



2021 MICHIGAN CORN HYBRIDS COMPARED

EXTENSION BULLETIN E-431

MICHIGAN STATE
UNIVERSITY

College of Agriculture
and Natural Resources

RESEARCH CONDUCTED BY MICHIGAN STATE UNIVERSITY

Results of the 2021 Growing Season

COMPANY INDEX

BRAND	CONTACT	BRAND	CONTACT
AG ARMOUR	Ag Armour Seeds 8236 North Williams Rd. St. Johns, MI 48879 https://ag-armourseeds.com/	NK Brand	NK Seeds 2001 Butterfield Rd. - Suite 1600 Downers Grove, IL 60515 www.syngenta-us.com/seds/nk
DAIRYLAND	Dairyland Seed P.O. Box 958 West Bend, WI 53095 www.dairylandseed.com	RENK	Renk Seed Company 6809 Wilburn Road Sun Prairie, WI 53590 www.renkseed.com
DYNA-GRO	Dyna-Gro Seed 4648 S. Garfield Road Auburn, MI 48611 www.dyna-groseed.com	RUPP	Rupp Seeds, Incorporated 17919 Co. Road B Wauseon, OH 43567 www.ruppseeds.com
GOLDEN HARVEST	Golden Harvest 2001 Butterfield Rd. - Suite 1600 Downers Grove, IL 60515 www.goldenharvestseeds.com	SEEDWAY	Seedway LLC P.O. Box 250 Hall, NY 14463 www.seedway.com
KEY	AGRA Solutins 23778 Jennings Delphos Rd. Delphos, OH 45833 https://www.agrasolutions.com	SPECIALTY	Specialty Hybrids 306 N Main Street Monticello, IN 47960 www.specialtyhybrids.com
LEGACY SEEDS	Legacy Seeds, Incorporated P.O. Box 68 - 290 Depot St. Scandinavia, WI 54799 www.legacyseeds.com	VIKING	Albert Lea Seeds 1414 West Main Street P.O. Box 127 Albert Lea, MN 56007 www.seedhouse@alseed.com
LEGEND	Legend Seeds P.O. Box 241 DeSmet, SD 57231 www.legendseeds.com	WELLMAN	Wellman Seeds, Incorporated 23778 Delphos Jennings Road Delphos, OH 45833 www.wellmanseeds.com
LG SEEDS	LG Seeds 1122 E 169th St. Westfield, IN 46074 www.lgseeds.com	WYCKOFF	Wyckoff Hybrids 594 E 400 N Valparaiso, IN 46383 www.wyckoffhybrids.com
M & W SEEDS	M & W Seeds Incorporated 8443 Wilcox Road Eaton Rapids, MI 48827 www.mwseeds.com		

2021

MICHIGAN CORN PERFORMANCE TRIALS

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Introduction

The Michigan State University (MSU) Department of Plant, Soil and Microbial Sciences conducts the Michigan Corn Performance Trials (MCPT) each year in cooperation with Michigan State University AgBioResearch, The Ohio State University, seed corn companies, and farmers, to determine yield and quality performance for corn hybrids throughout the state of Michigan.

Entries

Seed companies are invited to enter their hybrids in the trials and a fee is charged to cover incurred expenses. Separate indices for grain and silage provide a list of all hybrids entered in the 2021 trials (pg. 24-25 and 28, respectively). A total of 217 hybrids from 17 brand names make up the 320 entries, which translates into 3,840 separate plots planted across 12 grain locations and 9 silage locations in Michigan in 2021. Hybrids are entered into zones based upon growing degree days and then grouped into Early and Late trials based upon relative maturities. Company names used in association with hybrid numbers refer to the brand. Hybrid numbers are designated by the company.

Hybrids that have a seed-applied insecticide that may enhance yield are listed in the table column TRT (Treatment). The "TRAIT" column uses code numbers, listing the hybrid traits provided by the companies. Treatment and trait codes are listed in the tables on page 9.

How to Use This Bulletin

Tables list hybrids alphabetically and contain yield results for each location along with trial averages within each zone. Complete one and two-year yield results are listed in tables for each trial within each zone where data is available. One-year single-site results are less reliable than multiple year and multiple location averages and should be interpreted with more caution. Confidence in corn performance data increases as the number of years and the number of testing locations increase. Results for corn grain and corn silage trials are also listed on our Web site:

<http://www.varietrytrials.msu.edu>

Results are the average of four replications grown in close proximity to one another. Two or more plots of the same hybrid in the same field may produce somewhat different results because of uncontrolled variability in the soil and other environmental factors. Replication and randomization of entries are two methods employed to reduce this variability. Because these methods do not eliminate all variability, the magnitude of difference necessary for statistical significance has been calculated for yield, moisture content, and test weight. The least significant difference (LSD) is the amount an individual hybrid would have to differ from another hybrid to be considered significantly different. The coefficient of variability (CV) is indicative of a trial's precision. Trials with low levels of error variation have lower CV values.

The highest yielding hybrid in each trial is indicated with a double asterisk (**), hybrids that are not significantly different from the highest yielding hybrid are indicated with a single asterisk (*). Other agronomic information relative to each trial is given in Table B for the grain trials (pg. 26) and Table C for the silage trials (pg. 29). Fertilizer amounts are shown as total pounds per acre of N, P₂O₅, and K₂O applied during the season.

Season in Summary: 2021

Entry forms for participating companies were due March 15th; by the end of March seed was starting to arrive. After a lot of paperwork, printing labels, and placing labels on packets, we began counting seeds and filling packets. Seed packets were sorted by trial and location and organized according to the randomization for each location.

Planting commenced in Montcalm County on May 10th and ended in Iosco and Missaukee Counties on June 1st. Changes in County locations for the 2021 season included moving the Wexford County location to the Lake City AgBioResearch Center in Missaukee County.

Weed control was applied at trial locations as needed. Fertilizer applications were consistent with rates that were necessary based on soil type, soil samples, and cooperator recommendations for the field. Stand counts were conducted at all trial locations between the V4 and V6 growth stages.

Silage harvesting began on September 2ND in Wood County, OH and finished on September 29th in Missaukee County. We had a short break before grain harvest began, harvest started on October 13th in Ingham County and ended November 17th in Presque Isle County.

Locations in Zones 1, 2 and 3 (excluding Huron County) experienced tar spot infestation. The most severe disease pressure was observed in the southern-most counties, especially at locations with irrigated fields. Northern trial locations were less impacted by the disease.

Due to Michigan State University COVID-19 restrictions during the 2020 growing season, many locations were dropped from the trials and stand count data was not collected. Therefore, the multi-year analysis for the 2021 trials are limited.

Table A (pg. 5) presents 2021 accumulations of temperature, rainfall, and heat units plus their deviation from 30-year norms. Data is obtained from Michigan State University weather stations located closest to each trial location. Actual accumulation at each location may vary slightly. The weather summary is provided by Dr. Jeff Andresen from the Department of Geography using data from the Michigan State University Agricultural Weather Office.

2021 GROWING SEASON WEATHER SUMMARY

Jeff Andresen, Extension Agricultural Meteorologist | Department of Geography | Michigan State University

Prior to the 2021 growing season, the winter of 2020/2021 (December-February) averaged out as milder and drier than normal across Michigan, with mean temperatures 3.4°F above and 1.28" of precipitation totals 1.28" below the long term averages. However, there were some wide swings in temperature, especially during the latter stages of the season. Following an abnormally mild December and much of January, an arctic-origin upper air low pressure system moved southward into southern Canada, leading to the development of severe winter weather conditions across the Midwest during the first week of February and to a prolonged period of abnormally cold temperatures and almost daily snowfall across much of the state. Lake effect snowfall totals in northern and western portions of the state during the first half of February were significant, with more than 2 feet in most locations. In addition, a major winter storm brought widespread heavy snow, strong winds, and major travel disruptions to southern and central sections on the 15th. Interestingly, the relatively warm waters of the Great Lakes (warmer than normal at that point due to the mild fall and early winter) spared much of Michigan from even colder conditions. At their peak during the 14th-18th of the month, air temperatures in Lower Michigan averaged 15-25 degrees warmer than in areas upwind in Wisconsin and Minnesota due to the moderating effects of the open water and to lake effect clouds and precipitation. Extreme minimum temperatures across western sections of Lower Michigan generally ranged from -5°F to +10°F, while sections of Upper Michigan not in the direct downwind shadow of Lake Superior recorded low temperatures of -40°F or lower.

A major change in the jet stream to a mostly westerly flow pattern across North America during the last week of February led to a return of above normal temperatures and to an abrupt end of the arctic outbreak. Warmer and drier than normal conditions continued for much of March. Mean temperatures for the month March were much above normal state- and region-wide, generally ranging from 4-8°F above the long term normals. Early season base 50°F growing degree accumulations as of the beginning of April ranged from less than 20 units across northern sections to more than 80 units in the south and were enough to force break of dormancy and early development of some overwintering crops. Monthly precipitation totals were generally below normal statewide, ranging from less than 1.00" across much of the northern half of Lower Michigan and eastern Upper Michigan to more than 2.00" across the southern Lower and western Upper Peninsulas. Given a drier than normal winter and early spring (and late fall 2020 in some sections of the state), abnormally dry soils developed across much of the state and by the end of the month, the U.S. Drought Monitor categorized more than 97% of the state as either 'abnormally dry' (category 'D0') or in 'Moderate Drought' (category 'D1'), normally the period of highest soil moisture in the annual hydrologic cycle.

A changing, dynamic jet stream pattern across North America led to a range of weather conditions during the first half of April, with much warmer than normal temperatures during the first week of the month transitioning to much colder than normal weather during the third week. The formation of a deep upper air trough over the central USA led to the passage of a Canadian-origin air mass and sub-freezing temperatures through the region from the 19th-22nd which damaged some overwintering and early-planted crops. Despite the cold outbreak, mean monthly temperatures and seasonal growing degree day accumulations for April remained two-three calendar weeks ahead of normal over much of the state and the most advanced since the spring of 2012.

The development of a split flow jet stream pattern across North America resulted in major differences in precipitation across Michigan during late April and the beginning of May, with heavy rainfall totals across

many northern sections of the state contrasted by persistent below normal rain totals and intensifying dryness across central and southern sections. Precipitation totals for the month of April ranged from less than 1.00" across southeastern and east central Lower Michigan (less than 50% of normal) to more than 3.00" across western and northern portions of Lower Michigan to more than 5.00" over central sections of the Upper Peninsula (150-200% of normal). Combined with higher than normal potential evapotranspiration rates during the preceding weeks, plant available soil moisture in many central and southern sections of the state fell to well below normal levels for the season, in some areas less than 50% of normal. The drier than normal conditions greatly favored spring planting and other fieldwork activities but delayed germination and activation of herbicides due to dry soils. Widespread freezing temperatures developed once again across much of the state on the 1st of May, damaging some overwintering and earlier-planted crops.

A highly amplified jet stream pattern across North America with a number of passing troughs and ridging features led to wide swings in temperature across Michigan during late May and early June, with periods of unseasonably warm weather from the 20th-25th of May and the 3rd-7th of June and cool weather from the 27th – 30th of May which included reports of scattered frost and freezing temperatures. Mean temperatures across the state during May averaged out close to normal, generally ranging from near to 2°F below the long term normals. As was the case for much of the spring, Michigan generally remained in between major storm tracks to our north and south, resulting in a continuation of drier than normal weather for most of the state. The drier than normal conditions allowed rapid progress of spring planting but stressed emerging crops, transplants, and overwintering crops including pasture and forages. Precipitation totals for the month of May ranged from less than 1.00" across southwestern and east central portions of Lower Michigan (less than 50% of normal) to more than 4.00" across west central sections of the Lower Peninsula (more than 115% of normal). An area of low pressure moving through the Ohio Valley brought widespread rain (generally 0.50"-1.00") to central and southern sections of the state on the 26th-28th and in many southern sections of the state was the most significant precipitation since early April. As of early June, the U.S. Drought Monitor categorized 79% of the state in the D0 through D2 categories including 19% in D0 ('abnormally dry'), 60% in D1 ('Moderate Drought'), and 6% in D2 ('Severe Drought'). The D2 Severe Drought conditions were the first reported in the state since August of 2018 and the most extensive since July of 2012. Worst conditions were reported in southwestern sections of Lower Michigan.

Scattered showers and thunderstorms provided some much-needed moisture for crops from the 6th-12th of June, but areal coverage was limited and amounts were highly variable. An extended stretch of much warmer than normal weather from the 4th-12th of the month accelerated early crop growth and development but also increased potential evapotranspiration rates and crop water needs, with corresponding decreases in soil moisture availability in most areas. In what would turn out to be the peak of a long term dry pattern across most areas of the state dating back to the winter or even late fall season, the area of the state categorized by the U.S. Drought Monitor as abnormally dry in mid-June increased to just under 93%, including 23% in D0 ('abnormally dry'), 37% in D1 ('Moderate Drought'), and 33% in D2 ('Severe Drought') classes. The worst conditions (D2 category) were reported across portions of the southern half of the Lower Peninsula from the southwestern corner of the state northeastward to the Saginaw Valley and Thumb areas of Lower Michigan and also across portions of west central and northwestern Lower Michigan.

TABLE A. GROWING SEASON SUMMARY - TEMPERATURE, PRECIPITATION AND GROWING-DEGREE-DAY ACCUMULATIONS

COUNTY	MAY			JUNE			JULY			AUGUST			SEPTEMBER			SEASON			
	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	
	ZONE 1																		
BRANCH & CASS (Coldwater)	TEMP	56.4	58.6	-2.2	69.8	68.0	1.8	70.7	71.3	-0.6	72.9	69.5	3.4	64.5	62.4	2.1	66.9	66.0	0.9
	PPT	1.92	4.12	-2.20	9.55	3.97	5.58	4.56	4.18	0.38	4.78	4.42	0.36	2.69	3.41	-0.72	23.50	20.10	3.40
	GDD	336	342	-6.0	611	545	66.0	649	650	-1.0	707	603	104.0	453	403	50.0	2756	2543	213.0
LENAWEE (Morenci)	TEMP	56.7	59.6	-2.9	70.6	69.6	1.0	70.9	72.4	-1.5	72.0	70.5	1.5	62.5	63.9	-1.4	66.5	67.2	-0.7
	PPT	2.62	4.07	-1.45	5.53	4.00	1.53	6.31	3.73	2.58	1.44	3.57	-2.13	1.67	3.21	-1.54	17.57	18.58	-1.01
	GDD	352	375	-23.0	654	585	69.0	681	668	13.0	714	612	102.0	493	452	41.0	2894	2692	202.0
WOOD (OH) (Bowling Green)	TEMP	59.6	60.3	-0.7	73.2	70.6	2.6	73.9	73.6	0.3	74.8	71.7	3.1	67.1	65.0	2.1	69.7	68.2	1.5
	PPT	3.77	3.98	-0.21	4.66	3.64	1.02	5.61	3.60	2.01	3.72	3.79	-0.07	3.78	2.92	0.86	21.54	17.9	3.61
	GDD	382	377	5.0	674	608	66.0	739	711	28.0	764	665	99.0	522	472	50.0	3081.0	2833.0	248.0
INGHAM (E.Lansing MSU)	TEMP	56.5	57.9	-1.4	70.0	67.5	2.5	70.5	71.3	-0.8	69.5	69.5	0.0	63.7	62.1	1.6	66.0	65.7	0.4
	PPT	0.96	3.66	-2.70	6.95	3.85	3.10	3.68	2.94	0.74	3.78	3.48	0.30	2.93	2.75	0.18	18.30	16.7	1.62
	GDD	340	342	-2	609	539	70	630	654	-24	675	611	64	439	414	25	2693.0	2560.0	133.0
OTTAWA (Hudsonville)	TEMP	56.2	58.8	-2.6	69.8	68.4	1.4	70.9	72.4	-1.5	73.3	70.6	2.7	65.4	63.1	2.3	67.1	66.7	0.5
	PPT	1.69	3.99	-2.30	7.98	3.94	4.04	2.51	3.86	-1.35	1.96	3.55	-1.59	2.45	3.42	-0.97	16.59	18.8	-2.17
	GDD	326	350	-24.0	599	559	40.0	647	684	-37.0	685	652	33.0	474	426	48.0	2731.0	2671.0	60.0
SAGINAW (Freeand)	TEMP	57.3	58.1	-0.8	70.8	67.9	2.9	70.0	71.6	-1.6	72.0	69.5	2.5	62.7	62.3	0.4	66.6	65.9	0.7
	PPT	3.91	3.41	0.50	2.75	3.28	-0.53	3.72	2.83	0.89	3.59	3.85	-0.26	4.76	2.81	1.95	18.73	16.2	2.55
	GDD	346	333	13.0	624	542	82.0	601	663	-62.0	668	608	60.0	409	413	-4.0	2648.0	2599.0	89.0
HURON (Pigeon)	TEMP	55.7	54.9	0.8	69.3	65.3	4.0	69.0	70.0	-1.0	71.9	68.5	3.4	62.5	62.1	0.4	65.7	64.2	1.5
	PPT	1.22	3.25	-2.03	1.85	3.21	-1.36	3.88	3.57	0.31	2.30	3.40	-1.10	4.37	3.11	1.26	13.62	16.5	-2.92
	GDD	301	265	36.0	589	468	121.0	584	602	-18.0	670	559	111.0	400	393	7.0	2544.0	2287.0	257.0
MONTCALM (Eritrican)	TEMP	55.3	57.7	-2.4	68.9	67.0	1.9	69.5	70.5	-1.0	72.0	68.9	3.1	62.9	61.6	1.3	65.7	65.1	0.6
	PPT	2.18	4.05	-1.87	5.58	3.62	1.96	4.79	3.12	1.67	3.52	3.50	0.02	3.71	3.04	0.67	19.78	17.3	2.45
	GDD	325	354	-29.0	580	528	52.0	601	629	-28.0	666	592	74.0	418	416	2.0	2590.0	2519.0	71.0
MASON (Ludington)	TEMP	53.7	55.8	-2.1	66.2	64.5	1.7	67.8	69.1	-1.3	70.2	68.0	2.2	61.7	61.9	-0.2	63.9	63.9	0.1
	PPT	3.02	3.36	-0.34	3.39	3.65	-0.26	2.74	3.38	-0.64	4.51	3.16	1.4	1.30	3.23	-1.93	14.96	16.8	-1.82
	GDD	279	295	-16.0	516	462	54.0	556	594	-38.0	627	562	65.00	380	393	-13.0	2358.0	2306.0	52.0
IOSCO (Hale)	TEMP	53.7	54.2	-0.5	68.7	64.7	4.0	69.1	68.8	0.3	71.1	67.4	3.7	61.5	60.1	1.4	64.8	63.0	1.8
	PPT	2.65	3.11	-0.5	4.68	3.54	1.14	4.68	3.50	1.18	4.65	3.40	1.25	4.22	2.83	1.39	20.88	16.4	4.50
	GDD	275	273	2.0	589	465	124.0	593	574	19.0	671	531	140.0	350	358	-8.0	2478.0	2201.0	277.0
PRESQUE ISLE (Onaway)	TEMP	53.2	54.9	-1.7	66.2	64.4	1.8	67.0	68.8	-1.8	69.6	67.6	2.0	58.8	60.4	-1.6	63.0	63.2	-0.3
	PPT	2.28	3.04	-0.76	2.55	2.87	-0.32	7.48	3.24	4.24	4.45	3.28	1.17	2.51	3.17	-0.66	19.27	15.6	3.67
	GDD	294	302	-8.0	500	468	32.0	527	583	-56.0	614	552	62.0	325	377	-52.0	2260.0	2282.0	-22.0
MISSAUKEE (Lake City)	TEMP	52.5	53.7	-1.2	66.3	63.6	2.7	67.3	67.6	-0.3	68.8	65.9	2.9	58.2	58.0	0.2	62.6	61.8	0.9
	PPT	4.21	3.50	0.71	2.81	3.46	-0.65	5.43	3.18	2.25	6.32	3.51	2.81	2.81	3.03	-0.22	21.58	16.7	4.90
	GDD	272	274	-2.0	529	452	77.0	546	557	-11.0	601	519	82.0	332	341	-9.0	2280.0	2143.0	137.0

TEMP = Mean temperature (°F)
PPT = Precipitation (inches)
GDD = Growing Degree Day calcul
OBS = Totals observed in 2021
NORM = Normals calculated over 30 year period (1981-2010)
DEV = Deviation of observed from normal
Table courtesy of MSU Agricultural Weather Office (517-355-0231)

- Weather Continued From Page 4

Major upper air pattern changes occurred during late June with the development of persistent southwesterly flow across the Upper Midwest region and deep moisture transport from the Gulf of Mexico which led to a prolonged period of wet weather including heavy rainfall across many portions of Michigan. Between the 25th and 30th of the month, 5.00" to more than 8.00" was observed across large sections of southern Lower Michigan and was accompanied by a severe weather outbreak on the 26th, including at least 6 confirmed tornadoes and many reports of damaging winds. The heavy precipitation led to localized flooding, lodging of maturing wheat just prior to harvest, major disruptions of forage harvest, and loss of earlier applied nitrogen fertilizer in water-logged fields. On the positive side, and on a larger spatial scale across many portions of southern Lower Michigan, the heavy precipitation resulted in a dramatic change from moderate to severe drought conditions to normal or even above normal soil moisture conditions in a matter of days. Overall, the rain greatly reduced crop moisture stress and improved prospects for most spring-planted annual crops. For the month of June, total rainfall varied greatly across the state, ranging from less than 2.00" across sections of northern Lower Michigan to more than 10.00" across the southern Lower Peninsula. Mean temperatures for the month averaged out at above normal levels statewide, generally from 2-5°F above the long term means.

During July, a series of upper air troughing features passed through the Upper Midwest, leading to a continuation of wetter than normal weather for much of the state, but drier than normal conditions developed across many western and southern sections by month's end. Monthly precipitation totals for July ranged from less than 1.00" (less than 25% of normal) across western sections of Upper Michigan to more than 6.00" across portions of the northern Lower Peninsula (more than 200% of normal). Mean Temperatures for July were very close to the long term averages. Maximum temperatures on a number of days during July remained a few degrees below what they might have been otherwise due to unusually hazy skies associated with smoke from forest- and rangeland fires across western sections of North America transported eastward by prevailing winds. Seasonal base 50°F growing degree day totals (since May 1st) as of early August generally ranged from 50-150 units above normal, which roughly translates into a small surplus of 2-7 calendar days ahead of normal.

A persistent southwesterly upper air pattern similar to the late June period developed across the Upper Midwest region during early August, leading to a prolonged period of active weather including heavy rainfall across many portions of Michigan from the 9th-12th. Major severe weather outbreaks on the 10th and 11th brought widespread high winds and wind damage to many sections of the state, resulting in power outages for almost 1 million customers. Very heavy rainfall (from 3.00-6.00") was observed in extreme southwestern and northwestern sections of Lower Michigan on the 9th-11th, and over a large area of south central Lower Michigan on the 11th-12th. The southwesterly upper air pattern gave way to an upper air ridging pattern across the Upper Midwest during the second half of August which led to a prolonged period of warm and humid weather across Michigan and the Great Lakes region. Mean temperatures for the month of August were warmer than normal state- and region-wide, with averages generally ranging 2-5°F above the long term normals. Seasonal base 50°F growing degree totals (for May 1st through present) surged ahead as a result, with general surpluses from 50 units across northern sections to more than 300 units over southern sections by month's end. Precipitation totals for the month were variable by location, but were generally above normal at most locations, ranging from less than 3.00" across western sections of Upper Michigan (about 75% of normal) to more than 6.00" across western, northern, and southeastern sections of Lower Michigan (175-200% of normal). The rainfall was very favorable for most spring-

planted crops advancing through reproductive growth stages.

Warmer than normal weather continued through much of early September, accelerating late growth and maturation of annual crops. The warm weather also favored early harvest operations of corn silage, dry beans, and sugarbeets. A dynamic, progressive jet stream pattern developed across North America during the middle of September with the passage of several upper air troughing systems through the Great Lakes region which led to a return of cooler, more seasonable temperatures and significant rainfall in some areas. The pattern led to a series of severe weather events on the 12th-14th across central and southern sections of the state which included large hail, damaging winds, and localized heavy rain and flooding. Warm weather returned to the Upper Midwest during late September and early October with the redevelopment of upper air ridging across the region. Mean temperatures for September ranged from near normal across sections of eastern Upper and the northeastern Lower Peninsulas to 4°F above normal in southwestern Lower Michigan. Rainfall totals for the month ranged from just over 2.00" across western section of Lower Michigan to more than 5.00" across the eastern portions of the Thumb. As of early October, soil moisture in the top three feet of the profile ranged from below normal levels across large sections of the Upper and extreme southwestern Lower Peninsulas to much above normal levels across southeastern Michigan.

Abnormally warm weather continued across the Upper Midwest into the middle of October. The passage of several upper air troughing features across the Great Lakes region during the last week of the month into early November finally brought colder, more seasonable temperatures and frequent rounds of precipitation (including some lake effect snowfall) to Michigan and ended a prolonged period of abnormally warm weather. Even with the cold weather during late October, mean temperatures for the month remained much above normal, with monthly averages generally ranging from 5-7°F above normal. Monthly precipitation totals ranged from less than 2.00" across western Michigan to more than 8.00" across portions of the southern Lower Peninsula. The cold, wet weather late in the month led to saturated, waterlogged soils and delays in most fieldwork activities including fall harvest and winter wheat planting. The weather pattern change also led to the first widespread killing freeze conditions (minimum temperatures generally from 25-28°F) across the state on the 3rd-4th of November, which in many locations was at least two weeks later than normal. In addition to the late first fall freezes, another factor contributing to a longer than normal growing season this year were warmer than normal temperatures during much of the summer and early fall seasons. Mean temperatures across the state during the May-September period were 2.7°F above normal which is the 11th warmest such period since 1895. The statewide average precipitation total for the period was 18.68", which is 2.78" above normal and the 12th highest on record since 1895. However, the precipitation statistics are very unrepresentative of conditions at times during the summer, which varied from abnormally dry following persistently drier than normal weather for much of the winter, spring, early in the summer to much wetter than normal following much above normal rainfall from late June through early August. Not surprisingly given the warmer than normal season, seasonal base 50°F growing degree day accumulations from May 1st through the end of September ranged from 2100 units in far northern sections of the state to more than 3300 units across southern Lower Michigan (generally 200-400 units above normal), which in many cases was more than 10% above normal and more than enough to bring most heat-dependent crops to maturity prior to the end of the growing season.

2021 GRAIN PERFORMANCE TRIALS

Introduction

The grain index contains a list of all hybrids planted in the 2021 grain trials.

County results are reported in the following tables:

Tables 1E/1L Zone 1 - Branch, Cass, and Lenawee

Tables 2E/2L Zone 2 – Ingham, Ottawa, and Saginaw

Tables 3E/3L Zone 3 - Huron, Mason, and Montcalm

Tables 4E/4L Zone 4 – Iosco, Presque Isle, and Missaukee*

Tables 5E/5L Conventional Trial – Ingham (Z2), Montcalm (Z3), and Saginaw (Z2)

*Locations dropped due to severe lodging

The map of Michigan (lower right) shows each zone and the locations where the trials were located.

Methods

Three trial locations were planted in each of four maturity zones. These zones were based on available growing degree-day units (GDU) established from long-term weather records. Hybrids entered in a zone were tested in each of the three designated locations. Entries for zone 1, zone 2, zone 3, and zone 4 were divided into two maturity groups, early and late, based on the relative maturity (RM) of each hybrid provided by the seed companies.

Variety trials were conducted on farmers' fields, The Ohio State University Ohio Agricultural Research and Development Center, and Michigan State University AgBioResearch Stations. Planting was accomplished with an Almaco Seed Pro 360 vacuum planter equipped with precision metering units, Kinze planting units and, Trimbl GFX-750 paired with a NAV-900 controller provided the GPS signal. Four row plots were planted at a uniform length of 22 feet with a 3-foot alleyway at 30-inch row spacing. Experimental design, data acquisition, analysis of variance, and data summarization were facilitated in part by AGROBASE Generation IITM. The experimental layout was a four-replication, randomized complete block design. Hybrid performance is reported as the adjusted mean averaged from four replicated plots.

All plots within a location were managed uniformly with the same date of planting, fertilizer applications, pest control, harvest date and other management practices. In the field, hybrids were identified only by a plot number to assure unbiased comparisons. Trials in Branch, Cass, Mason, and Ottawa counties were irrigated.

Data was collected on the center two rows of each plot. Target population rates and average trial populations are listed with other important agronomic information in Table B (pg. 26). Stalk lodging (%SL) measurements were recorded during harvest. All plants broken below the ear and/or leaning more than 45 degrees were counted as a lodged plant. Moisture content (%H2O) and field weights were measured by a Harvest Master™ single plot high capacity Grain Gage™ HM800 System that is mounted on the Kincaid 8-XP plot combine.

Grain yields are reported in bushels per Acre (Bu/A) and is adjusted to a standard of 15.5 percent moisture. Data was recorded on a Panasonic FZ-G1 Toughpad using Harvest Master™ Software.

Grain test weight (Twt) is reported at harvest moisture. Automated test weight equipment loses some accuracy as harvest moistures increase. Test weight values should be used to determine relative rank and not as a precise weight.

Results

The tables report the following information about the hybrids tested:

1. Moisture content at harvest (%H2O)
2. Yield of shelled corn corrected to 15.5 percent moisture (Bu/A)
3. Test weight at harvest moisture (Twt)
4. Percent stalk lodging (plants broken below the ear and/or 45 degrees off vertical at harvest) (%SL)
5. Percent stand of target population (%Sd)

2021 Grain Trial Locations

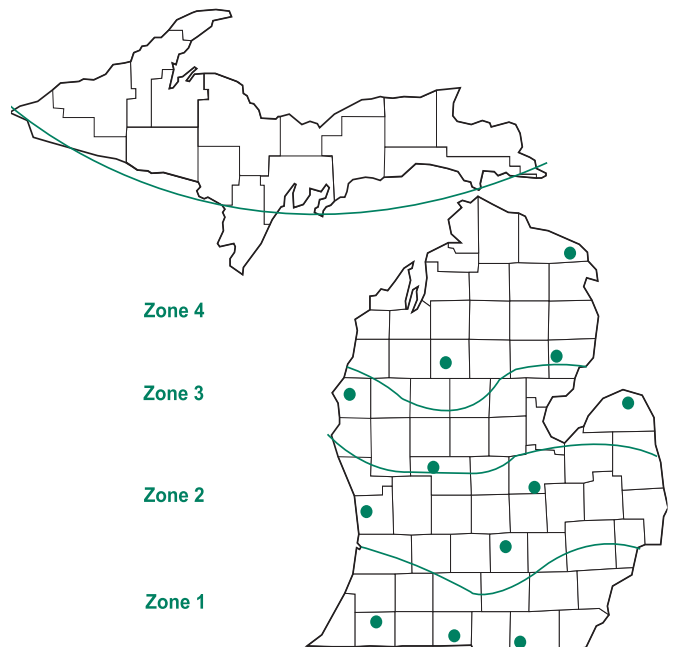


TABLE 1E.

BRANCH, CASS & LENAWEЕ COUNTY GRAIN TRIALS - EARLY (107 Day and Earlier)

ZONE 1

2021		Early - TRIAL AVERAGE				Branch - Early				Cass - Early				Lenawee - Early				
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd
DAIRYLAND SEED DS-3959AM	99	LUM	1,2,4	19.0	210.4	56.3	2	96	16.6	209.0	58.2	5	97	17.9	205.7	56.0	0	97
DAIRYLAND SEED DS-4000AMXT	100	LUM	1,2,3,4	20.2	215.8	57.7	1	97	18.4	222.0	61.4	1	99	18.6	209.3	56.7	1	99
DAIRYLAND SEED DS-40114Q	100	LUM	1,2,3,4	20.0	226.8	55.2	4	98	19.4	226.8	55.9	10	100	18.5	208.0	55.5	3	99
DAIRYLAND SEED DS-4018AM	100	LUM	1,2,4	20.0	226.8	56.9	2	98	18.4	233.2	57.8	4	99	18.6	222.8	57.0	1	100
DAIRYLAND SEED DS-4310AM	103	LUM	1,2,4	21.0	218.0	56.4	4	96	19.6	245.1	56.7	0	98	19.5	194.2	57.3	12	96
DAIRYLAND SEED DS-4440AM	104	LUM	1,2,4	20.2	222.4	55.4	2	96	19.2	238.6	57.6	0	98	18.7	212.5	53.1	0	95
DAIRYLAND SEED DS-4510Q	105	LUM	1,2,3,4	20.0	224.8	56.3	2	99	17.8	241.3	56.9	3	101	18.9	218.5	56.9	2	101
DYNAGRO D445SS4	105	P500	1,2,3,4	19.0	208.9	55.5	3	95	16.3	187.8	56.1	6	96	17.8	208.3	56.0	1	95
DYNAGRO D45TC56	106	P500	1,2,6	18.9	229.0	55.0	1	95	16.0	240.4	55.4	1	96	17.4	213.0	55.8	2	102
GOLDEN HARVEST G02K39-3120	102	C250	1,2,4	19.7	222.2	54.2	14	94	16.2	222.3	54.6	13	96	18.7	213.8	55.0	26	92
GOLDEN HARVEST G03B96-5122	103	C250	1,2,3,4	20.7	205.1	57.2	6	96	19.0	185.5	57.8	17	97	18.3	210.9	56.2	2	97
GOLDEN HARVEST G07F23-3111	107	C250	1,2,3,4,6	20.9	235.9	57.2	1	99	19.5	245.7	61.9	2	100	19.0	233.1	55.5	1	98
GOLDEN HARVEST G07G73-5122	107	C250	1,2,3,4	21.6	212.5	55.1	1	94	21.1	204.7	55.9	0	92	19.3	220.6	55.2	2	94
KEY 998BLG	95	ENC	1,2,6	19.8	214.5	57.6	2	95	18.4	224.6	57.1	2	99	17.1	201.3	56.2	5	93
LEGACY SEEDS 44V74	103	P500	1,2,3,4	19.3	221.3	56.4	4	96	17.0	211.0	55.4	9	97	18.2	220.3	57.3	1	93
LEGACY SEEDS LC555-21 5222	105	C250	1,2,3,4,6	19.8	200.9	54.3	6	95	16.4	147.2	54.8	27	99	18.8	226.2	54.8	1	92
LEGACY SEEDS LC564-20 PWE	106	P500	1,2,4	20.4	235.7	54.2	6	97	19.3	234.3	55.8	8	98	17.9	233.4	54.2	8	98
LEGEND LR 9104 PCE	102	C250	1,2,4,6	18.7	218.0	57.1	2	97	18.8	227.6	57.0	0	96	16.7	202.0	55.2	0	96
M&W SEEDS 45V21	104	T250	1,2	18.3	223.3	56.2	0	96	16.0	234.0	55.8	0	97	17.2	210.6	57.5	1	97
M&W SEEDS 44V74	105	T250	1,2,3,4,6	21.0	193.4	54.5	4	92	19.2	211.0	55.4	9	94	17.2	216.5	57.5	1	97
M&W SEEDS 44V42	107	T250	1,2	19.5	213.3	57.6	5	97	17.5	209.3	56.4	3	99	17.7	201.6	57.8	11	99
NK Brand NK0748-5122	107	C250	1,2,3,4	21.1	215.8	54.8	1	96	19.5	229.3	55.1	1	97	19.2	201.8	55.5	2	97
RENK RK7105S1X	107	ACC500	1,2	20.3	219.5	56.8	0	96	18.7	227.6	57.0	0	96	19.0	229.6	57.2	1	96
RUPP XRD05-16	105	P250	1,2	19.4	215.3	55.1	4	97	16.9	221.5	56.4	8	98	17.9	215.5	56.2	4	100
RUPP XRD09-42	109	P250	1,2	19.0	229.0	55.2	5	96	16.2	228.7	55.1	6	96	18.1	215.2	56.2	7	94
RUPP XRD06-53	106	P250	1,2	19.8	219.4	57.4	1	97	18.3	225.3	56.2	3	98	17.7	218.8	57.3	1	100
SPECIALTY 33A580	103	P500	1,2,3,4	18.9	221.5	55.2	2	97	16.8	224.4	55.4	5	98	17.1	231.0	55.8	1	100
SPECIALTY 36D260	106	P500	1,2	19.2	234.1	56.1	1	98	17.2	236.0	56.7	2	98	17.6	223.1	56.5	1	103
WELLMAN W2903DP	103	ENC	1,2	18.5	226.1	55.3	1	95	16.4	231.4	55.8	2	96	17.1	217.7	55.2	0	95
WELLMAN W2807DP	107	ENC	1,2	19.1	216.3	55.1	1	95	16.0	228.5	54.9	0	98	18.1	210.6	55.5	2	93
WYCKOFF 2170 TRECEPTA	98	P250	1,2,6	17.9	220.7	55.0	3	98	15.8	200.5	54.7	8	97	16.6	228.7	55.6	0	103
WYCKOFF 2180 VT2P	98	P250	1,2	17.9	197.4	56.3	4	96	16.3	212.2	55.6	0	100	16.7	175.6	57.1	12	94
WYCKOFF 2250 VT2P	102	P250	1,2	18.8	221.1	55.7	2	96	16.8	220.9	56.1	6	98	17.0	208.3	56.0	0	96
WYCKOFF 2335 SS	103	P250	1,2,3,4	19.3	222.4	56.2	1	97	17.0	233.3	56.1	2	99	17.9	203.3	56.9	0	98
WYCKOFF 2300 DG VT2P	103	P250	1,2	17.9	211.2	55.9	1	96	15.8	214.2	57.2	1	99	17.0	203.0	56.1	1	97
WYCKOFF 2483 VT2P	104	P250	1,2	18.7	219.1	55.2	7	96	16.7	226.3	56.1	2	99	16.8	203.7	55.8	18	96
WYCKOFF 2440 SS	105	P250	1,2,3,4	19.1	205.6	55.6	4	96	16.3	195.8	56.3	8	98	17.8	204.2	56.6	4	98
WYCKOFF 2433 SS	105	P250	1,2,3,4	20.2	216.8	56.6	0	95	17.8	219.5	56.9	0	94	18.2	210.4	57.2	1	99
AVERAGE				19.6	218.0	55.9	3	96	17.5	220.9	56.7	5	98	18.0	211.6	56.2	4	97
HIGHEST				21.6	235.9	57.7	14	99	21.1	245.7	61.9	27	101	19.5	233.4	56.2	26	103
LOWEST				17.9	193.4	54.2	0	92	15.8	147.2	54.6	0	92	16.6	175.5	53.1	0	88
CV (%)				3.0	7.3	1.5	300	3.0	3.7	9.7	5.9	211	3.0	3.1	8.5	1.6	295	4.0
LSD (5%)				0.4	10.8	0.6	6	2.0	0.8	25.1	3.9	16	5.0	0.7	21.0	1.0	18	7.0

2 Year Averages 2021 - 2020		Early - TRIAL AVERAGE				Branch - Early				Cass - Early				Lenawee - Early				
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd
DYNAGRO D45TC55	106	P500	1,2,6	17.0	179.9	56.3	17.0	179.9	17.0	179.9	56.3	17.0	179.9	17.0	179.9	56.3	17.0	179.9
GOLDEN HARVEST G02K39-3120	102	C250	1,2,4	17.4	190.5	55.2	17.4	190.5	17.4	190.5	55.2	17.4	190.5	17.4	190.5	55.2	17.4	190.5
GOLDEN HARVEST G07F23-3111	107	C250	1,2,3,4,6	18.1	201.8 *	55.9	18.1	201.8 *	18.1	201.8 *	55.9	18.1	201.8 *	18.1	201.8 *	55.9	18.1	201.8 *
M&W SEEDS 45V21	104	T250	1,2	16.8	180.8	57.7	16.8	180.8	16.8	180.8	57.7	16.8	180.8	16.8	180.8	57.7	16.8	180.8
M&W SEEDS 44V74	105	T250	1,2,3,4,6	18.6	180.8	55.5	18.6	180.8	18.6	180.8	55.5	18.6	180.8	18.6	180.8	55.5	18.6	180.8
M&W SEEDS 44V42	107	T250	1,2	17.6	183.5	58.3	17.6	183.5	17.6	183.5	58.3	17.6	183.5	17.6	183.5	58.3	17.6	183.5
RUPP XRD06-53	106	P250	1,2	17.5	190.8 *	58.0	17.5	190.8 *	17.5	190.8 *	58.0	17.5	190.8 *	17.5	190.8 *	58.0	17.5	190.8 *
SPECIALTY 33A580	103	P500	1,2,3,4	17.0	202.4 *	56.0	17.0	202.4 *	17.0	202.4 *	56.0	17.0	202.4 *	17.0	202.4 *	56.0	17.0	202.4 *
SPECIALTY 36D260	106	P500	1,2	18.1	201.8 *	57.1	18.1	201.8 *	18.1	201.8 *	57.1	18.1	201.8 *	18.1	201.8 *	57.1	18.1	201.8 *
WELLMAN W2903DP	103	ENC	1,2	17.0	189.1	56.2	17.0	189.1	17.0	189.1	56.2	17.0	189.1	17.0	189.1	56.2	17.0	189.1
WELLMAN W2807DP	107	ENC	1,2	17.5	189.0	56.4	17.5	189.0	17.5	189.0	56.4	17.5	189.0	17.5	189.0	56.4	17.5	189.0
WYCKOFF 2250 VT2P	102	P250	1,2	16.7	183.3	56.6	16.7	183.3	16.7	183.3	56.6	16.7	183.3	16.7	183.3	56.6	16.7	183.3
WYCKOFF 2335 SS	103	P250	1,2,3,4	17.4	177.7	57.6	17.4	177.7	17.4	177.7	57.6	17.4	177.7	17.4	177.7	57.6	17.4	177.7
WYCKOFF 2483 VT2P	104	P250	1,2	16.7	182.6	56.1	16.7	182.6	16.7	182.6	56.1	16.7	182.6	16.7	182.6	56.1	16.7	182.6
WYCKOFF 2433 SS	105	P250	1,2,3,4	18.0	204.8 **	57.9	18.0	204.8 **	18.0	204.8 **	57.9	18.0	204.8 **	18.0	204.8 **	57.9	18.0	204.8 **
AVERAGE				17.4	189.3	56.7	17.4	189.3	17.4	189.3	56.7	17.4	189.3	17.4	189.3	56.7	17.4	189.3
HIGHEST				18.6	204.8	58.3	18.6	204.8	18.6	204.8	58.3	18.6	204.8	18.6	204.8	58.3	18.6	204.8
LOWEST				16.7	177.7	55.2	16.7	177.7	16.7	177.7	55.2	16.7	177.7	16.7	177.7	55.2	16.7	177.7
CV (%)				3.6	8.6	1.5	3.6	8.6	3.6	8.6	1.5	3.6	8.6	3.6	8.6	1.5	3.6	8.6
LSD (5%)				0.5	14.1	0.7	0.5	14.1	0.5	14.1	0.7	0.5	14.1	0.5	14.1	0.7	0.5	14.1

** Highest Yielding Hybrid
 * Not Significantly Different from Highest Yielding Hybrid
 Stand Data Not Available for Branch - Early Grain

CODE NUMBERS FOR HYBRID TRAITS

Code Num.	Traits & Resistant Events
1	Glyphosate
2	European Corn Borer
3	Corn Rootworm
4	Liberty Link
5	Clearfield, IMI, IT, IR
6	Western Bean Cutworm
7	Brown Mid Rib
8	Leafy
9	High Oil
10	Waxy
11	HTF High Total Fermentable
12	HAE High Available Energy
13	HES High Extractable Starch
14	Other
Conv.	Conventional

TREATMENT CODES FOR SEED APPLIED INSECTICIDES

TRT	Seed Treatment/Rate
	No Seed Insecticide Applied
ACC250	Acceleron® @ 0.250 mg ai
ACC500	Acceleron® @ 0.500 mg ai
C125	Cruiser® @ 0.125 mg ai
C250	Cruiser® @ 0.250 mg ai
C500	Cruiser® @ 0.500 mg ai
P250	Poncho® @ 0.250 mg ai
P500	Poncho® @ 0.500 mg ai
T250	Titan® @0.250 mg ai
LUM	Lumigen®
ENC	Encase®
OSI	Other

TABLE 1L.

BRANCH, CASS & LENAOW COUNTY GRAIN TRIALS - LATE (108 Day and Later)

ZONE 1

BRAND /HYBRID	RM	TRT	TRAIT	Late - TRIAL AVERAGE				Branch - Late				Cass - Late				Lenaowee - Late							
				%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd
DAIRYLAND SEED DS-4878AM	108	LUM	1,2,4	21.0	225.8	55.3	1	96	19.3	234.1 *	56.2	2	97	23.9	220.3	54.7	0	94	20.0	223.1	55.1	0	97
DAIRYLAND SEED DS-4917AM	109	LUM	1,2,4	21.7	233.6 *	56.2	0	92	19.9	225.7	56.8	0	84	24.1	248.3 *	55.7	0	100	21.1	226.7	56.1	0	91
DAIRYLAND SEED DS-5018AM	110	LUM	1,2,4	19.9	230.3	55.5	0	95	18.4	222.8	55.9	0	97	23.0	241.6 *	55.3	0	95	18.3	226.5	55.3	0	92
DAIRYLAND SEED DS-5144Q	111	LUM	1,2,3,4	20.6	229.0	55.8	1	98	18.4	239.9 *	56.6	2	98	23.4	221.6	54.8	0	100	20.0	225.5	55.9	0	97
DAIRYLAND SEED DS-5250AM	112	LUM	1,2,4	21.6	239.3 *	55.3	1	98	19.8	236.5 *	55.7	3	98	23.9	247.0 *	54.5	0	97	21.0	234.2	55.9	1	98
DAIRYLAND SEED DS-5279Q	112	LUM	1,2,3,4	21.2	226.6	55.8	1	95	19.5	219.4	57.1	2	97	24.4	223.6	55.0	0	92	19.6	236.8	55.4	1	97
DYNAGRO D48VC84	108	P500	1,2	20.6	245.9 **	56.3	0	96	18.3	-	-	-	-	24.4	245.1 *	55.9	0	96	19.2	246.7 *	56.6	0	96
DYNAGRO D50VC09	110	P500	1,2	20.1	239.7 *	54.5	0	96	18.0	247.0 *	56.0	0	98	24.8	226.0	53.1	0	97	17.6	246.3 *	54.5	0	94
GOLDENHARVEST G08R62-3220	108	C250	1,2,4,6	21.4	224.4	53.7	3	103	18.9	185.8	54.7	8	97	25.5	250.6 *	51.6	0	116	19.9	236.8	54.8	1	98
GOLDENHARVEST G09Y24-3220A	109	C250	1,2,4,6,14	21.7	239.8 *	54.5	2	96	20.6	-	-	-	-	25.1	243.1 *	53.9	5	94	19.4	236.5	55.2	0	97
GOLDENHARVEST G10L16-5222A	110	C250	1,2,3,4,6,14	22.7	240.5 *	54.3	0	98	21.5	229.6	55.4	0	95	26.4	254.5 *	52.4	0	104	20.3	237.3	55.2	0	94
KEY 908BLG	108	ENC	1,2,6	20.0	217.4	55.9	2	99	17.7	180.7	57.1	5	96	24.5	232.2	54.8	1	102	17.9	239.2	55.8	0	98
LEGACY SEEDS LC582-21 3330	109	C250	1,2,4,6	21.2	230.9	53.0	4	98	18.4	206.7	54.5	13	100	25.6	235.2	51.0	0	97	19.8	260.9 *	53.5	0	97
M&W SEEDS 44V83	108	T250	Conv.	20.8	221.5	54.6	0	95	18.4	214.4	55.6	0	92	25.5	218.9	53.0	0	99	18.5	231.3	55.2	0	94
M&W SEEDS 43V69	111	T250	1,2,6	21.1	238.0 *	55.0	9	97	18.8	210.6	56.5	23	98	24.9	255.7 *	54.0	1	92	19.8	247.8 *	54.4	2	101
NK Brand NK0877-3220	108	C500	1,2,4,6	21.4	236.1 *	54.0	3	99	18.7	207.5	54.8	9	95	25.1	259.0 **	52.6	0	104	20.4	241.8	54.6	0	97
NK Brand NK1082-5222A	110	C500	1,2,3,4,6,14	23.4	232.8 *	54.0	0	95	22.9	232.4 *	54.9	0	97	26.9	243.6 *	52.3	0	92	20.3	222.3	54.7	1	96
NK Brand NK1026-5332	110	C500	1,2,3,4,6	22.2	228.8	54.1	1	92	19.7	219.0	55.1	3	92	25.4	227.9	52.3	0	90	21.7	239.6	54.8	0	94
RENK RK700SSTX	107	ACC500	1,2,4,6	20.5	234.2 *	55.0	1	93	18.5	239.9 *	56.2	2	95	24.7	239.6 *	53.7	0	90	18.4	223.0	55.2	1	93
RENK RK765VT2P	109	ACC250	1,2	19.8	220.3	54.3	0	95	16.8	204.7	54.3	0	92	23.9	244.0 *	54.2	0	98	18.6	212.2	54.4	0	94
RENK RK821SSTX	111	ACC500	1,2,3,4	21.1	221.7	55.9	6	94	18.7	186.4	56.6	17	94	24.5	247.9 *	54.8	0	94	20.0	220.6	56.5	2	95
RENK RK826VT2P	111	ACC250	1,2	20.7	225.7	54.9	2	96	18.1	212.9	56.2	6	100	24.6	245.3 *	53.3	1	87	19.3	218.8	55.1	0	101
RENK RK82TIRE	111	ACC250	1,2,6	21.4	232.7 *	55.0	1	98	18.5	222.4	56.1	1	94	24.7	225.9	54.0	0	105	20.9	249.6 *	54.9	1	94
RUPP XRJ08-88	108	C250	1,2,3,4,6,14	22.5	234.3 *	53.8	2	95	21.6	242.2 *	55.2	4	94	26.5	218.6	52.2	0	99	19.4	242.0	54.2	3	93
RUPP XRD10-16	110	P250	1,2	20.7	239.8 *	56.5	2	97	19.1	242.5 *	57.4	7	93	23.9	231.3	55.8	1	101	19.3	245.5 *	56.2	0	98
SPECIALTY 38D871	108	P500	1,2	20.3	235.0 *	55.2	2	97	17.4	236.8 *	55.9	6	95	24.4	233.6	54.2	0	97	18.9	234.5	55.4	1	99
SPECIALTY 39A569	109	P500	1,2,3,4	21.2	241.7 *	55.0	0	95	17.8	221.9	56.3	0	97	25.3	239.1 *	53.0	0	90	20.6	264.2 **	55.7	1	97
M&W SEEDS 44D81	108	C250	1,2	20.9	237.8 *	55.9	0	92	18.2	219.4	56.7	0	89	24.3	239.6 *	55.0	0	90	20.2	254.5 *	55.9	1	97
WYCKOFF 2584 VT2P	108	P250	1,2	20.6	230.3	56.5	2	96	17.9	201.8	57.3	6	92	24.7	233.5	55.5	0	97	19.2	255.6 *	56.8	0	99
WYCKOFF 2585 VT2P	107	P250	1,2	19.7	219.1	54.9	2	95	16.5	227.2	55.5	6	92	23.6	211.7	54.0	0	98	19.0	218.3	55.2	0	96
WYCKOFF 2583 TRECEPTA	109	P250	1,2,6	20.3	242.2 *	54.3	0	101	17.3	247.2 **	55.1	0	100	24.1	245.8 *	53.6	0	104	19.5	233.6	54.2	0	99
AVERAGE				21.0	232.1	55.0	2	96	18.8	221.6	55.9	4	95	24.7	237.1	53.9	0	97	19.6	236.2	55.2	0	96
HIGHEST				23.4	245.9	56.5	9	103	22.9	247.2	57.4	23	100	26.9	259.0	55.9	5	116	21.7	264.2	56.8	3	101
LOWEST				19.7	217.4	53.0	0	92	16.5	180.7	54.3	0	84	23.0	211.7	51.0	0	87	17.6	212.2	53.5	0	91
CV (%)				14.0	9.1	2.2	365	7	4.6	6.3	1.1	147	4	2.3	8.3	1.5	465	9	5.7	7.9	1.6	320	4
LSD (5%)				2.0	14.6	0.8	7	5	1.0	16.5	0.7	14	5	0.7	23.1	1.0	1	11	1.3	21.8	1.0	2	5

2 Year Averages 2021 - 2020

BRAND / HYBRID	RM	TRT	TRAIT	Late - TRIAL AVERAGE				Branch - Late				Cass - Late				Lenawee - Late								
				%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	
DAIRYLAND SEED DS-544Q	111	LUM	1,2,3,4	18.8	236.7 **	56.7		18.3	251.3 **	56.5							19.2	222.1 **	57.0					
GOLDEN HARVEST G09Y24-3220A	109	C250	1,2,4,6,14	19.1	206.0	55.0		19.9	-	-							18.3	206.0	55.0					
M&W SEEDS 43V69	111	T250	1,2,6	18.3	229.2 *	55.5		17.9	236.5	55.7							18.8	222.0 *	55.3					
RENK RK765V72P	109	ACC250	1,2	17.8	207.0	55.4		17.3	209.3	55.3							18.2	204.7	55.6					
RUPP XRD10-16	110	P250	1,2	18.6	220.3	57.0		18.7	233.7	57.5							18.5	207.0	56.5					
AVERAGE				18.5	219.9	55.9		18.4	232.7	56.2							18.6	212.4	55.9					
HIGHEST				19.1	236.7	57.0		19.9	251.3	57.5							19.2	222.1	57.0					
LOWEST				17.8	206.0	55.0		17.3	209.3	55.3							18.2	204.7	55.0					
CV (%)				11.5	8.5	2.1		5.6	6.0	1.7							5.1	7.3	1.6					
LSD (5%)				1.3	10.5	0.6		0.9	11.2	0.8							0.8	13.8	0.7					

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

- Data Lost Due to Severe Lodging

TABLE 2E.

INGHAM, OTTAWA & SAGINAW COUNTY GRAIN TRIALS - EARLY (101 Day and Earlier)

ZONE 2

BRAND / HYBRID	RM	TRT	TRAIT	2021						Early - TRIAL AVERAGE						Ottawa - Early						Ingham - Early						Saginaw - Early					
				%H2O	BU/A	Twt	%SL	%Sd	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
AG ARMOUR AA9608	96	C250	1,2,4,6	20.4	219.7	59.5	0	99	22.1	198.2	56.8	0	98	22.0	242.1	56.0	0	94	17.0	219.0	65.7	0	99	17.0	219.0	65.7	0	99					
AG ARMOUR AA9912	99	C250	1,2,4,14	19.8	211.8	54.4	0	97	22.6	204.8	54.7	0	98	20.2	227.7	53.0	0	95	16.6	202.9	55.4	0	97	16.6	202.9	55.4	0	97					
DAIRYLAND SEED DS-3550AM	95	LUM	1,2,4	19.7	231.8*	54.8	1	99	21.4	204.1	54.7	0	101	20.6	263.1*	53.9	0	94	17.2	228.1*	55.9	2	99	17.2	228.1*	55.9	2	99					
DAIRYLAND SEED DS-3727AM	97	LUM	1,2,4	20.2	215.3	56.9	0	98	21.0	177.8	57.3	0	101	21.7	260.8*	56.7	0	96	17.8	207.4	56.8	1	98	17.8	207.4	56.8	1	98					
DAIRYLAND SEED DS-3959AM	99	LUM	1,2,4	20.8	207.0	54.3	4	96	22.8	194.5	54.5	0	99	22.4	239.2	53.6	0	97	17.3	187.4	54.8	12	96	17.3	187.4	54.8	12	96					
DAIRYLAND SEED DS-4000AMXT	100	LUM	1,2,3,4	21.4	222.6	55.3	0	99	22.6	206.3	55.2	0	98	23.1	247.7	54.9	0	93	18.5	213.9	55.7	0	99	18.5	213.9	55.7	0	99					
DAIRYLAND SEED DS-4014Q	100	LUM	1,2,3,4	21.4	242.7**	54.7	1	99	23.4	212.3*	54.3	0	96	23.1	272.6*	53.8	0	99	17.8	243.1**	56.1	2	99	17.8	243.1**	56.1	2	99					
DAIRYLAND SEED DS-4018AM	100	LUM	1,2,4	21.6	222.8	55.4	0	97	21.9	189.6	55.1	0	76	23.7	267.0*	54.3	0	100	19.1	211.7	56.7	1	97	19.1	211.7	56.7	1	97					
DYNAGRO D36VC66	96	P500	1,2	19.2	220.0	55.1	0	99	20.3	195.1	56.5	0	97	21.5	247.8	54.4	0	98	15.9	217.0	54.3	1	99	15.9	217.0	54.3	1	99					
DYNAGRO D40VC41	100	P500	1,2	21.3	228.6*	54.4	0	99	23.9	223.7**	54.7	0	99	23.5	238.2	53.3	0	89	16.4	224.0*	55.1	0	99	16.4	224.0*	55.1	0	99					
GOLDEN HARVEST G95D32-3220	95	C250	1,2,4,6	20.0	235.2*	57.1	0	98	21.2	219.1*	55.8	0	100	21.9	269.0*	57.0	0	99	16.9	217.5	58.7	0	98	16.9	217.5	58.7	0	98					
GOLDEN HARVEST G99E68-5122	99	C250	1,2,3,4	20.9	220.3	55.4	0	100	22.3	197.7	55.4	0	100	23.0	246.3	55.1	0	101	17.5	216.9	55.8	0	100	17.5	216.9	55.8	0	100					
LEGACY SEEDS LC474- TRE	97	P500	1,2,6	19.7	223.5	54.5	0	102	21.0	211.9*	55.2	0	99	22.3	253.1	54.4	0	99	15.7	205.3	54.1	0	102	15.7	205.3	54.1	0	102					
LEGACY SEEDS LC484-20 VT2PR	98	P500	1,2	19.5	203.8	55.9	0	97	21.0	190.3	57.4	0	98	21.4	227.6	55.6	0	97	16.1	193.6	54.7	0	97	16.1	193.6	54.7	0	97					
LEGACY SEEDS LC-4248 VT2PR	100	P500	1,2	19.6	205.4	55.4	0	100	21.2	195.9	55.6	0	100	22.1	236.2	55.8	0	99	15.6	184.1	54.7	1	100	15.6	184.1	54.7	1	100					
LEGEND 9899 VT2P RIB	99	C250	1,2	20.9	232.1*	54.5	0	99	23.1	212.5*	54.9	0	96	23.2	265.5*	53.0	0	102	16.5	218.3	55.6	1	99	16.5	218.3	55.6	1	99					
M&W SEEDS 46P76	97	T250	1,2	19.6	207.5	55.5	0	98	21.5	201.7	56.6	0	93	21.2	242.5	55.5	0	94	16.0	178.1	54.4	0	98	16.0	178.1	54.4	0	98					
M&W SEEDS MM97A VT2P	97	T250	1,2	19.4	226.6*	54.3	0	100	22.2	198.5	54.6	0	99	20.8	259.3*	54.1	0	99	15.4	222.0	54.4	0	100	15.4	222.0	54.4	0	100					
M&W SEEDS 46T29	99	T250	1,2	19.8	214.6	56.0	1	100	21.2	197.4	56.9	0	97	22.0	242.8	55.5	0	94	16.2	203.5	55.5	2	100	16.2	203.5	55.5	2	100					
M&W SEEDS 45T56	100	T250	1,2	19.8	229.1*	55.4	0	100	20.9	218.2*	56.0	0	99	22.3	259.0*	54.7	0	102	16.4	210.2	55.4	0	100	16.4	210.2	55.4	0	100					
RENK RK579DGVT2P	99	ACC250	1,2,14	19.7	221.9	55.1	0	98	21.4	220.3*	55.0	0	99	21.8	245.1	55.3	0	99	15.8	200.3	54.8	0	98	15.8	200.3	54.8	0	98					
RENK RK600VT2P	100	ACC250	1,2,3,4	20.7	226.9*	55.2	0	100	22.0	200.1	55.1	0	93	23.5	258.9*	54.4	0	101	16.7	221.7	56.1	1	100	16.7	221.7	56.1	1	100					
RUPP XRD91-54	91	C250	1,2,4,6,14	19.8	219.9	55.5	0	100	21.9	207.3*	56.5	0	75	21.1	238.1	55.1	0	94	16.3	214.2	54.9	1	100	16.3	214.2	54.9	1	100					
RUPP XRD97-95	97	C250	1,2	19.9	214.2	58.0	1	100	21.5	195.3	56.6	0	98	22.0	246.3	55.8	0	100	16.3	201.0	61.7	2	100	16.3	201.0	61.7	2	100					
RUPP XRD98-13	98	P250	1,2,6	19.0	216.8	54.4	0	102	19.0	193.4	55.3	0	104	22.4	240.4	54.0	0	99	15.6	216.7	53.9	0	102	15.6	216.7	53.9	0	102					
RUPP XRD99-08	99	P250	1,2	20.4	221.9	54.8	0	99	21.2	201.0	55.8	0	98	23.6	241.9	52.8	0	99	16.3	222.9*	55.7	0	99	16.3	222.9*	55.7	0	99					
RUPP XRD01-90	101	P250	1,2	20.8	205.0	56.6	0	100	22.2	193.7	57.1	0	97	23.3	232.9	56.6	0	95	16.9	188.4	56.1	0	100	16.9	188.4	56.1	0	100					
SPECIALTY 27D728	97	P500	1,2	20.0	227.9*	55.5	0	100	22.3	203.8	55.6	0	99	21.6	263.2*	55.7	0	98	16.1	216.7	55.1	0	100	16.1	216.7	55.1	0	100					
SPECIALTY 29D010	99	P500	1,2	19.7	213.2	55.0	0	100	20.5	202.4	56.5	0	99	23.1	251.4	54.1	0	100	15.7	185.8	54.4	0	100	15.7	185.8	54.4	0	100					
SPECIALTY 31D921	101	P500	1,2	20.3	229.2*	54.5	0	101	22.2	208.9*	55.0	0	101	22.8	272.8**	54.2	0	102	16.0	206.1	54.2	1	101	16.0	206.1	54.2	1	101					
AVERAGE				20.2	220.6	55.3	0	99	21.7	202.7	55.7	0	97	22.2	250.2	54.7	0	98	16.6	208.9	55.6	1	99	16.6	208.9	55.6	1	99					
HIGHEST				21.6	242.7	58.0	4	102	23.9	223.7	57.4	0	104	23.7	272.8	57.0	0	102	19.1	243.1	61.7	12	102	19.1	243.1	61.7	12	102					
LOWEST				19.0	203.8	54.3	0	96	19.0	177.8	54.3	0	75	20.2	227.6	52.8	0	89	15.4	178.1	53.9	0	96	15.4	178.1	53.9	0	96					
CV (%)				14.4	12.6	1.9	830	8	6.1	6.9	1.7	0	12	4.2	6.4	1.6	0	5	2.2	8.3	7.1	496	3	2.2	8.3	7.1	496	3					
LSD (5%)				2.0	19.1	0.7	2	5	1.6	16.5	1.1	0	14	1.1	18.9	1.0	0	6	0.4	20.3	4.6	6	3	0.4	20.3	4.6	6	3					

2 Year Averages 2021 - 2020			Early - TRIAL AVERAGE						Ottawa - Early			Ingham - Early			Saginaw - Early			
BRAND /HYBRID	RM	TRT	TRAIT	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd
AG ARMOUR AA9608	96	C250	1,2,4,6						23.2	223.6	55.3							
DAIRYLAND SEED DS-4000MXT	100	LUM	1,2,3,4						24.2	238.5 *	53.8							
DAIRYLAND SEED DS-4014Q	100	LUM	1,2,3,4						24.6	237.7 *	52.6							
DAIRYLAND SEED DS-4018AM	100	LUM	1,2,4						22.6	223.7	54.0							
DYNAORO D40VC41	100	P500	1,2						24.9	234.5 *	53.1							
GOLDEN HARVEST G99E68-5122	99	C250	1,2,3,4						23.8	223.9	53.9							
M&W SEEDS 46P76	97	T250	1,2						22.8	217.9	54.8							
M&W SEEDS 46T29	99	T250	1,2						22.5	224.3	55.3							
M&W SEEDS 45T56	100	T250	1,2						23.2	239.1 **	53.7							
RENK RK600VT2P	100	ACC250	1,2,3,4						23.2	216.2	53.8							
RUPP XRD01-90	101	P250	1,2						23.3	214.7	55.1							
SPECIALTY 27D728	97	P500	1,2						23.0	229.3 *	54.1							
SPECIALTY 29D010	99	P500	1,2						22.9	228.6 *	53.7							
AVERAGE									96.9	227.1	54.1							
HIGHEST									104.1	239.1	55.3							
LOWEST									75.3	214.7	52.6							
CV (%)									5.0	6.6	1.6							
LSD (5%)									0.9	11.8	0.7							

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

TABLE 2L.

INGHAM, OTTAWA & SAGINAW COUNTY GRAIN TRIALS - LATE (102 Day and Later)

ZONE 2

2020		Late - TRIAL AVERAGE						Alleghen - Late						Ingham - Late						Saginaw - Late								
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd
DAIRYLAND SEED DS-4310AM	103	LUM	1,2,4	22.2	214.3 *	55.5	33	100	24.5	228.6 *	54.2	0	98	22.4	211.4	55.8	97	103	19.8	202.9	56.4	3	99	19.8	202.9	56.4	3	99
DAIRYLAND SEED DS-4440AM	104	LUM	1,2,4	22.1	215.1 *	55.3	34	100	24.6	206.5	54.9	0	95	23.2	231.0 *	54.5	101	104	18.4	207.8	56.4	1	100	18.4	207.8	56.4	1	100
DAIRYLAND SEED DS-4510Q	105	LUM	1,2,3,4	21.6	227.9 *	54.8	30	101	24.5	220.0 *	54.6	0	98	22.8	250.3 **	54.1	91	105	17.5	213.5 *	55.7	0	99	17.5	213.5 *	55.7	0	99
DAIRYLAND SEED DS-4878AM	108	LUM	1,2,4	21.9	222.8 *	53.1	34	103	24.8	228.9 *	53.6	1	100	24.0	236.8 *	53.1	99	108	16.9	202.8	52.7	1	99	16.9	202.8	52.7	1	99
DYNAGRO D42S520	102	P500	1,2,3,4	20.2	203.5	55.4	32	100	23.6	210.3	55.9	0	99	20.9	222.2	55.9	95	102	16.2	178.0	54.5	0	99	16.2	178.0	54.5	0	99
DYNAGRO D44S554	105	P500	1,2,3,4	21.4	216.3 *	54.0	33	100	24.3	217.4 *	53.9	0	96	23.5	235.3 *	53.9	97	105	16.2	196.0	54.1	1	99	16.2	196.0	54.1	1	99
DYNAGRO D45TG55	106	P500	1,2,6	21.1	212.5	54.0	33	101	23.9	210.7	54.5	0	99	23.1	224.2	54.0	99	106	16.3	202.6	53.4	0	99	16.3	202.6	53.4	0	99
GOLDEN HARVEST G02K39-3120	102	C250	1,2,4	20.4	209.9	52.7	34	99	24.1	198.4	53.4	4	98	21.6	224.0	52.4	95	102	15.5	207.3	52.4	3	97	15.5	207.3	52.4	3	97
GOLDEN HARVEST G03B96-5122	103	C250	1,2,3,4	22.3	215.2 *	55.8	33	101	24.5	195.8	55.3	0	99	23.5	248.9 *	55.5	97	103	19.0	201.0	56.8	1	101	19.0	201.0	56.8	1	101
GOLDEN HARVEST G07F23-3111	107	C250	1,2,3,4	21.6	216.8 *	53.5	33	102	22.9	198.1	52.5	0	98	23.6	230.3 *	52.8	99	107	18.3	222.1 *	55.1	1	99	18.3	222.1 *	55.1	1	99
LEGACY SEEDS LC-5217 VT2P	103	P250	1,2	21.0	226.3 *	55.0	32	100	23.9	235.0 **	54.5	0	99	22.9	232.9 *	56.3	97	103	16.3	211.0	54.1	0	99	16.3	211.0	54.1	0	99
LEGACY SEEDS LC-5319 SSX	103	P500	1,2,3,4	21.5	215.7 *	54.3	31	99	23.9	219.8 *	54.0	0	97	23.7	220.2	54.0	94	103	16.8	207.0	54.8	0	97	16.8	207.0	54.8	0	97
LEGACY SEEDS LC564-20 PWE	106	P500	1,2,4	21.7	229.7 **	52.3	29	100	24.7	231.3 *	52.4	0	97	23.8	227.9 *	51.8	86	106	16.6	229.9 *	52.6	1	97	16.6	229.9 *	52.6	1	97
LEGEND 9102 VIP3110	102	C250	1,2,4,6	22.1	220.7 *	56.1	32	99	24.0	211.3	56.0	0	98	23.0	219.7	55.4	94	102	19.2	231.3 **	57.0	2	98	19.2	231.3 **	57.0	2	98
M&W SEEDS 45V21	104	T250	1,2	19.6	205.3	54.8	31	101	21.6	199.5	55.4	0	100	21.0	208.3	54.7	94	104	16.2	208.2	54.4	0	97	16.2	208.2	54.4	0	97
M&W SEEDS 44V74	105	T250	1,2,3,4	22.1	212.8	53.1	32	99	25.5	216.7 *	52.6	0	96	23.6	212.2	52.4	95	105	17.1	209.6	54.4	1	96	17.1	209.6	54.4	1	96
M&W SEEDS 44V42	107	T250	1,2	21.6	219.9 *	56.4	34	104	24.0	209.9	56.8	0	105	23.2	241.3 *	55.5	101	107	17.7	208.6	56.9	0	100	17.7	208.6	56.9	0	100
M&W SEEDS 44V83	108	T250	Conv.	22.0	205.9	53.2	33	97	24.1	191.4	53.0	0	90	24.5	218.3	53.1	97	108	17.5	207.9	53.5	2	94	17.5	207.9	53.5	2	94
NK Brand NK0243-5122	102	C250	1,2,3,4	20.8	222.0 *	53.9	34	100	24.4	201.9	53.6	0	100	21.6	240.5 *	54.1	101	102	16.3	223.7 *	53.9	2	99	16.3	223.7 *	53.9	2	99
NK Brand NK0314-5122	103	C250	1,2,3,4	22.0	209.6	55.4	31	101	24.5	189.7	55.8	2	99	23.3	230.6 *	55.2	93	103	18.2	208.7	55.3	0	101	18.2	208.7	55.3	0	101
RENK RK642VT2P	103	ACC250	1,2	20.5	217.3 *	54.5	28	98	23.3	218.6 *	54.6	0	94	22.0	234.1 *	55.1	85	103	16.3	199.3	53.8	0	98	16.3	199.3	53.8	0	98
RENK RK625DGVIT2P	104	ACC250	1,2,14	19.3	211.4	56.8	33	100	21.7	206.0	55.2	0	97	21.1	243.6 *	54.3	99	104	15.3	184.6	60.9	1	99	15.3	184.6	60.9	1	99
RENK RK710DGVIT2P	106	ACC250	1,2,14	21.3	223.1 *	54.5	34	99	24.2	214.2 *	55.3	3	93	23.4	244.7 *	54.0	99	106	16.5	210.3	54.3	0	98	16.5	210.3	54.3	0	98
RUPP XRD05-16	105	P250	1,2	21.6	216.8 *	53.3	33	101	25.3	225.9 *	52.3	0	98	23.0	224.8	54.3	99	105	16.3	199.8	53.5	0	101	16.3	199.8	53.5	0	101
SPECIALTY 33A580	103	P500	1,2,3,4	21.3	221.5 *	55.1	30	100	24.6	220.3 *	54.4	0	96	23.1	240.8 *	57.1	89	103	16.3	203.5	54.0	1	100	16.3	203.5	54.0	1	100
AVERAGE				21.3	216.5	54.5	32	100	24.1	212.2	54.4	0	98	22.9	230.2	54.4	96	104	17.1	207.1	54.8	1	99	17.1	207.1	54.8	1	99
HIGHEST				22.3	229.7	56.8	34	104	25.5	235.0	56.8	4	105	24.5	250.3	57.1	101	108	19.8	231.3	60.9	3	101	19.8	231.3	60.9	3	101
LOWEST				19.3	203.5	52.3	28	97	21.6	189.7	52.3	0	90	20.9	208.3	51.8	85	102	15.3	178.0	52.4	0	94	15.3	178.0	52.4	0	94
CV (%)				15.8	10.4	1.8	359	6	3.5	9.1	1.6	393	5	3.7	8.6	3.2	9	0	3.6	7.9	6.3	209	2	3.6	7.9	6.3	209	2
LSD (5%)				2.3	15.6	0.7	1	4	1.0	22.7	1.0	2	6	1.0	23.2	2.0	10	0	0.7	19.3	4.1	2	2	0.7	19.3	4.1	2	2

2 Year Averages 2020 - 2019

BRAND / HYBRID	RM	TRT	TRAIT	Late - TRIAL AVERAGE				Alleghan - Late				Ingham - Late				Saginaw - Late							
				%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd
DYNAGRO D44SS54	105	P500	1,2,3,4	27.6	257.4	**	52.6	27.6	257.4	**	52.6	27.6	257.4	**	52.6	27.6	257.4	**	52.6	27.6	257.4	**	52.6
DYNAGRO D45TC55	106	P500	1,2,6	24.9	245.3	*	52.9	24.9	245.3	*	52.9	24.9	245.3	*	52.9	24.9	245.3	*	52.9	24.9	245.3	*	52.9
GOLDEN HARVEST G02K39-3120	102	C250	1,2,4	25.3	230.3		52.0	25.3	230.3		52.0	25.3	230.3		52.0	25.3	230.3		52.0	25.3	230.3		52.0
LEGACY SEEDS LC-5217 VT2P	103	P250	1,2	25.3	246.9	*	53.2	25.3	246.9	*	53.2	25.3	246.9	*	53.2	25.3	246.9	*	53.2	25.3	246.9	*	53.2
LEGACY SEEDS LC-5319 SSX	103	P500	1,2,3,4	25.8	252.2	*	52.7	25.8	252.2	*	52.7	25.8	252.2	*	52.7	25.8	252.2	*	52.7	25.8	252.2	*	52.7
LEGEND 9102 VIP3110	102	C250	1,2,4,6	24.8	223.4		54.8	24.8	223.4		54.8	24.8	223.4		54.8	24.8	223.4		54.8	24.8	223.4		54.8
M&W SEEDS 45V21	104	T250	1,2	23.4	237.6		53.5	23.4	237.6		53.5	23.4	237.6		53.5	23.4	237.6		53.5	23.4	237.6		53.5
M&W SEEDS 44V42	107	T250	1,2	25.8	232.5		55.4	25.8	232.5		55.4	25.8	232.5		55.4	25.8	232.5		55.4	25.8	232.5		55.4
RENK RK642VT2P	103	ACC250	1,2	25.6	238.2		53.4	25.6	238.2		53.4	25.6	238.2		53.4	25.6	238.2		53.4	25.6	238.2		53.4
RENK RK710DGV2P	106	ACC250	1,2,14	27.4	241.5		53.3	27.4	241.5		53.3	27.4	241.5		53.3	27.4	241.5		53.3	27.4	241.5		53.3
SPECIALTY 33A580	103	P500	1,2,3,4	27.8	240.5		52.7	27.8	240.5		52.7	27.8	240.5		52.7	27.8	240.5		52.7	27.8	240.5		52.7
AVERAGE				25.8	240.5		53.3	25.8	240.5		53.3	25.8	240.5		53.3	25.8	240.5		53.3	25.8	240.5		53.3
HIGHEST				27.8	257.4		55.4	27.8	257.4		55.4	27.8	257.4		55.4	27.8	257.4		55.4	27.8	257.4		55.4
LOWEST				23.4	223.4		52.0	23.4	223.4		52.0	23.4	223.4		52.0	23.4	223.4		52.0	23.4	223.4		52.0
CV (%)				12.4	8.9		2.0	12.4	8.9		2.0	12.4	8.9		2.0	12.4	8.9		2.0	12.4	8.9		2.0
LSD (5%)				1.5	10.1		0.6	1.5	10.1		0.6	1.5	10.1		0.6	1.5	10.1		0.6	1.5	10.1		0.6

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

Meet the Research Team

Thomas Siler

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Thomas (Tom) Siler is the new Research Assistant in Dr. Manni Singh's Cropping Systems Agronomy program at Michigan State University. Tom began coordinating the agronomy trials in corn, soybean, wheat, and barley in February 2021.

Tom received his B.S. in Crop and Soil Sciences from Michigan State University in May 2018. While attending school Tom worked at the MSU Agronomy Farm as an Undergraduate Research Assistant with the Forage Management, and Cropping Systems Agronomy programs from 2015 to 2018.

After graduation, Tom received his M.S. in Crop and Soil Sciences from Michigan State University in December 2020. Tom's thesis research in Dr. Manni Singh's program focused on identifying optimal management practices based on soybean planting date.

Micalah Blohm

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Micalah Blohm is the new Research Assistant in Dr. Manni Singh's Cropping Systems Agronomy program at Michigan State University. Micalah began coordinating the Michigan Corn Performance Trials in March 2021.

Micalah received her B.S. in Crop and Soil Sciences from Michigan State University in May 2019. While attending school Micalah was an active member in the MSU Agronomy Club and founded the MSU Soil Morphology Club. In addition, she worked at the MSU Agronomy Farm as an Undergraduate Research Assistant with the Dry Bean Research, Soil Fertility, and Potato Breeding programs from 2016 to 2019.

After graduation, Micalah worked as an Agronomy Sales Representative for CHS Inc. and as a Research Specialist for Mid-Michigan Agronomy.

Please feel free to contact Micalah with any questions you may have related to the Michigan Corn Performance Trials.

TABLE 3E.

HURON, MASON & MONTCALM COUNTY GRAIN TRIALS - EARLY (97 Day and Earlier)

ZONE 3

			2021						Early - TRIAL AVERAGE			Huron - Early			Mason - Early			Montcalm - Early					
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd
AG ARMOUR AA9100	91	C250	1,2,4,6,14	22.5	213.0	57.6	13	96	22.5	248.0 *	56.3	1	99	23.7	207.1	52.4	0	94	21.5	183.8	64.2	37	96
AG ARMOUR AA9303	93	C250	1,2,4,6	22.7	210.1	55.4	6	96	22.8	227.2	56.3	0	99	24.5	205.8	55.6	0	93	20.8	197.3	54.4	19	96
AG ARMOUR AA9608	96	C250	1,2,4,6	22.4	218.9 *	55.7	5	96	22.6	254.1 *	57.2	0	100	23.3	209.8	53.3	0	92	21.3	192.8	56.5	13	96
DAIRYLAND SEED DS-2828AM	88	LUM	1,2,4	20.0	212.0	54.1	1	96	20.6	229.4	55.5	0	98	21.0	203.9	52.6	0	91	18.3	202.8	54.3	2	99
DAIRYLAND SEED DS-3022AM	90	LUM	1,2,4	21.7	222.6 *	54.6	1	98	21.5	231.3	56.6	0	99	23.9	224.6 *	52.8	0	98	19.9	211.8 *	54.6	3	97
DAIRYLAND SEED DS-3162Q	91	LUM	1,2,3,4	20.1	213.7	55.6	1	94	20.5	225.4	61.9	0	92	21.5	215.7	50.5	0	95	18.3	199.9	54.4	2	96
DAIRYLAND SEED DS-3366AM	93	LUM	1,2,4	21.5	220.6 *	55.6	1	97	21.3	233.8	57.6	0	97	23.6	219.5 *	53.0	0	97	19.6	208.6 *	56.2	3	99
DAIRYLAND SEED DS-3550AM	95	LUM	1,2,4	22.8	218.5 *	53.3	0	97	22.2	242.8 *	55.0	0	100	24.5	224.2 *	50.5	0	94	21.6	188.4	54.4	1	98
DAIRYLAND SEED DS-3727AM	97	LUM	1,2,4	22.6	215.3 *	54.4	0	95	22.3	240.3	56.0	0	97	23.8	219.4 *	52.6	0	92	21.6	186.2	54.7	0	96
DYNAGRO D36/C66	96	P500	1,2	20.4	220.6 *	54.4	1	96	21.6	264.2 **	56.0	0	97	20.3	206.2	51.6	0	94	19.5	191.3	55.7	3	98
DYNAGRO D37/C64	97	P500	1,2	19.7	208.9	53.2	4	99	21.3	236.5	55.5	0	98	20.0	207.9	50.2	0	99	17.8	182.3	54.0	10	100
GOLDEN HARVEST G91V51-5222A	91	C250	1,2,3,4,6,14	23.1	222.2 *	54.5	10	98	23.1	243.0	56.2	1	99	24.2	225.4 *	52.6	0	96	21.9	198.3	54.6	29	99
GOLDEN HARVEST G95D32-3220	95	C250	1,2,4,6	22.2	234.1 **	57.6	0	98	22.4	261.9 *	63.1	0	94	23.1	238.5 **	53.5	0	99	21.3	202.1	56.2	1	99
LEGACY SEEDS LC-431-20 SSX	93	ACC500	1,2,3,4	21.7	191.9	54.3	0	89	21.4	216.5	56.3	0	90	23.5	195.7	51.8	0	85	20.3	163.5	54.8	1	91
LEGACY SEEDS LC-451-21 VT2P	95	P500	1,2	20.8	218.6 *	53.9	1	98	21.5	251.6 *	55.0	0	101	19.8	229.6 *	51.3	0	95	21.2	174.8	55.3	3	99
LEGACY SEEDS LC461-21 DGV72P	96	P500	1,2,14	21.7	212.0	55.7	2	97	21.9	239.8	57.1	0	99	23.8	197.2	53.0	0	97	19.3	199.1	57.1	7	96
LEGACY SEEDS LC474-20 TRE	97	P500	1,2,6	21.1	209.9	52.9	0	97	22.4	234.5	54.5	0	100	20.8	201.3	50.3	0	94	20.1	194.0	53.9	1	97
LEGEND LR 9191VP3110A	91	C250	1,2,4,6	22.5	213.8	54.7	3	95	22.3	232.5	56.8	1	94	23.7	209.6	51.6	0	96	21.6	199.3	55.7	10	95
LEGEND 9993 SS RIB	93	C250	1,2,3,4,6	21.2	203.0	54.4	1	98	21.1	227.2	55.3	0	99	23.4	183.5	51.6	0	97	19.1	198.4	56.2	3	99
LEGEND LR 9195DC5122	95	C250	1,2,3,4	22.5	204.2	53.7	3	94	22.8	227.1	53.4	1	93	24.6	171.1	52.1	0	92	20.2	214.4 *	55.6	7	97
LEGEND 4296 VT2P RIB	96	C250	1,2	21.6	207.2	54.7	1	98	21.8	224.6	56.7	0	96	22.3	211.1	52.4	0	97	20.8	185.9	55.0	4	101
M&W SEEDS 46P76	97	T250	1,2	20.2	204.7	54.4	0	94	21.3	232.5	56.1	0	97	20.5	192.8	51.7	0	92	18.8	188.8	55.5	0	94
M&W SEEDS MW97A VT2P	97	T250	1,2	20.2	225.5 *	53.8	0	98	21.4	246.1 *	54.6	0	98	19.2	233.0 *	49.3	0	97	20.0	197.4	57.5	0	100
NK Brand NK9353-3220	95	C250	1,2,4,6	22.1	227.3 *	55.6	1	96	22.3	254.9 *	56.9	0	98	22.9	229.2 *	53.5	0	93	21.1	198.0	56.5	4	97
RENK RK485DGV72P	94	ACC250	1,2,14	21.9	223.6 *	55.5	6	98	22.0	255.8 *	56.6	2	99	24.0	219.7 *	52.8	0	98	19.8	195.3	57.1	16	96
RENK RK499VT2P	94	ACC250	1,2	21.0	209.4	53.8	1	97	20.5	239.5	55.6	0	97	21.3	210.7	51.6	0	97	21.1	177.8	54.1	3	98
RENK RK561DGV72P	95	ACC250	1,2,14	21.1	203.4	55.4	0	94	21.9	244.0	55.9	0	94	22.0	204.4	51.0	0	96	19.4	161.9	59.5	1	93
RENK RK93VT2P	97	ACC250	1,2	20.7	209.5	54.4	1	96	22.1	247.1 *	56.0	1	98	21.6	198.4	51.6	0	95	18.4	182.9	55.5	3	94
RUPP XRD91-54	91	C250	1,2,4,6,14	22.0	229.6 *	55.2	12	98	22.2	252.9 *	56.8	0	101	23.3	207.6	52.7	0	95	20.5	228.4 **	56.0	37	99
RUPP XRD97-95	97	C250	1,2	21.5	201.9	54.3	1	97	21.6	243.6	56.0	0	97	22.5	198.9	51.6	0	95	20.5	163.2	55.2	3	98
SEEDWAY SW3590 GENVT2P	90	P500	1,2	20.4	195.7	55.0	1	98	20.8	226.3	56.4	0	100	22.2	188.4	53.0	0	96	18.2	172.4	55.7	4	99
SEEDWAY SW9504VT	96	P500	1,2	20.6	227.1 *	54.7	2	98	21.1	260.3 *	56.3	0	98	21.1	206.2 *	51.8	0	98	19.8	194.6	56.0	5	97
AVERAGE				21.5	214.0	54.8	3	97	21.8	240.5	56.4	0	98	22.5	209.9	52.0	0	95	20.1	191.7	55.8	7	97
HIGHEST				23.1	234.1	57.6	13	99	23.1	264.2	63.1	2	101	24.6	238.5	55.6	0	99	21.9	228.4	64.2	37	101
LOWEST				19.7	191.9	52.9	0	89	20.5	216.5	53.4	0	90	19.2	171.1	49.3	0	85	17.8	161.9	53.9	0	91
CV (%)				7.3	12.7	3.9	310	4	2.7	6.7	6.4	283	3	5.0	8.0	4.0	0	5.0	5.1	10.9	5.2	126	3
LSD (5%)				1.1	19.0	1.4	5	3	0.7	18.9	4.3	1	4	1.3	19.7	2.4	0	5.0	1.2	24.5	3.4	11	3

2 Year Averages 2021 - 2020		Early - TRIAL AVERAGE												Huron - Early			Mason - Early			Montcalm - Early				
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
AG ARMOUR AA9100	91	C250	1,2,4,6,14	28.3	244.6 *	53.7			28.3	244.6 *	53.7			28.3	244.6 *	53.7			28.3	244.6 *	53.7			
AG ARMOUR AA9303	93	C250	1,2,4,6	24.0	226.3	54.2			24.0	226.3	54.2			24.0	226.3	54.2			24.0	226.3	54.2			
AG ARMOUR AA9608	96	C250	1,2,4,6	24.5	245.4 *	55.4			24.5	245.4 *	55.4			24.5	245.4 *	55.4			24.5	245.4 *	55.4			
DYNAGRO D37VC64	97	P500	1,2	24.0	237.2	53.9			24.0	237.2	53.9			24.0	237.2	53.9			24.0	237.2	53.9			
GOLDEN HARVEST G95D32-3220	95	C250	1,2,4,6	24.4	251.1 **	58.4			24.4	251.1 **	58.4			24.4	251.1 **	58.4			24.4	251.1 **	58.4			
LEGACY SEEDS LC431-20 SXX	93	ACC500	1,2,3,4	23.1	219.7	55.0			23.1	219.7	55.0			23.1	219.7	55.0			23.1	219.7	55.0			
M&W SEEDS 46P76	97	T250	1,2	24.3	229.1	54.2			24.3	229.1	54.2			24.3	229.1	54.2			24.3	229.1	54.2			
RENK RK499VT2P	94	ACC250	1,2	23.0	240.2 *	53.9			23.0	240.2 *	53.9			23.0	240.2 *	53.9			23.0	240.2 *	53.9			
RENK RK561DGV72P	95	ACC250	1,2,14	24.2	243.5 *	54.0			24.2	243.5 *	54.0			24.2	243.5 *	54.0			24.2	243.5 *	54.0			
RENK RK593VT2P	97	ACC250	1,2	25.7	242.9 *	54.3			25.7	242.9 *	54.3			25.7	242.9 *	54.3			25.7	242.9 *	54.3			
AVERAGE				24.6	238.0	54.7			24.6	238.0	54.7			24.6	238.0	54.7			24.6	238.0	54.7			
HIGHEST				28.3	251.1	58.4			28.3	251.1	58.4			28.3	251.1	58.4			28.3	251.1	58.4			
LOWEST				23.0	219.7	53.7			23.0	219.7	53.7			23.0	219.7	53.7			23.0	219.7	53.7			
CV (%)				3.0	6.0	4.7			3.0	6.0	4.7			3.0	6.0	4.7			3.0	6.0	4.7			
LSD (5%)				0.6	11.9	2.2			0.6	11.9	2.2			0.6	11.9	2.2			0.6	11.9	2.2			

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

2 Year Averages 2021 - 2020		Late - TRIAL AVERAGE										Huron - Late				Mason - Late				Montcalm - Late				
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	%H2O	BUJA	Twt	%SL	%Sd	
DAIRYLAND SEED DS-4000AMXT	100	LUM	1,2,3,4						26.8	249.9 *	53.5													
DAIRYLAND SEED DS-4014Q	100	LUM	1,2,3,4						26.6	252.5 *	52.9													
DAIRYLAND SEED DS-4018AM	100	LUM	1,2,4						27.0	243.0	53.0													
DYNAGRO D40VC41	100	P500	1,2						27.8	254.0 *	53.7													
DYNAGRO D45TC55	106	P500	1,2,6						27.4	256.2 **	55.1													
GOLDEN HARVEST G99E68-5122	99	C250	1,2,3,4						27.3	240.7	54.2													
LEGACY SEEDS LC-5217 VT2P	103	P250	1,2						26.7	252.4 *	53.6													
M&W SEEDS 46T29	99	T250	1,2						26.6	245.1 *	54.5													
NK Brand NK9991-5122	99	C250	1,2,3,4						27.5	248.7 *	54.4													
AVERAGE									27.1	249.2	53.9													
HIGHEST									27.8	256.2	55.1													
LOWEST									26.6	240.7	52.9													
CV (%)									3.6	5.8	4.8													
LSD (5%)									0.8	12.0	2.2													

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

TABLE 4E.

IOSCO, OSCEOLA & PRESQUE ISLE COUNTY GRAIN TRIALS - EARLY (89 Day and Earlier)

ZONE 4

2021		TRIAL AVERAGE										Iosco - Early			Presque Isle - Early			Missaukee - Early						
BRAND /HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
DAIRYLAND SEED DS-2080AM	80	LUM	1,2,4	22.6	184.9 *	54.2	1	95	23.8	166.9	53.9	0	96	21.4	202.9	54.4	2	95						
DAIRYLAND SEED DS-2505Q	85	LUM	1,2,3,4	23.4	198.4 *	53.6	2	98	23.9	195.1 *	54.0	0	89	22.9	201.7	53.3	4	106						
DAIRYLAND SEED DS-2828AM	88	LUM	1,2,4	24.0	219.1 **	51.7	0	97	25.3	213.0 **	51.4	0	96	22.6	225.1 *	52.1	0	98						
GOLDEN HARVEST 684J92-3120A	86	C250	1,2,4,1,4	24.5	197.3 *	53.2	0	96	25.0	180.9	53.0	0	90	23.9	213.8 *	53.3	0	101						
LEGACY SEEDS LC351+20 VT2P	85	A250	1,2	23.7	178.5	52.6	0	87	24.5	158.5	51.4	0	84	22.9	198.5	53.8	0	90						
LEGACY SEEDS LC354+20	85	C250	1,2,4,6	23.6	188.8 *	52.1	1	93	25.2	168.3	51.3	0	91	22.0	209.3	53.0	1	95						
LEGACY SEEDS LC391+20	89	P500	1,2,	24.0	216.1 *	52.0	0	95	25.3	203.6 *	51.4	0	97	22.7	228.6 **	52.7	0	93						
RENK RK297VT2P	89	ACC250	1,2	24.9	215.0 *	52.1	0	94	25.5	203.2 *	51.1	1	89	24.3	226.9 *	53.2	0	99						
AVERAGE				23.8	199.8	52.7	1	94	24.8	186.2	52.2	0	92	22.8	213.4	53.2	1	97						
HIGHEST				24.9	219.1	54.2	2	98	25.5	213.0	54.0	1	97	24.3	228.6	54.4	4	106						
LOWEST				22.6	178.5	51.7	0	87	23.8	158.5	51.1	0	84	21.4	198.5	52.1	0	90						
CV (%)				15.9	28.4	11.1	266	11	2.7	8.2	1.7	353	9	5.6	6.2	1.5	201	7						
LSD (5%)				2.6	34.6	3.9	14	7	0.8	18.5	1.1	1	10	1.6	16.1	1.0	2	8						

2 Year Averages 2021 - 2020		TRIAL AVERAGE										Iosco - Early			Presque Isle - Early			Missaukee - Early						
BRAND /HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
DAIRYLAND SEED DS-2505Q	85	LUM	1,2,3,4	24.0	202.5 **	52.5			23.4	198.3 **	53.0			24.5	206.7 *	52.0								
LEGACY SEEDS LC351+20 VT2P	85	A250	1,2	23.5	190.9	52.0			22.8	170.4 *	51.9			24.2	211.5 **	52.1								
AVERAGE																								
HIGHEST																								
LOWEST																								
CV (%)																								
LSD (5%)																								

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

TABLE 4L. IOSCO, OSCEOLA & PRESQUE ISLE COUNTY GRAIN TRIALS - LATE (90 Day and Later) ZONE 4

2021		TRIAL AVERAGE										Iosco - Early			Presque Isle - Early			Missaukee - Late						
BRAND /HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
AG ARMOUR AA9100	91	C250	1,2,4,6,14	26.6	223.3 *	52.3	2	91	27.7	216.7	51.8	4	86	25.4	229.9 *	52.9	1	95						
DAIRYLAND SEED DS-3022AM	90	LUM	1,2,4	25.3	221.9 *	52.6	10	96	25.8	246.2 **	51.8	0	90	24.8	197.6	53.4	20	102						
DAIRYLAND SEED DS-3162Q	91	LUM	1,2,3,4	24.7	208.8 *	50.9	1	91	26.9	208.5	50.5	1	92	22.6	209.1	51.4	1	90						
DAIRYLAND SEED DS-3366AM	93	LUM	1,2,4	25.6	227.1 *	53.7	4	92	26.6	221.8	52.9	3	87	24.6	232.4 *	54.6	5	98						
DYNAGRO D36V666	96	P500	1,2	26.1	224.6 *	52.6	1	90	27.4	222.7	53.0	1	85	24.8	226.5 *	52.1	1	95						
GOLDEN HARVEST G90S99-5222	90	C250	1,2,3,4,6	24.8	212.0 *	54.7	2	91	26.4	194.2	57.3	0	86	23.3	229.9 *	52.0	3	97						
GOLDEN HARVEST G91V51-5222A	91	C250	1,2,3,4,6,14	26.7	227.5 *	51.8	0	97	28.2	221.6	50.9	0	95	25.1	233.3 *	52.7	0	98						
LEGACY SEEDS LC-3048	90	A500	1,2,3,4,6	26.1	219.8 *	52.3	0	82	27.3	206.9	51.6	1	90	24.9	232.8 *	53.0	0	97						
LEGACY SEEDS LC413-20	91	C250	1,2,4,6,14	26.2	219.4 *	52.9	3	88	27.3	214.0	52.2	6	79	25.0	224.7	53.7	0	98						
M&W SEEDS 46P76	97	T250	1,2	27.3	223.6 *	51.4	2	92	28.8	218.4	50.8	1	89	25.9	228.8 *	52.0	4	94						
M&W SEEDS MW97A VT2P	97	T250	1,2	27.4	233.5 **	50.6	0	97	28.6	225.4	49.7	0	93	26.1	241.7 **	51.5	0	100						
NK Brand NK9023-5222	90	C250	1,2,3,4,6	25.2	214.6 *	52.3	1	93	25.9	200.2	51.6	1	94	24.5	229.1 *	52.9	1	92						
NK Brand NK9175-5222A	91	C250	1,2,3,4,6,14	26.6	222.5 *	51.5	1	91	28.0	219.4	50.8	2	85	25.2	225.7 *	52.2	0	96						
Renk RK312VT2P	90	ACC250	1,2	25.3	224.9 *	52.4	1	92	25.8	215.5	51.5	0	86	24.8	234.3	53.3	2	97						
AVERAGE				26.0	221.7	52.3	2	92	27.2	216.5	51.9	1	88	24.8	226.8	52.7	3	95						
HIGHEST				27.4	233.5	54.7	10	97	28.8	246.2	57.3	6	95	26.1	241.7	54.6	20	102						
LOWEST				24.7	208.8	50.6	0	82	25.8	194.2	49.7	0	79	22.6	197.6	51.4	0	74						
CV (%)				13.7	25.6	7.6	233	13	4.8	6.0	5.7	151	95	4.1	6.2	1.5	277	14						
LSD (5%)				2.4	35.1	2.6	13	8	1.6	15.5	3.5	3	79	1.2	16.8	1.0	9	16						

2 Year Averages 2021 - 2020		TRIAL AVERAGE										Iosco - Early			Presque Isle - Early			Missaukee - Late						
BRAND /HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
AG ARMOUR AA9100	91	C250	1,2,4,6,14	30.4	203.7 *	49.4			30.3	194.2 *	48.7			30.5	213.3 *	50.2								
DAIRYLAND SEED DS-3162Q	91	LUM	1,2,3,4	24.0	208.4 **	49.9			24.0	202.4 **	49.7			24.0	214.5 *	50.1								
M&W SEEDS 46P76	97	T250	1,2	27.1	207.0 *	50.1			27.2	194.8 *	49.8			26.9	219.3 **	50.5								
AVERAGE				27.2	206.4	49.8			27.2	197.1	49.4			27.1	215.7	50.3								
HIGHEST				30.4	208.4	50.1			30.3	202.4	49.8			30.5	219.3	50.5								
LOWEST				24.0	203.7	49.4			24.0	194.2	48.7			24.0	213.3	50.1								
CV (%)				10.7	20.1	6.0			4.4	6.1	4.3			3.3	5.5	1.5								
LSD (5%)				1.5	21.3	1.6			1.0	10.6	1.8			0.7	10.2	0.6								

** Highest Yielding Hybrid
 * Not Significantly Different from Highest Yielding Hybrid

TABLE 5E. INGHAM, MONTCALM & SAGINAW COUNTY CONVENTIONAL GRAIN TRIALS - EARLY (101 Day and Earlier) ZONE 2 - 3

2021		Early - TRIAL AVERAGE				Ingham - Early				Montcalm - Early				Saginaw - Early									
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd					
KEY 592	92	ENC	Conv.	18.6	213.2 *	55.4	0	96	21.5	246.1	56.6	0	96	18.6	191.0	55.2	1	96	15.7	202.4	54.5	0	97
LEGACY SEEDS LC-3517 CONV	95	C250	Conv.	18.9	211.2 *	56.0	1	100	21.6	260.0	56.6	0	106	19.2	180.6	56.2	2	94	15.9	193.0	55.2	1	99
LEGACY SEEDS LC-3816 CONV	98	C250	Conv.	18.6	213.3 *	54.1	1	95	21.8	272.5 *	55.0	0	94	18.7	170.2	54.2	2	96	15.3	195.2	53.2	1	97
LEGACY SEEDS LC-4248 CONV	100	C250	Conv.	19.1	226.7 *	55.2	2	101	22.2	263.1	55.2	0	107	19.0	195.8 *	55.4	4	98	16.1	221.1 *	55.0	1	100
LG SEEDS LG37C33	87	OSF	Conv.	18.7	203.7	55.6	1	92	20.6	233.7	56.2	0	91	19.6	173.6	55.5	3	92	15.8	204.0	55.2	1	93
LG SEEDS LG42C24	92	OSF	Conv.	19.1	214.7 *	56.3	2	100	20.5	240.0	55.9	0	102	19.7	187.1	56.3	4	99	17.0	217.0 *	56.6	3	99
LG SEEDS LG49C19	99	OSF	Conv.	20.2	218.9 *	58.9	2	97	23.3	279.3 *	63.9	0	99	20.4	177.3	56.5	2	92	17.0	200.1	56.3	4	100
LG SEEDS LG49C28	99	OSF	Conv.	19.8	227.6 *	55.8	2	95	22.4	282.5 **	55.9	0	97	20.3	196.5 *	55.7	4	93	16.8	203.8	55.9	2	94
M&W SEEDS 48R10	87	T250	Conv.	18.2	189.7	56.1	1	95	20.6	221.4	56.5	0	98	17.9	159.5	56.0	1	92	16.1	188.2	55.7	1	94
M&W SEEDS 46T28	99	T250	Conv.	18.4	217.6 *	55.8	1	96	21.0	263.7	56.0	0	94	18.4	200.7 *	55.7	3	96	15.8	188.5	55.6	0	99
M&W SEEDS 45T55	99	T250	Conv.	19.4	232.8 **	55.2	2	103	22.6	277.1 *	55.3	0	115	19.7	206.6 **	55.1	5	96	15.9	214.8	55.3	2	97
RENK RK600	99	ACC250	Conv.	18.9	229.1 *	55.5	2	99	21.8	254.1	55.0	0	96	19.2	199.7 *	56.1	5	100	15.8	233.6 **	55.4	1	100
RUPP XRA97-55	97	C250	Conv.	18.9	218.1 *	55.6	1	95	21.6	262.4	55.7	0	95	19.2	176.8	55.8	3	91	15.9	215.3	55.4	1	99
RUPP XRA00-60	100	C250	Conv.	18.5	218.4 *	55.8	3	100	21.4	260.2	56.3	0	100	18.5	198.8 *	55.6	3	99	15.7	196.3	55.7	4	100
VIKING O.52-96P	96	C250	Conv.	18.8	221.6 *	56.5	2	98	21.5	265.7	58.9	0	100	19.1	196.8 *	55.9	5	96	15.7	202.5	54.8	0	99
VIKING O.45-97UP	97	C250	Conv.	17.9	204.9	55.3	1	92	21.3	247.4	57.3	0	89	17.3	174.0	54.6	4	90	15.2	193.4	54.0	0	97
VIKING O.85-00P	100	C250	Conv.	18.9	213.8 *	54.4	1	94	22.3	258.0	55.7	0	92	19.1	179.0	53.9	2	93	15.3	204.4	53.6	2	98
AVERAGE				18.9	216.2	55.7	1	97	21.6	258.1	56.6	0	98	19.1	186.2	55.5	3	95	15.9	204.3	55.1	1	98
HIGHEST				20.2	232.8	58.9	3	103	23.3	282.5	63.9	0	107	20.4	206.6	56.5	6	100	17.0	233.6	56.6	4	100
LOWEST				17.9	189.7	54.1	0	92	20.5	221.4	55.0	0	89	17.3	159.5	53.9	1	90	15.2	188.2	53.2	0	93
CV (%)				13.5	16.3	1.8	159	6	2.9	4.8	6.9	0	7	4.6	7.8	1.3	92	7	1.8	7.2	1.3	216	3
LSD (5%)				1.7	24.9	0.7	2	4	0.8	14.7	4.6	0	11	0.7	12.5	0.6	3	8	0.3	17.4	0.8	3	3

2 Year Averages 2021 - 2020		Early - TRIAL AVERAGE				Ingham - Early				Montcalm - Early				Saginaw - Early				
BRAND / HYBRID	RM	TRT	TRAIT	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd
KEY 592	92	ENC	Conv.						19.5	198.7 *	55.3							
LEGACY SEEDS LC-3517 CONV	95	C250	Conv.						20.1	191.6	56.0							
LG SEEDS LG49C19	99	OSF	Conv.						21.6	202.9 *	55.7							
M&W SEEDS 46T28	99	T250	Conv.						19.1	206.6 **	55.3							
RUPP XRA97-55	97	C250	Conv.						19.6	182.7	55.8							
RUPP XRA00-60	100	C250	Conv.						19.8	202.5 *	55.3							
VIKING O.45-97UP	97	C250	Conv.						18.8	181.8	55.1							
VIKING O.85-00P	100	C250	Conv.						20.5	189.9	54.0							
AVERAGE									19.9	194.6	55.3							
HIGHEST									21.6	206.6	56.0							
LOWEST									18.8	181.8	54.0							
CV (%)									4.6	7.8	1.3							
LSD (5%)									0.7	12.5	0.6							

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

TABLE 5L. INGHAM, MONTCALM & SAGINAW COUNTY CONVENTIONAL GRAIN TRIALS - LATE (102 Day and Later) ZONE 2 - 3

2021 BRAND / HYBRID	RM	TRT	TRAIT	Late - TRIAL AVERAGE				Ingham - Late				Montcalm - Late				Saginaw - Late								
				%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	
KEY 206	106	ENC	Conv.	22.1	185.9	53.5	4	107	24.6	250.2	54.1	0	123	25.5	145.2	53.0	9	100	16.3	162.5	53.5	4	98	
KEY 210	110	ENC	Conv.	25.5	201.1	53.1	5	98	25.6	248.3	53.0	0	99	25.3	154.0	53.3	9	96	-	-	-	-	-	-
LEGACY SEEDS LC-5217 CONV	103	C250	Conv.	20.4	210.2 *	54.7	3	97	23.3	258.1	54.2	0	96	21.6	180.3	55.3	7	98	16.4	192.2	54.6	1	96	
LEGACY SEEDS LC564-20 CONV	106	A500	Conv.	21.4	226.5 *	52.7	3	98	24.2	264.7 *	52.2	0	98	23.8	203.7 *	52.6	7	99	16.3	211.0 *	53.4	2	97	
M&W SEEDS MMX 105	105	T250	Conv.	22.6	211.4 *	55.6	3	98	24.2	281.2 **	54.2	0	95	24.3	154.8	55.1	8	99	19.2	198.4	57.4	1	100	
M&W SEEDS 44R33	106	T250	Conv.	19.9	216.8 *	54.2	0	94	23.3	253.8	54.9	0	85	20.6	185.7	53.6	1	97	15.9	210.8 *	54.0	0	101	
M&W SEEDS 44V40	107	T250	Conv.	21.5	221.0 *	54.8	1	97	24.1	263.3 *	54.4	0	97	22.7	198.3 *	54.2	3	99	17.7	201.3	55.8	0	96	
RENK RK642	102	ACC250	Conv.	19.4	214.6 *	54.7	1	96	22.5	257.3	55.1	0	97	19.2	185.6	54.1	1	96	16.4	200.9	54.9	2	94	
RENK RK726	106	ACC250	Conv.	21.4	234.9 **	52.4	2	99	24.6	261.5 *	51.2	0	99	23.3	206.6 *	52.5	5	98	16.3	236.5 **	53.4	1	100	
RUPP XRA02-20	102	C250	Conv.	20.3	201.4	56.1	1	98	23.1	237.5	56.3	0	95	20.7	165.9	55.7	3	100	17.1	200.8	56.4	1	100	
VIKING O.46-02P	102	C250	Conv.	19.5	211.9 *	54.3	0	91	22.9	243.8	54.7	0	88	19.1	188.6	53.6	1	91	16.5	203.3	54.8	0	93	
VIKING O.72-06	106	C250	Conv.	21.8	227.8 *	52.6	8	95	25.1	257.0	51.7	0	94	23.4	209.0 **	52.2	5	96	17.0	217.3 *	54.0	2	95	
AVERAGE				21.3	213.6	54.1	3	97	24.0	256.4	53.8	0	99	22.5	181.5	53.8	5	97	16.9	193.2	55.4	6	97	
HIGHEST				25.5	234.9	56.1	8	107	25.6	281.2	56.3	0	99	25.5	209.0	55.7	9	100	19.2	236.5	62.2	52	101	
LOWEST				19.4	185.9	52.4	0	91	22.5	237.5	51.2	0	99	19.1	145.2	52.2	1	91	15.9	83.6	53.4	0	93	
CV (%)				16.7	17.2	2.1	239	6	2.4	6.8	1.6	10	5.3	8.6	1.6	191	4	7.9	12.7	6.6	199	3		
LSD (5%)				2.4	26.6	0.8	6	4	0.7	20.8	1.0	12	1.4	18.6	1.0	14	4	1.6	29.4	4.4	13	4		

2 Year Averages 2021 - 2020	BRAND / HYBRID	RM	TRT	TRAIT	Late - TRIAL AVERAGE				Ingham - Late				Montcalm - Late				Saginaw - Late						
					%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL	%Sd	%H2O	BU/A	Twt	%SL
	LEGACY SEEDS LC-5217 CONV	103	C250	Conv.										22.6	194.0	54.7							
	M&W SEEDS 44R33	106	T250	Conv.										22.9	210.4 **	53.7							
	RENK RK642	102	ACC250	Conv.										21.3	207.3 *	53.8							
	VIKING O.46-02P	102	C250	Conv.										21.5	205.3 *	53.7							
	AVERAGE													22.1	204.3	54.0							
	HIGHEST													22.9	210.4	54.7							
	LOWEST													21.3	194.0	53.7							
	CV (%)													4.2	6.9	1.5							
	LSD (5%)													0.8	11.0	0.7							

** Highest Yielding Hybrid
 * Not Significantly Different from Highest Yielding Hybrid
 - Data Lost Due to Severe Lodging

HYBRID INDEX FOR GRAIN TRIALS

ZONE 1
Tables 1E/1L
Branch
Cass
Lenawee
Trial Average

ZONE 2
Tables 2E/2L
Ingham
Ottawa
Saginaw
Trial Average

ZONE 3
Tables 3E/3L
Huron
Mason
Montcalm
Trial Average

ZONE 4
Table 4E/4L
Iosco
Missaukee
Presque Isle
Trial Average

CONVENTIONAL TRIAL
Tables 5E/5L
Ingham - Zone 2
Montcalm - Zone 3
Saginaw - Zone 2
Trial Average

BRAND / HYBRID	RM TABLE	BRAND / HYBRID	RM TABLE	BRAND / HYBRID	RM TABLE
AG ARMOUR		GOLDEN HARVEST Cont.		LEGEND Cont.	
AA9100	91 3E,4L	G99E68-5122	99 2E,3L	9999 VT2P RIB	99 2E
AA9303	93 3E	G02K39-3120	102 1E,2L,3L	9102 VIP3110	102 2L
AA9608	96 2E,3E	G03B96-5122	103 1E,2L	LR 9104 PCE	104 1E
AA9912	99 2E,3L	G07F23-3111	107 1E,2L		
		G07G73-5122	107 1E	LG Seeds	
DAIRYLAND SEED		G08R52-3220	108 1L		
DS-2080AM	80 4E	G09Y24-3220A	109 1L	LG37C33	87 5E
DS-2505Q	85 4E	G10L16-5222A	110 1L	LG42C24	92 5E
DS-2828AM	88 3E,4E	KEY		LG49C19	99 5E
DS-3022AM	90 3E,4L			LG49C28	99 5E
DS-3162Q	91 3E,4L	592	92 5E	M&W SEEDS	
DS-3366AM	93 3E,4L	995BLG	95 1E		
DS-3550AM	95 2E,3E	206	106 5L	48R10	87 5E
DS-3737AM	97 2E,3E	908BLG	108 1L	46P76	97 2E,3E,4L
DS-3959AM	99 1E,2E,3L	210	110 5L	MW97A VT2P	97 2E,3E,4L
DS-4000AMXT	100 1E,2E,3L			46T29	99 2E,3L
DS-4014Q	100 1E,2E,3L	LEGACY SEEDS		46T28	99 5E
DS-4018AM	101 1E,2E,3L			45T55	99 5E
DS-4310AM	103 1E,2L	LC351-20 VT2P	85 4E	45T56	100 2E
DS-4440AM	104 1E,2L	LC354-20	85 4E	45V21	104 1E,2L,3L
DS-4510Q	105 1E,2L	LC391-20	89 4E	44V74	105 1E,2L
DS-4878AM	108 1L,2L	LC-3048	90 4L	MWX 105	105 5L
DS-4917AM	109 1L	LC413-20	91 4L	44R33	106 5L
DS-5018AM	110 1L	LC431-20 SSX	93 3E	44V42	107 1E,2L
DS-5144Q	111 1L	LC451-21	95 3E	44V40	107 5L
DS-5250AM	112 1L	LC-3517 CONV	95 5E	44D81	108 1L
DS-5279Q	112 1L	LC461-21	96 3E	44V83	108 1L,2L
		LC474-20	97 2E,3E	43V69	111 1L
DYNAGRO		LC484-20	98 2E,3L		
D36VC66	96 2E,3E,4L	LC-3816 CONV	98 5E	NK Brand	
D37VC64	97 3E	LC-4248	100 2E,3L		
D40VC41	100 2E,3L	LC-4248 CONV	100 5E	NK9023-5222	90 4L
D42SS20	102 2L,3L	LC503-21	100 3L	NK9175-5222A	91 4L
D44SS54	104 1E,2L	LC-5217 VT2P	102 2L,3L	NK9535-3220	95 3E
D45TC55	105 1E,2L,3L	LC-5217 CONV	102 5L	NK9991-5122	99 3L
D48VC84	108 1L	LC-5319 SSX	104 1E,2L,3L	NK0243-5122	102 2L,3L
D50VC09	110 1L	LC555-21	105 1E	NK0314-5122	103 2L
		LC564-20	106 1E,2L	NK0748-5122	107 1E
		LC564-20 CONV	106 5L	NK0877-3220	108 1L
GOLDEN HARVEST		LC592-21	109 1L	NK1082-5222A	110 1L
G84J92-3120A	86 4E	LEGEND		NK1026-5332	110 1L
G90S99-5222	90 4L				
G91V51-5222A	91 3E,4L	LR 9191VIP3110A	91 3E		
G95D32-3220	95 2E,3E	9993 SS RIB	93 3E		
		LR 9195DC5122	95 3E		
		4296 VT2P RIB	96 3E		

HYBRID INDEX FOR GRAIN TRIALS CONT.

BRAND / HYBRID	RM TABLE	BRAND / HYBRID	RM TABLE
RENK		VIKING	
RK297VT2P	89 4E	O.52-96P	96 5E
RK312VT2P	90 4L	O.45-97UP	97 5E
RK485DGVT2P	94 3E	O.85-00P	100 5E
RK499VT2P	94 3E	O.46-02P	102 5L
RK561DGVT2P	96 3E	O.72-06	106 5L
RK593VT2P	97 3E		
RK590VT2P	98 3L	WELLMAN	
RK579DGVT2P	99 2E	W2903DP	103 1E
RK600	99 5E	W2807DP	107 1E
RK600VT2P	100 2E		
RK642	102 5L	WYCKOFF	
RK642VT2P	103 2L	2170 TRECEPTA	98 1E
RK625DGVT2P	104 2L	2180 VT2P	98 1E
RK718SSTX	105 1E	2250 VT2P	102 1E
RK726	106 5L	2335 SS	103 1E
RK710DGVT2P	107 2L	2300 DG VT2P	103 1E
RK700SSTX	108 1L	2483 VT2P	104 1E
RK765VT2P	109 1L	2440 SS	105 1E
RK821SSTX	111 1L	2433 SS	105 1E
RK826VT2P	111 1L	2584 VT2P	108 1L
RK882TRE	111 1L	2585 VT2P	108 1L
		2583 TRECEPTA	109 1L
RUPP			
XRD91-54	91 2E,3E		
XRD97-95	97 2E,3E		
XRA97-55	97 5E		
XRD98-13	98 2E,3L		
XRD99-08	99 2E		
XRA00-60	100 5E		
XRD01-90	101 2E,3L		
XRA02-20	102 5L		
XRD05-16	105 1E,2L		
XRD09-42	106 1E		
XRD06-53	106 1E		
XRJ08-88	108 1L		
XRD10-16	110 1L		
SEEDWAY			
SW3590 GENVT2P	90 3E		
SW9504VT	96 3E		
SW3960 GENSS	98 3L		
SW4030 GENSS	100 3L		
SPECIALTY			
27D728	97 2E		
29D010	99 2E		
31D921	101 2E		
33A580	103 1E,2L		
36D260	106 1E		
38D871	108 1L		
39A569	109 1L		

TABLE B.

AGRONOMIC TABLE FOR GRAIN TRIAL LOCATIONS

	COUNTY	PLANTING DATES	HARVEST DATES	PREVIOUS CROP	100 % STAND	FERTILIZER N - P - K
Zone 1	BRANCH (Irrigated)	May 20	Oct 23	Seed Corn	33,264	220-10-3
	LENAWEE	May 13	Nov 9	Soybean	33,264	150-12-3
	CASS (Irrigated)	May 24	Nov 1	Snap Bean	33,264	150-11-3
Zone 2	OTTAWA (Irrigated)	May 25	Oct 27	Soybean	33,264	300-9-3
	INGHAM	May 11	Oct 13	Wheat	33,264	160-12-3
	INGHAM CONV.	May 11	Oct 13	Wheat	33,264	160-12-3
	SAGINAW & CONV.	May 18	Nov 7	Soybean	33,264	220-14-4
Zone 3	HURON	May 19	Nov 8	Soybean	33,264	27-12-3 High N credits from 2020
	MONTCALM & CONV.	May 11	Nov 4	Soybean	33,264	160-8-2
	MASON (Irrigated)	May 26	Oct 26	Soybean	33,264	220-14-4
Zone 4	IOSCO	June 1	Nov 10	Fallow	33,264	161-12-3
	MISSAUKEE	June 1	Nov 15	Fallow	33,264	154-9-3
	PRESQUE ISLE	May 27	Nov 16	Alfalfa	33,264	24-10-3 plus manure

	COUNTY	SOIL TYPE	SOIL TEST ¹	FARM COOPERATOR	LOCATION
Zone 1	BRANCH	Sandy loam	pH 7, P 91 K 136	Huff Farms Kyle Huff	Coldwater
	LENAWEE	Sandy loam	pH 5.8, P 81 K 107	Raymond & Stutzman Farm Tim Stutzman	Seneca
	CASS	Sandy loam	pH 6.6, P 17 K 119	Brossman's Farm George Brossman	Vandalia
Zone 2	OTTAWA	Loamy sand	pH 6.7, P 44 K 114	Ottawa Station Farms Adam Geertman	West Olive
	INGHAM	Sandy loam	pH 6.1, P 58 K 115	Plant, Soil & Microbial Sciences Research Facility, MSU	East Lansing
	INGHAM CONV.	Sandy loam	pH 6.1, P 58 K 115	Plant, Soil & Microbial Sciences Research Facility, MSU	East Lansing
	SAGINAW & CONV.	Loam	pH 6.0, P 43 K 113	Fred Gross Farms Peggy Gross & Dick Birchmeier	New Lothrop
Zone 3	HURON	Sandy clay loam	pH 6.5, P 146 K 230	Wil-Le Farms Ron, Ed and Chris McCrea	Bad Axe
	MONTCALM	Sandy loam	pH 6.5, P 53 K 84	Karnatz Farms Scott Karnatz	Greenville
	MASON	Loamy Sand	pH 6.1, P 44 K 54	Robert Oshe Jacob Zwagerman	Scottville
Zone 4	IOSCO	Sandy loam	pH 6.5, P 38 K 86	Double B Dairy Jeremy, Tim and Roger Beebe	Hale
	MISSAUKEE	Sandy clay loam	pH 6.2, P 19 K 92	Lake City Research, MSU Ty Hughston	Lake City
	PRESQUE ISLE	Sandy loam	pH 7.2, P 59 K 88	Ponik Farms Paul Ponik and Jeremy Karsten	Posen

¹-P reported in m3-ppm

2021

SILAGE PERFORMANCE TRIALS

Introduction

The silage index (pg. 28) contains a list of all hybrids planted in the 2021 silage trials.

County results are reported in the following tables:

Tables 6E/6L Zone 1 - Branch, Lenawee, and Wood County, OH

Tables 7E/7L Zone 2/3 - Ottawa, Huron (Zone 3), and Ingham

Tables 8E/8L Zone 4 - Iosco, Missaukee, and Presque Isle

The map of Michigan (pg. 28) shows each zone and the locations where the trials were located.

Methods

Testing procedures (randomization, replication, planting rates, etc.) for silage evaluation are the same as those utilized for grain trials. For silage, agronomic information refer to Table C (pg. 29).

All silage maturity zones were divided into two maturity groups designated early and late based on the relative maturity (RM) submitted by the companies with results listed in separate tables. The Wood County, OH location is managed in cooperation with The Ohio State University. Planting and in-season management is conducted by The Ohio State University while Michigan State University harvests plots and performs quality and data analysis.

A New Holland T6.175 tractor powered a two-row Champion C1200 Kemper forage harvester, and a rear mounted Haldrup M-63 weigh system is used to harvest the two center rows of plots. Electronic scales mounted on the Haldrup M-63 weigh system measured plot and subsample weights. All field data was recorded on a Panasonic FZ-G1 Toughpad using Harvest Master™ software. Total plot weight was used to calculate green tons per acre (GT/A). Subsamples of fodder, including grain, were collected, weighed, and oven dried in a WRH586-500 Greives forced air dryer until weight loss was zero, then re-weighed to determine the percent dry matter (%DM). Dry tons per acre (DT/A) is calculated mathematically by multiplying GT/A by %DM. The samples were ground using a Christy mill fitted with a 1mm screen before conducting quality analysis using near-infrared spectroscopy (NIRS) to predict quality components.

Silage Analysis

Tables 6E, 6L, 7E, 7L, 8E, and 8L provide silage quality data as determined by near-infrared spectroscopy (NIRS) analysis on freshly dried & ground samples. Data is provided for individual locations as well as averaged over multiple locations within each zone. Near-infrared spectral analysis involves irradiating the sample with light in the near infrared spectrum (1,100 to 2,500 nm). The illuminated sample absorbs light proportional to specific chemical and physical properties. The reflected energy is measured and correlated statistically with the NIRS Consortiums calibration equation established for silage quality levels. Results of the six quality traits analyzed are presented in the quality tables.

The six silage quality traits:

1. **IVD=(in vitro) digestible dry matter-48hr.** IVD is a measure of forage digestibility. Higher IVD is desirable.

2. **ADF=acid detergent fiber.** ADF represents the less digestible portion of the corn forage, containing cellulose, lignin, and heat damaged protein. ADF is closely related to the digestibility of forages. Lower ADF implies the forage is more digestible. More mature plant material will contain higher ADF concentrations. A low concentration of ADF is desirable.

3. **NDF=neutral detergent fiber.** NDF is a measure of the fiber content of the corn forage. It is less digestible than non-fiber constituents of the forage. Forages with high NDF levels have lower energy. NDF is also a measure of potential forage intake. High NDF levels decrease the potential forage intake. Low NDF content is desirable.

4. **NDFD=neutral detergent fiber digestibility.** NDFD is the portion of neutral detergent fiber digested by animals at a specified level of feed intake. High NDFD is desirable.

5. **CP=crude protein.** Forages are generally supplemented with high protein concentrates such as soybean meal to increase the protein content of ruminant diets. Corn hybrids with high protein levels require less supplementation and therefore result in lower feed costs. High protein content is desirable.

6. **STRCH=starch.** Starch from the grain, along with the digestible component of the fiber, accounts for most of the energy in corn silage. High starch content is desirable.

Silage quality traits are reported on a dry matter basis (100 percent DM). Quality traits in these tables are intended for use in hybrid selection only. Analysis for the balancing of feed rations should be analyzed from hybrids grown on each individual farm.

Milk2006

The MILK2006 equation (University Wisconsin-Madison Dairy Science Department) was used to estimate MK/T (milk per ton) and MK/A (milk per acre). MILK2006 estimates the dry matter intake using the NDF and CWD (cell wall digestibility) parameters of the sample. The updated equation utilizes crude protein, fat, and sugar, as well as the organic acid fractions, along with their total-tract digestibility coefficients to estimate energy. Whole plant dry matter was calculated to 34% for all hybrids and digestibility coefficients used. Fat and sugars, as well as the organic acid fractions, were held constant. MILK2006 also assumes the weight of the cow is 1,350 lbs. and that it consumes a 30 percent neutral detergent fiber diet. Using National Research Council (NRC, 2001) energy requirements, the estimated intake of energy from corn silage is converted to milk per ton. Milk per acre is then calculated using the estimated values for milk per ton and dry matter yield per acre. For more information on the utility of MILK2006 please see:

www.uwex.edu/ces/crops/uwforage/Milk2006silage.html

SILAGE HYBRID INDEX

ZONE 1 - Tables 6E/6L

Branch
Lenawee
Wood (Ohio)
Trial Average

ZONE 2/3- Tables 7E/7L

Huron - Zone 3
Ingham
Ottawa
Trial Average

ZONE 4 - Tables 8E/8L

Iosco
Missaukee
Presque Isle
Trial Average

BRAND / HYBRID	RM TABLE	BRAND / HYBRID	RM TABLE	BRAND / HYBRID	RM TABLE
AG ARMOUR		LG Seeds		RENK Cont.	
AA10524	105 7L	LG42C37-3110	92 8E	RK710DGVT2P	107 7L
		LG45C21-5122	95 8E	RK700SSTX	108 7L
DAIRYLAND SEED		LG50C93-5222	100 7E,8L	RK882TRE	111 7L
HiDF-3044Q	90 8E	LG54C11-5222	104 7E	RK807SSTX	111 7L
DS-3162Q	91 7E,8E	LG54C76STXRIB	104 7E		
HiDF-3522Q	95 8E	LG57C33STXRIB	107 6E,7L	SEEDWAY	
HiDF-3197RA	97 7E,8E	LG58C77-5222	108 6E,7L	SW9504VT	96 6E
HiDF-3099RA	99 7E	LG59C66VT2RIB	109 6E	SW4000 GENSS	99 6E
HiDF-4073Q	100 6E,7E	LG60C12-5222	110 6E	SW6340 GENVT2P	107 6E
HiDF-3802Q	100 7E	LG62C35STXRIB	112 6L		
DS-4510Q	105 7L	NK Brand		SPECIALTY	
HiDF-4545Q	105 6E,7L	NK9991-5122	99 7E	37A901	107 6E
HiDF-4999Q	109 6E,7L	NK0314-5122	103 7E	40A148	110 6E
DS-5144Q	111 6L	NK0440-3122	104 7E	43A311	113 6L
HiDF-5202Q	112 6L	NK0748-5122	107 7L		
DYNAGRO		NK1082-5222A	110 6E	VIKING	
D40VC41	100 7E,8L	NK1026-5332	110 6E	O.69-01P	101 7E
D45TC55	105 7L	NK1239-5122	112 6L	O.51-04P	104 7E
D48SS50	108 7L	NK1349-5222	113 6L	O.48-08P	108 7L
D52SS82	112 6L,7L	RENK		WELLMAN	
GOLDEN HARVEST		RK621VT2P	102 7E	W2012DP	112 6L
G91V51-5222A	91 8E	RK642VT2P	103 7E		
G95D32-3220	95 8E				
G02K39-3120	102 7E				
G04S19-3122	104 7E,8L				
G09Y24-3220A	109 6E,7L				
G12S75-5122	112 6L,7L				
G13Z50-3220	113 6L,7L				
G14N11-5222	114 6L				
G16K01-3111	116 6L				
G18D87-3111	118 6L				
LEGACY SEEDS					
LC413-20	91 8E				
LC431-20 SSX	93 8E				
LC484-20	98 8L				
LC-4248	100 7E,8L				
LC503-21	100 7E				
LC-5217 VT2P	102 7E				
LC533-20	103 7E				
LC592-21	109 6E,7L				
LC623-21	112 6L				
LC634-20 SSX	113 6L				

2021 Silage Trial Locations

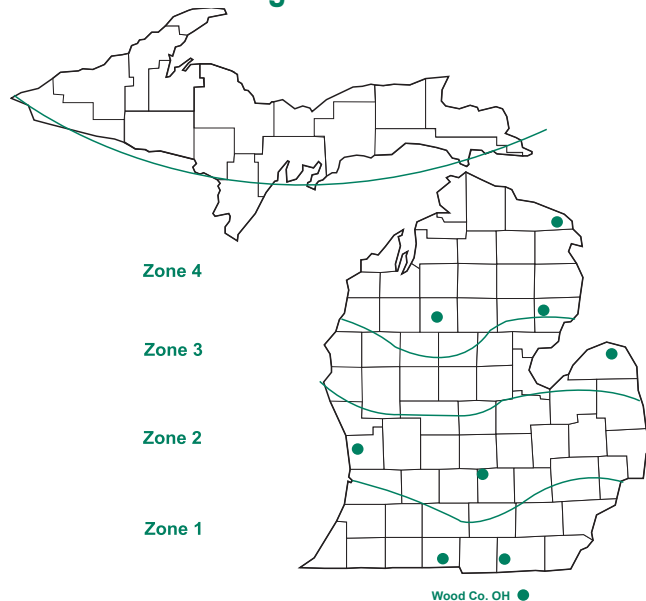


TABLE C.

AGRONOMIC TABLE FOR SILAGE TRIAL LOCATIONS

	COUNTY	PLANTING DATES	HARVEST DATES	PREVIOUS CROP	100 % STAND	FERTILIZER N - P - K
Zone 1	BRANCH (Irrigated)	May 20	Sept 9	Seed Corn	33,264	220-10-3
	LENAWEE	May 13	Sep 7	Soybean	33,264	150-12-3
	WOOD (OHIO)	May 8	Sep 2	Soybean	33,264	150-11-3
Zone 2/3	OTTAWA (Irrigated)	May 25	Sep 17	Soybean	33,264	300-9-3
	INGHAM	May 11	Sep 10	Wheat	33,264	160-12-3
	HURON	May 18	Sep 15	Soybean	33,264	27-12-3 High N credits from 2020
Zone 4	IOSCO	June 1	Sep 27	Fallow	33,264	161-12-3
	MISSAUKEE	June 1	Sep 28	Fallow	33,264	154-9-3
	PRESQUE ISLE	May 27	Sep 27	Alfalfa	33,264	24-10-3 plus manure

	COUNTY	SOIL TYPE	SOIL TEST ¹	FARM COOPERATOR	LOCATION
Zone 1	BRANCH	Sandy loam	pH 7, P 91 K 136	Huff Farms Kyle Huff	Coldwater
	LENAWEE	Sandy loam	pH 5.8, P 81 K 107	Raymond & Stutzman Farm Tim Stutzman	Seneca
	WOOD (OHIO)	Clay Loam	-	OARDC Matt Davis & Richard Minyo	Hoytville, Ohio
Zone 2/3	OTTAWA	Loamy sand	pH 6.7, P 44 K 114	Ottawa Station Farms Adam Geertman	West Olive
	INGHAM	Sandy loam	pH 6.1, P 58 K 115	Plant, Soil & Microbial Sciences Research Facility, MSU	East Lansing
	HURON	Sandy clay loam	pH 6.5, P 146 K 230	Wil-Le Farms Ron, Ed and Chris McCrea	Bad Axe
Zone 4	IOSCO	Sandy loam	pH 6.5, P 38 K 86	Double B Dairy Jeremy, Tim and Roger Beebe	Hale
	MISSAUKEE	Sandy clay loam	pH 6.2, P 19 K 92	Lake City Research, MSU Ty Hughston	Lake City
	PRESQUE ISLE	Sandy loam	pH 7.2, P 59 K 88	Ponik Farms Paul Ponik and Jeremy Karsten	Posen

¹-P and K reported in m3-ppm

2021			Lenawee - Early										Wood - Early																
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006	MKMT	MK/A	YIELD					% QUALITY					MILK 2006	MKMT	MK/A
				%DM	GT/A	DT/A	%STD	IVD	ADF	NDF	NDFD	CP	STR				%DM	GT/A	DT/A	%STD	IVD	ADF	NDF	NDFD	CP	STR			
DAIRYLAND SEED HDF-4073Q	100	LUM	1,2,3,4	41.2	18.4	7.6	99	86.8	17.9	34.8	62.0	6.3	42.5	3677	31216	41.9	26.1	11.0 *	101	86.6	17.3	31.5	57.7	6.4	45.4	3654	40339		
DAIRYLAND SEED HDF-4545Q	105	LUM	1,2,3,4	37.8	22.1	8.4	97	86.6	18.7	36.1	62.7	6.4	40.9	3652	30657	37.1	30.4	11.3 *	93	85.7	19.1	34.6	58.5	6.7	42.4	3385	40368		
DAIRYLAND SEED HDF-4990Q	109	LUM	1,2,3,4	40.0	22.9	9.1 *	96	87.8	16.9	32.6	62.4	6.2	44.3	3749	34116	39.6	29.5	11.7 **	98	85.8	19.0	33.9	58.0	6.6	42.7	3596	41982		
GOLDEN HARVEST G09Y24-3220A	109	C250	1,2,4,6,14	38.5	22.2	8.8 *	94	85.6	19.1	36.4	60.3	6.5	40.4	3590	31921	40.1	28.1	11.1 *	98	86.0	18.5	33.9	58.7	7.0	42.9	3609	39760		
LEGACY SEEDS LG555-215122	105	C250	1,2,3,4,6	42.8	19.1	8.4	95	86.2	18.3	35.1	60.6	7.1	39.6	3634	30773	45.1	23.3	10.5	98	86.6	17.5	31.8	57.7	6.7	45.8	3660	38564		
LEGACY SEEDS LG592-213330	109	C250	1,2,4,6	40.4	21.9	8.8 *	95	84.8	19.5	37.4	59.3	6.4	39.8	3539	31067	41.3	26.4	10.9 *	99	85.6	18.2	33.2	56.5	6.9	44.2	3388	39120		
LG SEEDS LG7C3357XBIB	107	P500	1,2,3,4	39.5	21.7	8.6	94	85.7	18.7	35.9	60.2	6.3	39.9	3605	30928	39.7	27.1	10.7 *	101	85.2	19.1	34.2	56.7	7.2	42.0	3558	38165		
LG SEEDS LG6807-5222	108	OSF	1,2,3,4,6	36.0	24.3	8.6	96	84.6	20.1	37.9	59.3	6.7	37.1	3523	30347	37.0	30.0	11.1 *	93	86.3	17.7	31.5	56.4	7.1	43.9	3641	40308		
LG SEEDS LG65068/72RIB	109	P500	1,2	41.9	21.3	8.9 *	98	85.2	19.2	36.7	59.7	6.3	40.4	3569	31765	42.9	24.6	10.5	98	83.6	17.8	31.0	53.4	6.5	44.8	3571	38064		
LG SEEDS LG6012-5222	110	P500	1,2,3,4,6	41.0	20.9	8.5	95	85.4	18.5	35.7	59.0	6.1	41.7	3589	30320	37.8	30.7	11.6 *	101	85.1	18.8	34.3	56.3	6.7	42.3	3549	41310		
NK Brand NK1082-2222A	110	C500	1,2,3,4,6,14	38.8	22.5	8.7	99	85.5	18.2	35.1	58.9	6.0	42.8	3602	31242	37.7	30.5	11.5 *	100	84.6	19.8	35.2	56.1	6.6	42.3	3515	40229		
NK Brand NK1026-5332	110	C500	1,2,3,4,6	41.3	20.5	8.5	96	85.1	18.7	36.4	59.1	6.6	40.6	3666	30184	39.1	27.6	10.7 *	99	85.8	18.1	32.7	56.6	7.3	43.6	3605	39144		
SEEDWAY SW950/WT	96	P500	1,2	52.7	16.8	8.8 *	97	87.2	16.3	31.5	59.2	6.4	46.3	3723	30191	44.4	20.0	9.9	98	79.0	25.2	43.2	56.6	7.1	29.9	3371	35944		
SEEDWAY SW4000 GENSS	99	P500	1,2,3,4	44.5	18.2	7.8	97	87.3	17.7	33.1	61.4	6.9	43.2	3712	29238	40.6	25.6	10.5	98	84.8	17.2	30.5	55.8	7.1	44.4	3630	36679		
SEEDWAY SW6340 GEN/T2P	107	P500	1,2	42.1	20.4	8.3	96	84.4	20.7	37.4	58.1	6.4	38.9	3514	29016	42.3	27.0	11.4 *	98	85.8	17.5	29.8	52.2	7.2	47.1	3626	41467		
SPECIALTY 374901	107	P500	1,2,3,4	37.6	23.3	9.8 **	95	86.0	18.7	36.5	61.7	6.2	40.0	3616	36580	39.3	28.2	11.1 *	97	85.0	19.3	34.2	55.9	6.9	41.3	3545	39284		
SPECIALTY 40A148	110	P500	1,2,3,4	36.7	22.2	8.4	99	86.3	18.2	34.8	60.4	6.2	42.0	3644	30557	38.4	28.4	10.9 *	97	84.4	20.2	35.4	56.1	6.5	41.7	3505	38250		
AVERAGE				40.7	21.1	8.6	96	85.9	18.5	35.5	60.2	6.4	41.2	3618	31183	40.2	27.3	11.0	98	85.0	18.8	33.6	56.1	6.8	42.8	3577	39366		
HIGHEST				52.7	24.3	9.8	99	87.8	20.7	37.9	62.7	7.1	46.3	3749	36580	45.1	30.7	11.7	101	86.6	25.2	43.2	58.7	7.3	47.1	3660	41982		
LOWEST				36.0	16.8	7.8	94	84.4	16.3	31.5	58.1	6.0	37.1	3514	29016	37.0	20.7	9.9	93	79.0	17.2	29.8	50.6	6.4	29.9	3371	35844		
CV (%)				9.0	8.5	9.7	4	1.5	10.6	9.0	2.3	5.8	8.7	3	9	6.3	5.4	7.7	3	3.2	17.4	15.6	3.2	4.7	15.1	4	10		
LSD (5%)				4.4	2.4	1.0	4	1.6	2.3	3.8	1.7	0.4	4.3	116	3277	3.0	1.8	1.0	4	3.2	3.9	6.2	2.1	0.4	7.7	169	4907		

2 Year Averages 2021 - 2020			Lenawee - Early										Wood - Early																
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006	MKMT	MK/A	YIELD					% QUALITY					MILK 2006	MKMT	MK/A
				%DM	GT/A	DT/A	%STD	IVD	ADF	NDF	NDFD	CP	STR				%DM	GT/A	DT/A	%STD	IVD	ADF	NDF	NDFD	CP	STR			
DAIRYLAND SEED HDF-4545Q	105	LUM	1,2,3,4	43.0	20.2	8.3 **		87.7	17.5	35.0	65.1	6.9	43.8	3715	30778	35.7	26.5	9.5 *	96	86.1	18.1	35.5	60.8	7.0	41.8	3616	34315		
DAIRYLAND SEED HDF-4990Q	109	LUM	1,2,3,4	42.5	19.1	8.0 *		87.7	16.3	32.9	62.6	7.1	45.4	3746	30710	36.4	26.5	9.7 **	97	86.5	17.8	34.3	60.7	7.3	41.3	3650	35385		
GOLDEN HARVEST G09Y24-3220A	109	C250	1,2,4,6,14	43.6	18.3	7.9 *		86.3	16.7	34.7	61.6	6.9	44.2	3644	28764	36.2	26.1	9.4 *	99	86.0	18.8	36.2	61.1	7.1	40.3	3604	33827		
LG SEEDS LG65068/72RIB	109	P500	1,2	45.0	17.6	7.8 *		85.4	19.8	38.5	61.9	6.9	39.8	3570	27849	39.2	23.6	9.3 *	98	84.2	18.3	34.9	57.0	6.8	41.3	3549	33191		
SEEDWAY SW4000 GENSS	99	P500	1,2,3,4	46.9	15.6	7.1		87.4	16.8	33.1	61.9	7.5	44.7	3725	26583	38.3	23.8	9.2 *	96	86.4	16.4	31.1	58.9	7.5	45.1	3690	33167		
SPECIALTY 40A148	110	P500	1,2,3,4	41.8	18.8	7.8		86.0	17.0	37.4	61.7	6.6	41.2	3617	27329	36.1	25.4	9.2 *	97	85.0	19.4	36.4	58.7	6.7	40.4	3545	32671		
AVERAGE				43.8	18.3	7.8		86.7	17.3	35.3	62.5	7.0	43.2	3669	28669	37.0	25.3	9.4	97	85.7	18.1	34.7	59.5	7.1	41.7	3609	33789		
HIGHEST				46.9	20.2	8.3		87.7	19.8	38.5	65.1	7.5	45.4	3746	30778	39.2	26.5	9.7	99	86.5	19.4	36.4	61.1	7.5	45.1	3690	35385		
LOWEST				41.8	15.6	7.1		85.4	16.3	32.9	61.6	6.6	39.8	3570	26583	35.7	23.6	9.2	96	84.2	16.4	31.1	57.0	6.7	40.3	3545	32671		
CV (%)				8.4	8.5	8.6		1.9	9.2	7.8	2.7	6.8	7.6	3	7	5.4	4.7	6.7	3	2.4	13.3	11.9	3.4	4.6	11.8	3	9		
LSD (5%)				3.0	1.4	0.6		1.3	1.4	2.3	1.4	0.4	2.1	83	1842	1.7	1.0	0.6	2	1.7	2.0	3.4	0.3	4.1	95	2634			

** Highest Yielding Hybrid
* Not Significantly Different from Highest Yielding Hybrid

BRANCH, LENAWEE & WOOD (OHIO) COUNTY SILAGE TRIALS - LATE (111 Day and Later)

		Late - TRIAL AVERAGE												Branch - Late																							
2021		YIELD						% QUALITY						MILK 2006						YIELD						% QUALITY						MILK 2006					
BRAND / HYBRID	RM	TRT	TRAIT	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT	STR	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT	STR	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT				
DAIRYLAND SEED DS-5144Q	111	LUM	1,2,3,4	38.0	27.9	10.6 *	97	85.7	19.4	34.6	59.7	7.0	42.1	3616	37948	40.2	85.1	21.6	36.5	59.2	7.7	40.2	3558	38143	40.2	85.1	21.6	36.5	59.2	7.7	40.2	3558	38143				
DAIRYLAND SEED HDF-5202Q	112	LUM	1,2,3,4	34.2	29.7	10.7 *	97	85.2	20.2	36.7	59.8	7.0	39.5	3553	35706	39.9	85.2	21.1	36.7	59.8	7.2	39.9	3545	37021	39.9	85.2	21.1	36.7	59.8	7.2	39.9	3545	37021				
DYNAGRO DS25S82	112	P500	1,2,3,4	35.6	28.3	10.1 *	97	85.3	20.1	35.4	57.7	6.8	41.9	3536	36638	44.0	85.4	19.8	33.7	56.8	7.0	44.0	3583	40932	44.0	85.4	19.8	33.7	56.8	7.0	44.0	3583	40932				
GOLDEN HARVEST G12575-5122	112	C250	1,2,3,4	36.0	28.6	10.3 *	99	84.5	20.4	36.8	57.9	6.7	40.6	3512	36444	36.2	84.5	20.6	36.4	57.3	7.0	40.7	3505	37494	36.2	84.5	20.6	36.4	57.3	7.0	40.7	3505	37494				
GOLDEN HARVEST G13250-3220	113	C250	1,2,4,6	43.7	25.9	11.4 **	99	85.1	20.5	38.8	59.5	6.6	41.2	3547	40430	44.5	83.8	23.4	40.3	59.7	6.9	38.0	3432	38882	44.5	83.8	23.4	40.3	59.7	6.9	38.0	3432	38882				
GOLDEN HARVEST G14N11-5222	114	C250	1,2,3,4,6,12	36.4	26.3	9.6 *	92	84.9	20.3	35.3	58.0	6.7	41.6	3549	34617	39.6	84.7	21.6	37.4	59.0	7.1	40.9	3509	35483	39.6	84.7	21.6	37.4	59.0	7.1	40.9	3509	35483				
GOLDEN HARVEST G16K01-3111	116	C250	1,2,3,4,6	34.7	30.1	10.3 *	97	83.8	20.9	37.4	57.4	6.3	39.3	3477	36327	34.8	82.8	22.4	39.1	56.0	6.5	38.1	3391	33361	34.8	82.8	22.4	39.1	56.0	6.5	38.1	3391	33361				
GOLDEN HARVEST G18D87-3111	118	C250	1,2,3,4,6	36.4	30.0	11.0 *	97	84.2	20.8	38.1	58.4	6.9	37.7	3483	38185	35.3	84.5	20.4	36.5	57.6	7.3	39.7	3506	36864	35.3	84.5	20.4	36.5	57.6	7.3	39.7	3506	36864				
LEGACY SEEDS LG828-21 5222	112	C250	1,2,3,4,6	35.2	27.9	9.9 *	97	83.4	21.6	39.0	57.5	6.4	38.1	3452	34057	37.8	82.9	22.2	39.5	56.6	6.7	37.3	3389	38551	37.8	82.9	22.2	39.5	56.6	6.7	37.3	3389	38551				
LEGACY SEEDS LG634-20 S5X	113	A500	1,2,3,6	41.3	27.0	11.1 *	95	85.1	20.0	36.3	59.0	6.9	40.7	3552	37932	38.9	85.8	19.4	34.5	58.7	7.1	43.1	3596	37988	38.9	85.8	19.4	34.5	58.7	7.1	43.1	3596	37988				
LG SEEDS LG82C857XR1B	112	P500	1,2,3,4	36.0	26.3	9.3 *	98	84.3	21.0	38.4	56.9	6.9	40.2	3501	32816	40.0	83.6	22.5	37.5	56.4	7.2	39.5	3447	35034	40.0	83.6	22.5	37.5	56.4	7.2	39.5	3447	35034				
NK Brand NK1238-5122	112	C500	1,2,3,4	32.2	28.1	9.1	98	84.7	20.5	37.4	59.0	6.6	39.7	3521	31734	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
NK Brand NK1348-5222	113	C500	1,2,3,4,6	35.4	26.6	9.5 *	97	84.0	20.3	38.4	56.3	6.8	40.8	3486	32816	38.1	82.1	23.0	39.8	55.3	6.9	37.3	3345	32132	38.1	82.1	23.0	39.8	55.3	6.9	37.3	3345	32132				
SPECIALTY 43A311	113	P500	1,2	33.3	29.0	9.8 *	98	84.2	20.9	36.9	57.1	6.8	40.0	3493	34191	35.2	82.9	22.8	38.6	55.8	7.1	38.4	3398	36861	35.2	82.9	22.8	38.6	55.8	7.1	38.4	3398	36861				
WELLMAN W2012DP	112	ENC	1,2	38.2	26.2	10.1 *	96	84.3	20.1	36.0	57.8	6.7	41.2	3522	37037	37.0	82.5	24.0	41.3	57.7	6.8	35.9	3351	32467	37.0	82.5	24.0	41.3	57.7	6.8	35.9	3351	32467				
AVERAGE				36.4	27.9	10.1 #	97	84.6	20.5	36.6	58.1	6.7	40.3	3520	35752	38.1	84.0	21.8	37.7	57.5	7.0	39.5	3467	36515	38.1	84.0	21.8	37.7	57.5	7.0	39.5	3467	36515				
HIGHEST				43.7	30.1	11.4 #	99	85.7	21.6	38.0	59.8	7.0	42.1	3616	40430	44.5	85.8	24.0	41.3	59.8	7.7	44.0	3596	40932	44.5	85.8	24.0	41.3	59.8	7.7	44.0	3596	40932				
LOWEST				32.2	25.9	9.1 #	92	83.4	19.4	34.6	56.3	6.3	37.7	3452	31734	34.8	82.1	19.4	33.7	55.3	6.5	35.9	3345	32132	34.8	82.1	19.4	33.7	55.3	6.5	35.9	3345	32132				
CV (%)				13.3	7.7	15.2	4	2.2	10.7	9.8	2.2	5.9	10.0	3	16	10.7	7.9	11.0	4	2.1	11.9	10.2	2.0	4.1	11.0	4	2.1	11.9	10.2	2.0	4.1	11.0	4	12			
LSD (5%)				7.0	2.9	2.1	6	2.7	3.1	5.2	1.9	0.5	5.7	169	7961	6.0	2.6	3.9	5.8	1.8	0.4	6.6	199	6262	6.0	2.6	3.9	5.8	1.8	0.4	6.6	199	6262				

		Late - TRIAL AVERAGE												Branch - Late																							
2 Year Averages 2021 - 2020		YIELD						% QUALITY						MILK 2006						YIELD						% QUALITY						MILK 2006					
BRAND / HYBRID	RM	TRAIT	TRAIT	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT	STR	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT	STR	IVD	ADF	NDF	NDFFD	CP	STR	MKTA	MKMT				
DAIRYLAND SEED HDF-5202Q	112	LUM	LUM	35.4	27.0	9.3	98	85.8	19.1	36.9	61.6	7.4	39.7	3596	33245	33.5	85.3	19.8	37.6	60.8	7.5	39.5	3549	37279	33.5	85.3	19.8	37.6	60.8	7.5	39.5	3549	37279				
GOLDEN HARVEST G14N11-5222	114	C250	C250	38.2	23.3	8.7	95	85.5	19.3	36.4	60.8	6.9	41.6	3683	31345	37.6	85.2	19.9	37.6	60.7	6.9	41.3	3547	34016	37.6	85.2	19.9	37.6	60.7	6.9	41.3	3547	34016				
LEGACY SEEDS LG634-20 S5X	113	A500	A500	40.9	24.1	9.7 **	97	85.2	19.2	37.2	60.4	7.0	40.9	3564	33382	38.3	84.8	19.1	37.2	59.2	7.0	41.7	3529	34865	38.3	84.8	19.1	37.2	59.2	7.0	41.7	3529	34865				
NK Brand NK1238-5122	112	C500	C500	37.1	23.1	8.1	98	84.9	19.5	38.5	61.3	7.0	39.2	3539	29808	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
AVERAGE				37.9	24.4	8.9	97	85.4	19.2	37.3	61.0	7.0	40.3	3571	31940	36.5	85.1	19.6	37.4	60.2	7.1	40.8	3542	35387	36.5	85.1	19.6	37.4	60.2	7.1	40.8	3542	35387				
HIGHEST				40.9	27.0	9.7	98	85.8	19.5	38.5	61.6	7.4	41.6	3596	33382	38.3	85.3	19.9	37.6	60.8	7.5	41.7	3549	37279	38.3	85.3	19.9	37.6	60.8	7.5	41.7	3549	37279				
LOWEST				35.4	23.1	8.1	95	84.9	19.1	36.4	60.4	6.9	39.2	3539	29808	33.5	84.8	19.1	37.2	59.2	6.9	39.5	3529	34016	33.5	84.8	19.1	37.2	59.2	6.9	39.5	3529	34016				
CV (%)																																					
LSD (5%)																																					

** Highest Yielding Hybrid
 * Not Significantly Different from Highest Yielding Hybrid
 - Data Lost Due to Severe Lodging

2021										Wood - Late															
Lenahee - Late					Wood - Late					Lenahee - Late					Wood - Late										
BRAND / HYBRID	RM	TRT	TRAIT	MILK 2006	YIELD			%QUALITY			MILK 2006	YIELD			%QUALITY			MILK 2006							
					%DM	GTIA	DTIA	%STD	IND	ADF		NDF	NDPD	CP	STR	MK/A	%DM		GTIA	DTIA	%STD	IND	ADF	NDF	NDPD
DAIRYLAND SEED DS-5144Q	111	LUM	1,2,3,4	37.2	26.0	8.7*	97	86.8	18.4	34.4	6.6	6.5	42.5	37.6	30.4	11.4	99	85.2	18.4	32.9	58.2	6.6	44	36.34	40101
DAIRYLAND SEED HDFF-5202Q	112	LUM	1,2,3,4	35.7	26.8	9.5*	97	84.9	20.8	39.3	6.1	6.4	36.8	31.3	32.8	10.2	99	85.7	18.9	34.2	58.0	7.4	42	35.88	36651
DYNAGRO DS25882	112	P500	1,2,3,4	32.6	27.5	9.0*	99	86.0	19.0	34.8	5.8	6.7	41.3	33.6	29.1	9.8	99	84.6	21.5	37.6	56.4	6.7	41	33.99	36109
GOLDEN HARVEST G1Z575-5122	112	C250	1,2,3,4	32.7	27.8	9.1*	99	84.2	20.9	38.8	5.9	6.3	38.6	39.3	28.5	11.0	100	84.9	19.7	35.1	57.2	6.8	42	35.41	39066
GOLDEN HARVEST G1Z550-3220	113	C250	1,2,4,6	35.1	24.8	8.7*	99	85.5	19.9	36.6	6.0	6.3	41.0	51.7	27.3	14.2**	101	86.1	18.3	33.4	58.5	6.7	45	36.25	51155
GOLDEN HARVEST G14N11-5222	114	C250	1,2,3,4,6,14	36.2	23.7	8.7**	88	85.2	19.7	36.1	5.9	6.4	41.1	35.69	29.6	9.9	96	84.9	19.5	32.4	56.2	6.8	43	35.68	37496
GOLDEN HARVEST G16K01-3111	116	C250	1,2,3,4,6	37.8	28.7	10.8**	98	84.6	20.6	38.1	5.9	6.1	38.1	31.3	33.3	10.4	100	84.1	19.7	35.1	56.7	6.5	42	35.18	36873
GOLDEN HARVEST G18D87-3111	118	C250	1,2,3,4,6	31.6	28.8	9.1*	97	83.4	21.9	41.0	5.9	6.2	34.6	42.4	31.3	13.2*	98	84.7	20.0	36.7	58.3	7.2	39	35.12	46496
LEGACY SEEDS LC625-21 5222	112	C250	1,2,3,4,6	33.0	24.8	8.3	94	83.3	22.0	40.6	5.8	6.2	36.6	34.9	28.7	10.0	100	84.0	20.5	37.0	56.8	6.5	40	34.74	34906
LEGACY SEEDS LC634-20 SSX	113	A500	1,2,3,6	38.3	25.8	9.6*	93	86.0	19.2	35.4	6.0	6.7	41.2	46.7	28.1	13.6*	96	83.5	21.4	39.0	57.3	6.8	38	34.37	40784
LG SEEDS L G62C35TXRIB	112	P500	1,2,3,4	34.9	24.6	8.6	97	85.6	19.4	35.0	5.9	6.7	41.3	36.02	28.9	9.3	101	83.7	21.2	36.6	55.3	6.7	40	34.55	32548
NK Brand NK1238-5122	112	C500	1,2,3,4	32.1	27.5	8.8*	95	84.5	21.4	38.9	6.0	6.6	37.4	35.05	28.7	9.3	101	85.0	19.7	35.8	57.9	6.7	42	35.37	32970
NK Brand NK1346-5222	113	C500	1,2,3,4,6	33.7	25.2	8.7*	95	85.4	19.1	35.4	5.8	6.6	41.9	35.66	29.4	10.1	98	84.6	18.9	34.1	54.8	6.8	43	35.28	35472
SPECIALTY 49A311	113	P500	1,2	29.9	25.6	7.8	96	84.5	21.3	39.2	6.0	6.4	37.5	35.07	30.4	10.6	99	85.2	18.6	32.8	55.0	6.8	44	35.75	38025
WELLMAN W2012DP	112	ENC	1,2	34.8	24.6	8.5	97	86.0	18.9	35.0	5.8	6.5	42.1	36.21	27.9	12.0*	95	84.6	17.6	31.6	56.0	6.8	46	35.92	48278
AVERAGE				34.4	26.1	9.0	96	85.1	20.1	37.2	5.9	6.4	39.5	35.57	29.6	11.0	99	84.7	19.6	35.0	56.9	6.8	42	35.32	39129
HIGHEST				38.3	28.8	10.8	99	86.8	22.0	41.0	6.1	6.7	42.5	36.76	33.3	14.2	101	86.1	21.5	39.0	58.5	7.4	46	36.34	51155
LOWEST				29.9	23.7	7.8	88	83.3	18.4	34.4	5.8	6.1	34.6	34.31	27.3	9.3	95	83.5	17.6	31.6	54.8	6.5	38	33.99	32548
CV (%)				13.3	7.7	19.2	4	2.2	10.7	9.8	2.2	5.9	10.0	3	16	18.3	5.1	2.0	8.7	7.4	3.0	5.0	8	3	20
LSD (5%)				7.0	2.9	2.1	6	2.7	3.1	5.2	1.9	0.5	5.7	1.69	7.961	8.2	1.8	2.0	2.0	3.1	2.0	0.4	4	116	9198

2 Year Averages 2021 - 2020										Wood - Late															
Lenahee - Late					Wood - Late					Lenahee - Late					Wood - Late										
BRAND / HYBRID	RM	TRAIT	MILK 2006	YIELD			%QUALITY			MILK 2006	YIELD			%QUALITY			MILK 2006								
				%DM	GTIA	DTIA	%STD	IND	ADF		NDF	NDPD	CP	STR	MK/A	%DM		GTIA	DTIA	%STD	IND	ADF	NDF	NDPD	CP
DAIRYLAND SEED HDFF-5202Q	112	LUM	LUM	41.8	21.6	8.6**		86.3	18.6	37.0	6.3	7.1	40.8	36.33	31.2	8.7	98	85.9	18.9	36.2	60.8	7.5	38.8	36.06	31334
GOLDEN HARVEST G14N11-5222	114	C250	C250	43.6	18.5	7.7		85.7	19.0	36.6	6.2	6.8	42.6	36.04	27.8	8.7	95	85.5	19.0	35.1	59.7	7.0	40.8	35.98	32177
LEGACY SEEDS LC634-20 SSX	113	A500	A500	43.5	20.7	8.4*		86.4	18.4	36.0	6.2	7.2	42.4	36.45	30.5	10.8**	97	84.6	20.0	38.6	60.0	6.8	38.6	35.19	34708
NK Brand NK1238-5122	112	C500	C500	41.1	20.7	7.9*		84.8	19.3	38.7	6.1	7.0	40.0	35.36	29.1	8.4	98	85.0	19.6	38.3	60.8	6.9	38.4	35.43	30503
AVERAGE				42.5	20.4	8.1		85.8	18.8	37.1	6.2	7.0	41.5	36.04	29.6	9.1	97	85.2	19.3	37.1	60.3	7.1	39.1	35.66	32181
HIGHEST				43.6	21.6	8.6		86.4	19.3	38.7	6.3	7.2	42.6	36.45	31.2	10.8	98	85.9	20.0	38.6	60.8	7.5	40.8	36.06	34708
LOWEST				41.1	18.5	7.7		84.8	18.4	36.0	6.1	6.8	40.0	35.36	27.8	8.4	95	84.6	18.9	35.1	59.7	6.8	38.4	35.19	30503
CV (%)				10.3	6.9	11.7		2.0	9.9	8.7	2.3	5.5	8.8	3	12	13.7	4.4	1.9	7.7	7.2	3.1	5.4	6.8	3	15
LSD (5%)				3.2	1.4	0.8		1.4	1.6	2.7	1.1	0.3	3.0	0.92	3.031	4.2	1.0	1.3	1.2	2.1	1.5	0.3	2.3	79	4636

** Highest Yielding Hybrid
* Not Significantly Different from Highest Yielding Hybrid
- Data Lost Due to Severe Lodging

TABLE 7E.

HURON, INGHAM & OTTAWA COUNTY SILAGE TRIALS - EARLY (104 Day and Earlier)

ZONE 2 - 3

2021		Early - TRIAL/AVERAGE										Ottawa - Early																	
BRAND /HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006					% QUALITY					MILK 2006					
				%DM	GT/A	DT/A	%STD	IND	ADF	NDF	NDFD	CP	STR	MK/A	MKT	%DM	GT/A	DT/A	%STD	IND	ADF	NDF	NDFD	CP	STR	MK/A	MKT		
DARIYLAND SEED DS3162Q	91	LUM	12,3,4	47.6	17.6	8.2	98	86.9	16.9	31.9	53.1	7.0	45.9	36.1	2906	36.1	2906	54.3	12.9	7.3	96	88.7	14.6	29.1	61.1	8.0	48.3	37.4	2767
DARIYLAND SEED HDF-3197RA	97	LUM	12,3,4	47.0	18.9	8.6	98	85.9	18.7	34.9	53.7	6.6	42.0	36.0	3102	36.0	3102	53.6	14.7	7.9	91	88.0	15.5	30.7	60.8	7.8	48.2	37.6	2953
DARIYLAND SEED HDF-3099RA	99	LUM	12,3,4	45.6	20.6	9.0	97	84.8	19.4	35.6	57.6	6.6	42.0	35.8	3163	35.8	3163	55.8	15.7	8.8	**	87.1	17.2	33.4	61.3	7.4	45.6	36.2	33048
DARIYLAND SEED HDF-4073Q	100	LUM	12,3,4	43.0	22.2	9.3	98	87.6	16.8	31.8	61.3	6.7	45.6	37.2	34342	37.2	34342	45.6	17.9	8.1	**	88.9	16.0	30.0	62.8	7.6	48.9	38.1	30959
DARIYLAND SEED HDF-3892Q	102	LUM	12,3,4	37.3	23.3	8.4	96	86.2	19.1	35.3	61.1	6.8	40.9	36.2	30555	36.2	30555	42.7	18.7	8.0	**	86.7	18.9	35.9	62.9	7.6	42.0	36.0	29177
DYNAMO DAVIC4	100	P50	1,2	44.3	22.4	9.6	**	86.2	18.0	33.9	59.2	6.0	44.4	36.0	34639	36.0	34639	50.4	17.0	8.6	**	86.4	18.0	34.1	60.1	6.3	45.8	35.9	31481
GOLDEN HARVEST G6X39-3120	102	C250	1,2,4	43.1	21.5	9.1	*	86.5	17.7	33.9	60.3	6.6	43.5	36.46	32033	36.46	32033	47.4	16.8	8.0	**	87.5	16.3	32.9	62.1	7.1	45.8	37.2	29661
GOLDEN HARVEST G6X39-3122	104	C250	1,2,3,4	42.3	21.4	8.9	98	86.4	18.4	34.0	61.0	6.6	42.5	36.28	32038	36.28	32038	47.3	18.2	8.6	**	88.1	16.2	31.5	62.1	7.5	47.7	37.0	32243
LEGACY SEEDS LC-4248 V7P	100	P50	1,2	46.5	19.5	8.8	98	85.9	18.0	34.0	58.7	6.3	43.7	36.3	31627	36.3	31627	52.4	15.5	8.1	**	86.9	16.8	32.9	60.1	6.7	46.2	36.95	29846
LEGACY SEEDS LC303-21522	100	C250	1,2,3,4,6	46.2	19.1	8.5	98	85.3	18.4	35.6	58.8	6.9	42.0	36.73	30208	36.73	30208	51.0	14.5	7.3	97	86.1	17.6	34.5	58.7	7.7	44.3	36.35	28670
LEGACY SEEDS LC-5217 V7P	103	P250	1,2	44.4	22.1	9.4	*	85.8	18.2	34.1	58.6	6.3	43.7	36.10	33725	36.10	33725	51.6	15.9	8.2	*	86.6	17.4	33.1	59.5	6.9	46.4	36.75	30071
LEGACY SEEDS LC33-20-522	103	C250	1,2,3,4,6	44.3	20.7	8.8	96	84.1	19.7	37.0	57.1	7.3	39.5	34.86	30583	34.86	30583	50.6	14.9	7.5	95	85.9	17.7	34.8	59.5	8.2	42.9	36.19	27276
LG SEEDS LG30303-522	100	OSF	1,2,3,4,6	46.8	19.5	9.0	*	85.5	18.0	34.9	58.4	7.0	42.5	36.88	32248	36.88	32248	50.3	14.6	7.7	*	86.2	17.4	33.8	58.1	7.9	44.5	36.42	28061
LG SEEDS LG-611-522	104	OSF	1,2,3,4,6	46.4	20.1	9.0	*	84.6	19.1	36.1	57.3	6.9	41.1	36.24	31642	36.24	31642	52.3	14.8	7.8	*	85.5	18.4	36.1	59.7	7.9	42.2	35.84	27822
LG SEEDS LG-642/RS7R1B	104	P50	1,2,3,4	39.6	22.6	8.8	96	84.6	19.4	36.1	57.3	6.2	39.5	35.27	31723	35.27	31723	44.4	19.5	8.7	*	85.3	18.1	34.3	57.0	6.8	43.3	36.68	31019
NK Brand NK909-5122	99	C250	1,2,3,4	45.9	20.0	8.8	99	87.0	16.8	32.1	59.7	6.8	45.5	36.92	32528	36.92	32528	53.7	14.8	7.9	*	87.6	16.4	31.9	61.3	7.6	46.8	37.17	29430
NK Brand NK0314-5122	103	C250	1,2,3,4	45.0	19.9	8.7	99	86.4	16.7	32.2	57.8	7.3	45.2	36.56	31694	36.56	31694	49.9	14.6	7.2	98	87.2	15.9	31.7	59.4	8.2	46.5	37.10	26751
NK Brand NK044-3122	104	C250	1,2,3,4	41.9	21.1	8.7	96	86.2	18.2	34.6	60.2	6.9	42.6	36.26	31281	36.26	31281	43.3	18.8	8.1	*	87.0	17.2	33.4	60.9	7.5	45.0	36.92	28912
RENK RK62/V7P	103	ACC250	1,2	41.9	21.4	8.8	96	85.8	18.3	34.9	59.5	6.5	42.3	36.10	31585	36.10	31585	43.5	16.7	7.4	95	86.8	16.8	33.1	60.1	7.0	44.8	36.86	27195
RENK RK62/V7P	103	ACC250	1,2	43.6	22.2	9.3	*	85.2	18.9	35.4	58.5	6.2	42.0	36.71	32068	36.71	32068	50.9	16.9	8.5	*	87.7	15.8	30.9	60.0	6.8	48.8	37.55	32005
Viking O-69-41P	101	C250	Comv.	41.4	20.9	8.3	87	85.7	19.0	35.9	60.3	7.1	40.3	36.84	29757	36.84	29757	47.3	17.3	8.0	*	85.8	19.0	36.5	61.3	7.7	41.0	36.04	28982
Viking O-51-41P	104	C250	Comv.	41.7	21.3	8.6	95	85.6	18.3	34.8	58.6	6.4	42.1	36.95	30979	36.95	30979	45.8	18.0	8.5	*	86.7	17.3	34.0	60.7	6.9	45.1	36.73	31091
AVERAGE				43.9	20.8	8.8	97	85.8	18.3	34.5	59.1	6.7	42.7	36.08	31827	36.08	31827	49.254	16.29	7.9986	96	86.932	16.599	33.099	60.51	7.4136	45.495	3687.9	29531
HIGH-EST				47.6	23.3	9.6	99	87.6	19.7	37.0	61.3	7.3	45.9	37.27	34639	37.27	34639	55.81	19.53	8.83	100	88.85	19.03	36.48	62.9	8.23	49.28	3811.1	33048
LOW-EST				37.3	17.6	8.2	87	84.1	16.7	31.8	57.1	6.0	39.5	34.66	29757	34.66	29757	42.68	12.85	7.23	91	85.25	14.63	29.08	56.98	6.28	40.98	3683.6	26470
CV (%)				9.0	9.5	10.3	4	1.9	12.6	10.8	2.7	7.0	9.5	3	11	3	11	10.26	12.03	11.32	5	1.7	13.61	11.08	2.66	4.3	9.29	2.788	11.916
LSD (%)				2.7	1.3	0.6	3	1.1	1.6	2.5	1.1	0.3	2.8	73	2945	73	2945	5.97	2.31	1.07	5	1.74	2.72	4.33	1.9	0.38	4.99	12.182	4158.2

** Highest Yielding Hybrid
* Not Significantly Different from Highest Yielding Hybrid

2021												Ingham - Early															
Huron - Early						Ingham - Early						MILK 2006															
BRAND/HYBRID	RM	IRT	TRAIT	YIELD			% QUALITY			IVD	ADF	NDF	CP	STR	MILK	MK/A	MILK	MK/A	MILK	MK/A							
				%DM	GTIA	DTIA	%STD	%ADF	%NDF												%CP	%M	%A	%M	%A		
DARLAND SEED DS-3162Q	91	LUM	12,34	382	24.4	9.7	97	84.0	20.0	36.3	55.9	6.7	41.8	3475	33228	49.4	15.5	7.6	100	87.9	16.2	30.4	60.3	6.4	46.6	3735	28402
DARLAND SEED HIF-3197FA	97	LUM	12,34	406	24.2	9.8	100	83.9	21.4	38.4	53.0	6.1	39.6	3453	33025	46.9	17.9	8.2	103	85.8	19.4	35.6	60.3	6.0	40.3	3750	29867
DARLAND SEED HIF-3099FA	99	LUM	12,34	376	28.3	10.6	98	81.8	22.2	38.9	53.1	6.2	38.9	3326	33408	43.4	17.8	7.7	98	85.4	18.8	34.7	58.3	6.2	41.6	3590	27684
DARLAND SEED HIF-4073Q	100	LUM	12,34	370	30.6	11.3	98	85.6	19.1	35.1	59.0	6.5	42.3	3578	40411	46.3	18.2	8.4	97	88.5	16.4	30.3	62.0	6.2	45.6	3793	31666
DARLAND SEED HIF-3802Q	102	LUM	12,34	295	31.3	9.4	94	84.1	21.1	38.3	53.4	6.6	37.5	3464	33838	39.7	19.9	7.9	97	87.9	17.3	31.9	61.9	6.4	43.1	3758	29661
DVMGRODAVCAH	100	P500	1.2	366	30.1	11.0	98	84.7	19.8	36.6	55.3	5.9	41.4	3517	38884	45.7	20.2	9.1	99	87.5	16.4	30.9	59.2	5.7	45.9	3744	33153
GOLDEN HARVEST G0X38-3120	102	C250	1.2	367	28.7	11.1	98	83.1	21.9	40.1	57.6	6.3	37.0	3390	37608	43.4	18.9	8.2	98	88.9	14.8	28.8	61.4	6.4	47.7	3820	31230
GOLDEN HARVEST G0M38-3122	104	C250	1.2,34	363	28.5	9.8	96	83.1	22.4	40.7	58.5	6.0	36.1	3387	33502	43.5	19.5	8.5	99	87.9	16.7	32.1	62.5	6.3	43.7	3726	31572
LEGACY SEEDS LC-4248 V17P	100	P500	1.2	397	26.7	10.6	99	83.7	20.9	38.0	56.9	6.0	39.9	3444	36425	47.3	16.3	7.7	97	87.3	16.3	31.1	58.1	6.3	45.0	3750	28909
LEGACY SEEDS LC-80321-822Z	100	C250	1.2,34,46	391	25.7	10.0	97	83.8	20.1	37.8	57.0	6.6	39.9	3448	34339	48.6	17.1	8.2	98	86.1	17.6	34.6	58.8	6.5	42.0	3635	29791
LEGACY SEEDS LC-5217 V17P	103	P250	1.2	356	30.3	10.8	96	83.3	20.8	37.8	55.8	6.2	40.0	3422	38895	46.1	20.0	9.2	101	87.5	16.4	31.5	60.4	5.9	44.7	3733	34209
LEGACY SEEDS LC-8320-822Z	103	C250	1.2,34,46	364	29.0	10.5	98	81.5	22.6	40.9	54.8	7.0	35.4	3282	34765	46.1	18.3	8.4	94	84.7	18.8	35.4	57.0	6.5	40.3	3549	29710
LG SEEDS LG60C8-822Z	100	DSF	1.2,34,46	395	25.6	10.1	98	84.5	18.9	35.4	56.1	7.0	42.1	3308	35505	50.5	18.3	9.2	97	85.9	17.9	35.4	60.0	6.3	40.8	3615	33189
LG SEEDS LG4C11-822Z	104	DSF	1.2,34,46	378	26.2	9.9	94	81.3	22.8	41.5	54.8	6.2	35.5	3278	32729	49.1	19.3	9.4	103	86.9	16.1	30.7	57.4	6.7	45.7	3710	34926
LG SEEDS LG4C7R81R18B	104	P500	1.2,34	342	28.5	9.8	96	82.4	21.7	39.8	55.8	6.0	35.1	3355	35305	40.1	19.9	7.9	98	86.1	18.5	34.2	59.0	5.8	40.0	3536	28844
NK Brand NK9891-512Z	99	C250	1.2,34	384	26.4	10.1	98	85.6	17.9	34.0	57.7	6.3	44.4	3590	36188	45.5	18.9	8.5	101	87.9	16.2	30.5	60.3	6.3	45.5	3770	31983
NK Brand NK0314-512Z	103	C250	1.2,34	383	26.0	10.0	98	84.6	18.5	34.7	55.3	6.8	43.4	3519	35217	46.8	19.0	8.9	101	87.4	15.7	30.4	58.6	6.9	45.8	3741	33085
NK Brand NK0440-312Z	104	C250	1.2,34	367	26.7	9.8	96	83.8	20.8	39.3	57.6	6.5	38.7	3445	33823	45.9	17.8	8.1	96	87.8	16.6	32.0	62.0	6.6	44.2	3739	30110
REBK RK62 V17P	103	ACC250	1.2	367	28.7	10.5	97	83.3	21.6	39.4	57.5	6.5	37.4	3406	35882	45.5	18.8	8.5	96	87.5	16.6	32.1	61.0	5.9	44.7	3738	31758
REBK RK62 V17P	103	ACC250	1.2	351	30.5	10.7	95	81.6	23.3	41.8	56.0	6.1	34.9	3294	35182	44.8	19.2	8.6	96	86.4	17.6	33.7	59.6	5.7	42.3	3663	31417
Viking O.69-01P	101	C250	Conv.	337	28.4	9.5	91	84.4	20.0	37.1	56.0	6.9	38.5	3490	33252	43.1	17.2	7.4	79	86.9	17.9	34.1	61.6	6.6	41.5	3658	27857
Viking O.51-04P	104	C250	Conv.	328	28.1	9.2	91	82.9	21.2	38.5	55.3	6.1	37.0	3391	31217	46.7	17.9	8.2	96	87.2	16.4	31.8	59.9	6.1	44.2	3723	30629
AVERAGE				368	27.7	10.2	96	83.5	20.8	38.1	56.7	6.4	38.9	3431	35098	45.6	18.4	8.3	97	87.1	17.0	32.4	60.1	6.2	43.7	3706	30563
HIGHEST				406	31.3	11.3	100	85.6	23.3	41.8	59.0	7.0	44.4	3590	40411	50.5	20.2	9.4	103	88.9	19.4	35.6	62.5	6.9	47.7	3820	34826
LOWEST				295	24.2	9.2	91	81.3	17.9	34.0	53.1	5.9	34.9	3278	31217	39.7	15.5	7.4	79	84.7	14.8	28.8	57.0	5.7	40.0	3549	27857
CV (%)				7.1	8.2	9.0	5	1.9	11.4	9.5	2.3	9.9	10.4	3	10	8.3	9.0	11.0	4	2.0	13.7	11.9	3.0	6.1	10.1	3	11
LSD (6%)				3.1	2.7	1.1	5	1.9	2.8	4.3	1.5	0.8	4.8	141	4069	6.4	2.8	1.5	4	2.0	2.8	4.6	2.1	0.5	5.2	171	5944

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

2021				Huron - Late										Ingham - Late																			
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006					YIELD					% QUALITY					MILK 2006				
				%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT		
AG ARMOUR AA10524	105	C250	1,2,4	36.6	30.8	11.3 *	97	83.6	20.9	38.1	57.0	6.5	38.8	34.0	38875	40.9	21.6	8.8 *	99	87.3	16.6	32.7	61.1	6.2	44.3	37.26	32700	37.26	32700				
DAIRYLAND SEED DS-45100	105	LUM	1,2,3,4	34.3	32.1	11.0 *	96	84.0	20.2	37.6	57.5	6.2	39.7	34.0	38151	39.6	22.4	8.8 *	97	87.3	17.2	33.7	62.4	6.1	43.0	37.22	32837	37.22	32837				
DAIRYLAND SEED HIDF-4545Q	105	LUM	1,2,3,4	32.1	33.3	10.7 *	96	83.8	21.5	39.2	58.7	6.3	37.4	34.4	36729	38.6	22.1	8.5 *	96	86.9	18.7	37.4	64.9	6.2	38.7	36.69	31173	36.69	31173				
DAIRYLAND SEED HIDF-4999Q	109	LUM	1,2,3,4	32.9	32.9	10.8 *	97	84.3	20.9	38.2	58.9	6.3	37.7	34.9	37447	37.1	24.4	9.0 *	98	87.6	17.7	34.9	64.3	5.9	40.9	37.28	33558	37.28	33558				
DYNAGRO D45TC65	106	P500	1,2,6	36.4	29.3	10.7 *	99	84.4	18.9	35.7	56.2	5.8	42.4	35.9	37409	40.9	20.5	8.4 *	99	87.2	16.1	32.4	60.4	6.2	45.6	37.24	31148	37.24	31148				
DYNAGRO D46SS50	108	P500	1,2,3,4	32.7	31.3	10.2 *	100	83.0	21.5	39.4	56.8	6.0	37.1	33.95	34530	38.3	23.4	8.9 *	100	86.4	17.6	34.2	60.0	6.2	43.5	36.61	32714	36.61	32714				
DYNAGRO D58SS82	112	P500	1,2,3,4	33.5	34.5	11.5 **	101	83.7	21.1	38.3	57.5	6.0	37.7	34.46	39588	35.8	24.6	8.8 *	99	86.6	19.4	37.4	61.4	5.5	38.3	35.98	31685	35.98	31685				
GOLDEN HARVEST G09Y24-320A	109	C250	1,2,4,6,14	33.2	34.4	11.4 *	95	83.8	20.7	38.9	58.4	6.3	37.4	34.77	39422	38.3	22.8	8.9 *	96	86.3	18.0	35.5	61.5	6.3	41.0	36.50	32195	36.50	32195				
GOLDEN HARVEST G12S75-5122	112	C250	1,2,3,4	32.3	31.4	10.3 *	101	80.5	24.2	44.0	55.6	5.9	32.8	32.12	33038	38.8	22.5	8.7 *	101	84.7	20.2	39.4	61.3	5.7	38.1	35.31	30713	35.31	30713				
GOLDEN HARVEST G13250-3220	113	C250	1,2,4,6	31.7	32.7	10.3 *	98	83.2	21.6	39.1	57.2	6.1	37.5	34.13	36371	39.6	22.7	8.9 *	101	87.0	17.7	34.4	62.2	6.3	42.7	36.96	32774	36.96	32774				
LEGACY SEEDS LC655-215122	105	C250	1,2,3,4,6	34.6	29.6	10.6 *	92	86.3	17.6	33.5	59.0	6.9	43.8	36.32	38637	43.3	21.4	9.2 *	98	85.5	16.5	32.9	62.0	6.6	43.6	37.36	34479	37.36	34479				
LEGACY SEEDS LC892-213300	109	C250	1,2,4,6	35.2	29.1	10.4 *	96	83.0	20.9	38.4	55.6	6.5	38.9	34.00	35523	42.2	21.7	9.1 *	99	86.1	17.1	34.0	59.3	6.3	44.1	36.47	33163	36.47	33163				
LG SEEDS LG57C33S7XRIB	107	P500	1,2,3,4	33.4	33.0	11.1 *	98	84.2	19.4	36.4	56.7	6.6	39.8	34.88	38726	39.4	20.8	8.2	99	85.2	19.4	38.2	61.1	5.8	38.1	35.65	29302	35.65	29302				
LG SEEDS LG86677-6222	108	OSF	1,2,3,4,6	32.8	32.0	10.5 *	96	83.6	20.5	37.6	56.4	6.5	37.7	34.66	36177	35.5	25.1	8.9 *	95	85.6	19.2	36.7	60.5	6.4	38.6	35.96	32091	35.96	32091				
NK Brand NK0748-5122	107	C250	1,2,3,4	33.0	29.8	9.8	94	83.4	20.4	38.2	56.6	6.5	36.8	34.27	33438	38.3	22.9	8.7 *	98	85.1	19.1	37.1	59.7	6.2	39.1	35.64	31090	35.64	31090				
REWK R710DGV72P	106	ACC250	1,2,14	37.1	29.9	11.1 *	98	83.8	20.1	37.3	56.7	5.9	40.6	34.62	38366	43.4	18.8	8.6 *	98	86.6	17.4	33.9	60.4	6.2	43.4	36.75	31809	36.75	31809				
REWK ACC500	107	ACC500	1,2,4,6	32.3	30.6	9.9	95	82.7	21.5	39.3	55.9	6.4	36.6	33.77	33622	41.3	21.4	8.9 *	96	87.2	16.0	31.8	59.8	6.4	44.5	37.26	32963	37.26	32963				
REWK R822RE	111	ACC250	1,2,6	33.6	30.6	10.3 *	94	83.3	21.2	39.2	57.3	6.0	38.4	34.12	36355	36.9	21.3	7.9	88	86.6	18.2	35.6	62.4	6.1	41.0	36.67	28883	36.67	28883				
REWK R807SSTX	111	ACC300	1,2,3,4	29.1	33.6	9.8	95	81.1	24.2	43.9	56.9	6.7	29.9	32.44	31644	37.5	22.1	8.3	92	85.3	19.7	38.0	61.2	6.1	37.7	35.70	29441	35.70	29441				
VIKING O18-08P	108	C250	Conv.	35.5	29.3	10.4 *	98	84.7	19.4	36.1	57.5	6.2	42.1	35.18	36812	41.4	22.5	9.3 **	99	86.0	15.4	30.5	60.7	6.2	47.8	37.77	35175	37.77	35175				
AVERAGE				33.6	31.5	10.6	97	83.5	20.8	38.4	57.1	6.3	38.1	34.33	36457	39.3	22.2	8.7	97	86.5	17.8	35.0	61.3	6.1	41.7	36.61	31985	36.61	31985				
HIGHEST				37.1	34.5	11.5	101	86.3	24.2	44.0	59.0	6.9	43.8	36.32	39558	43.4	25.1	9.3	101	88.0	20.2	39.4	64.9	6.6	47.8	37.77	35175	37.77	35175				
LOWEST				29.1	29.1	9.8	92	80.5	17.6	33.5	55.6	5.8	29.9	32.12	31644	35.5	18.8	7.9	88	84.7	15.4	30.5	59.1	5.5	37.7	35.31	28883	35.31	28883				
CV (%)				8.3	9.1	11.8	3	2.0	11.3	9.2	2.4	8.3	10.7	4	14	5.8	9.6	8.8	3	1.3	9.1	9.0	2.1	6.4	8.1	2	9						
LSD (5%)				3.3	3.4	1.5	4	2.0	2.8	4.2	1.6	0.6	4.8	14.9	60.06	2.7	2.5	0.9	3	1.3	1.9	3.8	1.6	0.5	4.0	9.9	36.97						

2 Year Averages 2021 - 2020				Huron - Late										Ingham - Late																			
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006					YIELD					% QUALITY					MILK 2006				
				%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT	IVD	ADF	NDF	NDFD	CP	STR	MKTA	MKLT		
DAIRYLAND SEED HIDF-4545Q	105	LUM	1,2,3,4	33.3	31.1	10.3 *		85.3	19.1	37.9	61.3	6.8	40.5	35.47	36555	37.4	24.0	8.9 *		86.7	18.9	37.3	64.5	6.7	40.0	36.55	33561	36.55	33561				
DAIRYLAND SEED HIDF-4999Q	109	LUM	1,2,3,4	32.9	31.4	10.3 *		85.4	19.3	37.1	60.6	7.0	39.8	35.58	36748	37.6	24.8	9.2 **		87.5	17.6	35.7	64.9	6.7	41.1	37.13	34126	37.13	34126				
GOLDEN HARVEST G09Y24-320A	109	C250	1,2,4,6,14	35.4	30.9	10.9 **		85.0	18.4	36.7	59.5	6.8	41.4	35.38	38449	35.7	24.4	8.7 *		85.9	18.4	37.1	62.1	6.8	39.7	36.10	31281	36.10	31281				
LG SEEDS LG57C33S7XRIB	107	P500	1,2,3,4	34.4	30.7	10.5 *		84.7	18.1	36.7	58.4	7.1	41.8	35.24	37215	36.0	22.9	8.1		85.1	18.4	36.9	61.1	6.6	40.0	35.66	29717	35.66	29717				
REWK R710DGV72P	106	ACC250	1,2,14	37.4	29.5	10.7 *		84.5	18.7	36.3	58.3	6.9	42.0	35.70	37447	41.8	19.4	8.4		85.7	17.7	34.7	59.5	6.7	42.7	36.12	30246	36.12	30246				
REWK R807SSTX	111	ACC300	1,2,3,4	32.1	31.1	9.9		83.4	21.5	40.2	59.0	7.3	36.2	34.20	33855	36.6	24.0	8.7 *		84.7	20.3	39.7	61.4	6.7	36.3	35.19	30464	35.19	30464				
AVERAGE				34.2	30.6	10.4		84.7	19.2	37.5	59.5	7.0	40.3	35.18	36711	37.5	23.2	8.7		85.9	18.6	36.9	62.2	6.7	40.0	36.12	31563	36.12	31563				
HIGHEST				37.4	31.4	10.9		85.4	21.5	40.2	61.3	7.3	42.0	35.58	38449	41.8	24.8	9.2		87.5	20.3	39.7	64.9	6.8	42.7	37.13	34126	37.13	34126				
LOWEST				32.1	29.5	9.9		83.4	18.1	36.3	58.3	6.8	36.2	34.20	33855	35.7	19.4	8.1		84.7	17.6	34.7	59.5	6.6	36.3	35.19	29717	35.19	29717				
CV (%)				7.5	7.1	8.1		2.0	9.2	7.9	2.4	6.5	9.0	3	11	5.8	9.0	7.6		1.8	8.0	8.3	2.7	6.0	7.6	3	8						
LSD (5%)				2.1	1.8	0.8		1.4	1.5	2.5	1.2	0.4	2.9	9.6	32.45	1.9	1.7	0.6		1.3	1.2	2.5	1.4	0.3	2.6	8.9	21.20						

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

TABLE 8E.

IOSCO, OSCEOLA & PRESQUE ISLE COUNTY SILAGE TRIALS - EARLY (97 Day and Earlier)

ZONE 4

BRAND /HYBRID		TRIAL AVERAGE										iosco - Early																			
		RM	TRT	TRAIT	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MILK 2006	IMKT	IMK/A	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MILK 2006	IMKT	IMK/A	
2021																															
DAIRYLAND SEED	HDF-304Q	90	LUM	1,2,3,4	34.8	25.8	9.0	97	86.8	17.9	34.6	62.0	6.4	42.2	3672	33026	36.1	24.7	8.9 *	99	87.6	16.7	32.1	61.3	6.3	45.9	3733	33257			
DAIRYLAND SEED	DS-3162Q	91	LUM	1,2,3,4	31.9	26.8	8.5	92	84.6	20.2	38.4	60.0	6.9	37.1	3518	29862	33.8	24.0	8.1	96	86.0	18.4	35.0	59.9	6.9	42.1	3614	29184			
DAIRYLAND SEED	HDF-3622Q	95	LUM	1,2,3,4	31.4	29.5	9.3 *	93	85.5	19.4	36.9	60.8	6.4	38.9	3584	33134	32.2	28.1	9.0 *	96	86.3	18.5	34.4	60.2	6.9	41.2	3636	32647			
DAIRYLAND SEED	HDF-319TRA	97	LUM	1,2,3,4	31.9	30.4	9.7 **	95	84.4	20.8	38.8	59.7	6.8	37.2	3500	33886	32.7	26.9	8.8 *	97	84.3	20.4	37.8	58.6	7.1	38.9	3495	30817			
GOLDEN HARVEST	G39IV61-622A	91	C250	1,2,3,4,6,14	32.4	27.2	8.8	92	85.6	18.5	35.1	59.1	6.8	40.6	3594	32462	33.0	25.5	8.4 *	96	85.9	17.7	33.1	57.5	6.8	44.3	3624	30297			
GOLDEN HARVEST	G36D32-3220	95	C250	1,2,4,6	33.1	28.6	9.4 *	92	84.1	20.0	37.5	57.6	6.6	38.5	3494	32906	35.3	25.0	8.8 *	92	85.0	18.0	33.7	55.4	6.6	44.1	3967	31461			
LEGACY SEEDS	LC143-20 3110	91	C250	1,2,4,6,14	32.0	27.4	8.7	93	85.1	18.9	35.4	58.1	6.8	39.2	3569	31017	34.6	26.4	9.1 **	91	85.8	17.4	32.9	57.0	6.7	43.2	3622	32799			
LEGACY SEEDS	LC431-20 SSX	93	A500	1,2,3,4	33.2	25.5	8.5	84	86.0	19.0	36.7	61.8	7.2	38.8	3600	30457	33.9	24.3	8.2	83	86.4	17.9	34.4	60.3	7.4	41.9	3639	29970			
LG SEEDS	LG42C37-3110	92	OSF	1,2,4,6	32.3	26.0	8.4	94	85.4	18.7	35.4	59.9	6.7	39.9	3572	30135	33.8	26.5	9.0 *	94	86.0	17.9	33.7	58.2	6.5	43.9	3623	32440			
LG SEEDS	LG45C21-5122	95	OSF	1,2,3,4	34.1	26.5	9.0	93	85.7	18.8	36.2	60.5	6.6	40.7	3596	32395	36.1	24.4	8.8 *	95	86.0	17.6	33.6	58.3	6.5	45.1	3625	31986			
AVERAGE																															
HIGHEST																															
LOWEST																															
CV (%)																															
LSD (5%)																															

BRAND /HYBRID		TRIAL AVERAGE										iosco - Early																			
		RM	TRT	TRAIT	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MILK 2006	IMKT	IMK/A	%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MILK 2006	IMKT	IMK/A	
2 Year Averages 2021 -2020																															
DAIRYLAND SEED	HDF-304Q	90	LUM	1,2,3,4	38.8	23.6	9.1		85.6	18.9	36.1	60.2	7.2	42.5	3584	32668	40.2	20.9	8.4 *		86.4	18.3	35.5	61.7	7.4	43.0	3644	30999			
DAIRYLAND SEED	DS-3162Q	91	LUM	1,2,3,4	36.2	24.8	8.8		83.3	22.0	39.5	59.0	7.3	36.8	3404	30070	36.8	21.3	8.1		85.1	21.4	37.4	61.0	7.5	37.7	3516	28431			
DAIRYLAND SEED	HDF-319TRA	97	LUM	1,2,3,4	37.1	26.9	9.8 **		84.1	20.8	39.6	60.3	7.5	37.6	3462	33225	38.9	23.3	8.9 **		84.5	20.6	39.0	61.1	7.8	37.6	3505	31063			
GOLDEN HARVEST	G36D32-3220	95	C250	1,2,4,6	35.8	24.6	8.6		83.5	20.4	37.7	57.1	7.5	38.9	3440	29574	37.6	20.6	7.6		85.2	17.9	34.3	58.4	7.7	43.1	3576	27132			
AVERAGE																															
HIGHEST																															
LOWEST																															
CV (%)																															
LSD (5%)																															

** Highest Yielding Hybrid
* Not Significantly Different from Highest Yielding Hybrid

2021										Presque Isle - Early										Missaukee - Early									
BRAND / HYBRID	RM	TRT	TRAIT	YIELD			% QUALITY			MILK 2006			YIELD			% QUALITY			MILK 2006										
				%DM	GTA	DTA	%STD	IND	ADF	NDF	NDFD	CP	STR	IMKTA	IMKIT	%DM	GTA	DTA	%STD	IND	ADF	NDF	NDFD	CP	STR	IMKTA	IMKIT		
DAIRYLAND SEED H1DF-304Q	90	LUM	1,2,3,4	36.0	28.7	10.3 *	100	85.4	19.1	36.8	60.3	6.3	40.4	3668	36682	32.5	24.0	7.8 *	93	87.5	17.9	35.0	64.4	6.6	40.5	3713	28988		
DAIRYLAND SEED DS-3162Q	91	LUM	1,2,3,4	31.4	31.0	9.7	92	82.1	23.2	43.4	58.7	6.4	32.0	3325	32217	30.7	26.3	7.8 *	88	85.9	19.1	36.8	61.5	7.4	37.2	3615	28184		
DAIRYLAND SEED H1DF-3522Q	95	LUM	1,2,3,4	31.8	33.3	10.6 *	96	84.0	21.1	39.7	59.7	6.0	36.8	3465	36621	30.1	27.2	8.3 *	88	86.4	18.6	36.5	62.6	6.5	38.8	3651	30195		
DAIRYLAND SEED H1DF-3197RA	97	LUM	1,2,3,4	32.8	33.9	11.1 **	93	84.3	20.6	39.3	60.0	6.7	36.8	3481	38844	30.3	30.3	9.1 *	94	84.6	21.5	39.3	60.7	6.7	36.0	3524	32197		
GOLDEN HARVEST G91V61-622A	91	C250	1,2,3,4,6,14	32.6	31.4	10.3 *	93	83.8	20.8	38.7	56.0	6.8	36.7	3498	35532	31.5	24.8	7.8 *	88	87.1	17.2	33.5	61.8	6.9	41.0	3700	31558		
GOLDEN HARVEST G96D32-3220	95	C250	1,2,4,6	32.8	31.5	10.4 *	96	81.5	23.2	43.0	57.1	6.4	32.6	3298	34146	31.3	29.2	9.2 **	97	85.7	18.9	36.0	60.3	6.7	38.8	3916	33112		
LEGACY SEEDS LC413-20 3110	91	C250	1,2,4,6,14	30.8	30.6	9.4	96	82.4	22.7	40.8	56.8	6.8	33.6	3362	31436	30.7	25.2	7.8 *	91	87.2	16.6	32.5	60.6	6.9	40.9	3693	28815		
LEGACY SEEDS LC431-20 SSK	93	A600	1,2,3,4	32.7	28.6	9.4	88	84.3	20.7	39.6	60.4	7.1	35.7	3480	32803	33.1	23.8	7.9 *	81	87.2	18.3	36.2	64.7	7.1	39.0	3682	28797		
LG SEEDS LG42C37-3110	92	OSF	1,2,4,6	31.7	30.8	9.8	94	84.7	19.3	36.3	57.8	6.8	39.9	3530	34391	31.3	20.7	6.4	95	85.7	18.9	36.2	60.6	6.9	36.0	3562	28574		
LG SEEDS LG46C21-5122	95	OSF	1,2,3,4	35.0	28.3	9.9	96	84.4	20.5	38.8	59.8	6.7	38.0	3495	34503	31.2	26.9	8.4 *	88	86.7	18.2	36.3	63.3	6.8	38.9	3667	30687		
AVERAGE				32.7	30.8	10.1	94	83.7	21.1	39.6	58.9	6.6	36.2	3446	34885	31.2	25.7	8.0	90	86.4	18.5	35.8	62.0	6.8	38.7	3642	29603		
HIGHEST				36.0	33.9	11.1	100	85.4	23.2	43.4	60.4	7.1	40.4	3568	38644	33.1	30.3	9.2	97	87.5	21.5	39.3	64.7	7.4	41.0	3713	33112		
LOWEST				30.8	28.3	9.4	88	81.5	19.1	36.3	56.8	6.0	32.0	3298	31436	30.1	20.7	6.4	81	84.6	16.6	32.5	60.3	6.5	36.0	3524	28574		
CV (%)				6.7	5.8	6.2	5	2.0	11.2	8.7	2.7	6.1	11.0	4	8	5.5	16.0	16.5	9	2.0	12.7	10.3	2.1	6.0	12.2	4	16		
LSD (5%)				2.6	2.1	0.8	5	2.1	2.8	4.2	1.9	0.5	4.8	148	3188	2.1	5.0	1.6	10	2.0	2.8	4.5	1.6	0.5	5.7	163	5798		

2 Year Averages 2021 - 2020										Presque Isle - Early										Missaukee - Early									
BRAND / HYBRID	RM	TRT	TRAIT	YIELD			% QUALITY			MILK 2006			YIELD			% QUALITY			MILK 2006										
				%DM	GTA	DTA	%STD	IND	ADF	NDF	NDFD	CP	STR	IMKTA	IMKIT	%DM	GTA	DTA	%STD	IND	ADF	NDF	NDFD	CP	STR	IMKTA	IMKIT		
DAIRYLAND SEED H1DF-304Q	90	LUM	1,2,3,4	37.4	26.3	9.9	99	84.9	19.5	36.7	58.8	6.9	42.0	3524	34737														
DAIRYLAND SEED DS-3162Q	91	LUM	1,2,3,4	33.5	28.4	9.4	94	81.6	22.6	41.6	57.1	7.0	36.0	3292	31709														
DAIRYLAND SEED H1DF-3197RA	97	LUM	1,2,3,4	35.3	30.5	10.7 **	97	83.6	21.0	40.3	59.4	7.2	37.6	3419	35386														
GOLDEN HARVEST G96D32-3220	95	C250	1,2,4,6	34.0	28.6	9.7	97	81.9	22.9	41.1	55.9	7.3	34.6	3304	32016														
AVERAGE				35.0	28.5	9.9	99	83.0	21.5	39.9	57.8	7.1	37.6	3385	33462														
HIGHEST				37.4	30.5	10.7	100	84.9	22.9	41.6	59.4	7.3	42.0	3524	35386														
LOWEST				33.5	28.3	9.4	94	81.6	19.5	36.7	55.9	6.9	34.6	3292	31709														
CV (%)				6.8	5.6	6.7	6	2.4	9.1	7.7	2.9	5.5	9.4	4	7														
LSD (5%)				1.9	1.4	0.6	6	1.7	1.6	2.5	1.4	0.3	2.9	111	2049														

** Highest Yielding Hybrid
* Not Significantly Different from Highest Yielding Hybrid

TABLE 8L.

IOSCO, OSCEOLA & PRESQUE ISLE COUNTY SILAGE TRIALS - LATE (98 Day and Later)

ZONE 4

2021		TRIAL AVERAGE										Iosco - Late															
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006													
				%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MK/A	MK/T	IVD	ADF	NDF	NDFD	CP	STR	MK/A	MK/T				
DYNAGRO D40V/C41	100	P500	1,2	32.3	31.0	93 *	94	84.6	20.6	39.1	60.7	6.4	35.6	35.1	33653	37.6	26.9	83	85.8	19.0	36.7	61.1	6.4	39.8	3606	32669	
GOLDEN HARVEST GM4S19-31/22	104	C250	1,2,3,4	29.3	27.6	8.1	81	83.8	22.2	41.9	61.2	7.5	31.3	34.18	27837	30.5	25.5	7.8	88	85.4	20.4	38.2	62.7	7.1	34.9	3554	30213
LEGACY SEEDS LC484-20/V72PR	98	P500	1,2	33.0	28.3	93 *	95	85.3	20.0	38.9	62.1	6.9	36.5	3563	33258	35.3	24.6	8.7 *	95	87.0	17.5	34.1	61.7	7.4	41.4	3692	32022
LEGACY SEEDS LC4248/V72PR	100	P500	1,2	30.1	31.9	96 **	96	85.1	19.9	37.5	60.4	6.5	36.9	3560	34046	31.8	29.0	9.2 *	97	85.4	18.9	35.9	59.5	6.4	40.0	3594	33019
LG SEEDS LG50035-5222	100	OSF	1,2,3,4,6	30.5	28.0	8.5	95	83.8	21.0	40.6	60.2	7.9	33.6	3448	29376	32.9	25.2	8.3	93	84.9	19.7	38.0	60.2	7.5	38.2	3540	29357
AVERAGE				31.0	29.3	9.0	92	84.5	20.7	39.6	60.9	7.0	34.8	3500	31634	33.6	26.2	8.8	93	85.7	19.1	36.8	61.0	6.9	38.9	3597	31456
HIGHEST				33.0	31.9	9.6	96	85.3	22.2	41.9	62.1	7.9	36.9	3563	34046	37.6	29.0	10.0	97	87.0	20.4	39.2	62.7	7.5	41.4	3692	33019
LOWEST				29.3	27.6	8.1	81	83.8	19.9	37.5	60.2	6.4	31.3	3418	27837	30.5	24.6	7.8	88	84.9	17.5	34.1	59.5	6.4	34.9	3540	29357
CV (%)				6.8	7.5	8.6	15	1.7	10.7	9.2	1.9	7.1	13.2	4	11	15.6	9.2	14.2	9	1.8	12.2	10.6	2.2	7.4	12.9	3	14
LSD (5%)				1.4	1.5	0.5	10	1.0	1.5	2.5	0.8	0.3	3.2	86	2411	6.6	3.0	1.6	11	1.9	2.9	4.9	1.7	0.7	6.3	147	5634

2 Year Average Not Available - No Repeating Hybrids

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

2021		Presque Isle - Late										Missaukee - Late															
BRAND / HYBRID	RM	TRT	TRAIT	YIELD					% QUALITY					MILK 2006													
				%DM	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MK/A	MK/T	IVD	ADF	NDF	NDFD	CP	STR	MK/A	MK/T				
DYNAGRO D40V/C41	100	P500	1,2	29.8	36.2	10.8 **	97	82.8	22.4	40.8	57.9	6.1	34.6	3388	36530	29.4	29.9	7.0 *	91	85.3	20.4	39.8	63.0	6.8	32.5	3538	31761
GOLDEN HARVEST GM4S19-31/22	104	C250	1,2,3,4	29.0	35.9	10.4 *	78	83.1	22.5	40.8	58.4	7.2	33.7	3397	35208	28.4	21.3	6.1	91	83.0	23.7	45.6	62.6	8.1	25.1	3303	18090
LEGACY SEEDS LC484-20/V72PR	98	P500	1,2	33.2	32.2	10.7 *	96	85.3	19.5	37.4	60.7	6.9	38.5	3554	37875	30.7	28.2	8.7 *	95	83.8	23.0	45.2	64.0	6.5	29.7	3443	29876
LEGACY SEEDS LC4248 V72PR	100	P500	1,2	29.5	36.3	10.7 *	95	84.0	21.2	38.7	58.7	6.4	36.2	3472	37188	29.0	30.5	8.9 **	95	85.9	19.5	38.0	63.0	6.8	34.7	3614	31959
LG SEEDS LG50035-5222	100	OSF	1,2,3,4,6	30.8	32.3	9.9	97	82.5	22.2	41.9	58.3	7.4	33.5	3356	33259	27.8	26.5	7.4 *	96	84.2	21.3	41.8	62.1	8.7	29.1	3446	25511
AVERAGE				30.5	34.6	10.5	90	83.5	21.6	39.9	58.8	6.8	35.3	3434	36006	29.1	27.3	7.6	94	84.4	21.6	42.1	62.9	7.4	30.2	3469	27440
HIGHEST				33.2	36.3	10.8	97	85.3	22.5	41.9	60.7	7.4	38.5	3554	37875	30.7	30.5	8.9	96	85.9	23.7	45.6	64.0	8.7	34.7	3614	31959
LOWEST				29.0	32.2	9.9	64	82.5	19.5	37.4	57.9	6.1	33.5	3356	33259	27.8	21.3	6.1	91	83.0	19.5	38.0	62.1	6.5	25.1	3303	18090
CV (%)				4.4	6.4	6.4	25	1.7	10.8	8.9	1.4	4.5	13.0	3	9	5.1	10.5	27.5	6	1.6	9.2	8.3	1.9	8.4	15.1	4	9
LSD (5%)				1.7	2.8	0.8	29	1.8	2.9	4.5	1.1	0.4	5.8	140	4007	1.9	3.6	2.6	10	1.7	2.5	4.4	1.5	0.8	5.8	179	3290

2 Year Average Not Available - No Repeating Hybrids

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

BRAND/HYBRID	RM	TRT	TRAIT	Early - Trial Average												Ottawa - Early											
				YIELD						% QUALITY						YIELD						% QUALITY					
				%M	GTIA	DTIA	%STD	ND	ADF	NDF	NDFD	CP	STR	MKLT	MKA	%M	GTIA	DTIA	%STD	IVD	ADF	NDF	NDFD	CP	STR	MKLT	MKA
2 Year Averages 2011 - 2020																											
DARYLAND SEED S1620	91	LUM	12,34	44.4	19.6	9.0 *	86.1	17.5	34.3	59.4	7.3	43.9	3619	30888	48.1	19.8	9.2	86.5	16.8	32.7	58.9	7.7	46.1	33398	33398		
DARYLAND SEED HD-319FA	97	LUM	12,34	44.5	20.8	9.1 *	85.9	19.0	36.4	61.0	7.2	42.0	3622	32526	48.7	20.4	9.6 *	85.5	19.2	36.4	59.1	7.6	42.8	3567	34615		
DARYLAND SEED HD-309RA	99	LUM	12,34	41.1	22.9	9.1 *	84.4	19.2	37.1	58.4	7.1	40.2	3512	31463	48.2	21.5	9.9 *	85.1	18.4	35.3	58.0	7.2	43.6	3556	34465		
DARYLAND SEED HD-300Q	102	LUM	12,34	36.8	25.0	9.1 *	86.1	18.6	36.3	62.4	7.2	41.0	3618	32790	41.2	25.3	10.2 **	85.9	18.9	37.4	62.2	7.2	41.8	3596	36332		
GOLDEN HARVEST 60X39-3120	102	C250	1,2,4	41.0	22.5	9.1 *	86.5	17.6	34.5	61.9	7.2	43.3	3641	32887	44.1	22.4	9.7 *	86.7	17.0	33.9	60.7	7.2	45.2	3559	35268		
GOLDEN HARVEST 60X59-3122	104	C250	1,2,3,4	40.3	23.7	9.4 **	85.9	18.7	36.6	61.8	6.9	41.4	3587	33415	44.2	23.2	10.1 *	85.7	19.6	36.7	59.9	7.2	42.9	3591	35694		
LEGACY SEED S1C-5277 V72P	103	P250	1,2	41.5	23.2	9.4 **	85.4	18.0	36.6	60.5	6.7	42.9	3574	33402	45.2	22.6	9.8 *	84.8	19.3	36.7	58.8	6.7	43.5	3534	34339		
NK Brand NQ891-5122	99	C250	1,2,3,4	41.8	22.2	9.3 *	86.4	17.8	35.0	61.1	7.3	43.6	3637	32716	46.9	22.0	9.8 *	85.7	19.5	36.9	59.9	7.2	44.0	3567	34650		
NK Brand NQ440-3122	104	C250	1,2,3,4	39.9	23.6	9.3 *	86.3	18.3	36.0	62.6	7.2	41.9	3627	32724	42.3	24.4	10.1 *	85.6	18.0	34.8	60.3	7.3	44.6	3590	36028		
RENK R62/V72P	103	ACC250	1,2	41.3	22.3	9.1 *	86.0	17.9	35.4	60.7	6.8	42.5	3624	32738	42.8	21.8	9.3	85.6	17.8	34.9	58.7	6.8	44.0	3591	33374		
RENK R64/V72P	103	ACC250	1,2	40.9	23.1	9.2 *	85.3	18.6	36.4	59.6	6.7	41.8	3566	32546	44.7	23.0	9.8 *	85.5	18.0	34.9	58.6	6.6	45.0	3587	35033		
AVERAGE				41.2	22.6	9.2	85.8	18.3	35.9	60.8	7.1	42.2	3602	32646	45.1	22.4	9.8	85.7	18.4	35.5	58.6	7.2	44.0	3586	34869		
HIGHEST				44.5	25.0	9.4	86.5	19.2	37.1	62.6	7.3	43.9	3641	32724	48.7	25.3	10.2	86.7	19.6	37.4	62.2	7.7	46.1	3669	36332		
LOWEST				36.8	19.6	9.0	84.4	17.5	34.3	58.4	6.7	40.2	3512	30888	41.2	19.8	9.2	84.8	16.8	32.7	58.0	6.6	41.8	3534	33314		
CV (%)				7.7	8.2	9.1	2.1	11.0	9.3	3.6	6.5	8.5	3	9	8.4	8.9	8.6	2.1	11.1	9.3	2.6	5.2	8.1	3	9		
LSD (5%)				1.5	0.9	0.4	0.8	1.0	1.6	1.0	0.2	1.7	5.0	13.5	3.2	1.5	0.7	1.5	1.7	2.7	1.3	0.3	3.0	9.7	2484		

** Highest Yielding Hybrid
 * Not Significantly Different from Highest Yielding Hybrid

TABLE 7E Cont. from page 41.

HURON, INGHAM & OTTAWA COUNTY SILAGE TRIALS - EARLY (104 Day and Earlier)

ZONE 2/3

BRAND / HYBRID	TRT	TRT	TRAIT	Huron - Early										Ingham - Early																			
				YIELD					%QUALITY					MILK 2006					YIELD					%QUALITY					MILK 2006				
				%DM	GTA	DTIA	%STD	STR	ND	ADF	NDF	NUPD	CP	STR	MKA	MKT	ND	ADF	NDF	NUPD	CP	STR	MKA	MKT	ND	ADF	NDF	NUPD	CP	STR	MKA	MKT	
DARVYLAND SEED DS-3162Q	91	LUM	1,234	39.4	22.8	9.1	85.1	18.8	36.9	59.4	7.4	41.6	3559	3220.4	45.7	16.2	33.2	60.0	6.9	44.0	3665	27063	86.7	16.8	33.2	60.0	6.9	44.0	3665	27063			
DARVYLAND SEED HDF-3197RA	97	LUM	1,234	41.4	23.0	9.5*	86.4	18.6	36.2	62.6	6.9	43.4	3628	3450.9	43.5	18.9	36.5	61.4	7.1	39.7	3669	28252	85.9	19.3	37.1	59.4	6.9	38.9	3547	26965			
DARVYLAND SEED HDF-308BRA	99	LUM	1,234	36.3	27.0	9.8*	83.1	20.1	38.0	58.0	7.0	38.0	3433	3286.0	38.8	20.1	37.1	59.4	6.9	38.9	3547	26965	84.9	19.1	37.1	59.4	6.9	38.9	3547	26965			
DARVYLAND SEED HDF-380ZQ	102	LUM	1,234	32.1	29.9	9.6*	85.0	19.5	37.5	61.9	7.1	40.1	3552	3346.9	37.3	19.8	34.0	63.1	7.2	41.2	3716	28570	87.4	17.4	34.0	63.1	7.2	41.2	3716	28570			
GOLDEN HARVEST 602K38-3720	102	C250	1,234	37.8	26.9	10.2**	85.9	19.3	36.6	62.8	7.2	41.4	3576	3338.9	41.0	18.1	33.0	62.1	7.1	43.4	3687	27973	87.0	16.5	33.0	62.1	7.1	43.4	3687	27973			
GOLDEN HARVEST 604S19-3722	104	C250	1,234	37.6	26.3	9.9*	84.9	19.1	38.9	62.5	6.7	39.9	3522	3389.4	39.2	21.6	34.2	62.9	6.8	41.6	3658	30467	86.7	17.4	34.2	62.9	6.8	41.6	3658	30467			
LEGACY SEEDS LC-6271 V2P	103	P250	1.2	36.7	27.5	10.1*	85.3	17.8	36.7	61.3	6.7	42.8	3569	3574.4	42.6	19.5	36.3	61.3	6.7	40.5	3621	30122	86.1	16.9	36.3	61.3	6.7	40.5	3621	30122			
NK Brand NK691-572	99	C250	1,234	38.2	25.8	9.9*	87.0	16.6	34.2	62.1	7.5	45.4	3689	3625.2	40.4	18.8	33.9	61.3	7.3	41.6	3657	27175	86.4	17.4	33.9	61.3	7.3	41.6	3657	27175			
NK Brand NK0446-372	104	C250	1,234	37.3	26.5	9.9*	86.1	19.0	37.9	63.4	7.1	40.6	3606	3569.4	40.1	20.0	35.1	64.2	7.2	40.5	3684	29449	87.1	17.7	35.1	64.2	7.2	40.5	3684	29449			
RENK R621V2P	103	ACC250	1.2	38.8	26.2	10.1*	85.3	19.2	37.7	61.1	6.9	41.2	3567	3600.1	42.3	19.9	33.6	62.3	6.8	42.3	3713	28900	87.3	16.6	33.6	62.3	6.8	42.3	3713	28900			
RENK R642V2P	103	ACC250	1.2	37.1	27.2	10.0*	84.4	21.3	40.1	59.4	6.8	38.3	3469	3464.8	40.9	19.3	34.2	60.8	6.9	42.0	3644	27951	86.2	16.4	34.2	60.8	6.9	42.0	3644	27951			
AVERAGE				37.5	26.3	9.8	85.3	19.0	37.4	61.3	7.0	41.2	3561	3480.3	41.1	19.2	34.6	61.7	7.0	41.6	3660	28262	86.5	17.4	34.6	61.7	7.0	41.6	3660	28262			
HIGHEST				41.4	29.9	10.2	87.0	21.3	40.1	63.4	7.5	45.4	3689	3632.5	45.7	21.6	33.0	62.3	7.3	44.0	3716	30467	87.4	19.3	37.1	64.2	7.3	44.0	3716	30467			
LOWEST				32.1	22.8	9.1	83.1	16.6	34.2	56.0	6.7	38.0	3433	3220.4	37.3	16.2	33.0	59.4	6.7	38.9	3547	26570	84.9	16.4	33.0	59.4	6.7	38.9	3547	26570			
CV (%)				6.4	6.7	8.1	2.1	9.8	8.2	4.1	7.8	8.5	3	8	7.5	9.3	9.4	2.9	6.1	8.4	3	9	2.0	10.6	9.4	2.9	6.1	8.4	3	9			
LSU (5%)				2.0	1.5	0.7	1.4	1.6	2.6	2.0	0.4	2.9	92	2448	3.8	2.1	1.5	2.7	1.5	0.3	2.9	123	3222	1.5	1.5	2.7	1.5	0.3	2.9	123	3222		

** Highest Yielding Hybrid

* Not Significantly Different from Highest Yielding Hybrid

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OSU NW Experiment Station, Matt Davis &
Richard Minyo Hoytville, Ohio
Kyle Huff, Coldwater
Tim Stutzman, Senica

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