345.4	824.6
Check Avg. + LSD (0.05)	234.8						

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 5/9/2016 & Harvested September 23, Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Laurel Irrigated	Georgetown Irrigated	Wyoming Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
NK	N83D	227.3	24.0	9.5	53.1	29750.0	0.0	0.0	108.1	1	3	4	10	221.4	2	
DOEBLER'S®	5815GRQ	226.5	24.4	9.3	53.5	28875.0	0.0	0.0	107.8	2	1	3	3	226.5	1	233.5
NK	N74L	223.2	19.6	11.4	51.2	29625.0	0.4	0.0	106.2	3	9	11	4	214.9	8	
AUGUSTA	A1565	217.9	21.0	10.4	52.6	27375.0	0.0	0.0	103.7	4	4	9	9	218.1	6	
DeKalb	DKC65-71RIB **(Check)**	215.8	21.2	10.2	55.3	29500.0	0.0	0.0	102.7	5	5	7	2	220.7	4	
ProHarvest Seeds	8404	215.6	22.5	9.6	54.8	26875.0	0.0	0.0	102.6	6	6	2	7	218.8	5	
ProHarvest Seeds	8455	215.3	22.8	9.5	52.7	28500.0	0.5	0.0	102.4	7	8	6	5	216.9	7	
DOEBLER'S®	5615GRQ	210.9	22.6	9.3	52.9	29000.0	0.0	0.0	100.3	8	7	8	11	210.1	11	215.8
TA SEEDS	TA774-22DP RIB	206.6	22.3	9.3	54.9	28625.0	0.0	0.0	98.3	9	11	5	8	210.6	10	223.4
DeKalb	DKC65-19RIB **(Check)**	204.6	22.0	9.4	57.1	27625.0	0.0	0.0	97.3	10	10	10	1	213.3	9	214.1
TA SEEDS	TA767-22DP RIB	199.1	19.7	10.1	53.7	27500.0	0.0	0.0	94.7	11	2	1	6	220.8	3	

	Check Avg.	210.2	21.6	9.8	56.2	28562.5	0.0
	Test Avg.	214.8	22.0	9.8	53.8	28477.3	0.1
	LSD (0.05)		1.1	0.8	0.9	1645.3	
	% C.V.	6.0	3.3	5.4	1.1	4.0	446.8
	Check Avg. + LSD (0.05)	228.9					

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

Planted 4/25/2016 & Harvested September 14, Early Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Wyoming	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DOEBLER'S®	**RPM® 4917AM™**	**233.9**	21.3	11.0	56.1	27375.0	0.5	0.0	110.5	1	1	1	5	227.2	2	
NK	**N66V**	**231.5**	22.6	10.3	53.7	29375.0	0.5	0.0	109.4	2	7	7	1	227.2	3	224.0
AUGUSTA	**A4959**	**229.9**	21.7	10.6	56.9	29125.0	1.3	1.3	108.6	3	3	10	4	223.8	4	221.2
DOEBLER'S®	**RPM® 5015AM™**	**229.5**	20.2	11.4	55.0	28875.0	0.5	0.0	108.5	4	6	2	3	227.3	1	221.3
ProHarvest Seeds	**6705**	**226.4**	20.6	11.0	56.3	29250.0	0.0	0.0	107.0	5	5	9	10	217.0	7	
ProHarvest Seeds	**6886**	**219.0**	18.7	11.8	54.8	28500.0	0.0	0.0	103.5	6	2	5	9	218.3	6	
AUGUSTA	A1108	214.9	19.2	11.3	54.5	28000.0	0.5	0.0	101.6	7	4	6	2	222.1	5	
TA SEEDS	TA583-22 DPRIB	214.4	18.5	11.7	55.9	25375.0	1.5	0.0	101.3	8	8	11	7	211.6	10	211.2
DOEBLER'S®	RPM® 4816AM™	214.3	19.5	11.0	57.1	26625.0	0.5	0.0	101.3	9	9	3	8	214.9	8	218.8
DeKalb	DKC58-06RIB **(Check)**	211.6	20.6	10.3	57.2	27750.0	0.5	0.0	100.0	10	12	4	6	212.0	9	
TA SEEDS	TA547-22 DPRIB	211.0	19.8	10.7	56.0	27500.0	0.0	0.0	99.7	11	10	8	11	211.1	11	
ProHarvest Seeds	6860	199.8	19.9	10.1	55.6	28000.0	0.9	0.0	94.4	12	11	14	14	194.9	13	
ProHarvest Seeds	6565	198.8	17.9	11.2	58.8	27000.0	0.4	0.0	94.0	13	14	12	13	195.3	12	
NK	N50D	187.7	16.7	11.3	58.7	29000.0	20.0	5.6	88.7	14	13	15	12	189.7	14	
ProHarvest Seeds	6101	187.4	16.4	11.4	58.0	28000.0	1.4	0.0	88.6	15	15	13	15	186.1	15	

Check Avg.	211.6	20.6	10.3	57.2	27750.0	0.5	0.0
Test Avg.	214.0	19.6	11.0	56.3	27983.3	1.9	0.5
LSD (0.05)	17.1	0.9	1.0	0.6	1467.9	5.4	1.1
% C.V.	5.6	3.4	6.2	0.8	3.7	199.1	173.7
Check Avg. + LSD (0.05)	228.7						

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

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

Planted 4/25/2016 & Harvested September 14, Early-Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Wyoming Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DOEBLER'S®	**RPM® 5125AM™**	**247.0**	21.3	11.6	55.9	29375.0	0.0	0.0	108.7	1	4	6	7	231.0	2	233.8
ProHarvest Seeds	**8312**	**243.3**	23.1	10.6	53.8	29125.0	0.0	0.0	107.1	2	1	2	4	235.7	1	
AUGUSTA	**A1564**	**237.7**	20.5	11.6	51.4	28625.0	0.0	0.0	104.6	3	6	10	6	225.9	5	
AUGUSTA	**A6664**	**234.8**	24.0	9.8	53.5	27750.0	0.0	0.0	103.3	4	12	9	8	221.9	7	228.6
AUGUSTA	**A5063**	**233.6**	25.4	9.2	54.4	27500.0	0.0	0.0	102.8	5	5	16	9	220.3	9	235.4
AUGUSTA	**A5062**	**232.3**	22.9	10.2	56.1	28250.0	0.5	1.4	102.2	6	17	13	14	215.3	12	
DeKalb	**DKC63-33RIB (Check)**	**230.3**	21.6	10.7	55.5	28500.0	0.4	0.0	101.4	7	3	4	3	230.1	4	
TA SEEDS	TA736-22DP RIB	228.2	23.0	9.9	55.2	28250.0	0.0	0.0	100.4	8	11	5	5	224.8	6	228.7
DeKalb	DKC63-87RIB **(Check)**	224.1	23.4	9.6	53.8	27500.0	0.0	0.0	98.6	9	10	1	1	230.8	3	233.5
ProHarvest Seeds	8074	223.5	21.7	10.3	56.0	29250.0	0.0	0.0	98.4	10	15	15	11	212.4	16	
DOEBLER'S®	RPM® 5315AM™	222.6	22.0	10.2	54.4	29125.0	0.9	0.0	98.0	11	2	3	16	220.5	8	234.1
ProHarvest Seeds	8244	219.3	23.2	9.5	55.9	28500.0	0.0	0.0	96.5	12	7	14	10	217.1	10	
ProHarvest Seeds	8265	218.7	23.2	9.5	54.2	28500.0	0.0	0.0	96.3	13	9	11	15	212.6	15	
NK	N68K	215.3	18.6	11.6	51.8	27750.0	0.0	0.0	94.8	14	16	17	17	201.0	17	
TA SEEDS	TA667-31	211.2	22.5	9.4	54.1	27375.0	0.0	0.0	93.0	15	13	7	13	214.6	13	
NK	N69D	208.1	23.2	9.0	53.9	27875.0	0.0	0.0	91.6	16	14	8	12	213.7	14	
Phoenix	5352A4	201.0	22.6	8.9	54.2	27875.0	0.5	0.0	88.5	17	8	12	2	217.0	11	
	Check Avg.	227.2	22.5	10.1	54.6	28000.0	0.2	0.0								
	Test Avg.	225.3	22.5	10.1	54.3	28301.5	0.1	0.1								
	LSD (0.05)	17.3	0.7	0.8	0.7											
	% C.V.	5.4	2.2	5.4	1.0	4.2	442.2	824.6								
	Check Avg. + LSD (0.05)	244.5														

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid

Table 15. Irrigated Corn Hybrid Performance Summary
Davis Farms (Sussex County) Georgetown, Delaware

Planted 4/25/2016 & Harvested September 14, Medium Hybrids										Performance Ranking for				Pooled sites		
Brand	Hybrid	Yield Bu/A[1]	% Moisture	Yield/ Moisture	Test Weight	Final Pop	% Stalk Lodging	% Root Lodging	% Relative Yield to Check Avg.	Georgetown Irrigated	Laurel Irrigated	Wyoming Irrigated	Middletown Dry land	Yield Avg. Bu/A	Rank	Two Year Yield Ave. Bu/A
DOEBLER'S®	**5815GRQ**	**247.1**	28.1	8.8	53.2	28000.0	0.0	0.0	109.6	1	2	3	3	226.5	1	233.5
TA SEEDS	**TA767-22DP RIB**	**246.5**	23.6	10.5	52.5	28250.0	0.0	0.0	109.4	2	11	1	6	220.8	3	
NK	**N83D**	**243.9**	29.1	8.4	52.8	28625.0	0.9	0.0	108.2	3	1	4	10	221.4	2	
AUGUSTA	**A1565**	**241.7**	23.2	10.5	51.7	28250.0	0.0	0.0	107.2	4	4	9	9	218.1	6	
DeKalb	**DKC65-71RIB (Check)**	**234.2**	22.7	10.3	54.2	28875.0	0.0	0.0	103.9	5	5	7	2	220.7	4	
ProHarvest Seeds	**8404**	**233.6**	25.4	9.2	54.3	27125.0	0.0	0.0	103.6	6	6	2	7	218.8	5	
DOEBLER'S®	**5615GRQ**	**231.0**	24.4	9.5	52.5	29125.0	0.0	0.0	102.5	7	8	8	11	210.1	11	215.8
ProHarvest Seeds	8455	226.4	24.6	9.2	52.1	28000.0	0.0	0.0	100.4	8	7	6	5	216.9	7	
NK	N74L	225.2	21.0	10.8	51.6	29125.0	0.0	0.0	99.9	9	3	11	4	214.9	8	
DeKalb	DKC65-19RIB **(Check)**	216.6	22.9	9.4	56.5	26375.0	0.0	0.0	96.1	10	10	10	1	213.3	9	214.1
TA SEEDS	TA774-22DP RIB	215.0	24.5	8.8	52.7	26625.0	0.0	0.0	95.4	11	9	5	8	210.6	10	223.4

Check Avg.	225.4	22.8	9.9	55.3	27625.0	0.0
Test Avg.	232.8	24.5	9.6	53.1	28034.1	0.1
LSD (0.05)	19.1	0.9	0.9	0.6		
% C.V.	5.7	2.5	6.2	0.8	5.3	663.3
Check Avg. + LSD (0.05)	244.5					

[1]The bold text and darker shading indicate that the yield of the hybrids is not statistically different from the top yielding hybrid