NEW YORK and VERMONT CORN SILAGE HYBRID EVALUATION PROGRAM

FIELD CROP PERFORMANCE NETWORK

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Joseph Lawrence[1], Allison Kerwin[2], Thomas Overton[1, 2], Heather Darby[4]

Margaret Smith[3], Michael Van Amburgh[2], Elle Andreen[1],

Kirsten Workman[1], Sara Ziegler[4]

Cornell University PRO-DAIRY[1]

Cornell University Department of Animal Science[2]

Cornell University Section of Plant Breeding and Genetics[3]

University of Vermont Department of Plant and Soil Science[4]

NYS College of Agriculture and Life Sciences

Cornell University

Ithaca, NY 14853

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PART I

NEW YORK and VERMONT CORN SILAGE HYBRID EVALUATION PROGRAM – 2025

Hybrid evaluation at multiple environments helps in decision making and expands the reach of this type of data to more farmers. Cornell, UVM, and seed companies collaborate to provide this evaluation. Hybrids were either entered into the 85-98 day RM group (Early-Mid; n = 31) or were entered into the 99-110 day RM group (Mid-Late; n = 33). All hybrids were planted at two locations; the Musgrave Research Farm in Aurora, NY (Cayuga County) and Borderview Farm in Alburgh, VT (Grand Isle County). Harvest dates were staggered by maturity group at each location. Weather data, growing degree days (**GDD**; 86-50°F system), and precipitation, for both the current year and long-term averages, can be found in Table 1.1 for all locations.

The NY and VT corn silage evaluation program is made possible with support from dairy producers, participating seed companies, Cornell University, the University of Vermont, and the Cornell University Agricultural Experiment Station. Seed companies were invited to submit hybrids into either maturity group (two locations per maturity group) for a fee.

MATERIALS AND METHODS

In 2025, the corn silage hybrid evaluation program received 64 entries from 13 seed brands. All hybrids were planted using a four-row planter at 34,000 plants/acre. Each plot consisted of four rows spaced 30 inches apart with harvest of the inner two rows. Hybrids were planted in a randomized complete block design with 3 replications.

Planting occurred on June 4th in Aurora and May 13th in Alburgh (Table 2). The early-mid hybrids were harvested on September 9^{th,} and the mid-late hybrids were harvested on September 17th in Alburgh (Table 1.2). Harvest did not occur at the Aurora location due to extreme weather patterns resulting in failure and substantial variability between plots. Based on RM there is a range in tasseling dates, average tasseling dates across the RM groups are included in Table 1.2. Information on soil type and fertility management can be found in Table 1.2 for each field location. From planting to harvest, the early-mid hybrids accumulated 1,977 GDD with the mid-late hybrids accumulated 2,072 in Alburgh (86-50°F system, Figure 1.1 and Table 1.3).

The goal was to harvest all hybrids at 65% (±3%) moisture. The maturity groups were monitored, and harvest decisions were made by measuring whole plant dry matter (**DM**) on buffer plots prior to harvest. In Vermont, plots were harvested with a John Deere 2-row chopper into a wagon equipped with an Avery Weigh-Tronix weighing system at a target cutting height of 8 inches (± 1 inch).

An approximate 500 g sample was taken per plot replicate, resulting in 3 samples per hybrid. Samples were sealed in gallon-sized freezer bags, packaged, and shipped for immediate analysis. Samples were submitted to Cumberland Valley Analytical Services (Waynesboro, PA) where near-infrared spectroscopy (**NIR**) procedures were used to determine crude protein (**CP**), starch, lignin, linoleic acid (C18:2), ash corrected neutral detergent fiber (**aNDFom**), and NDF digestibility at difference time points (**NDFD**; 12, 30, 120, 240 h). Three companies paid an additional fee for wet chemistry analysis on aNDFom and NDFD at 30 h of in vitro fermentation.

Corn silage hybrid performance was evaluated by the predicted milk production output (metabolizable energy [ME] and metabolizable protein [MP] allowable milk) of Cornell Net Carbohydrate and Protein System (CNCPS) v.7.0 (Cornell University, Ithaca, NY). Rumen aNDFom and uNDFom pool sizes have been shown to correlate with dry matter intake (DMI), with more degradable aNDFom, lower uNDFom diets encouraging intake, holding all other dietary nutrients equal. Increased intake of a common diet is meant to improve milk production whereas lower intake will limit production. Corn silage NIR results were applied to a typical New York high corn silage-based diet (forage at ~51.3% of diet DM; corn silage ~80% of forage DM) in CNCPS v7.0. For practical purposes, since the samples had not undergone fermentation, feed library values were assigned to soluble protein, ammonia, volatile fatty acids, and 7-hr starch digestibility values. A base diet which fed a corn silage representing the average feed chemistry of all hybrids was formulated by Elle Andreen. The diet was formulated for 93 lb milk yield, assuming 4.15%, 3.25%, and 4.85% milk fat, true protein, and lactose concentrations, respectively. Cattle were described as 48 months old, 130 days in milk, weighing approximately 1,600 lb, and expending the average maintenance energy assuming thermoneutral conditions in a typical Northeast freestall barn. Initially, each individual hybrid replicate replaced the average corn silage in the base diet (assuming total of 58.1 lb DMI) at the same DM inclusion rate. Subsequently, for each hybrid, DMI of the entire diet was adjusted based on the first limiting rumen fill factor (rumen aNDFom pool size or rumen uNDFom pool size), keeping dietary inclusion level (%DM) of all ingredients fixed. This novel approach to hybrid evaluation allows us to account for differences in DMI potential of the total diet based upon hybrid selection and is a more biologically robust representation compared to evaluating hybrids on a constant DMI basis. The predictions made by the CNCPS v.7.0 were used to evaluate differences in intake potential and subsequent predicted allowable milk yield based upon the nutrient and digestibility characteristics of each hybrid.

The GLM procedure was used for analyzing data using SAS software (v. 9.4, SAS Institute, Cary, NC). If there were significant differences between hybrids for a given nutrient ($P < 0.10$), the least significant difference (**LSD**) generated at the $P = 0.10$ level was reported for separating hybrid means for each location. For interpretation purposes, if the difference between two hybrids is greater than the reported LSD, there is a 90% probability that this is not due to random variation and there is a true varietal difference between the hybrids.

RESULTS AND DISCUSSION

Several factors, including precipitation, nutrient availability, pest pressure, and other plant stressors impact how efficiently crops utilize the heat available throughout the season. Evaluation of GDD accumulation, calendar days, and the average whole plant DM (Table 1.3) offers insight and contrast to how the crop responded to above average GDD accumulation at each location.

A reminder that while tools such as tracking GDD accumulation can help inform harvest decisions, close-up evaluation of fields and plant development (both kernel development and whole plant DM) are needed to optimize harvest timing.

Nitrogen Balances

A nitrogen (N) balance can be calculated by subtracting the total N in the harvested crop from the total N supplied to the crop. The total N supplied includes current year fertilizer and manure N additions, as well as N credits from previous manure applications, previous crops (sod or soybeans), and soil N supply (based on soil type). Contributions by previous crops and soil are both derived from book values. The total N taken up by the crop is calculated using the crop yield multiplied by the N concentration within the crop, which is derived from the CP content (CP / 6.25). Manure N from past applications assumed 12% and 5% of the organic N from applications from one and two prior growing seasons, respectively. The total N balance includes all N in manure applied to the current crop year. The available N balance assumes 35% from organic N and 0 to 65% (based on soil incorporation) from inorganic N in the manure to be available to the crop in the current year. Thus, total N balances will be higher than available N balances when manure is applied in the current crop year.

Based on this calculation a positive N balance indicates more N was applied than was taken up by the crop, suggesting that excess N was left in the soil at the end of the growing season or losses throughout the season were larger. This can represent the addition of N inputs beyond what the crop was able to utilize, which is most often the case when other conditions are not limiting plant growth. In the instance of first year corn after sod, a positive balance may remain even when additional N inputs are minimal; however, this may also occur when the plant is not able to utilize available N and crop yield is limited by other factors, often due to extreme drought or prolonged periods of saturated soils.

A negative balance can also represent different scenarios. First, it can represent an inadequate supply of N and this would be reflected by depressed yields, visual signs of N deficiency (firing of leaves up to the ear leaf), or low-test values from the end-of-season Corn Stalk Nitrate Test (CSNT). When yields are not compromised and no other indications of N deficiency are noted, a negative balance suggests that 1) the soil N supply and/or manure and previous crop N credits may exceed the book value, 2) the crop is more efficient at utilizing available N than predicted N rate calculations, or 3) both.

The results presented in Table 1.2 reflect the available N balance for each location in 2025. Available N Balance = Available N supply (soil N + sod/soybean N + fertilizer N + available manure N) - Total N uptake (yield x N concentration).

Least Significant Difference

Least significant difference values are presented in Tables 1.5 and 1.6, as well as Figures 1.5 and 1.6. The LSD indicates the level of difference between two values that is statistically significant. When the reported values for two hybrids are within the LSD, this indicates that these differences cannot be attributed to hybrid alone and other factors may have contributed to the differences, such as environmental factors. When evaluating differences in hybrids, it is important to confirm if numerical differences are significant or not based on the LSD value.

Growing Conditions and Location Notes

Aurora

Excessive rain in May delayed planting until June 4th. Immediately following planting, excessively wet conditions returned affecting germination and plot establishment. Following this early June precipitation, conditions turned dry and remained excessively dry for the rest of the season resulting in excessive stress and unevenness.

Alburgh

Early season conditions were marginal but a few dry days combined with well drained soil allowed for timely planting (Table 1.1 and Figure 1.1). Wet and cool conditions after planting were followed by dry conditions in late July and the plot experienced mild drought stress late in the season. Monthly GDD accumulation was near average throughout the season (Table 1.1).

Fiber Digestibility levels were very similar to the 2024 crop (Figure 1.2a, Table 1.5 & 1.6). Given the significant role of fiber digestibility in the ability for a cow to utilize forage nutrients, contrasting 2025 results with the previous growing season suggests producers could expect similar feeding performance. However, it is important to recognize there are many interacting factors associated with this, and producers will need to monitor performance closely when transitioning forages. Starch levels (Figure 1.2b) were slightly below previous years, likely impacted by a lower average whole plant DM at harvest and dry conditions during kernel development.

The calculated N need for the Alburgh location was 111 lb N/acre, with 110 lb N delivered through starter and sidedress fertilizer to meet this need. Available N balances were slightly negative (Table 1.2) while yields were average to above average for this location (Table 1.4). This suggests that N was not limiting, despite excess precipitation and elevated risk of N leaching early in the season. It should be noted that a significant portion of the N fertilizer was applied as sidedress, which reduces the potential for early season losses to the environment and, combined with dry conditions limiting later season losses likely led to better N utilization by the crop.

Forage Quality and Yield

Individual hybrid results are presented in Tables 1.5 and 1.6 for each trial location. The tables provide yield and forage quality (CP, aNDFom, starch, lignin, 30 hr NDFD, 240 hr undigested NDF, predicted milk yield, etc.) results. Results are sorted by DM and hybrids should only be compared with hybrids that have a DM within ±3 DM points within a relative maturity group.

Figures 1.5 and 1.6 show the crop yield plotted against the predicted milk yield (**PMY**). The axes are presented as a percent (%) of plot mean with 100% representing the plot mean. From these plots, you can derive the percentage above or below the mean that a given hybrid performed. Each scatterplot is split into four quadrants using the plot mean for the respective parameters to divide the quadrants. This graphical representation provides a quick reference of which quadrant each hybrid falls into at each location; 1) above average in crop yield and below average in PMY, 2) above average in both crop yield and PMY, 3) below average in both crop yield and PMY, 4) below average in crop yield and above average in PMY (Figure 1.5 and 1.6). It is important to view the data in this context, as the performance

of a hybrid relative to its peers at the same location is more important than the absolute value for crop yield or PMY. The plot means for crop yield (tons/acre at 35% DM) and PMY (lb/day) as well as the minimum and maximum values are reported to provide context to the percentages.

When evaluating trial data for corn silage hybrids, two approaches are often used. One method of evaluating hybrids is to study hybrid performance at a location that is most closely related to the growing conditions you experienced on your own farm for this growing season. This is a less desirable method of evaluation since conditions at a given location can vary greatly from season to season.

A second, preferable, method for picking desirable hybrids is to look for hybrids that perform consistently above average across trial locations, as this may reflect varying growing conditions more so than the first method. The actual yield or quality measurement (absolute value) is less important than how a hybrid performed relative to its peers at the same locations (% of plot mean). Consistent above average performance across locations in both crop yield and PMY (Figures 1.5 and 1.6) is a strong indicator of hybrid performance.

It may not always be desirable to select a hybrid that falls into the second quadrant in Figures 1.5 and 1.6 (above average in crop yield and PMY). Instead, selecting a range of hybrids may be beneficial to accommodate feeding a range of cow groups. As an example, with respect to other forages available for the diet, it is often not favorable to feed a highly digestible corn silage to heifers or dry cows as this may cause over conditioning due to increased DMI and excessive energy consumption. However, the difference in PMY results in different growing environments demonstrates the importance of growing digestible forages as an approach to reduce non-forage feed costs and non-forage feed inclusion rates. Environmental conditions strongly influence the forage quality; however, selecting hybrids that have performed well under varying conditions may improve your chances of having a more digestible forage compared to other hybrids grown under the same conditions. We suggest working with your agronomist and nutritionist to identify hybrids that would succeed for your farm and meet your nutritional needs.

Overall Trends in Performance

As previously stated, evaluating the impacts of growing season on hybrid performance with the information presented here is crucial when assessing characteristics that may work best for your farm; however, summarizing across locations can provide insight into the consistency of performance over a range of conditions. This information should not be used on its own but adds value when used in conjunction with location specific data.

Data by growing season can be found in Table 1.4 and Figure 1.2. This data provides a valuable comparison across growing seasons to understand both the impact of growing environment as well as a benchmark of performance potential based on year-to-year differences in growing conditions.

Table 1.7 provides comparative performance data, which considers a hybrid's performance within a location, then averages across locations and years (when a hybrid has been entered into the program for more than one season).

CONCLUSIONS

Growers can use this performance data to better understand how a hybrid performs under a diverse set of environments. We encourage the use of this data in conjunction with replicated data from other independent and company sources to best understand a hybrid's overall performance in the context of different growing environments. Using this approach, in contrast to focusing on an individual data source, will lead to much better hybrid selection decisions.

The results of this study will be published by PRO-DAIRY (https://prodairy.cals.cornell.edu/), Cornell Field Crops (www.fieldcrops.org), and the University of Vermont Extension (www.uvm.edu/extension/nwcrops) and disseminated widely across the region using multiple electronic and print publications.

ACKNOWLEDGEMENTS

We thank the seed companies that participated in 2025 for their collaboration. We urge all seed companies to participate in our corn silage testing program in 2026 so we can provide the best information under New York and Vermont growing conditions to our producers.

We thank Sherrie Norman, Keith Payne, Brian Lanphere, Shawn Bossard, Nick Lepak, and Kyle Cornell for support at the Cornell Musgrave Research Farm location, Aurora; and Roger Rainville at Borderview Farm, VT for their efforts during field operations.

Additional support was provided by the Cornell University Agricultural Experiment Station.

PART II

FIELD CROP PERFORMANCE NETWORK – 2025

With the goal of further studying differences in crop performance across growing environments, a network of field crop plots utilizing two corn hybrids was implemented across the region. Coupling this data with the NY VT Corn Silage Hybrid Evaluation Program expands the opportunity for growers to understand the impact of growing environment on corn silage performance and compare conditions at their farm location with plot data from locations experiencing similar growing conditions.

MATERIALS AND METHODS

The same two hybrids, 93- and 98-day relative maturity, were supplied to host farms and managed with best agronomic practices throughout the season. Each hybrid was planted in a field-size strip, a minimum of 8 rows wide. Seed was distributed to 10 farm locations; however, given weather challenges only seven plots were fully implemented and included in this report. Field data is presented in Table 2.1.

Harvest timing was dictated by host farm harvest schedules. Prior to field harvest by the host farm, three subsamples, each representing 1/1000th of an acre, were hand harvested. Samples were cut

at an 8 inch (± 1 inch) cutting height and weighed to obtain an estimate of yield. An approximate 500 g sample was taken per plot replicate, resulting in 3 samples per hybrid per location. Samples were sealed in gallon-sized freezer bags and frozen. Samples were submitted to Cumberland Valley Analytical Services (Waynesboro, PA) where near-infrared spectroscopy (**NIR**) procedures were used to determine crude protein (**CP**), starch, lignin, linoleic acid (C18:2), ash corrected neutral detergent fiber (**aNDFom**), and neutral detergent fiber digestibility (**NDFD**; 12, 30, 120, 240 h).

RESULTS AND DISCUSSION

Field locations spanned from Erie County in western NY to Essex County in northeastern NY and Grand Isle County in northwestern Vermont (Table 2.1). While the general trend was above average precipitation early in the growing season followed by dry to drought conditions later in the season, the total amounts and timing of precipitation played a significant role in overall crop performance (yield and nutritional value). The trends, and in some cases lack of trends, highlight the interactions of weather patterns, soil characteristics and cropping system/rotation with crop performance.

Crop Performance and weather data can be found in Tables 2.1 and 2.2, and Figure 2.1.

Cayuga County, NY

This location reported the lowest crop yield despite precipitation totals similar to four other locations. With just over 10 inches of precipitation for the season, the crop suffered significantly from the timing of this precipitation and soil health characteristics at the site. Wet conditions delayed planting until June 4th at which time soil conditions were acceptable for planting. Within 24 hours of planting, the location received intense precipitation which saturated the soil, a condition which persisted through the critical germination period. Coupled with soil drainage challenges, this resulted in significant emergence issues. Once the field began to dry out, conditions quickly turned to a moisture deficit which persisted through pollination and ear development, resulting in stunted plants and uneven ear development.

Delaware County, NY

This location was planted much earlier than other locations (May 1st) and reported the highest precipitation totals; however, crop yield remained below average. In contrast to most locations where planting was delayed until after most of the significant precipitation occurred, this location experienced significant precipitation post planting. Very well drained soil limited the potential stress from this early season precipitation. However, despite near normal monthly precipitation in July and August, the pattern of this rain and lack of soil moisture holding capacity caused drought-induced stress at key growth stages. A high average whole plant DM relative to the GDD accumulation is associated with drought conditions at harvest accelerating dry down.

Erie County, NY

Planting was delayed until June 3rd due to May precipitation. As with several of the study locations, precipitation was much lower following planting. Across most locations, Hybrid A and B showed similar performance; however, this location was the exception. Observations at harvest showed stunted ears on hybrid A which shows up as larger differences in crop yield and starch content between hybrids A and B. Reviewing field data, this variation between hybrid A and B may be associated in field

topography and changes in soil type. Lower average whole plant DM aligns with low GDD accumulation due to harvest schedule restrictions.

Essex County, NY

With under nine inches of precipitation, this location recorded the lowest total rainfall from planting to harvest. Despite the dry conditions, crop performance was average or above relative to other locations in the network. Soil health characteristics providing adequate drainage and good water holding capacity along with the timing of precipitation events likely factored into the overall performance.

Lewis County, NY

This location reported the highest crop yield across the network despite below average precipitation. Soil health characteristics providing adequate drainage and good water holding capacity along with the timing of precipitation events likely factored into the overall performance.

Madison County, NY

Like the Erie County location, the difference in crop performance between hybrids A and B does not strictly represent differences in hybrid. Within field variability and slightly lower emerged populations in hybrid B are noted variables in reported yields, which were likely factors in the recorded differences.

Grand Isle County, VT

Early season conditions were marginal but a few dry days combined with well drained soil allowed for timely planting. The weather turned dry in late July, and the plot experienced mild drought stress during critical pollination and ear development stages which persisted through the remainder of the season. As with the Erie County location, lower average whole plant DM is associated with lower GDD accumulation.

CONCLUSIONS

The Field Crop Performance Network provides insight into growing environment impacts on crop performance. Utilizing data from network locations that experienced a similar growing environment to an individual farms location allows growers to determine if results for their own corn silage performance were enhanced or constrained by the farm's growing environment and conditions or by forage management practices.

ACKNOWLEDGEMENTS

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Part I: NY VT Corn Silage Hybrid Evaluation Program
Tables and Figures

Table 1.1: Current season and historic growing conditions at trial locations in New York and Vermont.

	Precipitation, inches				Growing Degree Days (GDD), 86/50			
	Alburgh, VT		Aurora, NY		Alburgh, VT		Aurora, NY	
	2025	Avg.*	**2025**	Avg.*	**2025**	Avg.*	**2025**	Avg.*
May	**4.78**	3.71	**6.01**	3.26	**279**	314	**255**	324
June	**3.67**	4.87	**4.08**	4.01	**512**	474	**534**	495
July	**4.79**	4.77	**1.97**	3.74	**644**	628	**696**	649
August	**1.60**	4.69	**2.68**	3.99	**510**	569	**533**	595
September	**3.04**	3.87	**1.63**	3.34	**376**	383	**397**	410
May-August	**14.84**	18.04	**14.74**	15.00	**1,944**	1,984	**2,016**	2,064
May-September	**17.88**	21.91	**16.37**	18.33	**2,320**	2,367	**2,413**	2,474

*Avg. - Represents averages of years: 2005-2025

Table 1.2: NY & VT Corn Silage Hybrid Evaluation Program, 2025 Field Data.

	85 - 98 Day Relative Maturity		99 - 110 Day Relative Maturity	
	Alburgh, VT	Aurora, NY	Alburgh, VT	Aurora, NY
Planting Date	13-May	4-Jun	13-May	4-Jun
Harvest Date	9-Sep	-	17-Sep	-
Previous Crop	Corn	Corn	Corn	Corn
Starter N / Pre-plant	20	30	20	30
Manure N Credits	0	0	0	0
Sidedress N	90	138	90	138
Total N Inputs	110	168	110	168
Available N Balance[1]	-15		-7	
Soil Type	Benson	Lima	Benson	Lima

[1] Available N Balance = N Uptake by Crop - Available N Supply
A positive balance indicates there was excess N not utilized by the crop.
When N does not limit yield, a negative balance indicates more
efficient N use or soil N supply compared to book values.

Table 1.3: Calendar day, growing degree day (GDD), and precipitation accumulation from planting date to harvest date, and average whole plant dry matter (DM) at harvest by RM group and location.

Year		Short Season		Long Season	
		Aurora, NY	Alburgh, VT	Aurora, NY	Alburgh, VT
2025	**Calendar Days**	-	**119**	-	**127**
	GDD (86/50)	-	**1,977**	-	**2,072**
	Precipitation (in.)	-	**14.9**	-	**14.9**
	Whole Plant DM	-	**30.9**	-	**31.9**
2024	Calendar Days	106	126	114	132
	GDD (86/50)	1951	2,203	2,043	2,291
	Precipitation (in.)	13.9	26.2	14.7	26.2
	Whole Plant DM	32.6	34.4	34.7	34.7
2023	Calendar Days	-	128	128	135
	GDD (86/50)	-	2,130	2,087	2,203
	Precipitation (in.)	-	26.8	17.8	27.2
	Whole Plant DM	-	31.4	34.8	30.8
2022	Calendar Days	-	122	118	134
	GDD (86/50)	-	2,117	2,132	2,264
	Precipitation (in.)	-	22.5	14.6	25
	Whole Plant DM	-	33.6	31.7	33.0
2021	Calendar Days	-	126	120	128
	GDD (86/50)	-	2,193	2,220	2,242
	Precipitation (in.)	-	12.5	21.3	12.5
	Whole Plant DM	-	36.3	35.2	39.8
2020	Calendar Days	-	119	110	130
	GDD (86/50)	-	2,099	2,144	2,198
	Precipitation (in.)	-	15.5	11.4	15.7
	Whole Plant DM	-	32.4	36	36.4
2019	Calendar Days	-	134	144	141
	GDD (86/50)	-	2,031	2,215	2,090
	Precipitation (in.)	-	14.2	16.5	18
	Whole Plant DM	-	33.7	34.7	35.4
2018	Calendar Days	-	117	116	125
	GDD (86/50)	-	2,134	2,204	2,271
	Precipitation (in.)	-	10.8	15.3	10.8
	Whole Plant DM	-	33.3	38.2	34.9
2017	Calendar Days	-	125	118	134
	GDD (86/50)	-	1,928	1,975	2,077
	Precipitation (in.)	-	20.3	16.8	20.3
	Whole Plant DM	-	31.8	31.9	32.7

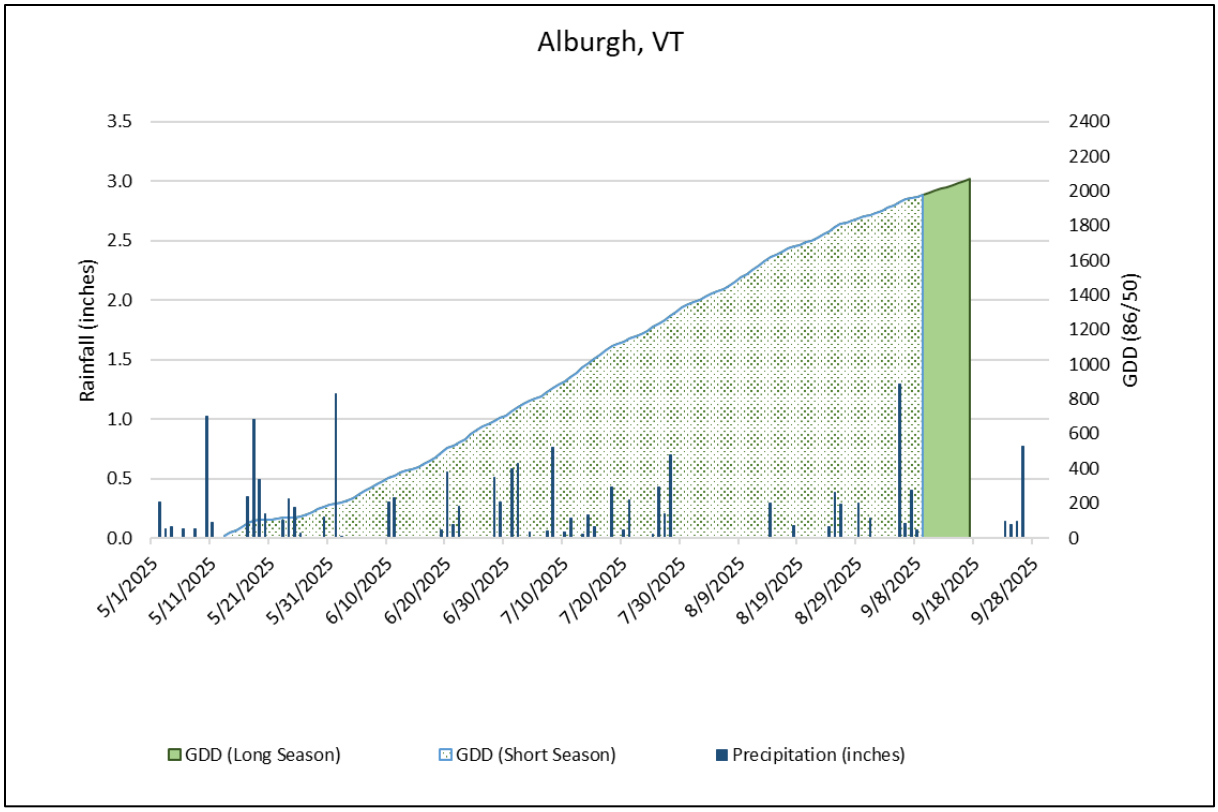

Figure 1.1. Accumulation of growing degree days (GDD) from planting through harvest and individual precipitation events from May 1st through harvest at Alburgh, VT.

Table 1.4: Whole plot mean for key corn silage performance indicators

Relative Maturity Group	Growing Season	Location	Yield, 35% DM tons/acre	Dry Matter %	Starch Content % DM	Crude Protein % DM	aNDFom % DM	30 hr NDFD % NDFom	120 hr NDFD %NDFom	240 hr uNDFom % DM
85-98 day RM	2025	**Aurora, NY**	-	-	-	-	-	-	-	-
		Alburgh, VT	**22.6**	**30.9**	**34.4**	**7.6**	**38.9**	**54.2**	**65.9**	**12.1**
	2024	Aurora, NY	21.6	33.0	35.4	6.3	37.5	56.7	65.5	11.8
		Alburgh, VT	24.4	34.4	36.1	7.7	37.1	54.4	65.3	11.6
	2023	Alburgh, VT	25.2	31.6	38.2	7.4	37.3	47.7	56.8	15.2
80-95 day RM	2022	Alburgh, VT	27.8	33.6	36.2	8.2	36.2	55.8	66.3	11.2
	2021	Alburgh, VT	19.9	36.3	37.9	8.4	36.1	52.8	64.1	12.0
	2020	Alburgh, VT	19.8	32.4	37.8	8.3	35.9	56.0	65.6	11.4
	2019	Alburgh, VT	23.4	33.7	36.5	7.3	37.8	61.6	67.6	11.2
	2018	Alburgh, VT	18.3	33.3	31.0	7.8	39.0	56.2	67.4	11.8
	2017	Alburgh, VT	27.5	31.8	34.4	7.5	38.9	53.2	62.7	13.4
99-110 day RM	2025	**Aurora, NY**	-	-	-	-	-	-	-	-
		Alburgh, VT	**24.4**	**31.9**	**34.8**	**7.3**	**39.1**	**54.6**	**65.4**	**12.4**
	2024	Aurora, NY	21.9	34.7	37.4	5.7	37.1	57.6	65.3	11.6
		Alburgh, VT	27.3	34.7	38.9	7.3	36.4	54.1	63.1	12.4
	2023	Aurora, NY	25.0	34.8	38.4	6.5	36.1	57.7	65.2	11.4
		Alburgh, VT	24.4	30.8	38.1	8.0	38.4	49.5	59.8	14.4
96-110 day RM	2022	Aurora, NY	20.6	31.7	37.2	7.8	37.4	61.5	70.0	10.0
		Alburgh, VT	27.3	33.0	38.7	8.0	36.5	52.3	60.7	13.2
	2021	Aurora, NY	29.3	35.2	37.8	6.3	38.5	54.1	62.7	13.3
		Alburgh, VT	23.9	39.8	37.2	7.5	38.6	56.9	66.9	11.7
	2020	Aurora, NY	17.1	36.0	38.2	7.5	36.0	61.1	68.3	10.4
		Alburgh, VT	25.1	36.4	37.9	7.6	36.5	55.4	65.6	11.6
	2019	Aurora, NY	27.1	34.7	38.3	6.5	36.9	55.5	62.2	12.9
		Alburgh, VT	24.3	35.4	39.3	7.6	35.5	61.6	71.1	9.2
	2018	Aurora, NY	21.7	38.2	38.8	7.3	35.3	59.9	67.7	10.4
		Alburgh, VT	23.3	34.9	34.2	7.2	38.3	55.2	66.0	12.0
	2017	Aurora, NY	26.0	31.9	31.2	6.1	42.6	54.5	63.8	14.4
		Alburgh, VT	28.5	32.7	35.3	7.2	39.8	52.7	61.4	14.3

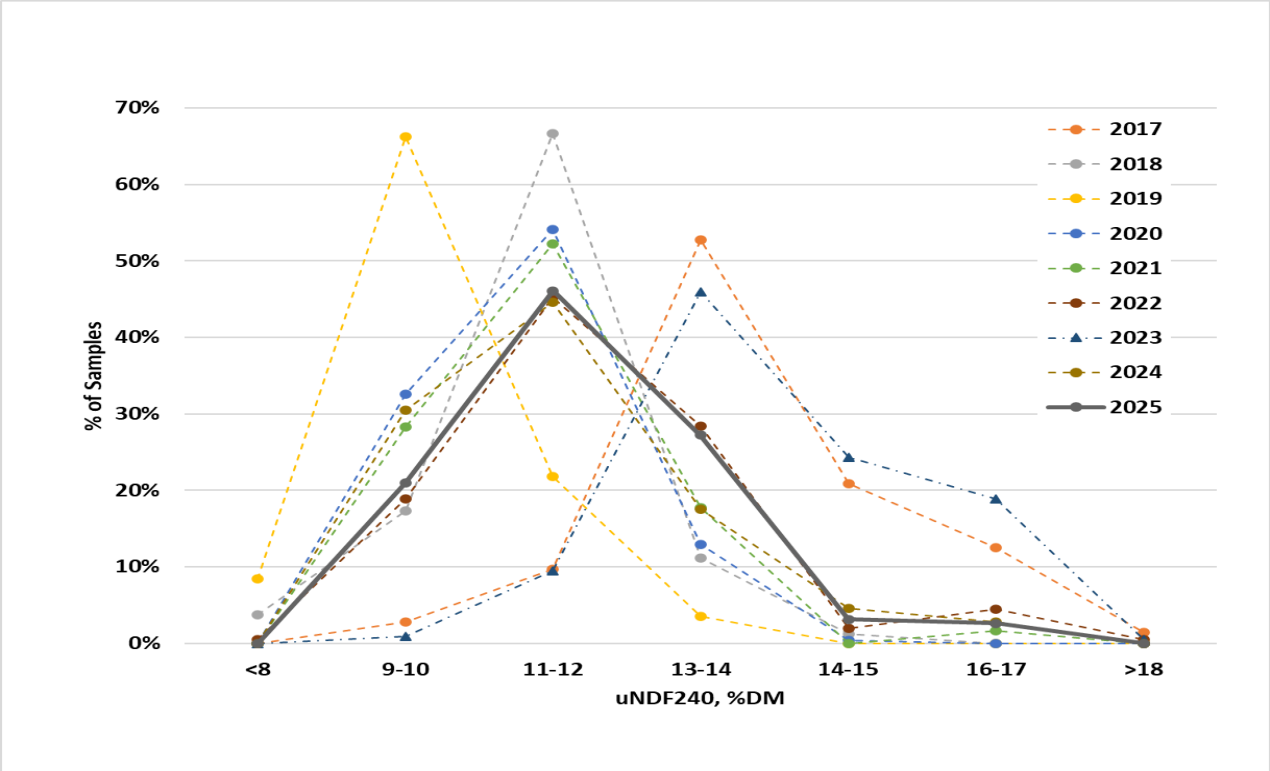

Figure 1.2a

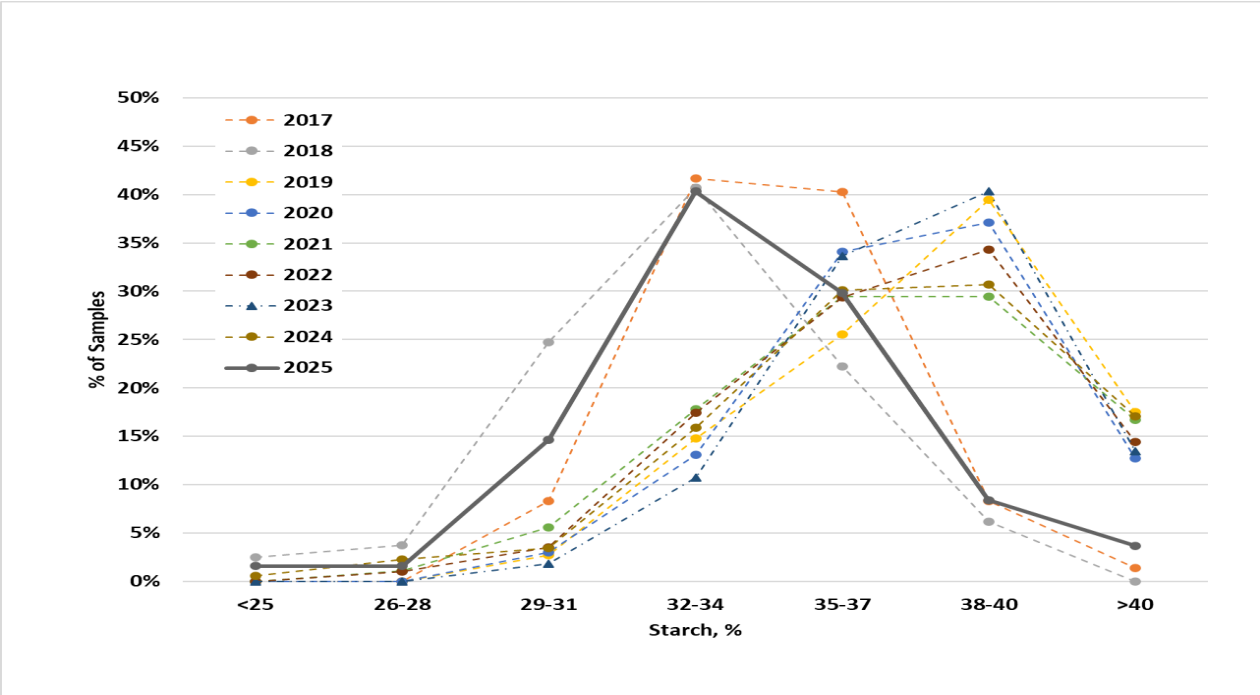

Figure 1.2b

Figure 1.2: The proportion of samples within different ranges of uNDF240 (Figure 1.2a) and starch (Figure 1.2b) combined across locations for the current year and previous growing seasons.

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Table 1.5:

Hybrid field and forage quality data for 85–98-day relative maturity (RM) hybrids planted at Alburgh, VT. Hybrids are sorted by dry matter content at harvest.

Table 1.6.

Hybrid field and forage quality data for 99–110-day relative maturity (RM) hybrids planted at Alburgh, VT. Hybrids are sorted by dry matter content at harvest.

Tables 1.5 & 1.6: Least Significant Difference

Least significant difference (LSD) is used to indicate if the statistical difference between two values is meaningful at a certain confidence level. An LSD of 0.10 indicates a confidence level of 90%. The LSD value is presented at the base of the column for each hybrid parameter reported.

Footnotes for Tables 1.5 and 1.6.

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.
** Tables are sorted by descending dry matter for comparison purposes
*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber
[1] RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19."
[2] NS = Not Significant
[3] Data omitted due to pest damage

Table 1.5: Hybrid performance for 85 – 98-day RM groups at Alburgh, VT *(page 1 of 2)*.

Company/Brand	Hybrid	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	C 18:2	aNDFom	12 hr NDFD	Wet Chem aNDFom	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
			plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% NDFom	% DM	% NDFom	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Dekalb	DKC092-13RIB	92	29,502	29.8	21.6	35.5	7.1	3.4	1.24	39.7	34.2	.	.	53.5	64.8	67.9	12.8	3.1	87.0	55.6
Revere Seed	Revere 093-V37	93	29,852	29.9	22.3	33.8	8.1	3.3	1.17	37.7	34.2	.	.	55.2	65.4	68.2	12.0	3.2	95.0	59.0
Dyna-Gro Seed	D33SP06RIB	93	29,766	30.6	23.8	31.8	7.2	3.5	1.14	42.5	36.2	.	.	54.4	66.2	69.0	13.2	2.8	80.9	53.0
Dekalb	DKC093-05RIB	93	28,647	30.9	23.4	35.3	7.6	3.1	1.13	38.0	36.0	.	.	56.1	69.6	72.5	10.5	3.3	99.3	60.9
Redtail (King's Agriseeds)	RT 44T28	94	30,776	31.2	23.3	34.8	7.5	3.3	1.15	37.1	34.0	.	.	51.5	63.3	66.0	12.6	3.0	88.9	56.2
Channel	193-42VT4PRIB	93	29,964	31.6	24.3	34.0	6.7	3.3	1.06	39.8	35.7	.	.	54.6	65.9	68.8	12.4	3.0	90.7	57.3
Revere Seed	Revere 091-P42	91	29,169	32.0	21.6	35.5	7.5	3.3	1.22	38.6	35.2	.	.	54.1	65.2	68.0	12.4	3.1	91.7	57.6
Redtail (King's Agriseeds)	RT 41T19	91	27,995	32.4	22.2	34.8	7.9	3.3	1.26	35.9	33.3	.	.	52.4	63.0	65.6	12.3	3.1	91.4	57.0
Channel	193-40VT4PRIB	93	28,301	32.5	23.3	35.3	6.9	3.2	1.12	37.9	35.2	.	.	57.2	67.8	70.7	11.1	3.4	101.4	61.8
Seedway	SW 8989PE (RA)	89	30,142	32.8	22.8	32.8	7.9	3.4	1.11	36.8	33.8	.	.	52.5	64.4	67.2	12.1	2.9	93.5	58.4
Channel	192-52SSPRIB	92	29,896	34.1	25.5	38.8	8.0	3.2	1.43	36.9	34.1	.	.	56.9	65.5	68.3	11.8	3.7	99.8	60.7
Seedway	SW 9093SS (RIB)	90	29,001	34.4	23.5	42.5	7.4	3.1	1.37	33.7	32.9	.	.	53.2	61.5	64.2	12.1	3.7	92.1	57.2
Seed Consultants	SC946PCE[3]	94	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		RM Mean	**29,418**	**31.9**	**23.1**	**35.4**	**7.5**	**3.3**	**1.20**	**37.9**	**34.6**	**.**	**.**	**54.3**	**65.2**	**68.0**	**12.1**	**3.2**	**92.6**	**57.9**
	Overall LSD (0.10)		**1,426**	**2.0**	**2.3**	**3.9**	**0.6**	**NS[2]**	**0.15**	**2.6**	**NS[2]**	**NS[2]**	**2.1**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**0.5**	**NS[2]**	**NS[2]**
	Overall Mean		**29,404**	**31.3**	**22.6**	**34.4**	**7.6**	**3.3**	**1.14**	**38.9**	**35.4**	**38.6**	**54.0**	**54.2**	**65.9**	**68.9**	**12.1**	**3.1**	**90.4**	**57.0**

Table 1.5: Hybrid performance for 85 – 98-day RM groups at Alburgh, VT *(page 2 of 2)*.

Company/Brand	Hybrid	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	C 18:2	aNDFom	12 hr NDFD	Wet Chem aNDFom	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
			plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% NDFom	% DM	% NDFom	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Chemgro Seeds	Chemgro 5644PCE	96	28,077	29.4	22.3	34.5	7.9	3.4	1.02	39.9	35.1	.	.	55.0	66.1	69.0	12.4	3.1	89.7	56.8
Growmark FS	FS 4559PCRA	95	29,314	29.7	23.4	35.1	7.5	3.5	1.07	39.4	34.6	.	.	51.6	64.1	66.9	13.0	2.9	83.9	54.2
Brevant	B96M56V	96	28,205	30.1	22.9	32.5	7.1	3.5	0.98	42.1	36.8	41.9	53.1	49.9	64.7	67.5	13.7	2.5	68.5	47.6
Revere Seed	Revere 9827 SSX	98	29,895	30.2	22.9	31.0	7.3	3.6	1.08	43.0	34.7	.	.	53.6	65.3	68.0	13.8	2.7	76.4	51.1
Syngenta NK Seed	NK9771-DV	97	29,651	30.3	18.8	33.1	8.4	3.4	1.10	41.3	35.8	.	.	52.6	66.5	69.4	12.7	2.8	80.0	52.6
Brevant	B97G09Q	97	28,423	30.3	21.0	34.1	7.7	3.1	1.08	37.0	36.8	36.3	54.8	53.3	67.3	70.3	11.0	3.0	95.7	59.4
Growmark FS	FS 4547T RIB	95	29,846	30.5	22.4	34.9	7.4	3.2	1.12	39.4	36.1	.	.	55.5	67.2	70.1	11.8	3.2	93.6	58.6
Seedway	SW 9543V4 (RIB)	95	30,239	30.8	24.2	34.2	7.9	3.2	1.15	39.8	36.2	.	.	57.7	67.7	70.7	11.7	3.3	97.2	60.0
Channel	197-99SSPRIB	97	29,476	31.0	22.8	34.3	7.3	3.3	1.22	41.7	35.8	.	.	56.2	67.3	70.5	12.3	3.1	89.9	56.7
Seed Consultants	SC964PCE	96	29,658	31.0	22.2	34.0	7.5	3.5	1.13	39.1	35.0	.	.	54.1	65.7	68.6	12.3	3.0	90.2	57.1
Redtail (King's Agriseeds)	RT 48T16	98	29,420	31.2	22.7	34.8	8.0	3.3	1.15	38.3	36.3	.	.	54.1	66.6	69.4	11.8	3.1	93.0	58.1
Seedway	SW 9655PE (RA)	96	29,846	31.3	23.0	32.9	7.6	3.3	0.97	38.2	35.6	.	.	54.3	66.9	69.8	11.5	3.0	92.9	58.2
Seed Consultants	SC976V	97	30,848	31.3	23.4	35.1	7.3	3.4	1.08	39.0	35.4	.	.	51.5	64.9	67.7	12.6	2.9	85.2	54.9
Pioneer	P9823Q	98	28,370	31.4	22.1	33.1	8.1	3.4	1.18	39.3	35.9	.	.	55.5	66.2	69.1	12.2	3.1	92.3	58.1
Syngenta NK Seed	E097K6-D	97	30,506	31.5	20.2	33.2	8.5	2.9	1.15	35.7	36.5	36.5	55.3	55.7	67.3	70.2	10.6	3.1	104.0	62.8
Brevant	B95R21V	95	28,529	31.7	21.0	32.3	7.5	3.2	1.00	40.0	38.4	39.9	53.0	53.0	66.7	71.4	11.5	2.7	84.9	54.7
Seedway	SW 9522TR (RIB)	95	29,647	32.0	22.9	33.7	7.5	3.3	1.12	40.3	35.9	.	.	56.0	66.7	69.6	12.3	3.1	89.8	56.9
Dekalb	DKC098-55RIB	98	29,146	33.5	21.8	34.0	7.6	3.0	1.10	40.0	37.4	.	.	55.6	68.7	71.6	11.4	3.1	94.3	58.5
		RM Mean	**29,394**	**30.9**	**22.2**	**33.7**	**7.7**	**3.3**	**1.10**	**39.6**	**36.0**	**38.6**	**54.0**	**54.2**	**66.4**	**69.4**	**12.1**	**3.0**	**89.0**	**56.4**
	Overall LSD (0.10)		**1,426**	**2.0**	**2.3**	**3.9**	**0.6**	**NS[2]**	**0.15**	**2.6**	**NS[2]**	**NS[2]**	**2.1**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**0.5**	**NS[2]**	**NS[2]**
	Overall Mean		**29,404**	**31.3**	**22.6**	**34.4**	**7.6**	**3.3**	**1.14**	**38.9**	**35.4**	**38.6**	**54.0**	**54.2**	**65.9**	**68.9**	**12.1**	**3.1**	**90.4**	**57.0**

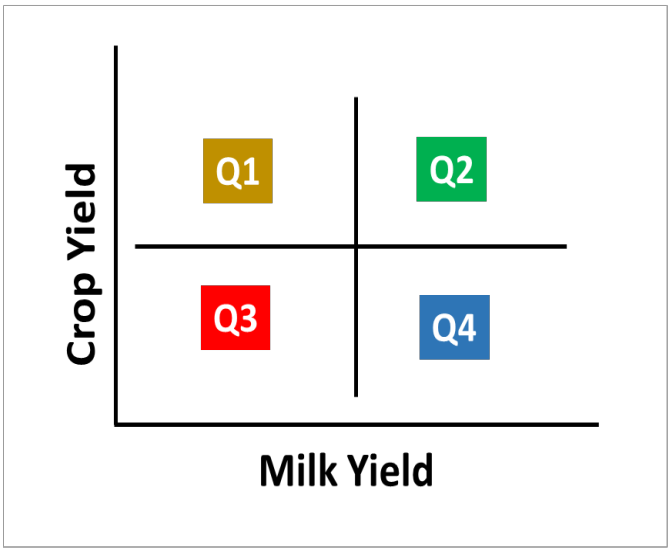
Table 1.6: Hybrid performance for 99–110-day RM groups at Alburgh, VT *(page 1 of 2)*.

Company/Brand	Hybrid	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	C 18:2	aNDFom	12 hr NDFD	Wet Chem aNDFom	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
			plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% NDFom	% NDFom	% DM	% NDFom	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Dyna-Gro Seed	D44PN56RA	104	30,142	29.6	19.3	33.6	7.6	3.5	1.10	40.1	33.4	.	.	52.3	63.4	66.0	13.6	2.8	81.8	53.5
Revere Seed	Revere 0120 PC	101	29,054	30.2	20.0	33.3	7.2	3.5	1.13	39.1	32.4	.	.	51.8	63.3	66.0	13.3	2.8	82.5	53.7
Channel	204-54SSPRIB	104	31,654	30.4	25.1	37.0	7.1	3.3	1.30	37.9	32.7	.	.	54.2	65.2	67.9	12.1	3.3	94.5	58.8
Seed Consultants	SC1018AM	101	30,109	30.5	21.8	34.7	7.1	3.4	1.19	39.2	35.3	.	.	53.8	66.0	68.9	12.2	3.1	89.1	56.8
Seedway	SW 0123PE (RA)	101	29,888	30.6	24.8	32.9	7.2	3.4	1.11	39.2	33.0	.	.	53.5	63.6	66.3	13.2	2.9	86.1	55.2
Growmark FS	FS 5159PCRA	101	30,868	31.6	24.5	35.9	7.0	3.3	1.12	37.7	35.1	.	.	53.2	64.8	67.6	12.2	3.2	90.6	57.2
Seed Consultants	SC1006PCE	100	29,588	32.0	23.6	36.6	7.1	3.4	1.26	38.4	33.9	.	.	53.0	63.6	66.5	12.8	3.1	87.6	55.9
Dekalb	DKC101-33RIB	101	30,040	32.4	25.2	35.8	7.0	3.3	1.24	39.6	34.2	.	.	55.3	65.4	68.2	12.6	3.2	91.4	57.5
Dekalb	DKC53-94RIB	103	31,363	32.5	25.7	34.3	7.0	3.2	1.23	38.9	34.2	.	.	56.3	66.4	69.2	12.0	3.3	93.0	58.0
Dekalb	DKC102-13RIB	102	29,469	32.7	24.1	35.0	6.9	3.4	1.12	38.7	33.9	.	.	54.6	65.5	68.4	12.3	3.1	91.2	57.8
Growmark FS	FS 5347TRIB	103	30,345	32.7	23.8	37.2	7.8	3.2	1.27	35.5	33.1	.	.	54.6	63.0	66.2	12.0	3.5	95.4	58.7
Seedway	SW 0404SS (RIB)	104	28,981	32.8	24.7	35.8	6.8	3.5	1.31	39.6	31.8	.	.	51.8	62.1	64.8	14.0	3.0	80.0	52.6
Channel	201-07SSPRIB	101	30,066	33.2	23.8	36.2	7.0	3.3	1.31	38.3	33.7	.	.	54.9	63.6	66.4	12.9	3.3	89.2	56.2
Channel	202-43VT4PRIB	102	29,881	33.2	25.8	35.6	7.4	3.3	1.21	38.3	34.1	.	.	54.5	64.2	67.3	12.7	3.2	91.0	57.1
Syngenta NK Seed	E102K7-D	102	29,093	33.3	23.2	34.4	8.2	3.1	1.30	37.9	36.7	38.5	56.4	54.8	66.0	68.8	11.8	3.1	95.6	59.3
Brevant	B99A24V	99	29,529	33.4	25.3	37.0	7.6	3.3	1.19	37.6	35.2	37.3	52.5	53.6	66.0	68.8	11.8	3.2	93.4	58.2
Seedway	SW 9876SS (RIB)	98	28,628	33.5	22.2	33.6	7.4	3.5	1.13	40.1	34.1	.	.	54.0	64.3	67.0	13.2	3.0	85.7	55.3
Syngenta NK Seed	NK0025-DV	100	31,271	34.5	27.6	37.3	7.4	3.2	1.20	37.3	34.8	.	.	54.7	66.3	69.2	11.7	3.5	95.0	59.1
		RM Mean	**29,998**	**32.2**	**23.9**	**35.3**	**7.3**	**3.3**	**1.21**	**38.5**	**34.0**	**.**	**.**	**53.9**	**64.6**	**67.4**	**12.6**	**3.1**	**89.6**	**56.7**
		Overall LSD (0.10)	**1,371**	**2.1**	**2.8**	**3.9**	**NS[2]**	**NS[2]**	**0.12**	**NS[2]**	**2.3**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**
		Overall Mean	**29,942**	**31.9**	**24.4**	**34.8**	**7.3**	**3.3**	**1.18**	**39.1**	**34.4**	**40.0**	**56.6**	**54.6**	**65.5**	**68.3**	**12.4**	**3.1**	**90.3**	**57.0**

Table 1.6: Hybrid performance for 99–110-day RM groups at Alburgh, VT *(page 2 of 2)*.

Company/Brand	Hybrid	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	C 18:2	aNDFom	12 hr NDFD	Wet Chem aNDFom	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
			plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% NDFom	% DM	% NDFom	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
KingFisher (King's Agriseeds)	KF 59B70	109	29,269	25.5	18.0	26.4	8.2	3.1	1.07	42.2	37.9	42.0	59.2	61.8	72.0	75.0	10.6	3.1	101.9	62.7
Dekalb	DKC111-02RIB	111	29,690	29.9	24.5	34.8	7.1	3.4	1.15	38.4	32.8	.	.	53.6	64.1	66.9	12.7	3.1	88.7	56.4
Brevant	B08R32V	108	30,142	31.0	27.0	36.3	7.5	3.3	1.18	38.7	35.4	39.1	57.8	54.1	65.8	68.5	12.3	3.1	91.3	57.3
Seed Consultants	SC1086PCE	108	29,195	31.1	25.2	32.3	7.2	3.5	1.09	41.3	34.3	.	.	55.4	67.5	70.4	12.3	3.0	87.3	55.9
Redtail (King's Agriseeds)	RT 55T79	105	29,829	31.4	24.1	33.8	7.6	3.3	1.15	39.2	33.7	.	.	53.4	63.5	66.2	13.3	3.0	85.1	54.8
Syngenta NK Seed	NK0604-DV	106	29,832	31.6	24.6	33.6	7.0	3.4	1.19	40.4	34.5	.	.	55.4	66.6	69.5	12.3	3.1	90.2	57.1
Pioneer	P0732Q	107	29,357	31.9	24.5	34.9	7.4	3.2	1.13	38.6	36.3	.	.	56.9	68.0	70.9	11.3	3.4	97.8	60.4
Chemgro Seed	Chemgro 6854PCE	108	29,163	32.0	25.3	35.8	7.5	3.4	1.23	39.1	34.0	.	.	54.3	65.4	68.3	12.4	3.2	89.6	56.8
Brevant	B09C43V	109	29,954	32.0	25.9	34.6	7.6	3.2	1.09	42.4	40.2	42.5	60.0	58.2	69.7	72.6	11.6	2.9	92.3	58.1
Brevant	B05D47V	105	30,040	32.2	25.1	36.0	6.8	3.3	1.13	39.9	34.7	40.3	55.5	52.8	66.5	69.4	12.3	3.0	83.4	54.2
Seed Consultants	SC1055PCE	105	30,928	32.3	27.5	34.2	6.9	3.6	1.03	40.8	33.2	.	.	53.9	65.6	68.4	12.9	2.9	84.9	54.9
Dekalb	DKC110-10RIB	110	30,238	32.4	25.4	35.7	7.4	3.2	1.25	38.3	34.1	.	.	56.6	67.3	70.2	11.4	3.4	99.2	60.5
Dekalb	DKC105-25RIB	105	30,347	32.7	25.8	35.7	7.1	3.3	1.21	37.8	33.3	.	.	54.4	64.0	66.8	12.5	3.2	91.7	57.5
Revere Seed	Revere 0518VT2PRIB	105	29,357	32.9	24.2	34.3	6.9	3.5	1.16	39.1	32.4	.	.	53.4	62.3	65.4	13.5	3.0	83.1	53.9
Syngenta NK Seed	E108K4-DV	108	30,776	33.9	26.8	35.2	7.4	3.1	1.17	39.6	37.3	40.4	54.9	57.1	69.2	72.1	11.1	3.4	98.6	60.4
		RM Mean	**29,874**	**31.5**	**24.9**	**34.2**	**7.3**	**3.3**	**1.15**	**39.7**	**34.9**	**40.9**	**57.5**	**55.4**	**66.5**	**69.4**	**12.2**	**3.1**	**91.0**	**57.4**
		Overall LSD (0.10)	**1,371**	**2.1**	**2.8**	**3.9**	**NS[2]**	**NS[2]**	**0.12**	**NS[2]**	**2.3**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**	**NS[2]**
		Overall Mean	**29,942**	**31.9**	**24.4**	**34.8**	**7.3**	**3.3**	**1.18**	**39.1**	**34.4**	**40.0**	**56.6**	**54.6**	**65.5**	**68.3**	**12.4**	**3.1**	**90.3**	**57.0**

Figure 1.4. Interpretation of quartile plots used in Figures 5 and 6.



Q1: Crop Yield: Above Average
Milk Yield: Below Average

Q2: Crop Yield: Above Average
Milk Yield: Above Average

Q3: Crop Yield: Below Average
Milk Yield: Below Average

Q4: Crop Yield: Below Average
Milk Yield: Above Average

Figure 1.5.

Relationship between crop yield and predicted milk yield (PMY) for 85–98-day relative maturity (RM) hybrids planted at Alburgh, VT. Hybrids located in the top right quadrant were above the overall mean for both crop yield and PMY and are considered good performers. Hybrids located in the bottom left quadrant were below the mean for yield and milk production potential. Hybrids in the top left quadrant were below the mean for yield and above the mean for milk production potential and hybrids in the bottom right quadrant were above the mean for yield and below the mean for milk production potential.

Figure 1.6.

Relationship between crop yield and predicted milk yield (PMY) for 99–110-day relative maturity (RM) hybrids planted at Alburgh, VT. Hybrids located in the top right quadrant were above the overall mean for both crop yield and PMY and are considered good performers. Hybrids located in the bottom left quadrant were below the mean for yield and milk production potential. Hybrids in the top left quadrant were below the mean for yield and above the mean for milk production potential and hybrids in the bottom right quadrant were above the mean for yield and below the mean for milk production potential.

Figures 1.5 & 1.6: Least Significant Difference

Least significant difference (LSD) is used to indicate if the statistical difference between two values is meaningful at a certain confidence level. An LSD of 0.10 indicates a confidence level of 90%. In figures 1.5 & 1.6 the LSD (0.10) is represented graphically as a way to visualize if the differences between hybrids is statistically significant.

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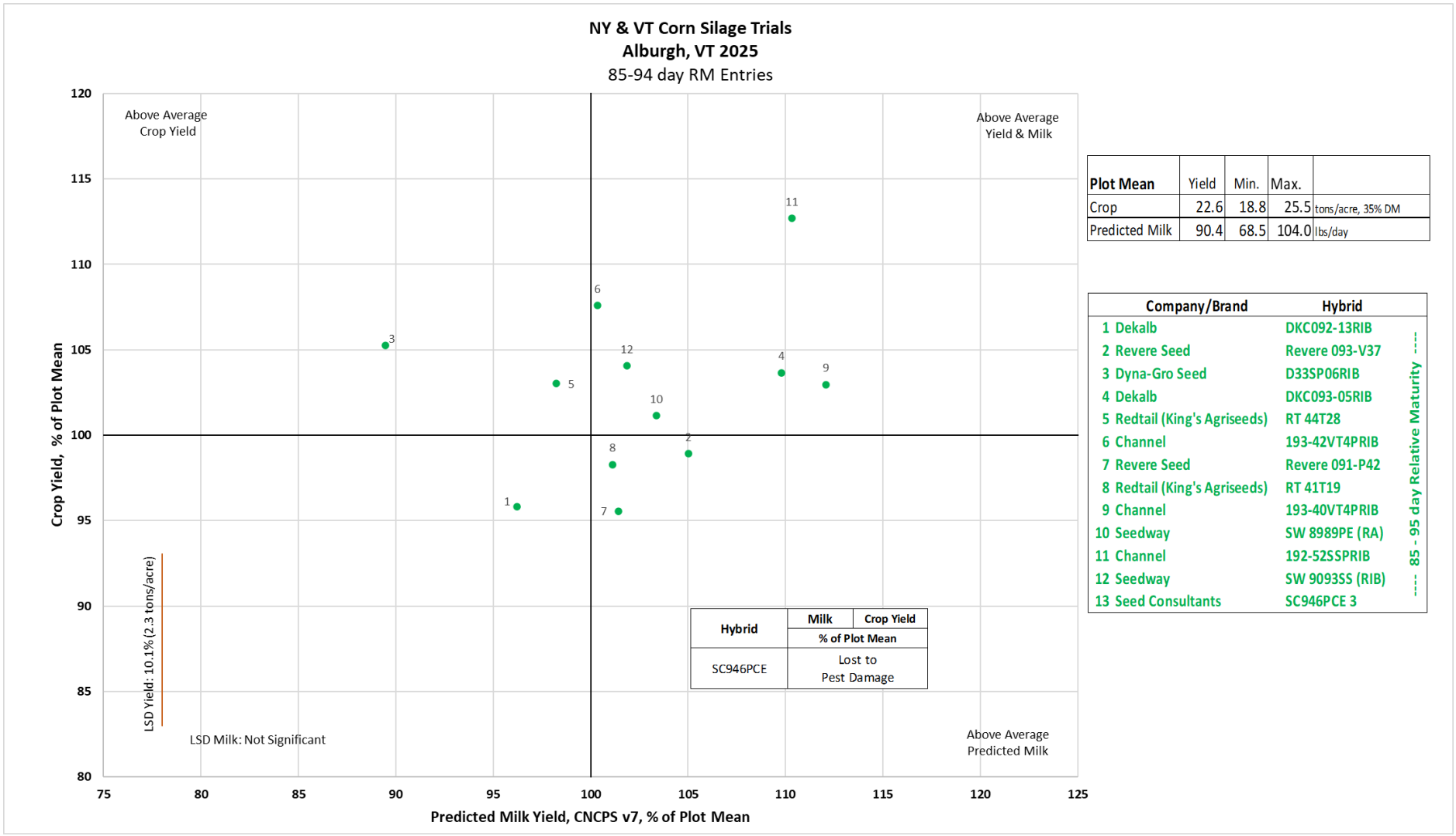


Figure 1.5: Alburgh, VT 85–98-day RM hybrids, 85-94 RM entries.

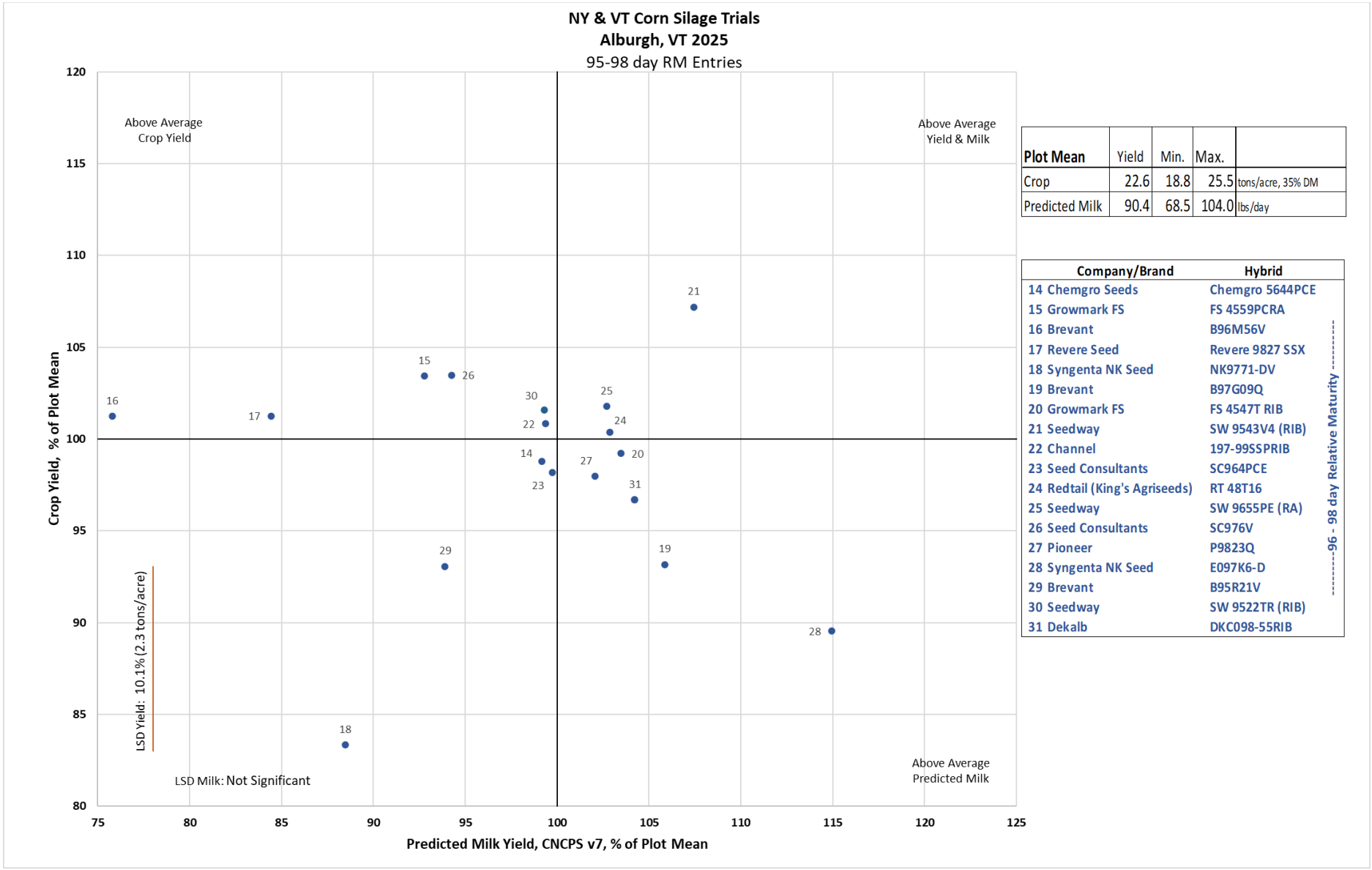
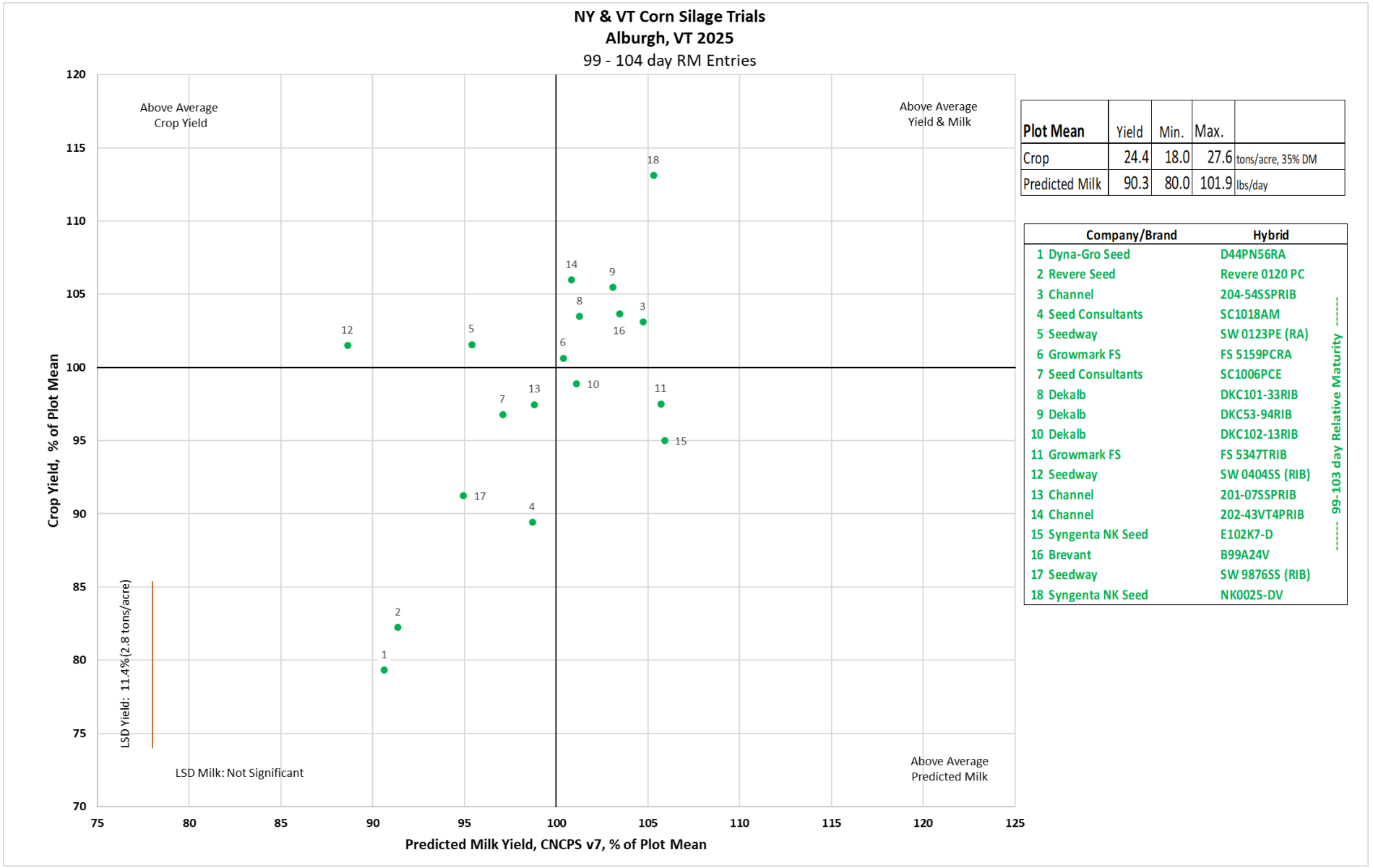


Figure 1.5: Alburgh, VT 85–98-day RM hybrids, 95-98 RM entries *(cont.)*.

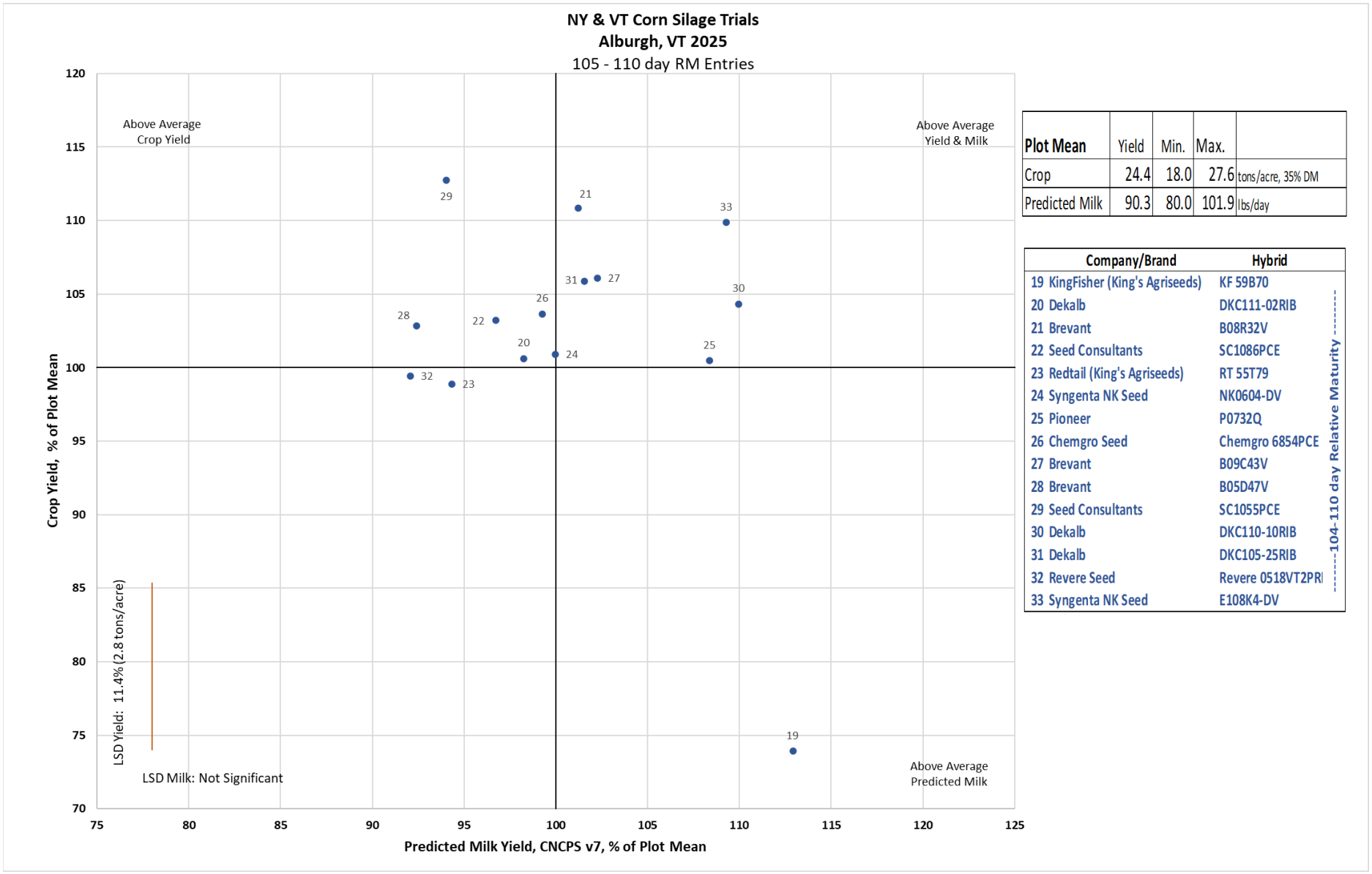


Plot Mean	Yield	Min.	Max.	
Crop	24.4	18.0	27.6	tons/acre, 35% DM
Predicted Milk	90.3	80.0	101.9	lbs/day

	Company/Brand	Hybrid
1	Dyna-Gro Seed	D44PN56RA
2	Revere Seed	Revere 0120 PC
3	Channel	204-54SSPRIB
4	Seed Consultants	SC1018AM
5	Seedway	SW 0123PE (RA)
6	Growmark FS	FS 5159PCRA
7	Seed Consultants	SC1006PCE
8	Dekalb	DKC101-33RIB
9	Dekalb	DKC53-94RIB
10	Dekalb	DKC102-13RIB
11	Growmark FS	FS 5347TRIB
12	Seedway	SW 0404SS (RIB)
13	Channel	201-07SSPRIB
14	Channel	202-43VT4PRIB
15	Syngenta NK Seed	E102K7-D
16	Brevant	B99A24V
17	Seedway	SW 9876SS (RIB)
18	Syngenta NK Seed	NK0025-DV

------ 99-103 day Relative Maturity ------

Figure 1.6: Alburgh, VT 99–110-day RM hybrids, 99-104 RM entries.



Plot Mean	Yield	Min.	Max.	
Crop	24.4	18.0	27.6	tons/acre, 35% DM
Predicted Milk	90.3	80.0	101.9	lbs/day

	Company/Brand	Hybrid
19	KingFisher (King's Agriseeds)	KF 59B70
20	Dekalb	DKC111-02RIB
21	Brevant	B08R32V
22	Seed Consultants	SC1086PCE
23	Redtail (King's Agriseeds)	RT 55T79
24	Syngenta NK Seed	NK0604-DV
25	Pioneer	P0732Q
26	Chemgro Seed	Chemgro 6854PCE
27	Brevant	B09C43V
28	Brevant	B05D47V
29	Seed Consultants	SC1055PCE
30	Dekalb	DKC110-10RIB
31	Dekalb	DKC105-25RIB
32	Revere Seed	Revere 0518VT2PRI
33	Syngenta NK Seed	E108K4-DV

------104-110 day Relative Maturity ------

Figure 1.6: Alburgh, VT 99–110-day RM hybrids, 105-110 RM entries *(cont.)*.

Table 1.7: Comparative hybrid performance across locations and years.

Footnotes for Table 1.7

[1]Comparative values based on mean equal to 100%, Crop Yield is reported in tons/acre, 35% DM and milk yield is reported in lb/day.

[2]Environments are site-year combinations for current year and across all years a hybrid has been entered.

Table 1.7a: 85 - 98-day relative maturity (RM).

Company/Brand	Hybrid	RM	2025			All Years		
			Comparative Crop Yield	Comparative Milk Yield	No. Environ-ments[2]	Comparative Crop Yield	Comparative Milk Yield	No. Environ-ments[2]
			% of overall mean[1]			% of overall mean[1]		
Seedway	SW 8989PE	89	94%	104%	1	94%	104%	1
Seedway	SW 9093SS	90	96%	102%	1	96%	102%	1
Revere Seed	Revere 091-P42	91	88%	102%	1	88%	102%	1
Redtail (King's Agriseeds)	RT 41T19-D2	91	91%	101%	1	96%	101%	3
Dekalb	DKC092-13RIB	92	89%	96%	1	89%	96%	1
Channel	192-52SSPRIB	92	104%	110%	1	104%	110%	1
Revere Seed	Revere 093-V37	93	92%	105%	1	92%	105%	1
Dyna-Gro Seed	D33SP06RIB	93	97%	90%	1	97%	90%	1
Dekalb	DKC093-05RIB	93	96%	110%	1	101%	101%	3
Channel	193-42VT4PRIB	93	100%	100%	1	109%	104%	3
Channel	193-40VT4PRIB	93	95%	112%	1	102%	104%	3
Redtail (King's Agriseeds)	RT 44T28	94	95%	98%	1	95%	98%	1
Seed Consultants	SC946PCE	94	Lost to Wildlife Damage					
Growmark FS	FS 4559PCRA	95	96%	93%	1	96%	93%	1
Growmark FS	FS 4547T RIB	95	92%	104%	1	99%	103%	3
Seedway	SW 9543V4	95	99%	108%	1	99%	108%	1
Brevant	B95R21V	95	86%	94%	1	86%	94%	1
Seedway	SW 9522TR	95	94%	99%	1	94%	99%	1
Chemgro Seeds	Chemgro 5644PCE	96	91%	99%	1	91%	99%	1
Brevant	B96M56V	96	94%	76%	1	94%	76%	1
Seed Consultants	SC964PCE	96	91%	100%	1	96%	105%	3
Seedway	SW 9655PE	96	94%	103%	1	100%	96%	3
Syngenta NK Seed	NK9771-DV	97	77%	89%	1	77%	89%	1
Brevant	B97G09Q	97	86%	106%	1	86%	106%	1
Channel	197-99SSPRIB	97	93%	100%	1	104%	102%	3
Seed Consultants	SC976V	97	96%	94%	1	96%	94%	1
Syngenta NK Seed	E097K6-D	97	83%	115%	1	83%	115%	1
Revere Seed	Revere 9827 SSX	98	94%	85%	1	98%	94%	3
Redtail (King's Agriseeds)	RT 48T16	98	93%	103%	1	93%	103%	1
Pioneer	P9823Q	98	91%	102%	1	100%	103%	5
Dekalb	DKC098-55RIB	98	89%	104%	1	98%	106%	3
Seedway	SW 9876SS	98	98%	95%	1	103%	96%	3

Table 1.7b: 99 - 110-day relative maturity (RM).

Company/Brand	Hybrid	RM	2025			All Years		
			Comparative Crop Yield	Comparative Milk Yield	No. Environ-ments[2]	Comparative Crop Yield	Comparative Milk Yield	No. Environ-ments[2]
			% of overall mean[1]			% of overall mean[1]		
Brevant	B99A24V	99	112%	103%	1	112%	103%	1
Seed Consultants	SC1006PCE	100	104%	97%	1	104%	97%	1
Syngenta NK Seed	NK0025-DV	100	122%	105%	1	122%	105%	1
Revere Seed	Revere 0120 PC	101	89%	91%	1	89%	91%	1
Seed Consultants	SC1018AM	101	96%	99%	1	103%	109%	12
Seedway	SW 0123PE	101	110%	95%	1	102%	90%	3
Growmark FS	FS 5159P CRA	101	109%	100%	1	109%	100%	1
Dekalb	DKC101-33RIB	101	112%	101%	1	107%	105%	6
Channel	201-07SSPRIB	101	105%	99%	1	99%	109%	9
Dekalb	DKC102-13RIB	102	107%	101%	1	107%	108%	3
Channel	202-43VT4PRIB	102	114%	101%	1	114%	101%	1
Syngenta NK Seed	E102K7-D	102	102%	106%	1	102%	106%	1
Dekalb	DKC53-94RIB	103	114%	103%	1	100%	98%	9
Growmark FS	FS 5347T RIB	103	105%	106%	1	95%	99%	3
Dyna-Gro Seed	D44PN56RA	104	86%	90%	1	86%	90%	1
Channel	204-54SSPRIB	104	111%	105%	1	103%	103%	6
Seedway	SW 0404SS	104	109%	88%	1	109%	88%	1
Redtail (King's Agriseeds)	RT 55T79-D1	105	107%	94%	1	103%	97%	6
Brevant	B05D47V	105	111%	92%	1	111%	92%	1
Seed Consultants	SC1055PCE	105	122%	94%	1	122%	94%	1
Dekalb	DKC105-25RIB	105	114%	101%	1	103%	96%	3
Revere Seed	Revere 0518VT2PR	105	107%	92%	1	107%	92%	1
Syngenta NK Seed	NK0604-DV	106	109%	100%	1	109%	100%	1
Pioneer	P0732Q	107	108%	108%	1	108%	108%	1
Brevant	B08R32V	108	120%	101%	1	120%	101%	1
Seed Consultants	SC1086PCE	108	111%	97%	1	111%	97%	1
Chemgro Seed	Chemgro 6854PCE	108	112%	99%	1	112%	99%	1
Syngenta NK Seed	E108K4-DV	108	119%	109%	1	119%	109%	1
KingFisher (King's Agriseeds)	KF 59B70	109	80%	113%	1	91%	129%	6
Brevant	B09C43V	109	114%	102%	1	114%	102%	1
Dekalb	DKC110-10RIB	110	113%	110%	1	107%	108%	3
Dekalb	DKC111-02RIB	111	109%	98%	1	109%	98%	1

Table 1.8: Description of seed traits for hybrids listed in Tables 1.5 and 1.6.

Table 1.8a. 85 - 98-day relative maturity (RM).

Brand	Hybrid	RM	Trait Package	
Brevant	B96M56V	96	Vorceed Enlist	V
Brevant	B95R21V	95	Vorceed Enlist	V
Brevant	B97G09Q	97	Qrome	Q
Channel	192-52SSPRIB	92	SmartStax PRO	SSPro
Channel	193-40VT4PRIB	93	VT4 PRO w/RNAi Technology	VT4PRO
Channel	193-42VT4PRIB	93	VT4 PRO w/RNAi Technology	VT4PRO
Channel	197-99SSPRIB	97	SmartStax PRO	SSPro
Chemgro Seeds	Chemgro 5644PCE	96	PowerCore Enlist Refuge Advanced	PCE
Dekalb	DKC092-13RIB	92	SmartStax PRO	SSPro
Dekalb	DKC093-05RIB	93	SmartStax PRO	SSPro
Dekalb	DKC098-55RIB	98	SmartStax PRO	SSPro
Dyna-Gro	D33SP06RIB	93	SmartStax PRO	SSPro
Growmark FS	FS 4547T RIB	95	Trecepta RIB Complete	TRERIB
Growmark FS	FS 4559PCRA	95	Powercore Enlist	PWE
NK Seeds	NK9771-DV	97	Duracade Viptera (Agrisure5222EZ)	DV
NK Seeds	E097K6-D	97	Duracade (Agrisure5122EZ)	D
Pioneer	P9823Q	98	Qrome	Q
Redtail	RT 41T19	91	Duracade Viptera (Agrisure5222EZ)	DV
Redtail	RT 44T28	94	Duracade Viptera (Agrisure5222EZ)	DV
Redtail	RT 48T16	98	Powercore Enlist	PWE
Revere Seed	Revere 091-P42	91	VT2 PRO RIB Complete	VT2PRIB
Revere Seed	Revere 093-V37	93	Viptera (Agrisure3220EZ)	V
Revere Seed	Revere 9827 SSX	98	Genuity SS	SX
Seed Consultants	SC946PCE	94	Powercore Enlist	PWE
Seed Consultants	SC964PCE	96	Powercore Enlist	PWE
Seed Consultants	SC976V	97	Vorceed Enlist	V
Seedway	SW 8989PE (RA)	89	Powercore Enlist	PWE
Seedway	SW 9093SS (RIB)	90	SmartStax	SS
Seedway	SW 9522TR (RIB)	95	Trecepta RIB Complete	TRERIB
Seedway	SW 9543V4 (RIB)	95	VT4 PRO w/RNAi Technology	VT4PRO
Seedway	SW 9655PE (RA)	96	Powercore Enlist	PWE

Table 1.8b. 99 - 110-day relative maturity (RM).

Brand	Hybrid	RM	Trait Package	
Brevant	B99A24V	99	Vorceed Enlist	V
Brevant	B05D47V	105	Vorceed Enlist	V
Brevant	B09C43V	109	Vorceed Enlist	V
Brevant	B08R32V	108	Vorceed Enlist	V
Channel	201-07SSPRIB	101	SmartStax PRO	SSPro
Channel	202-43VT4PRIB	102	VT4 PRO w/RNAi Technology	VT4PRO
Channel	204-54SSPRIB	104	SmartStax PRO	SSPro
Chemgro Seed	Chemgro 6854PCE	108	PowerCore Enlist Refuge Advanced	PCE
Dekalb	DKC101-33RIB	101	SmartStax PRO	SSPro
Dekalb	DKC102-13RIB	102	VT4 PRO w/RNAi Technology	VT4PRO
Dekalb	DKC53-94RIB	103	SmartStax PRO	SSPro
Dekalb	DKC105-25RIB	105	SmartStax PRO	SSPro
Dekalb	DKC110-10RIB	110	SmartStax PRO	SSPro
Dekalb	DKC111-02RIB	111	SmartStax PRO	SSPro
Dyna-Gro	D44PN56RA	104	Powercore Enlist	PWE
Growmark FS	FS 5159PCRA	101	Powercore Enlist	PWE
Growmark FS	FS 5347TRIB	103	Trecepta RIB Complete	TRERIB
KingFisher	KF 59B70	109	Conventional	C
NK Seeds	NK0025-DV	100	Duracade Viptera (Agrisure5222EZ)	DV
NK Seeds	E102K7-D	102	Duracade (Agrisure5122EZ)	D
NK Seeds	NK0604-DV	106	Duracade Viptera (Agrisure5222EZ)	DV
NK Seeds	E108K4-DV	108	Duracade (Agrisure5122EZ)	D
Pioneer	P0732Q	107	Qrome	Q
Redtail	RT 55T79	105	Duracade (Agrisure5122EZ)	D
Revere Seed	Revere 0120 PC	101	Powercore Enlist	PWE
Revere Seed	Revere 0518VT2PRIB	105	VT2 PRO RIB Complete	VT2PRIB
Seed Consultants	SC1006PCE	100	Powercore Enlist	PWE
Seed Consultants	SC1018AM	101	Acremax	AM
Seed Consultants	SC1055PCE	105	Powercore Enlist	PWE
Seed Consultants	SC1086PCE	108	Powercore Enlist	PWE
Seedway	SW 9876SS (RIB)	98	SmartStax	SS
Seedway	SW 0123PE (RA)	101	Powercore Enlist	PWE
Seedway	SW 0404SS (RIB)	104	SmartStax	SS

Table 1.9: Trait descriptions

The latest version of the table is always posted at https://www.texasinsects.org/bt-corn-trait-table.html
For questions & corrections: Chris DiFonzo, Michigan State Univ., difonzo@msu.edu
Contributor: Pat Porter, Texas A&M University (web site host)

The Handy Bt Trait Table for U.S. Corn Production

Updated August 2025

Compiled by
Chris DiFonzo
Michigan State University

Web site hosted by
Pat Porter
Texas A&M University

The most up-to-date version and related extension materials are free online at: **www.texasinsects.org/bt-corn-trait-table.html**
Questions? Comments/ Complaints? difonzo@msu.edu

Several formatting changes for 2025

Resistance to Bt proteins continues to be a major theme for 2025. Localized populations of southwestern corn borer (SWCB) and European corn borer (ECB) have been found which survive one or more of the Bts labeled for their control (except VIP for SWCB). Both species developed resistance in isolated regions, often where single-trait hybrids were still being planted. For SWCB, this was in corn production on irrigated pivots in the southern New Mexico. For ECB, this was in small production areas outside of the corn belt in the Canadian Maritime provinces, Quebec, and Connecticut.

With the increase in species surviving Bts, the table was redesigned to eliminate a separate resistance column. That information is now captured in the control column. An 'x' means a trait package is effective against that insect. Resistance to all traits in a package is indicated by 'R' if it is common or 'RL' if only in localized areas.

All single-trait packages were moved from Table 2 to Table 1 (below), the 'time capsule' of older products. Single-trait hybrids increase the chance of resistance development and thus were supposed to be phased out after introduction of seed-blend refuge fourteen years ago. In 2025, single trait hybrids are still listed in some seed catalogs. Moving single traits out of the main trait table draws attention to the problem of their continued availability.

ABBREVIATIONS & TERMS used in the TRAIT TABLE

Insect Pests

BCW	black cutworm
CEW	corn earworm
ECB	European corn borer
FAW	fall armyworm
NCR	northern corn rootworm
SB	stalk borer
SCB	sugarcane borer
SWCB	southwestern corn borer
TAW	true armyworm
WBC	western bean cutworm
WCR	western corn rootworm

Herbicide Tolerance

GLY	glyphosate/Roundup-Ready
LL	glufosinate/Liberty Link
LL*	check bag tag for LL status
Enlist	2,4-D & fops/Enlist trait

Refuge: Unless specified as a seed blend, percentages in table assume a separate 'structured' refuge planted in strips, blocks, borders, or in an adjacent field

TABLE 1: TIME CAPSULE Trait packages phased out by industry & single-traits in limited supply	letter code	Traits in the package ********** Font type denotes target: caterpillar or *rootworm*	Expected control by traits in the package *one or more remain effective (x) *resistance to all, widespread (R) / localized(RL)											Refuge in northern states (higher in the south)	Weed control trait	
			BCW	CEW	ECB	FAW	SB	SCB	SWCB	TAW	WBC	NCR	WCR			
AcreMax1	AM1	Cry1F *Cry34/35Ab1*	x		RL	RL	x	x	RL		R	RL	R	10% blend 20% ECB	GLY	LL
AcreMax RW	AMRW	*Cry34/35Ab1*										RL	R	10% blend	GLY	LL
AcreMax TRIsect	AMT	Cry1Ab Cry1F *mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	10% blend	GLY	LL
Agrisure 3010 (Agrisure GT/CB/LL)	3010	Cry1Ab		R	RL			x	RL					20%	GLY	LL
Agrisure 3000GT	3000GT	Cry1Ab *mCry3A*		R	RL			x	RL			x	R	20%	GLY	LL
Agrisure RW or GT/RW	-	*mCry3A*										x	R	20%	GLY	
Herculex I	HXI	Cry1F	x		RL	RL	x	x	RL		R			20%	GLY	LL
Herculex RW	HXRW	*Cry34/35Ab1*										RL	R	20%	GLY	LL
Herculex XTRA	HXX	Cry1F *Cry34/35Ab1*	x		RL	RL	x	x	RL		R	RL	R	20%	GLY	LL
Intrasect TRIsect	CYHR	Cry1Ab Cry1F *mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	20%	GLY	LL
Intrasect Xtra	YXR	Cry1Ab Cry1F *Cry34/35Ab1*	x	R	RL	RL	x	x	RL		R	RL	R	20%	GLY	LL
Intrasect Xtreme	CYXR	Cry1Ab Cry1F *Cry34/35Ab1 mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	5%	GLY	LL
TRIsect	CHR	Cry1F *mCry3A*	x		RL	RL	x	x	RL		R	x	R	20%	GLY	LL
VT Triple PRO	VT3P	Cry1A.105 Cry2Ab2 *Cry3Bb1*		R	RL	x	x	x	RL			RL	R	20%	GLY	
YieldGard Corn Borer	YGCB	Cry1Ab		R	RL			x	RL					20%	GLY	
YieldGard Rootworm	YGRW	*Cry3Bb1*										RL	R	20%	GLY	
YieldGard VT Triple	VT3	Cry1Ab *Cry3Bb1*		R	RL			x	RL			RL	R	20%	GLY	

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Updated August 2025

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TABLE 2 **Principal trait packages available in the U.S.** (alternate names in parentheses)	**letter code**	**Traits in the package** ********** Font type denotes target: caterpillar or *rootworm*	**Expected control by traits in the package** *one or more remain effective (x) *resistance to all, widespread (R) / localized(RL)											**Refuge in northern states** (higher in the south)	**Weed control Trait** *check bag tag
			BCW	CEW	ECB	FAW	SB	SCB	SWCB	TAW	WBC	*NCR*	*WCR*		
AcreMax	AM	Cry1Ab Cry1F	x	R	RL	RL	x	x	RL		R			5% blend	GLY LL
AcreMax Leptra	AML	Cry1Ab Cry1F Vip3A	x	x	RL	x	x	x	x	x	x			5% blend	GLY LL
AcreMax Xtra	AMX	Cry1Ab Cry1F *Cry34/35Ab1*	x	R	RL	RL	x	x	RL		R	RL	R	10% blend	GLY LL
AcreMax Xtreme	AMXT	Cry1Ab Cry1F *Cry34/35Ab1 mCry3A*	x		RL	RL	x	x	RL		R	x	R	5% blend	GLY LL
Agrisure Above (Agrisure3120EZ) AA Refuge Renew (Agrisure3120)	AA	Cry1Ab Cry1F	x	R	RL	RL	x	x	RL		R			5% blend Renew: 5%	GLY LL*
Agrisure Total (Agrisure3122EZ) AT Refuge Renew (Agrisure3122)	AT	Cry1Ab Cry1F *Cry34/35Ab1 mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	5% blend Renew: 5%	GLY LL*
Agrisure Viptera 3110	3110	Cry1Ab Vip3A	x	x	RL	x	x	x	x	x	x			20%	GLY LL
Agrisure Viptera 3111	3111	Cry1Ab Vip3A *mCry3A*	x	x	RL	x	x	x	x	x	x	x	R	20%	GLY LL
Duracade (Agrisure5122EZ) D Refuge Renew (Agrisure5122)	D	Cry1Ab Cry1F *eCry3.1Ab mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	5% blend Renew: 5%	GLY LL*
Duracade Viptera (Agrisure5222EZ) DV Refuge Renew (Agrisure 5222)	DV	Cry1Ab Cry1F Vip3A *eCry3.1Ab mCry3A*	x	x	RL	x	x	x	x	x	x	x	R	5% blend Renew: 5%	GLY LL*
Duracade Viptera Z3 (Agrisure5332EZ) DVZ Refuge Renew (Agrisure5332)	DVZ	Cry1Ab Cry1A.105 Cry2Ab2 Vip3A *eCry3.1Ab mCry3A*	x	x	RL	x	x	x	x	x	x	x	R	5% blend Renew: 5%	GLY LL*
Intrasect	YHR	Cry1Ab Cry1F	x	R	RL	RL	x	x	RL		R			5%	GLY LL
Leptra	VYHR	Cry1Ab Cry1F Vip3A	x	x	RL	x	x	x	x	x	x			5%	GLY LL
PowerCore Refuge Adv.	PWRA	Cry1A.105 Cry2Ab2 Cry1F	x	R	RL	x	x	x	RL		R			5% blend	GLY LL
PowerCore Enlist or Enlist Refuge Advanced	PWE PCE	Cry1A.105 Cry2Ab2 Cry1F	x	R	RL	x	x	x	RL		R			5% Adv 5% blend	GLY LL Enlist
PowerCore Ultra Enlist or Ultra Enlist Refuge Advanced	PWUE PCUE	Cry1A.105 Cry2Ab2 Cry1F Vip3A	x	x	RL	x	x	x	x	x	x			5% Adv 5% blend	GLY LL Enlist
QROME	Q	Cry1Ab Cry1F *Cry34/35Ab1 mCry3A*	x	R	RL	RL	x	x	RL		R	x	R	5% blend	GLY LL
SmartStax or Genuity SS	SS SX	Cry1A.105 Cry2Ab2 Cry1F *Cry3Bb1 Cry34/35Ab1*	x	R	RL	x	x	x	RL		R	RL	R	5%	GLY LL
SmartStax Enlist SS Enlist Refuge Advanced	SSE	Same as SmartStax	x	R	RL	x	x	x	RL		R	RL	R	5% Adv 5% blend	GLY LL Enlist
SmartStax Refuge Advanced SmartStax RIB Complete	SXRA	Same as SmartStax	x	R	RL	x	x	x	RL		R	RL	R	5% blend	GLY LL
SmartStax PRO	SSPro	Cry1A.105 Cry2Ab2 Cry1F *Cry3Bb1 Cry34/35Ab1 dvSnf7*	x	R	RL	x	x	x	RL		R	x	x	5%	GLY LL
SmartStax PRO Enlist SSPro Enlist Refuge Advanced	SSPro	Same as SmartStax Pro	x	R	RL	x	x	x	RL		R	x	x	5% Adv 5% blend	GLY LL Enlist
SmartStax PRO Refuge Advanced RIB Complete or w/RNAi Tech	SSPro	Same as SmartStax Pro	x	R	RL	x	x	x	RL		R	x	x	5% blend	GLY LL
Trecepta RIB Complete	TRERIB	Cry1A.105 Cry2Ab2 Vip3A	x	x	RL	x	x	x	x	x	x			5% blend	GLY
Viptera (Agrisure3220EZ) Vip Refuge Renew (Agrisure3220)	V	Cry1Ab Cry1F Vip3A	x	x	RL	x	x	x	x	x	x			5% blend Renew: 5%	GLY LL*
Viptera Z3 (Agrisure3330EZ) VZ Refuge Renew (Agrisure3330)	VZ	Cry1Ab Cry1A.105 Cry2Ab2 Vip3A	x	x	RL	x	x	x	x	x	x			5% blend Renew: 5%	GLY LL*
Vorceed Enlist	V	Cry1A.105 Cry2Ab2 Cry1F *Cry3Bb1 Cry34/35Ab1 dvSnf7*	x	R	RL	x	x	x	RL		R	x	x	5% blend	GLY LL Enlist
Vorceed Enlist Structured *- Expected in 2026*	VS	Cry1A.105 Cry2Ab2 Cry1F *Cry3Bb1 Cry34/35Ab1 dvSnf7*	x	R	RL	x	x	x	RL		R	x	x	5%	GLY LL Enlist
VT Double PRO	VT2P	Cry1A.105 Cry2Ab2		R	RL	x	x	x	RL					5%	GLY
VT2 PRO RIB Complete	VT2PRIB	Cry1A.105 Cry2Ab2		R	RL	x	x	x	RL					5% blend	GLY
VT3 PRO RIB Complete	VT3PRIB	Cry1A.105 Cry2Ab2 *Cry3Bb1*		R	RL	x	x	x	RL			RL	R	10% blend	GLY
VT4 PRO w/RNAi Technology	VT4PRO	Cry1A.105 Cry2Ab2 Vip3A *Cry3Bb1 dvSnf7*	x	x	RL	x	x	x	x	x	x	x	x	5% blend	GLY

Part II: Field Crop Performance Network
Tables and Figures

Table 2.1: Network location field and weather information for 2025 growing season.

County	Town, State	Soil Type	Planting Date	Average Tassel Date	Harvest Date	Calendar Days	Seasonal Precipitation	Seasonal GDD (86/50)	Average Whole Plant DM
Cayuga	Aurora, NY	Lima	4-Jun	1-Aug	30-Sep	118	10.1	2,144	44.2
Delaware	Unadilla, NY	Chenango	1-May	18-Jul	8-Sep	130	24.4	1,890	37.0
Erie	North Collins, NY	Minoa	3-Jun	31-Jul	15-Sep	104	10.2	1,989	31.1
Essex	Willsboro, NY	Stafford	28-May	3-Aug	29-Sep	124	8.9	2,225	34.1
Lewis	Lowville, NY	Galway	27-May	1-Aug	28-Sep	124	11.3	2,098	37.1
Madison	Morrisville, NY	Palmyra	20-May	29-Jul	1-Oct	134	17.8	2,072	38.1
Grand Isle	Alburgh, VT	Benson	13-May	26-Jul	9-Sep	119	14.9	1,977	31.6

Table 2.2: Whole plot mean for key corn silage performance indicators, 2025

County	Hybrid	Relative Maturity	Plant Population	Yield, 35% DM	Dry Matter	Starch Content	Crude Protein	aNDFom	30 hr NDFD	120 hr NDFD	240 hr uNDFom
				tons/acre	%	% DM	% DM	% DM	% NDFom	%NDFom	% DM
Cayuga, NY	A	93	33,000	12.8	44.4	31.7	7.5	44.0	62.3	69.9	12.0
	B	98	33,000	14.2	44.0	31.3	7.0	45.1	59.9	68.1	13.1
Delaware, NY	A	93	31,000	18.9	37.6	36.9	6.4	40.6	54.9	68.6	11.6
	B	98	31,000	19.1	36.4	36.7	6.2	40.4	52.2	67.5	12.0
Erie, NY	A	93	31,000	16.8	31.2	31.4	9.5	39.4	60.6	69.3	10.9
	B	98	31,000	24.2	31.0	35.7	8.7	34.8	60.3	72.9	8.4
Essex, NY	A	93	35,100	23.8	33.7	43.1	7.8	35.1	54.4	64.7	11.3
	B	98	33,300	24.4	34.5	42.8	7.5	35.8	57.5	67.9	10.4
Lewis, NY	A	93	33,750	29.1	38.3	40.1	6.8	37.4	54.8	69.6	10.3
	B	98	33,500	29.5	35.8	39.9	6.9	37.7	54.6	68.9	10.7
Madison, NY	A	93	33,250	25.2	39.6	38.6	6.6	37.0	58.1	66.9	11.2
	B	98	31,750	21.1	36.5	35.9	6.0	39.8	60.5	69.6	10.9
Grand Isle, VT	A	93	28,500	22.4	32.7	36.6	7.9	38.4	57.9	67.6	11.3
	B	98	29,600	23.8	30.5	35.4	7.3	37.5	52.9	62.8	12.8

Figure 2.1. Accumulation of growing degree days (GDD) from planting through harvest and individual precipitation events from May 1st through harvest at Alburgh, VT.

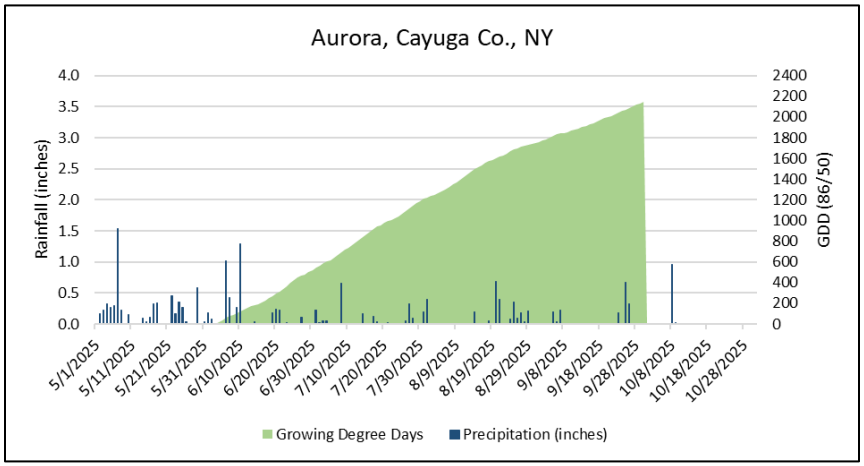

Figure 2.1a: Aurora, Cayuga Co., NY

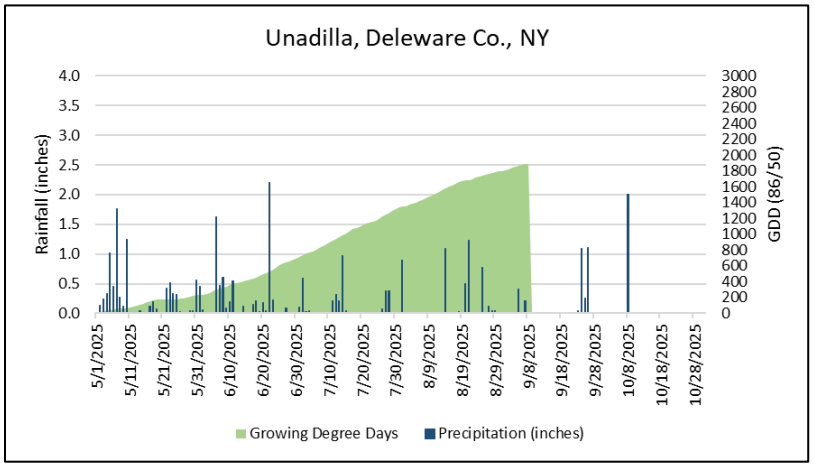

Figure 2.1b: Unadilla, Delaware Co., NY

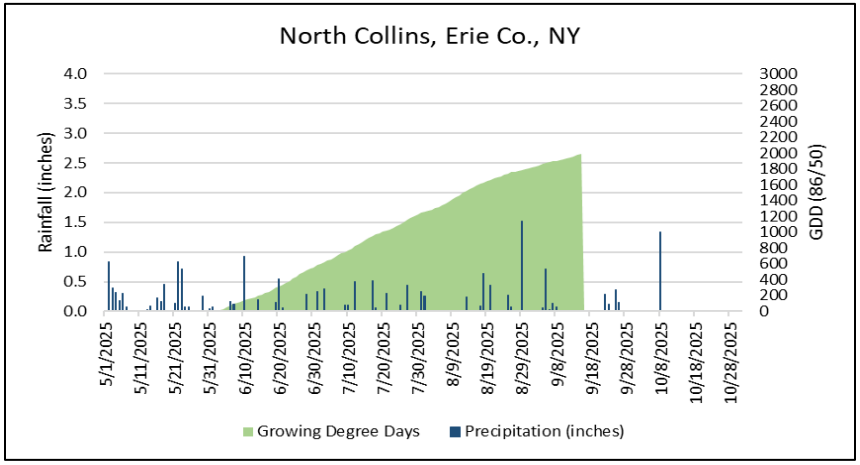

Figure 2.1c: North Collins, Erie Co., NY

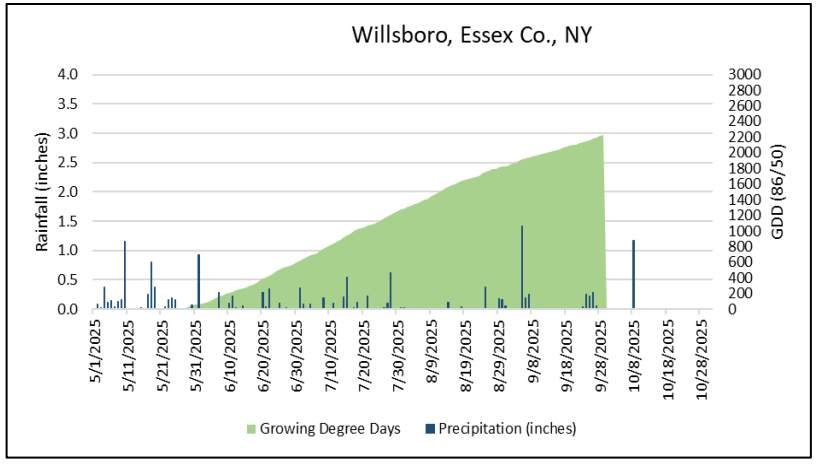

Figure 2.1d: Willsboro, Essex Co., NY

Figure 2.1. Accumulation of growing degree days (GDD) from planting through harvest and individual precipitation events from May 1st through harvest at Alburgh, VT (*cont.*).

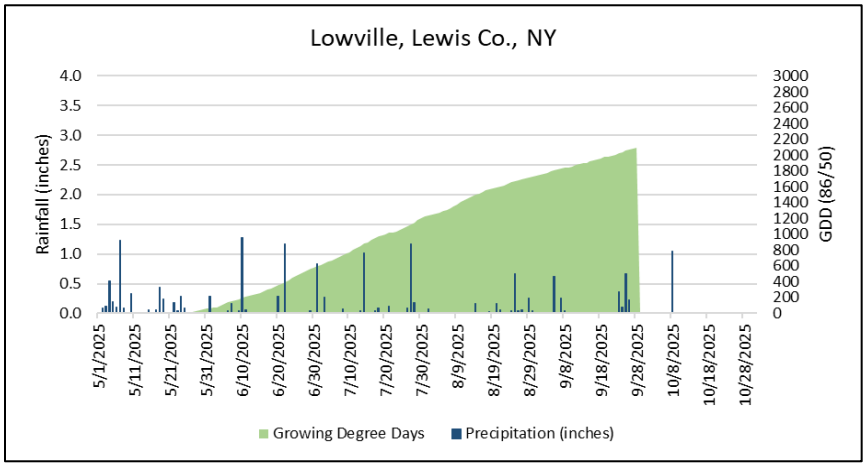

Figure 2.1e: Lowville, Lewis Co., NY

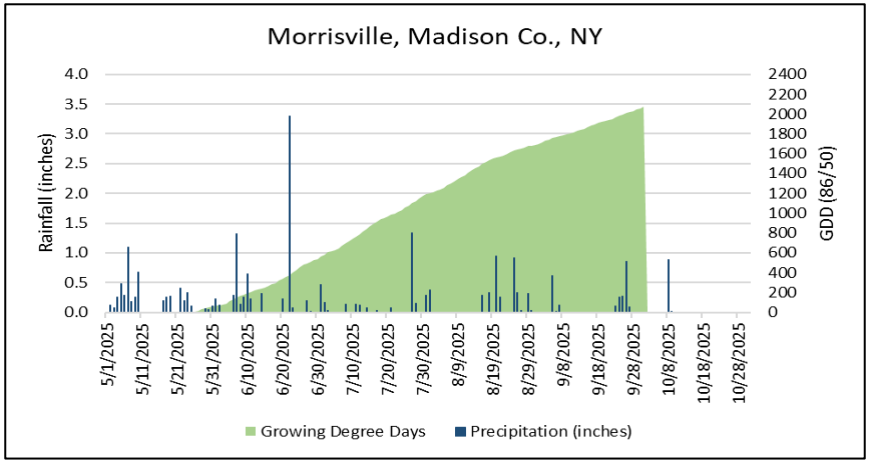

Figure 2.1f: Morrisville, Madison Co., NY

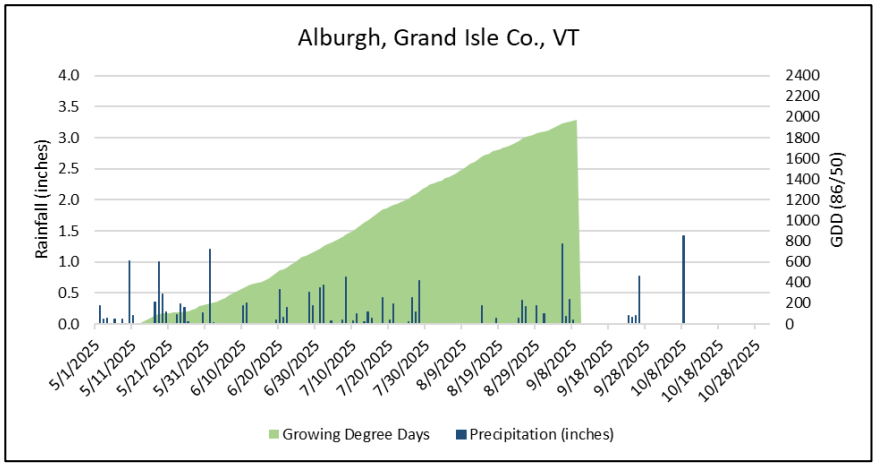

Figure 2.1g: Alburgh, Grand Isle Co., VT