

2003

Wisconsin Corn Hybrid Performance Trial Results

Grain and Silage



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2003 WISCONSIN CORN HYBRID PERFORMANCE TRIALS GRAIN AND SILAGE

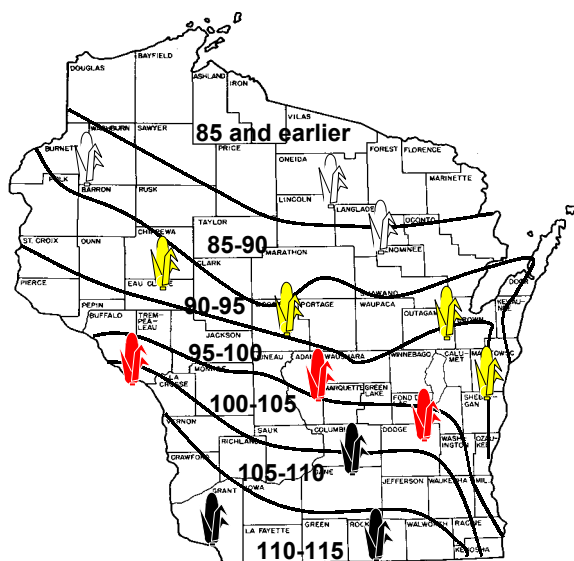
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The University of Wisconsin Extension-Madison and College of Agricultural and Life Sciences conduct a hybrid corn evaluation program, in cooperation with the Wisconsin Crop Improvement Association. The purpose of this program is to provide unbiased performance comparisons of hybrid seed corn available in Wisconsin. These trials evaluate corn hybrids for both grain and silage production performance.

TESTING PROCEDURE

In 2003, grain and silage performance trials were planted at thirteen locations in four production zones. Both seed companies and university researchers submitted hybrids. Companies with hybrids included in the 2003 trials are listed in Table 1. At most locations trials were divided into *early* and *late* maturity trials, based on the hybrid Relative Maturities **provided by the companies**. The specific Relative Maturities separating early and late trials are listed below.

Map: Wisconsin Relative Maturity Belts and test sites.



Grain			
	Southern Zone	Early Maturity Trial: 105-day or earlier	Table 4
	Arlington, Janesville, Lancaster	Late Maturity Trial: later than 105-day	Table 5
	South Central Zone	Early Maturity Trial: 100-day or earlier	Table 6
	Fond du Lac, Galesville, Hancock (irrigated)	Late Maturity Trial: later than 100-day	Table 7
	North Central Zone	Early Maturity Trial: 90-day or earlier	Table 8
	Chippewa Falls, Marshfield, Seymour, Valders	Late Maturity Trial: later than 90-day	Table 9
	Northern Zone		Table 10
	Spoooner (three sites), White Lake		
Silage			
	Southern Zone	Early Maturity Trial: 105-day or earlier	Table 11
	Arlington and Lancaster	Late Maturity Trial: later than 105-day	Table 12
	South Central Zone	Early Maturity Trial: 100-day or earlier	Table 13
	Fond du Lac and Galesville	Late Maturity Trial: later than 100-day	Table 14
	North Central Zone	Early Maturity Trial: 90-day or earlier	Table 15
	Chippewa Falls, Marshfield, Valders	Late Maturity Trial: later than 90-day	Table 16
	Northern Zone		Table 17
	Spoooner (two sites), Rhinelander		

CULTURAL PRACTICES

The seedbed at each location was prepared by either conventional or conservation tillage methods. Fertilizer was applied as indicated by soil tests. Herbicides were applied for weed control and supplemented with cultivation when necessary. Corn rootworm insecticide was applied when the previous crop was corn. Information for each location is summarized in Table 3.

PLANTING

A corn planter with cone units was used at all locations. Two- or four-row plots were planted at all locations. Twenty-five foot long plots were over planted and hand thinned to achieve as near a uniform stand as possible. Each hybrid was grown in at least three separate plots (replicates) at each location to account for field variability.

GROWING CONDITIONS FOR 2003

Seasonal precipitation and temperature at the trial sites are shown in Table 2. The southwestern quadrant of Wisconsin was affected by a drought where little rain fell from mid-July through August. Grain and silage yields were quite variable. Both grain and silage yields were above normal in northeastern Wisconsin. Spring planting conditions were good until May 4 after which conditions were cooler and dryer than average. Plant emergence and stands were above average and the condition of the crop looked good through the end of July. Corn development was somewhat behind average due to cool early growing conditions, but development caught up and was average by mid-July due hot, dry conditions. Dry, hot weather during pollination lowered yields in southwestern Wisconsin, especially for late-planted corn and longer-season relative maturity hybrids. Growing degree unit accumulation was slightly behind average throughout the entire growing season. Corn silage harvest began earlier than normal on sites affected by the drought. A killing frost did not occur until early-October. Plant standability was poor in drought affected trials. During the fall harvest season, yields were generally good to excellent, and moisture was low decreasing drying costs.

HARVESTING

Grain: Plots were harvested with a self-propelled corn combine. Lodged plants and/or broken stalks were counted, plot grain weights and moisture contents were measured and yields were calculated and adjusted to 15.5% moisture.

Silage: Whole-plant (silage) plots were harvested using a tractor driven, three-point mounted one-row chopper. One row was analyzed for whole plant yield and quality. Kernel milk percent, plot weight, and moisture content were measured, and yields were adjusted to tons dry matter / acre. A sub-sample was collected and analyzed using near infra-red spectroscopy.

PRESENTATION OF DATA

Yield results for individual location trials and for multi-location averages are listed in Tables 4 through 18. Within each trial, hybrids are ranked by moisture, averaged over all 2003 trials conducted in that zone. Yield and moisture data for both 2002 and 2003 are provided if the hybrid was entered previously in the 2002 trials. A two-year average for yield is calculated using location data for replications. A **hybrid index** at the back of this report lists relative maturity ratings, specialty traits and locations tested for each hybrid.

RELATIVE MATURITY

Seed companies use different methods and standards to classify or rate the maturity of corn hybrids. To provide corn producers a “standard” maturity comparison for the hybrids evaluated, the *average* grain moisture of all hybrids rated by the Minnesota Relative Maturity rating system are shown in each table. Minnesota Relative Maturity ratings are rounded to 5-day increments.

The Minnesota Relative Maturity rating system categorizes corn hybrids into relative maturity groups by comparing harvest grain moisture of a hybrid to the moisture of standard hybrids for each group (see *Minnesota Relative Maturity Rating of Corn Hybrids*, Agriculture Extension Service, University of Minnesota, Agronomy No. 27). In these Wisconsin results hybrids with **lower** moisture than a particular relative maturity average

are likely to be **earlier** than that relative maturity, while those with **higher** grain moisture are most likely **later** in relative maturity.

Maturity ratings can be found in Table 1 where company maturity ratings, Minnesota Relative Maturity ratings, and Wisconsin Grain and Silage Relative Maturity (GRM and SRM) rating are listed. The Wisconsin ratings are grain or silage moisture at harvest compared to company maturity ratings. Each hybrid in a trial is rated and averaged over all trials in a zone.

PERFORMANCE INDEX

Three factors—yield, moisture, and standability—are of primary importance in evaluating and selecting corn hybrids. A **performance index** (P.I.), which combines these factors in one number, was calculated for multi-location averages for grain trials. This performance index evaluates yield, moisture, and lodged stalks at a 50 (yield): 35 (moisture): 15 (lodged stalks) ratio.

The performance index was computed by converting the yield, dry matter, and upright stalk values of each hybrid to a percentage of the test average. Then the performance index for each hybrid that appears in the tables was calculated as follows:

$$PI = [(Yield \times 0.50) + (Dry \ matter \times 0.35) + (Upright \ stalks \times 0.15)] / 100$$

SILAGE QUALITY

Corn silage quality was analyzed using near infrared spectroscopy equations derived from previous work of Drs. Jim Coors and Joe Lauer (UW-Madison). Plot samples were dried, ground and analyzed for crude protein (CP), acid detergent fiber (ADF), neutral detergent fiber (NDF), *in vitro* cell wall digestibility (NDFD), *in vitro* digestibility (IVD), and starch. Spectral groups and outliers were checked using wet chemistry analysis.

MILK2000 silage performance indices, milk per ton and milk per acre, are calculated using an adaptation by Eric Schwab and Randy Shaver (UW-Madison Dairy Science Department) of the MILK95 model (Undersander, Howard and

Shaver; Journal Production Agriculture 6:231-235). In **Milk2000**, the energy content of corn silage was estimated using a modification of a published summative energy equation (Weiss and co-workers, 1992; Animal Feed Science Technology 39:95-110). In the modified summative equation, CP, fat, NDF, starch, and sugar plus organic acid fractions were included along with their corresponding total-tract digestibility coefficients for estimating the energy content of corn silage. A regression equation developed from literature data was used to predict total tract starch digestibility from the samples whole-plant dry matter content. The samples lab measure of NDFD was used for the NDF digestibility coefficient. Digestibility coefficients used for the CP, fat, and sugar plus organic acid fractions were constants. Dry matter intake was estimated using the samples NDF and NDFD content assuming a 1350 lb. cow consuming a 30% NDF diet. Using National Research Council (NRC, 2000) energy requirements, the intake of energy from corn silage was converted to expected milk per ton. Because the cows maintenance energy requirements were partitioned against the total diet in **MILK2000** rather than against only corn silage as was done in MILK95, there was a base increase in our new estimate of milk per ton which was of equal value across all samples that did not influence ranking. Milk per acre was calculated using milk per ton and dry matter yield per acre estimates.

LEAST SIGNIFICANT DIFFERENCE

Variations in yield and other characteristics occur because of variations in soil and other growing conditions that lower the precision of the results. Statistical analysis makes it possible to determine, with known probabilities of error, whether a difference is real or whether it might have occurred by chance. Use the appropriate LSD (least significant difference) value at the bottom of the tables to determine true differences.

Least significant differences (LSD's) at the 10% level of probability are shown. Where the difference between two selected hybrids within a column is equal to or greater than the LSD value at the bottom of the column, you can be sure in nine out of ten chances that there is a real difference

between the two hybrid averages. If the difference is less than the LSD value, the difference may still be real, but the experiment has produced no evidence of real differences. Hybrids that were not significantly lower in performance than the highest hybrid in a particular test are indicated with an asterisk.

HOW TO USE THESE RESULTS TO SELECT TOP-PERFORMING HYBRIDS

The results can be used to provide producers with an *independent, objective* evaluation of performance of unfamiliar hybrids, promoted by seed company sales representatives, compared to competitive hybrids.

Below are suggested steps to follow for selecting top-performing hybrids for next year using these trial results:

1. Use **multi-location average data in shaded areas**. Consider single location results with extreme caution.
2. Begin with trials in the zone(s) nearest you.
3. Compare hybrids with similar maturities within a trial. You will need to divide most trials into at least two and sometimes three groups with similar average harvest moisture—within about 2% range in moisture.
4. Make a list of 5 to 10 hybrids with highest 2003 Performance Index within each maturity group within a trial.
5. Evaluate **consistency of performance** of the hybrids on your list over years and other zones.
 - a) Scan 2002 results. **Be wary** of any hybrids on your list that had a 2002 Performance Index of 100 or lower. Choose two or three of the remaining hybrids that have relatively high Performance Indexes for **both** 2002 and 2003.
 - b) Check to see if the hybrids you have chosen were **entered in other zones**. (For example, some hybrids entered in the Southern Zone Trials, Tables 4 and 5, are also entered in the South Central Zone Trials, Tables 6 and 7).
 - c) **Be wary** of any hybrids with a Performance Index of 100 or lower for 2002 or 2003 in any other zones.

6. Repeat this procedure with about three maturity groups to select top-performing hybrids with a range in maturity, to spread weather risks and harvest time.
7. Observe relative performance of the hybrids you have chosen based on these trial results in several **other reliable, unbiased trials** and **be wary** of any with inconsistent performance.
8. You might consider including the hybrids you have chosen in your own test plot, primarily to evaluate the way hybrids stand after maturity, dry-down rate, grain quality, or ease of combine-shelling or picking.
9. Remember that you don't know what weather conditions (rainfall, temperature) will be like next year. Therefore, the most reliable way to choose hybrids with greatest chance to perform best next year on your farm is to consider performance in 2002 and 2003 over a wide range of locations and climatic conditions.

You are taking a tremendous gamble if you make hybrid selection decisions based on 2003 yield comparisons in only one or two local test plots.

OBTAINING DATA ELECTRONICALLY

This report is also available on the internet at <http://corn.agronomy.wisc.edu>. Hybrid performance for the last 10 years can be summarized using **SELECT** at the above internet address. This book can be downloaded over the internet in Microsoft Excel and Acrobat PDF formats.

Table 1. Companies with hybrids included in 2003 trials

Brand	Company	Address	City	State	Zip
Ag+ Seeds	Elk Mound Seed Company	308 Railroad Ave	Elk Mound	WI	54739
AgriGold	AgriGold Hybrids	R.R. 1 Box 203	St. Francisville	IL	62460
Agripro	Garst Seed Company	5366 Lee Lane	Coon Valley	WI	54623
Asgrow	Monsanto Co.	3100 Sycamore Road	Dekalb	IL	60115
Badgerland	Badgerland Seeds	N7416 Co Rd I	Juneau	WI	53039
Baldrige Hybrids	Baldrige Hybrids	P.O. Box 99	Cherry Fork	OH	45618
Bio Gene	Bio Gene Seeds	5491 Tri-County Hwy	Sardinia	OH	45171
Brown	Brown Seed, Inc.	N1279 530th Street, P.O. Box 7	Bay City	WI	54723
Brunner	Brunner Seed Farm	W3850 U.S. Hwy 10	Durand	WI	54736
Carharts Blue Top	Carhart's Blue Top Seed, Inc.	N14743 County Road M	Galesville	WI	54630
Cornelius	Cornelius Seed	14760 317th Ave	Bellevue	IA	52031
Croplan Genetics	Croplan Genetics	180 Lynne Trail	Oregon	WI	53575
Crows	Crows Hybrids	P.O. Box 157	Kentland	IN	47951
Dahlman	Dahlman Seed Co. LLP	73504 200th Street	Dassel	MN	55325
Dairyland	Dairyland Seed Co, Inc.	P.O. Box 958	West Bend	WI	53095
Dekalb	Monsanto Co.	3100 Sycamore Road	Dekalb	IL	60115
Dynagro	UAP Great Lakes	221 W. Lake Lansing Rd 102	East Lansing	MI	48823
Foundation Direct	Foundation Direct Seeds	634 13th Ave N	Onalaska	WI	54650
Garst	Garst Seed Company	5366 Lee Lane	Coon Valley	WI	54623
Gold Country	Gold Country Seed, Inc.	16506 Hwy 15 N. P.O. Box 0604	Hutchinson	MN	55350
Golden Harvest	Golden Harvest	27525 135th Ave. North	Cordova	IL	61242
Great Lakes	Great Lakes Hybrids	9915 W. M-21 P.O. Box 637	Ovid	MI	48866
Growmark	Growmark, Inc.	1701 Towanda Ave	Bloomington	IL	61701
High Cycle	Trelay Seeds	11623 Hwy 80	Livingston	WI	53554
Hughes	Hughes Hybrids	206 North Hughes Rd	Woodstock	IL	60098
Hyland Seeds	Hyland Seeds	2 Hyland Drive, P.O. Box 130	Blenheim	Ontario	Canada
Jeske	Jeske Seed Farm	W8598 Cty Rd S	Hortonville	WI	54944
Johnson Seeds	Johnson Seeds, Inc.	72700 185th Street	Dassel	MN	55325
Jung	Jung Seed Genetics, Inc.	341 South High Street	Randolph	WI	53956
Kaltenberg	Kaltenberg Seeds	5506 State Hwy 19	Waunakee	WI	53597
Kruger	Kruger Seed Company	33938 160th Street Box A	Dike	IA	50624
Kussmaul	Kussmaul Seed Company	9020 Hwy 18	Mt. Hope	WI	53816
La Crosse Forage	La Crosse Forage	P.O. Box 995	La Crosse	WI	54602
Lemke	Lemke Seed Farms, Inc.	10220 North Granville	Mequon	WI	53097
LG Seeds	LG Seeds	22827 Shissler Rd	Elmwood	IL	61529
Midwest	Midwest Seed Genetics	P.O. Box 518	Carroll	IA	51401
Mycogen	Mycogen Seeds	9330 Zionsville Road	Indianapolis	IN	46268
NK Brand	Syngenta Seeds, Inc.	933 Fly Wheel Circle	DeForest	WI	53532
North-Gro	North-Gro Seeds, Inc.	613 North Randolph Street	Cuba City	WI	53807
O'Brien	O'Brien Farms, Inc.	552 Glenway Road	Brooklyn	WI	53521
Ottillie	Ottillie RO Seed	1462 Sanford Ave.	Marshalltown	IA	50158
Pilgrim Seed	Elk Mound Seed Company	308 Railroad Ave	Elk Mound	WI	54739
Pioneer	Pioneer Hi-Bred Int'l.	99 Navaho Ave Ste 101-A	Mankato	MN	56001
Ragt Semences	Ragt Semences	Site de Bourran, Ave. St. Pierra BP 3357	12 033 Rodez Cedex 9		France
Renk	Renk Seed Company	6800 Wilburn Road	Sun Prairie	WI	53590
Spangler	Spangler Seedtech, Inc.	803 West Racine Street	Jefferson	WI	53549
Trelay	Trelay Seeds	11623 Hwy 80	Livingston	WI	53554
Wisconsin	UW Agronomy	1575 Linden Drive	Madison	WI	53706
Wolf River Valley	Wolf River Valley Seeds	N2976 Hwy M	White Lake	WI	54491
Wyffels	Wyffels Hybrids	13344 U.S. Hwy 6	Genesco	IL	61254

Table 2. 2003 Temperature and Precipitation Summary

Location		May		June		July		August		September	
		Average	Departure	Average	Departure	Average	Departure	Average	Departure	Average	Departure
	Precipitation	Total	Departure	Total	Departure	Total	Departure	Total	Departure	Total	Departure
Arlington	Temperature	55.6	-1.5	66.0	-0.6	71.1	0.6	71.6	3.1	60.9	0.4
	Precipitation	3.8	0.4	3.3	-0.7	3.3	-0.6	1.8	-2.5	4.0	0.3
Chippewa Falls (Eau Claire)	Temperature	56.2	-1.8	65.9	-0.9	70.8	-0.6	72.5	3.5	60.2	0.8
	Precipitation	4.5	0.8	3.4	-0.9	3.5	-0.4	0.3	-4.4	2.1	-1.6
Fond du Lac	Temperature	54.8	-3.1	63.9	-3.2	69.5	-2.3	71.0	1.5	60.9	-0.4
	Precipitation	3.5	0.5	2.7	-0.8	4.2	0.7	1.2	-3.0	3.3	-0.2
Galesville (Trempealeau Dam #6)	Temperature	58.2	-1.6	66.8	-1.8	72.2	-0.6	74.2	3.9	63.0	1.3
	Precipitation	4.5	0.8	2.3	-1.5	2.0	-2.3	1.9	-2.6	2.3	-1.5
Hancock*	Temperature	55.0	-1.5	65.2	-0.5	69.7	0.1	71.5	4.2	61.4	2.4
	Precipitation	5.3	1.9	3.4	-0.4	2.3	-1.9	0.7	-3.6	2.9	-0.7
	Irrigation	1.5		3.0		6.3		6.8		2.0	
Janesville (Beloit)	Temperature	56.3	-2.5	65.6	-3.0	71.9	-0.5	73.9	3.8	63.5	1.2
	Precipitation	8.2	4.8	2.5	-2.1	5.1	1.3	1.1	-3.2	2.6	-1.1
Lancaster	Temperature	55.8	-1.9	65.1	-1.8	70.6	-0.5	72.9	4.0	61.4	0.9
	Precipitation	6.3	2.6	3.2	-1.6	3.5	-0.6	0.7	-3.9	2.9	-0.3
Marshfield	Temperature	54.7	-1.1	63.6	-1.7	68.7	-1.1	70.9	3.7	60.3	2.5
	Precipitation	3.9	0.2	2.8	-1.3	1.5	-2.5	0.9	-3.4	2.2	-1.8
Rhinelanders*	Temperature	50.2	-3.8	60.0	-2.5	65.3	-1.9	66.8	1.7	56.5	0.6
	Precipitation	2.0	-1.4	1.3	-2.7	4.0	-0.1	0.8	-3.6	1.9	-2.3
	Irrigation	0.0		0.3		2.7		1.8		0.4	
Seymour (Green Bay)	Temperature	53.1	-3.3	63.2	-2.2	67.9	-2.0	69.1	1.6	60.7	1.9
	Precipitation	3.2	0.4	3.7	0.3	4.3	0.8	4.2	0.4	3.3	0.2
Spooner*	Temperature	55.6	-1.5	64.7	-0.4	68.9	-0.5	71.6	4.4	61.0	2.6
	Precipitation	4.7	1.6	5.4	1.4	2.9	-1.3	1.6	-3.1	3.3	-0.4
	Irrigation	0.0		1.4		2.4		2.7		0.9	
Valders (Manitowoc)	Temperature	49.6	-5.0	61.4	-2.7	68.8	-1.1	70.5	2.0	60.8	0.1
	Precipitation	4.2	1.4	3.2	-0.1	2.4	-1.1	3.4	-0.4	2.2	-0.9
White Lake (Antigo)	Temperature	52.7	-1.2	62.3	-0.3	66.9	-0.1	67.9	3.0	58.0	2.6
	Precipitation	3.8	0.8	3.4	-0.3	2.2	-1.8	2.4	-1.8	4.2	0.2

*Irrigation applied at Hancock, Rhinelanders and Spooner - Irrigated Sand Trials.

Table 3. Individual Trial Information - 2003 Trials

Location	Cooperators	Soil Type	Previous Crop	Row Width (in)	Planting Date	Harvest Dates	Ave. Final Stand (plants/A)	Tillage Operations	--Soil Test--			actual (lb/a)	--Nitrogen Fertilizer--		Weed Control	Insecticides
									pH	P	K		form	time		
Arlington	S.Kraak J. Quimby	Plano Silt Loam	Soybean	30	3-May	G:16-Oct S: 11-Sept	G: 27900 S: 31400	Chisel Field Cultivator Soil Finisher	6.7	70	164	150 9	46-0-0 6-24-24	preplant planting	Harness 2.5 pt/A Hornet 3.0 oz/A Callisto 3.0 oz/A cultivate	None
Chippewa Falls	J. Clark	Sattre Silt Loam	Soybean	30	29-Apr	G: 24-Sept S: 3-Sept	G: 29000 S: 31500	Field Cultivator	6.8	26	88	150 9	28-0-0 6-24-24	preplant planting	Harness 1.6 pt/A Hornet 3.0 oz/A cultivate	None
Fond du Lac	E. Montsma M. Rankin	Virgil Silt Loam	Soybean	30	3-May	G: 22-Oct S: 16-Sept	G: 26800 S: 30400	Field Cultivator	6.7	31	77	9 120	6-24-24 28-0-0	planting preemerge	Basis 0.33 oz/A Lumax 5.0 pt/A cultivate	
Galesville	K. Congdon J. Zander	Downs Silt Loam	Soybean	30	28-Apr	G: 20-Oct S: 10-Sept	G: 28100 S: 31800	V-ripper Field Cultivator	6.2	36	136	160 9	46-0-0 6-24-24	preplant planting	Dual II 2.25 pt/A Hornet 3.0 oz/A Clarity 4.0 oz/A cultivate	None
Hancock Irrigated	J. Breuer C. Kostichka	Plainfield Sand	Soybean	30	24-Apr	G: 15-Oct	G: 27700	Moldboard Plow Disk	7.1	109	93	9 204	6-24-24 34-0-0	planting post	Aatrex 4L 0.75 lb/A Lasso 2.0 qt/A Callisto 3.0 oz/A	None
Janesville	B. Jaynes J. Stute	Plano Silt Loam	Soybean	30	25-Apr	G: 21-Oct	G: 28700	Chisel Plow Field Cultivator	6.9	59	174	100 9	28-0-0 6-24-24	preplant planting	Dual II 1.8 pt/A Hornet 4.5 oz/A Callisto 3.0 oz/A Steadfast 0.75 oz/A cultivate	None
Lancaster	T. Wood	Fayette Silt Loam	G: Soybean S: Soybean	30 30	28-Apr 28-Apr	G: 7-Oct S: 9-Sept	G: 27600 S: 29800	Soil Finisher	G: 7.1	48	138	140 9	46-0-0 6-24-24	preplant planting	Aatrex 4L 1.0 qt/A Harness 1.0 qt/A Accent 0.33 oz/A Northstar 4.0 oz/A cultivate	None
Marshfield	M. Bertram T. Drendel	Withee Silt Loam	Alfalfa	30	1-May	G: 8-Oct S: 8-Sept	G: 26700 S: 28500	Chisel Plow Disk Field Cultivator	6.2	70	190	9 45 13000 gal/A	6-24-24 28-0-0 Manure	planting post preplant	Harness 1.8 pt/A Hornet 2.4 oz/A Atrazine 4L 1.1 qt/A Permit 1.07 oz/A cultivate	Force 4.4 lbs/A
Rhineland	B. Bowen S. Woodford	Vilas Loamy Sand	Corn	30	20-May	S: 22-Sept	S: 32000	Chisel Plow Disk	5.8	170	125	57 110	19-19-19 34-0-0	planting post	Harness Extra 1.75 qt/A	
Seymour	R. Vanden Heuvel Z. Miller	Clay Loam	Corn	30	2-May	G: 24-Oct	G: 28500	Chisel Plow Soil Finisher	7.1	22	119	9 9000 gal/A	6-24-24 Manure	planting post	Accent 0.67 oz/A Atrazine 0.5 lb/A Callisto 3.0 oz/A cultivate	Force 4.4 lbs/A
Spooner Dryland	P. Holman Y. Berger	Cress Sandy Loam	Alfalfa	30	8-May	G: 23-Sept	G: 30400	Moldboard Plow Disk	6.5	100	121	22 161	13-16-18-8s 46-0-0	planting post	Dual II Mag 1.0 pt/A Hornet 4.0 oz/A	None
Spooner Irrigated	P. Holman Y. Berger	Cress Sandy Loam	Alfalfa	30	8-May	G: 21-Oct S: 15-Sept	G: 30400 S: 35600	Moldboard Plow Disk	6.5	100	121	22 161	13-16-18-8s 46-0-0	planting post	Dual II Mag 1.0 pt/A Hornet 4.0 oz/A	None
Spooner Silt Loam	P. Holman Y. Berger	Miami Silt Loam	Soybean	30	16-May	G: 14-Oct S: 9-Sept	G: 30900 S: 34100	Moldboard Plow Disk	7.0	23	56	22 120	13-16-18-8s 46-0-0	planting post	Dual II Mag 1.0 pt/A Hornet 4.0 oz/A Accent 0.67 oz/A	None
Valders	T. & B. Maney	Kewaunee Clay Loam	Corn	30	2-May	G: 24-Oct S: 23-Sept	G: 26000 S: 28600	Chisel Plow Field Cultivator	6.9	91	186	9 7500 gal/A 20 Ton	6-24-24 Manure Manure	planting preplant	Dual II Mag 1.0 pt/A Accent Gold 2.0 oz/A Banvel 2.0 oz/A cultivate	Force 4.4 lbs/A
White Lake	J. Wahleithner	Antigo Silt Loam	Soybeans	30	29-Apr	G: 25-Oct	G: 29000	Disk	6.5	58	144	9 100	6-24-24 32-0-0	planting preplant	Atrazine 1.0 lb/A Harness 2.0 pt/A cultivate	None

Note: G=Grain, S=Silage

Table 4. Southern Zone - Early Maturity Grain Trial (page 1 of 2)

105 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (ARLINGTON = ARL, JANESVILLE = JAN, LANCASTER = LAN)

BRAND	HYBRID	Genes [†]	2003									2002					2 YEAR	
			AVERAGE						ARL	JAN	LAN	AVERAGE			ARL	JAN	LAN	AVERAGE
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
OBrien	OB954Bt	G	190	103 *	17.1	58	1	197 *	194	178								
Kruger	K9002YGCB	G	189	102 *	17.5	58	3	177	211 *	179	203	104 *	194 *	193	224		196 *	
Jung	6560A	GJ	168	97	17.8	56	0	164	175	166								
Kruger	EX303YGCB	G	179	99	18.0	57	2	173	189	176								
Kruger	K9203YGCB	G	184	101	18.4	55	1	188	199	165								
Dekalb	DKC5245(YGCB)	G	191	103 *	18.4	57	0	210 *	186	178								
Dekalb	DKC5018(YGCB)	G	182	100	18.6	58	0	198 *	186	160								
Mycogen	4521Bt	G	183	100	18.7	58	3	183	190	175								
Renk	RK772YGCB	G	190	102 *	18.9	55	1	201 *	183	186 *								
NK Brand	N50P5	GD	194 *	103 *	19.1	56	2	194 *	198	189 *								
Croplan Genetics	401Bt	G	192	102 *	19.1	59	0	202 *	192	180								
Mycogen	2M527		190	102 *	19.3	55	1	192 *	203	175								
Jung	2565		174	97	19.3	57	2	171	197	153	197	103	183	213 *	196		185	
Renk	RK636YGCB	G	193	103 *	19.8	55	0	204 *	190	187 *								
Asgrow	RX499YG	G	187	101	19.8	57	1	196 *	203	163								
Brown	6079		174	97	19.8	54	1	177	199	147	197	102	198 *	203 *	190		186	
100-DAY HYBRID TRIAL AVERAGE##					19.9													
Kruger	K9404YGCB	G	172	97	20.0	59	0	164	179	172								
Crows	2192B	G	179	98	20.2	58	5	186	181	170								
Midwest	G7221B	G	192	102 *	20.2	57	4	188	197	192 *								
Renk	RK633YGCB	G	194 *	102 *	20.4	57	4	195 *	197	191 *								
Cornelius	C443YG	G	186	100	20.5	55	0	195 *	186	177								
Croplan Genetics	501RRBt	GX	200 *	104 *	20.7	55	0	201 *	216 *	184 *								
Hughes	4762	G	195 *	102 *	20.8	56	2	195 *	215 *	175								
Growmark	FS4453		195 *	102 *	20.8	56	2	204 *	192	188 *	188	100	187	187	191		191	
Growmark	FS4882		183	99	20.8	55	1	196 *	190	164								
Dekalb	DKC5334(RRYGCB)	GH	185	100	20.9	56	1	204 *	200	153	216 *	106 *	205 *	214 *	231		201 *	
Spangler	5300G	G	181	99	20.9	57	0	180	196	165								
Cornelius	C430YG	G	188	100	21.0	56	2	201 *	187	176								
Jung	6580	G	177	97	21.0	59	2	176	199	156	201	103	177	191	235 *		189	
Dynagro	55P63	GX	180	98	21.1	57	1	188	181	170								
Carharts Blue Top	CX1057Bt	G	184	99	21.1	56	2	193 *	190	170								
Brown	5345YGCB	G	181	98	21.2	56	2	182	188	172								
105-DAY HYBRID TRIAL AVERAGE##					21.3													
Kruger	K9306YGCB	G	199 *	103 *	21.3	54	1	212 *	198	189 *	208 *	104 *	202 *	209 *	213		204 *	
Garst	8647		182	99	21.3	56	1	195 *	185	165								
Jung	2545		188	100	21.4	56	1	192 *	202	171								
Pioneer	35R57		203 *	104 *	21.4	56	0	212 *	209 *	188 *	183	98	190	184	174		193	
Ottilie	4102	G	193	102 *	21.4	55	1	202 *	197	181 *								
LG Seeds	LG2513Bt	G	192	101	21.6	56	1	198 *	194	184 *								
AgriGold	A6305Bt	G	183	98	21.6	56	3	199 *	187	163								
Croplan Genetics	503Bt	G	196 *	103 *	21.6	56	0	191	199	198 *	207 *	104 *	197 *	194	232		202 *	
Great Lakes	5300Bt	G	181	98	21.8	56	1	198 *	186	159								
Cornelius	C417YG	G	189	100	21.9	56	0	188	204 *	175								
Kaltenberg	K5009Bt	X	158	92	21.9	55	1	164	162	148								

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Table 4 (continued). Southern Zone - Early Maturity Grain Trial (page 2 of 2)

105 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (ARLINGTON = ARL, JANESVILLE = JAN, LANCASTER = LAN)

BRAND	HYBRID	Genes [†]	2003									2002					2 YEAR	
			AVERAGE						ARL	JAN	LAN	AVERAGE			ARL	JAN	LAN	AVERAGE
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
AgriGold	XA5234		200 *	103 *	22.0	54	4	200 *	211 *	188 *								
Wyffels	W3813	G	188	100	22.0	55	1	204 *	184	177	210 *	105 *	195 *	202 *	232			199 *
Trelay	7012		203 *	104 *	22.1	55	0	207 *	220 *	182 *	189	99	183	186	198			196 *
Dairyland	Stealth 5104	G	203 *	104 *	22.1	56	0	199 *	206 *	203 *								
AgriGold	A6375		184	99	22.2	55	2	188	194	169								
Spangler	5003G	G	206 *	105 *	22.2	56	0	207 *	216 *	195 *	210 *	104 *	189	196	244 *			208 *
La Crosse Forage	LC7973Bt	X	154	91	22.2	55	0	145	170	147								
Renk	RK700YGCB	G	197 *	102 *	22.4	55	1	204 *	209 *	179	212 *	105 *	190	204 *	242 *			205 *
Kussmaul	SB305RR	J	178	97	22.4	56	2	187	173	172								
Kussmaul	K405		188	100	22.6	56	1	196 *	181	189 *								
LG Seeds	LG2533		198 *	102 *	22.6	54	1	201 *	203	190 *	207 *	104 *	202 *	206 *	213			203 *
Kruger	K9206YGRW	N	185	99	22.7	56	2	195 *	181	180								
Kussmaul	K505		197 *	102 *	23.0	56	0	203 *	211 *	177								
Brown	6220		186	99	23.1	55	1	191	196	171								
Dynagro	55N37		193	101	23.1	55	1	197 *	195	186 *	184	98	177	189	187			188
Great Lakes	5377		183	98	23.1	55	1	190	186	173								
North-Gro	5909		184	98	23.2	55	1	187	192	172	192	100	184	198	195			188
Dairyland	Stealth 1605		182	98	23.4	55	1	186	189	172	189	99	184	200 *	186			186
Brown	5636		157	91	23.5	55	1	161	180	131								
Kruger	K9206YGCB	G	193	101	23.8	55	0	207 *	189	184 *								
Ottillie	4594	G	196 *	101	23.8	55	0	206 *	199	183 *								
MEAN			187	100	21.0	56	1	192	194	175	190	100	182	191	198			195
LSD(0.10)**			12	3	1.2	1	2	20	16	22	17	4	16	15	18			13

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 5 (continued). Southern Zone - Late Maturity Grain Trial (page 2 of 2)

106 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (ARLINGTON = ARL, JANESVILLE = JAN, LANCASTER = LAN)

BRAND	HYBRID	Genes†	2003							2002			2 YEAR			
			AVERAGE					ARL	JAN	LAN	AVERAGE			AVERAGE		
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A		
North-Gro	7071Y	G	195	101	24.5	53	2	189	215 *	181						
Bio Gene	BG1111		191	99	24.6	53	2	196 *	203	173						
Cornelius	C599		190	99	24.7	54	1	193 *	186	190						
Kaltenberg	K6767Bt	X	202	102 *	24.7	52	1	198 *	226 *	184						
Brown	6895YGCB	G	192	99	24.8	52	2	181	215 *	178	208	101	190	195	238 *	200
Hughes	5743	G	195	101	24.8	54	0	184	205	196 *						
Kruger	K9910YGCB	G	190	99	24.8	52	3	182	201	186	218 *	104 *	203	203	248 *	204
Cornelius	C637YG	G	184	98	24.9	53	0	187	199	167						
110-DAY HYBRID TRIAL AVERAGE##			24.9													
Pioneer	34B23		189	99	25.0	57	2	170	207	189						
Great Lakes	5961Bt	G	218 *	106 *	25.0	52	1	211 *	223 *	218 *						
Renk	RK789YGCB	G	196	101	25.0	53	1	180	221 *	188						
LG Seeds	LG2540Bt	G	206 *	103 *	25.0	52	1	209 *	215 *	195						
Hughes	5600	G	193	100	25.1	52	2	193 *	205	181	211	102	202	202	228	202
High Cycle	7796Rb	GJ	193	100	25.2	53	2	182	202	195						
Renk	RK837		186	97	25.2	53	4	178	214 *	164						
Dynagro	56N42		192	100	25.2	54	1	192 *	199	187						
Kruger	K9309YGCB	G	186	98	25.2	53	0	183	194	182	214	103 *	212 *	217 *	211	200
Wyffels	W7273	G	191	99	25.3	53	5	195 *	207	172	224 *	104 *	226 *	205 *	240 *	207
Spangler	674G	G	191	99	25.3	52	5	169	209 *	194						
Kruger	K9212RRYGCB	GJ	197	101	25.3	53	3	183	210 *	198 *						
Crows	4911B	G	203	102 *	25.4	52	1	199 *	221 *	189						
Kruger	EX108YGCB	G	194	100	25.6	52	3	185	213 *	183						
Brown	X7171YGCB	G	188	98	25.7	52	1	179	199	186						
Wyffels	W6578	G	199	101	25.7	52	2	187	213 *	196 *						
Growmark	FS5634Bt	G	186	98	25.9	53	0	176	210 *	174						
Carharts Blue Top	CX1080Bt	G	167	93	25.9	51	0	155	187	160						
Croplan Genetics	691BtLL	KD	200	101	26.0	52	2	189	214 *	196 *						
Cornelius	C605YG	G	189	98	26.0	52	3	184	194	189						
Lemke	7068Bt	G	202	102 *	26.0	53	1	198 *	227 *	180						
Jung	6710	G	200	101	26.3	53	1	189	215 *	196 *	222 *	104 *	218 *	219 *	230	211 *
NK Brand	N65Y3	KD	198	101	26.3	53	1	204 *	196	195	220 *	104 *	216 *	213 *	232	209 *
Croplan Genetics	601Bt	G	202	102 *	26.3	54	1	190 *	218 *	197 *						
Wyffels	W5483	G	173	94	26.3	54	0	178	182	159						
Spangler	7558G	G	194	100	26.4	52	0	192 *	203	186	217 *	102	216 *	197	239 *	205
Garst	8556YG1	G	199	101	26.4	53	4	194 *	194	211 *						
High Cycle	7748Bt	G	190	98	26.7	52	6	173	196	202 *						
High Cycle	7807Bt	G	193	99	26.7	50	2	179	216 *	183						
OBrien	OB1113Bt	G	198	100	26.7	53	1	197 *	222 *	177						
Golden Harvest	H9148Bt	G	192	98	26.8	50	3	189	220 *	168						
Wyffels	W5541	G	181	96	26.9	53	0	178	196	170	196	97	187	179	222	189
Ottillie	5267	G	198	100	27.0	53	1	188	217 *	189	216 *	102	207	189	253 *	207
Asgrow	RX702YG	G	201	101	27.2	53	0	199 *	215 *	189						
Pioneer	34N42	L	196	100	27.2	54	1	192 *	203	192						
Cornelius	C707RRYG	GJ	201	100	28.1	52	2	190 *	219 *	193						
Pioneer	33A14	G	198	100	28.1	54	4	188	192	214 *	229 *	105 *	219 *	211 *	257 *	214 *
Kruger	EX414YGCB	G	192	98	28.3	52	1	195 *	197	183						
Kruger	EX412YGCB	G	191	98	28.5	52	0	194 *	200	180						
Kruger	K9314YGCB	G	197	99	28.6	52	0	196 *	208	186						
Kruger	K9314A	G	191	98	28.9	52	0	195 *	196	181						
MEAN			193	100	24.6	53	2	188	206	184	204	100	199	198	215	204
LSD(0.10)**			13	4	1.7	1	3	21	18	22	21	5	17	38	19	12

† Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 6. South Central Zone - Early Maturity Grain Trial (page 1 of 2)

100 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL, HANCOCK = HAN)

BRAND	HYBRID	Genes [†]	2003									2002					2 YEAR	
			AVERAGE						FON	GAL	HAN	AVERAGE		FON	GAL	HAN	AVERAGE	
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A		
Kussmaul	K593		188	99	18.6	58	1	158	177	231								
Renk	RK438YGCB	G	189	99	18.7	58	0	180 *	173	214								
Garst	ND922YG1	G	193	100	19.0	58	0	179 *	181	218								
Spangler	324G	G	190	99	19.0	57	0	179 *	173	219								
Dynagro	53F49	G	193	100	19.3	58	0	185 *	180	213								
Dekalb	DKC4295(RRYGCB)	GH	197	101 *	19.7	57	0	181 *	185	226								
Pilgrim Seed	9601		195	100	19.7	56	1	174 *	177	235	181	95	162	186	194			188
Dairyland	Stealth 1598		187	98	19.8	56	1	150	191	220	211	101	181	235 *	218			199
OBrien	OB954Bt	G	199	101 *	19.8	57	0	175 *	179	242 *								
Growmark	FS3724		191	99	19.8	56	1	150	191	231								
Dekalb	DKC4446(RRYGCB)	GH	203	102 *	19.9	55	0	182 *	202	225	207	101	194	208	220			205
Kussmaul	K595		184	97	19.9	58	0	165	171	215								
Foundation Direct	X103		211 *	104 *	19.9	57	0	177 *	205	250 *								
Midwest	G6963B	G	194	100	19.9	56	0	183 *	190	208								
Kruger	K9002YGCB	G	209 *	103 *	20.0	57	0	161	210	255 *								
Dairyland	Stealth 5497	G	195	100	20.1	56	0	178 *	193	214								
Mycogen	2R426	G	197	101 *	20.1	56	0	183 *	182	226								
Dairyland	Stealth 1497		191	99	20.1	56	1	172	169	231	199	99	177	192	227			195
Carharts Blue Top	CX1956Bt	G	207 *	103 *	20.1	56	0	189 *	191	239 *								
Growmark	FS3584		196	100	20.1	55	1	179 *	180	228								
La Crosse Forage	LC4531		192	99	20.1	55	1	171	179	227								
Bio Gene	BG991		189	98	20.2	55	1	162	195	210								
Jung	2432		199	101 *	20.2	55	1	181 *	186	231								
Kruger	K9496YGCB	G	200	101 *	20.2	56	0	184 *	190	225								
Croplan Genetics	344Bt	G	178	95	20.3	58	0	152	172	209								
LG Seeds	LG2463Bt	G	187	98	20.3	56	0	167	191	203	221	104	218 *	215	231			204
AgriGold	XA6205Bt	X	204	102 *	20.3	56	0	185 *	190	238 *								
Crows	1703B	G	203	102 *	20.4	56	0	188 *	190	230								
Lemke	5015Bt	G	206	102 *	20.4	56	2	164	205	248 *								
Renk	RK622		199	101 *	20.4	56	1	165	201	232	226	104	193	240 *	243			212 *
Croplan Genetics	364Bt	G	195	100	20.4	56	0	174 *	183	229								
Lemke	4011Bt	G	202	101 *	20.4	56	0	171	200	235								
Great Lakes	4623Bt	G	198	101 *	20.5	56	0	173 *	198	222								
Dekalb	DKC4710(RRYGCB)	GH	195	100	20.5	57	0	180 *	188	218								
Johnson Seeds	2151		196	100	20.5	55	1	180 *	171	237 *								
Agripro	8880YG1	G	206	102 *	20.5	55	0	177 *	190	249 *								
Dekalb	DKC4628(RR)	H	203	102 *	20.5	57	1	182 *	193	235	204	100	174	196	243			204
Jung	6432	G	201	102 *	20.5	56	0	183 *	201	218								
Badgerland	BL509Y	X	202	101 *	20.6	56	1	170	191	244 *								
Renk	RK556		192	99	20.6	55	1	166	193	215	206	99	165	226	226			199
LG Seeds	LG2489		198	101 *	20.6	55	1	171	208	215								
95-DAY HYBRID TRIAL AVERAGE##			20.7															
Kussmaul	K499		183	96	20.7	55	2	143	185	221	204	99	182	218	213			194
Brunner	S4993		199	101 *	20.7	56	0	161	198	238 *								
Croplan Genetics	354Bt	G	194	99	20.8	58	0	170	186	226								

CONTINUED.

Table 6 (continued). South Central Zone - Early Maturity Grain Trial (page 2 of 2)

100 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL, HANCOCK = HAN)

BRAND	HYBRID	Genes [†]	2003									2002			2 YEAR		
			AVERAGE						FON	GAL	HAN	AVERAGE		FON	GAL	HAN	AVERAGE
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
Dynagro	53F09	G	195	100	20.8	56	1	189 *	180	217							
AgriGold	XA6302		188	98	20.9	55	1	160	198	206							
Dekalb	DKC4884(RRYGCB)	GH	206	102 *	20.9	56	0	175 *	197	245 *							
Renk	RK488YGCB	G	211 *	103 *	21.0	55	0	188 *	197	247 *							
Golden Harvest	H7108		190	98	21.0	56	2	161	177	233							
Hughes	2970	G	204	101 *	21.1	56	0	161	212	238 *	232 *	106 *	216 *	233 *	249 *	218 *	
Growmark	FS4042Bt	G	207 *	102 *	21.2	56	1	166	205	249 *	236 *	107 *	211 *	242 *	255 *	221 *	
Kaltenberg	K4950		209 *	103 *	21.3	54	2	184 *	201	241 *							
Johnson Seeds	4650		198	100	21.5	54	1	157	202	233							
Pioneer	38A25	G	196	100	21.5	58	0	176 *	183	231							
Pioneer	37R71	G	191	98	21.5	54	0	158	180	235							
Golden Harvest	H7140Bt	G	188	98	21.7	56	0	172	175	219	205	100	177	226	213	197	
100-DAY HYBRID TRIAL AVERAGE##					21.7												
La Crosse Forage	LC7415		186	97	21.9	57	0	148	188	222	185	94	163	185	208	186	
AgriGold	A6235BtRR	XX	196	100	22.2	56	0	181 *	190	217							
High Cycle	7560Bt	G	221 *	105 *	22.2	54	0	184 *	226 *	251 *							
Dekalb	DKC5018(YGCB)	G	209 *	102 *	22.3	55	1	185 *	199	241 *							
Renk	RK633YGCB	G	205	101 *	22.8	55	2	175 *	204	236 *							
Dynagro	55P63	GX	195	99	23.4	54	0	170	198	218							
Johnson Seeds	2247BtRR	XX	189	97	23.7	54	0	163	183	221							
Pioneer	37H26	D	203	100	23.7	58	0	173 *	203	232							
Brown	5636		170	91	23.8	53	1	131	156	224							
Brown	5130YGCB	G	202	100	23.9	54	0	176 *	203	225							
North-Gro	5530Y	G	208 *	101 *	24.1	52	1	176 *	203	244 *							
Dynagro	DG5295Bt	G	200	99	24.2	54	0	171	200	227	224	104	217 *	230	225	212 *	
Brown	5020		205	99	25.4	53	2	162	205	246 *							
Spangler	4203G	X	198	98	26.3	52	3	171	198	225							
MEAN			197	100	21.0	56	1	172	191	229	208	100	186	214	223	202	
LSD(0.10)**			14	4	1.1	1	1	16	12	19	15	4	20	18	18	12	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 7. South Central Zone - Late Maturity Grain Trial (page 1 of 2)

101 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL, HANCOCK = HAN)

BRAND	HYBRID	Genes†	2003									2002			2 YEAR		
			AVERAGE						FON	GAL	HAN	AVERAGE	FON	GAL	HAN	AVERAGE	
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	
Dekalb	DKC5245(YGCB)	G	201	103 *	19.7	56	0	182 *	200	222							
NK Brand	N45A6	KD	199	102 *	19.8	55	0	164	202	231	235 *	107 *	196	237 *	272 *		217 *
Kaltenberg	K5151Bt	X	196	101	20.0	57	2	171	190	225							
High Cycle	7525Bt	G	210 *	105 *	20.2	57	2	180 *	208 *	243 *							
Dahlman	D5102Bt	G	201	102 *	20.3	57	2	171	198	233	238 *	108 *	206	245 *	262 *		219 *
Mycogen	4521Bt	G	200	102 *	20.5	57	2	165	204	231							
Dairyland	Stealth 1502		184	98	20.9	56	1	147	194	211							
Dairyland	Stealth 1602		194	101	20.9	55	1	173	186	224							
Hughes	3030		190	99	21.0	55	1	145	193	231							
Mycogen	2M527		190	99	21.4	54	1	156	196	219							
Jung	6560A	GJ	181	97	21.4	54	0	157	179	207							
Kaltenberg	K5123		189	99	21.6	55	0	157	194	217							
Kruger	EX303YGCB	G	204 *	102 *	21.6	55	1	157	209 *	247 *							
100-DAY HYBRID TRIAL AVERAGE##					21.8												
Jung	6573	G	196	101	22.1	53	0	158	205	226							
Midwest	G7221B	G	197	101	22.1	56	2	165	208 *	219							
Renk	RK772YGCB	G	215 *	105 *	22.2	54	0	187 *	210 *	247 *							
Kruger	K9203YGCB	G	195	100	22.3	53	0	162	201	224							
Renk	RK636YGCB	G	194	100	22.3	53	0	163	197	224							
Kruger	K9404YGCB	G	190	99	22.4	56	0	160	193	217							
Asgrow	RX499YG	G	198	101	22.4	55	0	171	201	222							
NK Brand	N50P5	GD	211 *	104 *	22.5	53	1	182 *	213 *	237 *							
Crows	2192B	G	195	100	22.5	56	2	174	191	220							
Dairyland	Stealth 1503		202	102 *	22.6	54	2	169	207 *	229							
Golden Harvest	H7470Bt	G	187	98	22.7	54	1	159	173	230							
Garst	8787YG1	G	188	98	22.8	56	0	152	203	209							
Jung	6580	G	189	99	22.8	56	1	159	194	215	213	101	168	219	254 *		201
Brunner	EXP104		203 *	102 *	23.0	54	0	177 *	202	229							
Dekalb	DKC5334(RRYGCB)	GH	203 *	102 *	23.0	54	0	171	213 *	225	229 *	105 *	206	232 *	247		216
Spangler	5300G	G	188	99	23.1	54	0	166	207 *	192							
Pioneer	36N71	G	212 *	104 *	23.1	54	1	191 *	206	240 *							
Dynagro	CX03502		186	98	23.2	56	0	155	193	210							
High Cycle	7592Rb	GJ	202	102 *	23.2	56	0	173	216 *	217							
NK Brand	N51Z7	KD	211 *	104 *	23.3	53	1	172	216 *	247 *	229 *	105 *	211	232 *	244		220 *
Golden Harvest	H7900		188	98	23.4	54	0	162	193	209							
Dynagro	DG5440		205 *	103 *	23.4	53	0	187 *	207 *	221	214	99	182	216	243		209
La Crosse Forage	LC7374		160	90	23.5	53	0	114	161	206							
Kruger	K9306YGCB	G	208 *	103 *	23.8	52	0	177 *	192	254 *							
Dairyland	Stealth 1606		204 *	102 *	24.0	52	0	171	223 *	220	220	101	197	220	244		212
AgriGold	A6305Bt	G	198	100	24.0	54	0	175	196	222							
Pioneer	36B08		194	99	24.1	55	1	163	198	222	215	101	186	226	233		205
Trelay	6400		187	97	24.2	53	1	164	194	201	201	96	159	211	233		194
Brown	5345YGCB	G	196	100	24.2	54	0	160	193	236							
105-DAY HYBRID TRIAL AVERAGE##					24.3												
Kruger	K9305YGCB	G	198	100	24.4	53	0	162	194	237 *							

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Table 7 (continued). South Central Zone - Late Maturity Grain Trial (page 2 of 2)

101 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL, HANCOCK = HAN)

BRAND	HYBRID	Genes [†]	2003							2002					2 YEAR	
			AVERAGE				FON	GAL	HAN	AVERAGE		FON	GAL	HAN	AVERAGE	
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
Garst	8647		194	99	24.5	53	1	161	194	227	227 *	104 *	188	252 *	240	210
Trelay	7012		205 *	102 *	24.5	53	0	183 *	213 *	219						
Renk	RK700YGCB	G	204 *	102 *	24.6	53	0	172	212 *	228	216	101	193	218	238	210
Carharts Blue Top	CX1057Bt	G	200	100	24.6	53	0	169	202	228						
Pioneer	35Y55	G	214 *	104 *	24.7	52	0	180 *	205	256 *	240 *	107 *	238 *	229	253 *	227 *
Lemke	5031Bt	G	202	101	24.9	55	0	169	212 *	225						
Foundation Direct	8670		184	96	24.9	53	1	147	175	230						
Jung	6545Bt	G	197	100	24.9	54	0	164	200	226						
Spangler	5003G	G	207 *	102 *	25.0	54	0	178 *	214 *	228	227 *	104 *	213 *	225	244	217 *
AgriGold	XA5234		206 *	102 *	25.0	51	2	169	206	245 *						
Crows	3520B	G	198	100	25.0	53	0	168	198	228	221	102	187	223	255 *	210
Midwest	G7494B	G	195	99	25.1	52	0	165	196	223	233 *	105 *	211	234 *	255 *	214
Dairyland	Stealth 5104	G	197	99	25.2	54	0	167	201	222						
High Cycle	7601Bt	G	205 *	102 *	25.3	54	0	179 *	208 *	227						
Great Lakes	5377		200	100	25.4	53	0	178 *	191	231						
LG Seeds	LG2518		194	99	25.4	53	1	171	201	211						
Dynagro	55N37		199	100	25.4	53	0	169	212 *	216	208	99	177	220	227	204
OBrien	OBX1064RRBt	HX	187	97	25.5	54	0	161	186	215						
OBrien	OB1033RR	J	204 *	101	25.6	54	2	171	215 *	227						
High Cycle	7698Rb	GJ	204 *	101	25.8	51	1	167	211 *	234						
AgriGold	A6333Bt	G	212 *	103 *	25.9	51	0	190 *	222 *	224						
Golden Harvest	H8312		182	95	25.9	53	1	157	184	204						
Brunner	S5202		185	96	26.4	53	0	163	186	205	213	100	206	208	225	199
Dairyland	Stealth 1605		185	96	26.5	52	0	156	195	205						
Kruger	K9310YGCB	G	194	98	26.6	53	0	168	189	226						
Kruger	EX108YGCB	G	196	99	26.7	50	0	169	203	218						
Kruger	K9310AYGCB	G	186	96	27.2	52	1	148	197	214						
Kruger	K9308YGCB	G	198	99	27.5	50	0	169	206	220						
Dairyland	Stealth 1507Bt	G	196	98	27.8	50	1	160	202	228	232 *	104 *	202	247 *	247	214
Kruger	K9910YGCB	G	200	99	28.2	50	1	162	199	240 *						
Carharts Blue Top	CX1080Bt	G	184	94	30.0	49	0	143	187	223						
MEAN			197	100	23.8	54	1	166	200	224	211	100	184	214	234	211
LSD(0.10)**			12	3	1.5	1	1	14	16	19	16	4	26	22	19	10

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 8. North Central Zone - Early Maturity Grain Trial (page 1 of 2)

90 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, SEYMOUR = SEY, VALDERS = VAL)

BRAND	HYBRID	Genes [†]	2003								2002					2 YEAR		
			AVERAGE					CHP	MAR	SEY	VAL	AVERAGE		CHP	MAR	SEY	VAL	AVERAGE
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
LG Seeds	LG2355		142	100	17.7	54	0	91	123	183	170							
Dekalb	DKC3501(RR)	H	128	96	18.3	53	1	103	115	133	159							
Spangler	154G	G	145	100	18.4	54	0	95	127 *	188	173							
Johnson Seeds	4240		137	98	18.4	53	1	96	111	173	170							
Jung	2202		142	100	18.5	55	1	111	118	178	162							
Kussmaul	SB383RR	J	134	96	18.5	55	1	81	111	181	161							
Dairyland	Stealth 1685		143	100	18.5	54	1	101	122	180	167							
Dairyland	Stealth 1280		136	97	18.9	54	1	100	111	179	159							
Ag+ Seeds	6387RR	H	144	99	18.9	55	1	79	121	206	170							
Johnson Seeds	2111RR	X	148	101	19.0	56	0	94	121	201	176							
Renk	RK288		143	101	19.0	54	0	117	119	173	164							
Kussmaul	SB387RR	J	143	99	19.1	56	0	101	115	183	167							
Mycogen	M2E212		132	96	19.1	54	1	105	105	163	158							
85-DAY HYBRID TRIAL AVERAGE##					19.2													
Carharts Blue Top	CR85RR	J	144	100	19.2	56	0	101	115	195	162							
Gold Country	8302RR	X	150	102 *	19.3	55	1	119	122	185	171							
Brunner	B2495		133	94	19.3	52	1	64	102	193	172	164	103	148	195	176	136	148
Garst	8959YG1	G	147	101	19.4	54	1	111	116	182	180							
Dahlman	D4301		148	101	19.5	56	0	101	120	200	173	162	102	153	189	167	139	155
Ag+ Seeds	6290Bt	G	147	100	19.5	56	0	95	126 *	191	174							
Mycogen	2H243	G	145	99	19.8	53	1	99	113	186	174							
Pioneer	39D82	G	142	98	19.8	55	2	98	118	186	165							
Carharts Blue Top	CR840RB	GX	158 *	106 *	19.9	55	1	147 *	122	187	176	171	105	164 *	214 *	170	136	164
Johnson Seeds	2241		136	95	20.0	55	0	81	102	198	159	156	98	136	208 *	164	114	145
Carharts Blue Top	CR8500RB	GX	146	99	20.1	54	0	84	112	206	186	166	103	162 *	193	174	137	157
Spangler	2777RG	GX	150	100	20.1	54	0	89	115	212	180	160	100	147	191	179	123	155
Brown	1811YGCB	G	143	99	20.1	55	1	103	110	185	172							
Lemke	2043RRBt	GX	149	100	20.3	54	0	94	115	215	172							
Jung	6205	GJ	151	102 *	20.4	54	1	112	121	190	177	169	103	155	210 *	195 *	115	159
La Crosse Forage	LC7283		109	86	20.6	54	3	68	94	152	125							
Pilgrim Seed	8601		151	103 *	20.6	56	1	132 *	114	185	171	197 *	112 *	183 *	220 *	213 *	172 *	174 *
Croplan Genetics	294Bt	G	158 *	103 *	20.8	52	0	96	116	229 *	193 *							
Johnson Seeds	3750		145	99	20.9	54	1	107	109	194	167							
Brunner	S3903RRBt	GX	146	99	21.0	54	0	97	117	199	175							
Brunner	S2852RRBt	GX	151	101	21.0	54	1	111	115	193	186	166	102	148	210 *	173	131	159
90-DAY HYBRID TRIAL AVERAGE##					21.2													
Dahlman	D4515	G	161 *	104 *	21.2	53	1	108	121	210	199 *	198 *	113 *	182 *	223 *	210 *	176 *	179 *
Kaltenberg	K2727Bt	X	149	100	21.2	55	0	109	109	202	177							
Dahlman	R45S15	GX	153	101	21.3	54	1	101	119	195	198 *							
Lemke	3081Bt	G	160 *	103 *	21.4	53	2	93	138 *	213	197 *							

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Table 8 (continued). North Central Zone - Early Maturity Grain Trial (page 2 of 2)

90 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, SEYMOUR = SEY, VALDERS = VAL)

BRAND	HYBRID	Genes [†]	2003										2002				2 YEAR	
			AVERAGE					CHP	MAR	SEY	VAL	AVERAGE		CHP	MAR	SEY	VAL	AVERAGE
			Yield bu/A	P.I. #	Moist %	Test Wt.	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A
Dekalb	DKC3948(RRYGCB)	GH	142	97	21.5	53	0	83	121	196	172							
Johnson Seeds	5150		145	98	21.6	52	1	85	117	203	176							
NK Brand	N29A2	GD	157 *	102 *	21.7	53	0	106	122	221 *	174							
High Cycle	7242Bt	G	156 *	101	21.7	53	3	90	129 *	220 *	184							
Dahlman	D4501Bt	G	153	101	21.7	53	0	93	125	208	183	175	105	149	207 *	179	164 *	164
Brown	3000YGCB	G	164 *	105 *	21.8	54	1	126 *	117	215	193 *							
Garst	ND922YG1	G	164 *	105 *	21.8	54	1	127 *	115	214	195 *							
Ragt Semences	MX152		153	101	21.9	53	1	106	113	202	189							
Carharts Blue Top	CR1857RB	GX	160 *	103 *	22.1	54	1	101	131 *	211	195 *							
Dekalb	DKC3947(RR)	H	149	100	22.1	54	1	103	116	199	180	184	109 *	156	210 *	204 *	165 *	167
Wolf River Valley	2490	G	169 *	107 *	22.1	53	2	118	130 *	224 *	206 *							
Ag+ Seeds	5492Bt	G	149	100	22.1	53	1	108	114	193	178							
Ragt Semences	MX155		150	99	22.2	53	3	91	113	209	185							
MEAN			147	100	20.3	54	1	101	117	195	175	159	100	138	197	170	130	160
LSD(0.10)**			14	5	1.7	1	1	24	12	13	13	13	5	24	17	22	20	10

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 9. North Central Zone - Late Maturity Grain Trial (page 1 of 2)

91 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, SEYMOUR = SEY, VALDERS = VAL)

BRAND	HYBRID	Genes [†]	2003								2002					2 YEAR	
			AVERAGE				CHP	MAR	SEY	VAL	AVERAGE		CHP	MAR	VAL	AVERAGE	
			Yield bu/A	P.I. #	Moist Test %	Lodged Wt. %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	
Kussmaul	K492		134	95	18.6	55	0	99	96	183	155						
Dairyland	Stealth 1592		146	98	19.1	55	1	102	111	207	162						
Dairyland	Stealth 7191	GX	145	98	19.6	53	0	96	123	197	166						
High Cycle	7495Rb	GJ	155	101 *	20.3	53	0	109	127	217 *	169						
Jung	6420	GJ	146	98	20.4	53	1	97	119	198	170						
Brunner	S3630RR	X	148	99	20.4	55	0	94	131	203	165						
Dairyland	Stealth 1692		139	96	20.8	54	1	98	107	192	160						
Wolf River Valley	2493RR	GX	162 *	104 *	20.9	53	0	120 *	146 *	205	180						
Kussmaul	SB392RR	J	150	99	21.0	55	0	102	127	202	170						
Johnson Seeds	2194BtRR	XX	153	101 *	21.1	54	0	118 *	127	202	167						
Renk	RK438YGCB	G	158 *	102 *	21.3	54	2	118 *	132	205	178						
NK Brand	N32L9	KD	162 *	102 *	21.4	52	1	120 *	102	231 *	195 *	191 *	107 *	208 *	209 *	158 *	176 *
90-DAY HYBRID TRIAL AVERAGE##					21.5												
Jung	6418	GJ	153	101 *	21.5	53	0	125 *	120	181	185						
LG Seeds	LG2415		139	95	21.7	54	1	97	103	194	162						
Pioneer	38P04	L	156	101 *	21.7	54	0	113 *	135	206	171						
Dahlman	D4801		167 *	105 *	21.8	52	1	118 *	138	215 *	200 *	187 *	105 *	180	218 *	162 *	178 *
Dahlman	D4747	G	156	100 *	21.8	53	1	102	116	229 *	177						
Great Lakes	4256Bt	G	165 *	104 *	21.8	54	0	120 *	139	215 *	187 *						
Croplan Genetics	344Bt	G	141	95	21.9	54	1	91	114	199	160	175 *	102 *	172	203 *	149	157
Dekalb	DKC4295(RRYGCB)	GH	156	101 *	22.0	53	0	112 *	129	202	180						
Spangler	324G	G	160 *	101 *	22.0	54	0	106	125	218 *	191 *						
LG Seeds	LG2407Bt	G	160 *	102 *	22.0	53	0	105	148 *	197	188 *						
Dairyland	Stealth 5497	G	156	100 *	22.0	53	1	106	125	212	180						
Croplan Genetics	314Bt	G	160 *	101 *	22.0	54	1	114 *	123	219 *	182						
Midwest	G6963B	G	160 *	102 *	22.0	53	1	115 *	125	214 *	184						
Lemke	4011Bt	G	150	98	22.1	52	2	93	117	202	188 *						
Dairyland	Stealth 1497		161 *	102 *	22.1	52	1	99	146 *	214 *	186 *	179 *	103 *	181	196	161 *	171 *
Kaltenberg	K4688	X	158 *	101 *	22.1	52	1	96	136	215 *	187 *						
Dahlman	D4815	G	151	98	22.1	52	1	86	135	202	179						
North-Gro	4674Y	G	150	98	22.1	54	1	102	107	211	180						
Bio Gene	BG940		155	100 *	22.1	53	1	107	124	212	179						
Carharts Blue Top	CX1956Bt	G	162 *	102 *	22.2	52	0	118 *	116	221 *	194 *						
Lemke	4021Bt	G	150	98	22.2	54	0	107	107	213 *	174						
Johnson Seeds	2238RR	X	163 *	103 *	22.2	53	1	112 *	138	218 *	185						
NK Brand	N35B8	GD	156	101 *	22.3	51	1	117 *	128	198	178						
Jung	6432	G	160 *	101 *	22.3	52	1	101	133	215 *	192 *						
North-Gro	4460RR	J	160 *	102 *	22.4	53	1	118 *	129	216 *	175						
Mycogen	2K350	G	158 *	102 *	22.4	53	0	135 *	117	203	176						
Kussmaul	SB494RR	J	145	96	22.4	54	0	92	118	200	168						
Johnson Seeds	2151		164 *	103 *	22.4	52	1	104	138	222 *	193 *						
Brown	3020YGCB	G	155	100 *	22.4	53	0	104	121	215 *	179						
Golden Harvest	H6775Bt	G	143	96	22.4	56	0	102	106	196	167	185 *	105 *	184 *	210 *	161 *	163
Agripro	8880YG1	G	161 *	102 *	22.4	52	0	106	128	214 *	194 *						
95-DAY HYBRID TRIAL AVERAGE##					22.5												

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Table 9 (continued). North Central Zone - Late Maturity Grain Trial (page 2 of 2)

91 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, SEYMOUR = SEY, VALDERS = VAL)

BRAND	HYBRID	Genes [†]	2003								2002					2 YEAR		
			AVERAGE				Lodged	CHP	MAR	SEY	VAL	AVERAGE		CHP	MAR	VAL	AVERAGE	
			Yield bu/A	P.I. #	Moist %	Test Wt.						Yield bu/A	P.I. #					Yield bu/A
Ragt Semences	MX156		165 *	103 *	22.6	53	2	129 *	120	215 *	194 *							
Jung	6370	G	152	99	22.6	53	0	111	119	204	176	176 *	102 *	181	208 *	138	164	
NK Brand	N3030BT	KD	149	98	22.7	53	0	121 *	97	200	172	183 *	104 *	187 *	207 *	154	165	
Gold Country	9401CB	G	169 *	105 *	22.7	53	0	114 *	159 *	220 *	181							
Dekalb	DKC4446(RRYGCB)	GH	163 *	103 *	22.7	52	0	126 *	133	206	186 *	195 *	108 *	200 *	207 *	179 *	179 *	
Brown	4250YGCB	G	160 *	102 *	22.7	52	1	112 *	130	212	187 *							
Dynagro	53F49	G	163 *	103 *	22.8	54	0	122 *	139	210	181							
Croplan Genetics	364Bt	G	168 *	105 *	22.8	52	0	113 *	156 *	210	194 *							
Dairyland	Stealth 1496		146	96	22.8	51	1	98	106	198	182	180 *	103 *	187 *	202 *	149	162	
Dahlman	R4815	X	163 *	104 *	22.8	52	1	125 *	146 *	205	179							
Dynagro	53P30	GX	150	99	22.8	54	0	114 *	125	176	185							
Dairyland	Stealth 5194	G	160 *	102 *	22.9	53	0	126 *	123	210	183							
Wolf River Valley	2496	G	163 *	102 *	22.9	53	0	112 *	131	221 *	190 *							
High Cycle	7301Bt	G	148	98	22.9	53	0	99	125	198	172							
Kaltenberg	K4664		165 *	104 *	22.9	53	1	130 *	136	207	187 *	174	101 *	164	202 *	155	170 *	
Jung	2432		152	99	23.0	52	1	105	138	195	172	181 *	103 *	186 *	211 *	145	166	
La Crosse Forage	LC7333		116	88	23.1	53	3	90	99	144	132							
Dekalb	DKC4710(RRYGCB)	GH	166 *	104 *	23.1	54	0	124 *	129	222 *	191 *							
Brunner	EXP96		148	98	23.1	54	0	121 *	103	191	178							
Renk	RK622		147	96	23.4	52	1	90	113	211	172	177 *	101 *	161	212 *	158 *	161	
Dekalb	DKC4442(YGCB)	G	161 *	102 *	23.4	51	0	129 *	114	210	189 *	183 *	104 *	172	206 *	170 *	172 *	
Dynagro	53F09	G	169 *	105 *	23.5	52	0	131 *	139	213 *	194 *							
Jeske	SX224		140	94	23.5	51	0	101	91	190	169	152	94	156	182	118	146	
La Crosse Forage	LC7383		155	99	23.5	51	1	95	130	214 *	183							
Mycogen	2R426	G	165 *	103 *	23.7	52	0	127 *	131	205	194 *							
Johnson Seeds	3565		147	96	23.7	51	1	93	108	209	177							
Renk	RK488YGCB	G	169 *	105 *	23.8	53	0	128 *	143 *	214 *	191 *							
La Crosse Forage	LC7953Bt	X	138	93	23.8	51	0	82	114	186	173							
La Crosse Forage	LC7415		145	96	23.8	54	1	108	105	202	163	139	89	150	174	92	144	
Pioneer	38A25	G	162 *	102 *	23.9	54	1	128 *	127	208	183	186 *	105 *	203 *	208 *	148	174 *	
Croplan Genetics	354Bt	G	158 *	101 *	23.9	54	0	120 *	123	205	183							
Pioneer	37J99	C	164 *	102 *	24.1	51	1	120 *	125	225 *	184							
Dekalb	DKC4884(RRYGCB)	GH	156	99	24.2	52	0	107	120	208	185							
Pioneer	37R71	G	158 *	99	24.7	50	0	108	115	214 *	189 *	177 *	102 *	166	207 *	159 *	167	
100-DAY HYBRID TRIAL AVERAGE##			24.9															
Dynagro	DG5295Bt	G	155	97	28.6	50	0	109	117	204	189 *							
MEAN			155	100	22.4	53	1	110	124	206	179	172	100	172	201	143	166	
LSD(0.10)**			12	5	1.5	1	1	23	19	18	14	20	7	26	18	21	10	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 10. Northern Zone Grain Trial

WHITE LAKE = WHL, SPOONER DRYLAND SAND = SPD, SPOONER IRRIGATED SAND = SPI, SPOONER DRYLAND SILT LOAM = SPS

BRAND	HYBRID	Genes [†]	2003								2002					2 YEAR			
			AVERAGE				WHL	SPD	SPI	SPS	AVERAGE		WHL	SPD	SPI	SPS	AVERAGE		
			Yield bu/A	P.I. #	Moist %	Test Wt. %	Lodged %	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	P.I. #	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	Yield bu/A	
LG Seeds	LG2355		107	97	18.4	54	13	94	* 55	178	100								
Dairyland	Stealth 1685		109	99	18.7	54	14	100	* 62	165	108 *								
NK Brand	N16N7	GD	108	100 *	18.7	58	1	66	83 *	188	95								
Carharts Blue Top	CR85RR	J	107	97	18.9	55	8	75	65	185	103								
Dahlman	R4215	X	117	104 *	19.1	54	7	90	* 79 *	183	117 *								
Golden Harvest	H6155RR	J	107	98	19.1	54	7	89	* 61	176	102								
Renk	RK232		113	102 *	19.2	55	6	83	77 *	175	116 *	160	102	146	182 *	170	145	137 *	
NK Brand	N17R3	KD	110	101 *	19.5	56	1	105	* 66	174	93	155	101	163 *	140	157	161	132	
Ragt Semences	MX227		105	96	19.6	54	12	85	54	176	105								
85-DAY HYBRID TRIAL AVERAGE##			19.8																
North-Gro	1541RR	J	117	103 *	19.9	54	10	103	* 78 *	178	109 *								
Pioneer	39D82	G	126 *	107 *	19.9	54	5	119	* 75 *	203	* 107	160	102	150	161	162	166	143 *	
Golden Harvest	H6395		119	104 *	19.9	54	4	95	* 79 *	192	109 *								
NK Brand	N25J7	GD	115	103 *	19.9	55	1	80	78 *	190	113 *								
Carharts Blue Top	CX8500A		110	99	19.9	54	6	70	76 *	196	* 98	162	103	154	181 *	153	157	136 *	
Renk	RK288		106	97	20.0	53	9	70	64	175	115 *								
Dynagro	51N39		102	94	20.3	52	7	75	58	185	88								
Renk	RK240		106	98	20.4	52	4	78	69	177	98								
Brunner	S2055RR	X	120 *	106 *	20.4	54	2	118	* 76 *	177	109 *								
Dairyland	Stealth 7191	GX	123 *	103 *	20.8	53	12	102	* 63	209	* 118 *								
NK Brand	N2555BT	KD	121 *	104 *	21.0	55	7	103	* 68	201	* 113 *	170	104	168 *	175	169	166	145 *	
Kaltenberg	K2515RRBt	XX	111	98	21.2	54	13	74	79 *	180	111 *								
Brunner	S2823RRBt	GX	109	96	21.2	54	16	97	* 58	182	100								
Carharts Blue Top	CR840RB	GX	113	99	21.4	53	16	105	* 69	172	106								
Dairyland	Stealth 1089Bt	G	113	98	21.4	53	9	66	76 *	203	* 106	165	102	150	168	183	156	139 *	
90-DAY HYBRID TRIAL AVERAGE##			22.0																
Ragt Semences	PG002		112	100 *	22.2	56	8	79	81 *	179	108 *	157	100	178 *	142	158	146	134 *	
Brunner	S2852RRBt	GX	109	95	22.3	52	16	74	66	187	109 *								
Carharts Blue Top	CR8500RB	GX	113	98	22.3	53	9	87	65	200	* 101	161	101	133	172	175	164	137 *	
Pioneer	38P04	L	115	99	22.9	52	9	87	66	201	* 109 *								
Kaltenberg	K2727Bt	X	111	96	23.4	52	9	51	70	199	* 122 *	174	106 *	157	182 *	196 *	160	142 *	
Carharts Blue Top	CR1857RB	GX	122 *	103 *	23.5	53	9	82	80 *	199	* 127 *								
Renk	RK438YGCB	G	132 *	107 *	23.6	53	13	117	* 80 *	203	* 127 *								
NK Brand	N29A2	GD	124 *	104 *	23.8	52	5	105	* 78 *	210	* 104								
Brown	4250YGCB	G	110	93	25.6	51	18	79	53	183	124 *								
MEAN			113	100	20.9	54	9	88	70	187	108	155	100	145	160	158	157	138	
LSD(0.10)**			12	7	1.7	1	9	30	11	17	19	17	6	15	20	24	18	11	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

P.I. = Performance Index, evaluates hybrids by combining yield, moisture, and lodged % at a 50(yield) : 35(moisture) : 15(lodged) ratio.

Average grain moisture of all hybrids in this trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5-day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 11. Southern Zone - Early Maturity Silage Trial.

105 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (ARLINGTON = ARL, LANCASTER = LAN)

BRAND	HYBRID	Genes [†]	2003										2002					2 Year Average Yield T/A			
			AVERAGE										AVERAGE								
			Yield T/A	MILK PER		Moist %	Kernel							Yield T/A	Yield T/A	Yield T/A	Yield T/A				
TON	ACRE	Milk %		CP %	ADF %		NDF %	IVD %	NDFD %	Starch %	MILK PER TON	MILK PER ACRE									
Renk	RK772YGCB	G	8.2	3250	26500	47.5	40	7.4	25	48	82	61	35	8.2 *	8.1						
Crows	2192B	G	8.5	3300	28200	53.5	40	7.5	26	49	81	62	32	7.9	9.2 *						
NK Brand	N48V8	KDM	9.0	3000	27800	54.4	40	6.7	31	58	77	60	25	8.1 *	9.8 *	9.8 *	3510	34500 *	10.6 *	9.1 *	9.4 *
Cornelius	C430YG	G	8.8	3400 *	29900	55.9	40	7.5	24	46	82	62	36	8.8 *	8.8						
105-DAY HYBRID TRIAL AVERAGE##						56.2															
Hyland Seeds	HLS058		8.5	3340	28300	56.4	70	6.9	26	50	81	62	30	8.3 *	8.6						
Hyland Seeds	HLS067		8.8	3410 *	29900	56.5	70	7.4	26	50	82	64	30	7.8	9.7 *						
NK Brand	NX4942		8.1	3340	27000	56.9	50	7.8	27	51	81	63	30	9.2 *	7.0						
LG Seeds	LG2526SP		8.6	3310	28500	57.3	40	7.0	27	51	81	61	31	8.5 *	8.8	8.5 *	3640 *	30800 *	8.7	8.2 *	8.6 *
MEAN			8.6	3290	28300	54.8	50	7.3	26	50	81	62	31	8.3	8.8	8.3	3520	29300	8.3	8.3	9.0
LSD(0.10)**			NS	50	NS	3.9	20	0.5	2	3	1	1	3	1.2	0.9	1.4	70	5100	1.7	1.6	1.1

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 12. Southern Zone - Late Maturity Silage Trial. (Page 1 of 2)

106 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (ARLINGTON = ARL, LANCASTER = LAN)

BRAND	HYBRID	Genes [†]	2003											2002				2 Year Average Yield T/A				
			AVERAGE											AVERAGE								
			Yield T/A	MILK PER		Moist %	Kernel								Yield T/A	Yield T/A	Yield T/A		Yield T/A			
TON	ACRE	Milk %		CP %	ADF %		NDF %	IVD %	NDFD %	Starch %												
Cornelius	C590YG	G	9.6 *	3380	32400 *	55.0	40	7.2	26	50	82	64	32	9.6 *	9.5 *	10.3 *	3670	37600 *	9.8 *	10.7 *	9.9 *	
High Cycle	7796Rb	GJ	9.3 *	3470	32400 *	55.5	50	7.1	24	46	83	64	35	9.2 *	9.5 *							
Renk	RK845RRYGCB	GH	9.0 *	3150	28200	55.6	50	7.2	27	52	79	59	30	8.8	9.1 *							
Pioneer	34M95	G	9.5 *	3340	32000 *	56.1	70	6.8	27	51	81	63	30	10.0 *	9.0 *	10.7 *	3670	39400 *	10.7 *	10.8 *	10.1 *	
NK Brand	N65Y3	KD	9.6 *	3280	31400 *	56.1	50	6.4	27	51	80	62	31	9.7 *	9.4 *	9.9 *	3650	36100 *	11.2 *	8.6	9.7 *	
Garst	8530Bt	G	9.4 *	3360	32700 *	56.8	60	7.0	25	48	82	62	33	9.6 *	9.2 *							
Spangler	7558G	G	9.0 *	3320	30000	57.4	60	6.8	26	49	81	61	32	9.5 *	8.5	9.8 *	3620	35400 *	8.9	10.6 *	9.4 *	
Hyland Seeds	HLS072		9.5 *	3260	31000	57.5	50	7.1	27	51	80	60	29	9.4 *	9.7 *							
Dairyland	Stealth 1606		8.2	3400	27900	57.6	50	6.8	25	49	82	63	33	8.8	7.7							
Trelay	9012		9.0 *	3460	31200 *	57.9	60	6.9	25	48	82	63	33	9.2 *	8.9 *	7.8	3650	28400	6.9	8.6	8.4	
Brunner	S6408Bt	G	8.7	3410	29600	58.0	60	7.3	26	51	81	63	31	8.6	8.8 *							
OBrien	OB1113Bt	G	9.8 *	3480	34200 *	58.1	60	7.2	24	47	83	63	33	10.3 *	9.4 *							
Crows	4911B	G	8.8	3340	29500	58.1	60	7.4	26	50	81	61	32	9.0	8.6							
Kussmaul	RFS610	M	9.5 *	3330	31600 *	58.3	70	6.9	27	51	80	62	29	9.9 *	9.1 *							
Golden Harvest	H8662Bt	G	8.5	3360	28500	58.5	50	7.5	26	49	81	61	33	9.4 *	7.7	10.0 *	3570	35600 *	9.8 *	10.1 *	9.2 *	
Pioneer	34M93	L	9.4 *	3450	32400 *	58.7	70	7.1	26	51	82	64	32	9.9 *	8.9 *							
110-DAY HYBRID TRIAL AVERAGE##						58.8																
Cornelius	C635		8.6	3340	28600	58.8	50	7.3	27	52	80	62	29	9.2 *	7.9	9.2	3740	34600	10.0 *	8.5	8.9	
Pioneer	34B23		9.0 *	3550	32000 *	58.9	60	7.7	25	49	83	65	30	9.4 *	8.7	9.1	3580	32500	9.6	8.5	9.0	
LG Seeds	LG2585		8.6	3450	29800	59.0	60	7.3	25	49	82	63	32	9.6 *	7.6							
Dairyland	Stealth 1607		7.6	3560	27200	59.5	50	7.3	23	46	83	64	33	8.1	7.2							
High Cycle	7807Bt	G	9.0 *	3330	29900	59.7	50	7.4	28	53	80	62	28	9.0	9.0 *							
Cornelius	C707RRYG	GJ	9.6 *	3380	32600 *	59.7	70	7.0	27	51	81	62	30	9.9 *	9.4 *							
115-DAY HYBRID TRIAL AVERAGE##						59.8																
Kaltenberg	K8112LF	M	8.8	3380	29700	60.1	60	7.0	27	51	81	62	28	9.3 *	8.3							

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Table 12 (continued). Southern Zone - Late Maturity Silage Trial. (Page 2 of 2)

106 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (ARLINGTON = ARL, LANCASTER = LAN)

BRAND	HYBRID	Genes [†]	2003										2002			2 Year Average					
			AVERAGE										AVERAGE								
			Yield T/A	MILK PER		Moist %	Kernel							Yield T/A	Yield T/A		Yield T/A	Yield T/A			
TON	ACRE	Milk %		CP %	ADF %		NDF %	IVD %	NDFD %	Starch %											
Garst / Agripro	7850		8.7	3360	29400	61.4	60	7.3	27	51	80	61	30	8.5	8.9 *						
Carharts Blue Top	CX1080Bt	G	7.7	3350	25900	61.4	50	7.3	26	49	80	60	32	7.5	8.0						
Wisconsin	JC11		9.1 *	3460	31500 *	61.6	50	7.6	25	48	82	62	32	9.4 *	8.8 *						
Cornelius	C605YG	G	8.3	3460	28700	61.7	60	7.2	26	49	82	62	32	8.8	7.8						
Spangler	LFT61	M	8.9	3280	29200	61.9	70	7.0	29	54	79	62	24	9.1	8.6	9.9 *	3410	33700	9.9 *	9.9 *	9.4 *
Wisconsin	JC12		8.7	3440	30000	62.8	80	7.2	27	51	81	62	29	8.7	8.7						
Golden Harvest	H9247Bt	G	9.8 *	3480	34300 *	63.0	70	7.2	26	49	81	62	29	9.9 *	9.8 *						
Baldrige Hybrids	BH611A		6.6	3390	22300	64.4	70	8.5	27	52	80	62	23	6.7	6.5						
Mycogen	F697	B	8.4	3890 *	32700 *	64.8	60	7.7	25	49	86	72	30	8.7	8.1						
Pioneer	33J57	G	9.1 *	3480	31700 *	65.5	70	7.7	27	51	81	63	26	9.1	9.1 *						
High Cycle	7748Bt	G	8.2	3230	26600	65.7	60	7.2	31	56	78	61	25	8.2	8.2						
Dairyland	Stealth 1416		7.4	3460	25200	67.2	70	7.8	28	52	81	63	27	6.8	7.9						
MEAN			8.8	3400	30100	59.8	60	7.2	26	50	81	63	30	9.1	8.6	8.9	3600	32000	9.0	8.8	9.3
LSD(0.10)**			0.8	150	3200	3.6	10	0.3	3	4	2	2	5	1.2	1.1	1.1	120	4700	1.5	1.1	0.9

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603); M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 13. South Central Zone - Early Maturity Silage Trial.

100 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL)

BRAND	HYBRID	Genes [†]	2003											2002			2 Year Average Yield T/A					
			AVERAGE											AVERAGE								
			Yield T/A	MILK PER TON ACRE		Moist %	Kernel							FON Yield T/A	GAL Yield T/A	Yield T/A		FON Yield T/A	GAL Yield T/A			
Pilgrim Seed	Pilgrim Plus		8.6	3500 *	30200	57.1	30	7.1	24	46	84	64	38	7.8	9.4 *							
La Crosse Forage	LC4531		8.5	3380	28800	58.2	30	7.3	25	48	82	62	37	8.7 *	8.3							
Carharts Blue Top	CX1956Bt	G	8.2	3600 *	29500	60.4	40	6.7	24	45	84	64	39	7.6	8.8							
Dekalb	DKC5018(YGCB)	G	8.7	3640 *	31800 *	62.0	50	7.0	25	47	84	65	37	8.9 *	8.6							
Renk	RK622		8.3	3360	27900	62.2	50	6.9	28	52	80	62	32	8.2	8.4							
100-DAY HYBRID TRIAL AVERAGE##						62.4																
Kussmaul	RFS697	M	8.8	3590 *	31400	62.4	60	7.5	25	47	83	64	35	9.0 *	8.5							
Growmark	FS4042Bt	G	9.3 *	3430	32100 *	63.0	50	7.0	27	50	81	62	33	9.3 *	9.4 *	9.7 *	3400	33100 *	9.3 *	10.2 *	9.5	
Dynagro	DG5288LFY	M	8.1	3520 *	28500	63.1	60	7.3	27	50	82	64	32	7.7	8.5							
NK Brand	N48V8	KDM	10.0 *	3510 *	35200 *	63.2	60	6.5	28	52	81	65	29	9.8 *	10.2 *	10.7 *	3380	36100 *	10.2 *	11.1 *	10.3 *	
La Crosse Forage	LC7415		7.6	3630 *	27800	65.2	60	7.7	25	47	83	64	34	7.1	8.1	8.8	3380	29900	8.3	9.3	8.2	
Garst	8590IT	C	8.8	3550 *	30800	65.9	60	6.9	27	49	82	64	34	8.7 *	8.9							
NK Brand	NX4942		9.8 *	3570 *	34900 *	66.0	60	7.4	27	51	82	65	31	9.4 *	10.1 *							
MEAN			8.7	3520	30700	62.4	50	7.1	26	49	82	64	34	8.5	8.9	9.0	3380	30500	8.2	9.8	9.4	
LSD(0.10)**			0.8	200	3600	3.0	10	0.5	3	4	3	2	5	1.2	1.1	1.2	NS	5800	1.0	1.4	0.4	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 14. South Central Zone - Late Maturity Silage Trial. (Page 1 of 2)

101 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL)

BRAND	HYBRID	Genes [†]	2003											2002					2 Year Average Yield T/A					
			AVERAGE											AVERAGE										
			Yield T/A	MILK PER		Moist %	Kernel							Yield T/A	Yield T/A	Yield T/A	MILK PER			Yield T/A	Yield T/A			
TON	ACRE	Milk %		CP %	ADF %		NDF %	IVD %	NDFD %	Starch %	TON	ACRE												
Renk	RK636YGCB	G	8.0	3550	28400	62.8	60	6.7	26	49	83	64	35	7.1	8.8									
Renk	RK668		8.3	3340	27900	63.2	60	6.5	28	52	80	61	32	7.2	9.4	9.4	3190	30300	8.7	10.2		8.9 *		
Renk	RK772YGCB	G	8.1	3630	29400	63.8	70	6.8	26	48	83	65	35	7.9 *	8.4									
Kussmaul	RFS602	M	8.5 *	3560	30400 *	64.4	60	6.5	27	51	82	65	31	7.4	9.7 *									
Dekalb	DKC5334(RRYGCB)	GH	7.6	3540	26800	64.8	70	6.9	28	52	82	65	32	6.9	8.2	9.2	3470	31800	9.1	9.2		8.4		
Pioneer	35R58	G	7.9	3540	28200	65.4	70	6.8	28	52	82	65	29	6.9	9.0	10.1 *	3480	35400 *	10.1 *	10.2		9.0 *		
Garst	8579RR	H	9.1 *	3650	33400 *	65.5	60	6.7	26	48	83	66	35	8.5 *	9.8 *									
Midwest	G7494B	G	8.2	3390	28100	65.6	70	7.1	29	54	80	63	28	7.3	9.2									
Dekalb	DKC6019(RRYGCB)	GH	8.0	3550	28600	65.8	60	6.6	26	49	82	64	34	7.4	8.7	9.9	3470	34400 *	9.4 *	10.3		9.0 *		
Trelay	7012		8.6 *	3620	31300 *	66.2	70	7.5	27	50	83	66	32	8.2 *	9.1	9.2	3360	31200	8.4	10.1		8.9 *		
Kaltenberg	K8110LF	M	9.0 *	3530	31700 *	66.4	80	7.1	28	53	82	66	28	8.1 *	9.8 *									
Asgrow	RX499YG	G	7.5	3530	26400	66.5	60	7.6	28	51	82	65	30	7.1	7.9									
Golden Harvest	H7900		8.3	3560	29400	66.5	60	6.8	27	50	82	64	33	8.0 *	8.5									
Crows	3520B	G	8.2	3390	27900	66.9	70	6.6	29	54	80	63	27	7.3	9.1									
105-DAY HYBRID TRIAL AVERAGE##						67.0																		
High Cycle	7698Rb	GJ	8.7 *	3540	30900 *	67.2	70	6.9	27	51	82	65	31	8.0 *	9.4									
100-DAY HYBRID TRIAL AVERAGE##						67.2																		
La Crosse Forage	LC7374		6.3	3730	23600	67.3	70	7.8	24	46	84	66	34	5.4	7.2									
Dynagro	DG5440		8.0	3690	29400	67.4	60	6.2	26	48	84	66	34	7.0	8.9									
Midwest	G7221B	G	8.4 *	3420	28800	67.5	60	7.0	29	53	80	63	29	8.3 *	8.5									
Johnson Seeds	5450		7.6	3590	27000	67.5	60	7.1	26	49	83	65	33	7.0	8.1	8.2	3340	27600	7.9	8.6		7.9		
NK Brand	N59Q9		8.3	3580	29700 *	67.5	70	6.8	26	49	82	65	32	8.1 *	8.4	10.2 *	3530 *	36000 *	9.6 *	10.8 *		9.2 *		
Pioneer	34M93	L	9.1 *	3620	33200 *	67.6	80	6.9	28	53	83	67	30	8.9 *	9.3									
Hyland Seeds	HLS067		8.7 *	3690	32200 *	67.7	80	7.3	26	50	84	67	31	7.9 *	9.5 *									
OBrien	OBX1064RRBt	H	7.7	3590	27700	67.8	70	7.0	26	48	83	64	35	7.6	7.8									

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Table 14 (continued). South Central Zone - Late Maturity Silage Trial. (Page 2 of 2)

101 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (FOND DU LAC = FON, GALESVILLE = GAL)

BRAND	HYBRID	Genes [†]	2003											2002					2 Year Average Yield T/A				
			AVERAGE											AVERAGE									
			Yield T/A	MILK PER TON ACRE		Moist %	Kernel Milk CP ADF NDF IVD NDFD Starch				FON Yield T/A	GAL Yield T/A	Yield T/A	FON Yield T/A	GAL Yield T/A								
Growmark	FS4322		7.7	3630	28000	67.8	60	6.7	26	49	83	66	33	7.5	7.9								
Pioneer	35D45		7.9	3530	27900	67.9	70	7.9	27	51	82	64	30	7.2	8.5	10.1 *	3400	34500 *	9.3 *	10.9 *		9.0 *	
Carharts Blue Top	CX1080Bt	G	7.2	3410	24500	68.0	70	7.2	28	51	80	62	28	5.9	8.4								
Golden Harvest	H8350Bt	G	8.2	3570	29600 *	68.1	70	6.9	27	50	82	65	32	7.1	9.3								
Midwest	G7622B	G	9.0 *	3600	32300 *	68.2	90	6.9	28	52	82	66	30	8.2 *	9.9 *								
Growmark	FS6533Bt	G	9.0 *	3470	31100 *	69.1	80	7.1	28	53	81	64	28	7.5	10.5 *								
Garst	8510YG1RR	GH	8.5 *	3520	29700 *	69.4	70	6.7	27	51	82	64	30	7.7	9.3								
Wisconsin	JC13		7.1	3410	24600	69.4	80	7.4	30	56	80	65	24	5.5	8.8								
110-DAY HYBRID TRIAL AVERAGE##						69.5																	
High Cycle	7644Bt	G	7.8	3480	27300	69.7	70	7.4	28	52	81	64	27	7.6	8.1								
Hyland Seeds	HLS058		7.9	3550	29300	70.1	80	6.8	28	51	82	65	28	7.3	8.6								
LG Seeds	LG2518		7.6	3610	27500	70.2	70	7.4	27	50	83	66	32	7.8	7.4								
Spangler	LFT50	M	8.0	3540	28200	70.3	80	6.9	28	52	82	65	25	7.5	8.4								
Midwest	G7716B	G	8.6 *	3560	30900 *	70.4	80	7.5	28	52	82	65	29	7.9 *	9.4								
Croplan Genetics	DS107RR	H	7.8	3530	27700	70.7	80	6.8	29	54	82	66	26	7.0	8.7								
Wisconsin	JC14		7.6	3530	26800	70.8	60	6.9	30	55	82	67	27	6.6	8.5								
Baldrige Hybrids	BH515		6.4	3200	20400	71.4	70	8.6	31	56	78	61	22	6.0	6.7								
Pioneer	33J57	G	9.4 *	3520	33200 *	71.6	80	6.9	28	53	82	65	26	8.4 *	10.5 *								
High Cycle	7748Bt	G	8.0	3330	25800	72.2	70	6.6	32	57	79	63	25	7.2	8.7								
Garst	24X		7.4	3590	26500	73.5	70	7.8	29	53	82	67	26	7.7	7.1	9.2	3420	31600	8.7	9.8		8.3	
Mycogen	F697	B	7.0	4050 *	28400	74.3	80	7.5	28	55	88	77	21	7.1	7.0								
MEAN			8.1	3550	28600	68.0	70	7.0	28	52	82	65	30	7.4	8.7	9.5	3390	32100	8.9	10.0		8.7	
LSD(0.10)**			1.0	180	3900	1.7	10	0.6	2	3	2	3	4	1.0	1.0	1.0	210	4800	1.3	1.4		0.7	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 15. North Central Zone - Early Maturity Silage Trial.

90 DAY RELATIVE MATURITY OR EARLIER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, VALDERS =VAL)

BRAND	HYBRID	Genes [†]	2003											2002						2 Year Average Yield T/A					
			AVERAGE											AVERAGE											
			Yield T/A	MILK PER		Moist %	Kernel								CHP Yield T/A	MAR Yield T/A	VAL Yield T/A	Yield T/A	MILK PER		CHP Yield T/A	MAR Yield T/A	VAL Yield T/A		
TON	ACRE	CP		ADF	NDF		IVD	NDFD	Starch	TON	ACRE														
Garst	8959YG1	G	6.7	3450	23200 *	53.1	40	7.8	23	47	84	65	35	7.0 *	5.3	7.9									
Croplan Genetics	294Bt	G	7.6 *	3380	25800 *	53.3	50	7.3	25	49	83	65	34	7.2 *	6.8 *	8.8 *									
Carharts Blue Top	CR85RR	J	6.5	3330	21800	54.0	50	7.6	26	51	82	64	32	6.5	5.7	7.3									
Carharts Blue Top	CR8500RB	GX	6.9	3440	23800 *	55.7	60	7.3	25	50	83	66	32	6.5	5.6	8.7 *	7.4 *	3570 *	26200 *	8.2 *	8.7 *	5.2 *	7.2		
Garst	8865		7.4 *	3260	24200 *	55.9	50	7.2	28	53	80	64	29	7.1 *	6.1 *	8.9 *									
90-DAY HYBRID TRIAL AVERAGE##						56.7																			
Johnson Seeds	5150		6.9	3380	23200 *	56.9	60	7.8	25	50	82	64	32	6.6 *	6.3 *	7.9									
Carharts Blue Top	CR1857RB	GX	7.1 *	3600 *	25500 *	57.4	60	7.4	24	48	85	69	34	7.3 *	5.5	8.4 *									
Hyland Seeds	HLS034		7.2 *	3370	24500 *	58.5	60	7.6	28	53	81	65	27	7.1 *	6.7 *	8.4 *									
Hyland Seeds	HLS041		7.1 *	3560 *	25500 *	60.3	60	7.6	26	50	83	67	30	6.4	6.0	8.9 *									
Dekalb	DKC3948(RRYGCB)	GH	6.9	3620 *	25000 *	61.1	60	7.3	25	49	84	68	32	7.1 *	5.3	8.1 *									
MEAN			7.0	3440	24200	56.6	60	7.5	26	50	83	66	32	6.9	5.9	8.3	6.7	3550	23500	7.4	7.6	5.0	7.2		
LSD(0.10)**			0.5	150	2600	2.6	10	0.3	3	4	2	2	5	0.7	0.7	0.9	0.7	110	2700	0.9	1.5	0.9			

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 16. North Central Zone - Late Maturity Silage Trial. (Page 1 of 2)

91 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, VALDERS =VAL)

BRAND	HYBRID	Genes [†]	2003											2002						2 Year Average							
			AVERAGE											AVERAGE													
			Yield T/A	MILK PER		Moist %	Kernel								Yield T/A	Yield T/A	Yield T/A	Yield T/A	Yield T/A		Yield T/A						
				TON	ACRE		Milk %	CP %	ADF %	NDF %	IVD %	NDFD %	Starch %	CHP								MAR	VAL				
Pioneer	38T28	G	7.0	3360	23700	53.9	40	7.4	26	51	82	65	31	6.9	6.7 *	7.5	7.4	3540	26000	8.1	8.0 *	6.0	7.2				
Golden Harvest	H2387		7.3 *	3300	23900	54.0	40	7.8	26	51	81	63	31	8.2 *	6.4 *	7.1											
Midwest	G6956		7.0	3380	23700	54.9	50	7.5	27	53	82	65	30	6.5	6.7 *	7.7											
Golden Harvest	H7108		6.9	3390	23400	55.1	50	8.1	26	50	82	65	31	7.1 *	6.1	7.4											
Dekalb	DKC4446(RRYGCB)	GH	7.3 *	3500	25600	55.1	50	7.2	25	50	83	67	33	7.0	6.5 *	8.3 *	7.9 *	3700 *	29000 *	8.6 *	8.6 *	6.3	7.6 *				
LG Seeds	LG2415		7.0	3390	23700	55.7	60	8.0	27	52	82	65	29	6.9	6.5 *	7.6											
NK Brand	N45T5		7.1	3460	24700	55.7	50	7.1	26	52	83	66	31	7.2 *	6.4 *	7.7											
Renk	RK668		7.3 *	3170	23600	56.4	50	7.2	29	55	79	62	27	7.0	6.4 *	8.4 *											
La Crosse Forage	LC7333		6.3	3380	21200	56.8	50	7.8	26	52	82	65	29	6.6	5.5	6.8	7.8 *	3530	27700 *	8.3	8.0 *	7.3 *	7.5 *				
95-DAY HYBRID TRIAL AVERAGE##						57.3																					
La Crosse Forage	LC7383		7.1	3410	24300	57.4	60	7.3	26	51	82	66	30	7.1 *	6.1	8.1 *											
La Crosse Forage	LC7415		6.4	3300	21300	57.5	60	7.9	27	51	81	63	29	6.4	6.0	6.9											
Dekalb	DKC5334(RRYGCB)	GH	7.1	3490	24900	57.8	60	7.4	27	52	83	67	30	6.9	6.5 *	7.9	7.8 *	3700 *	28800 *	8.7 *	8.1 *	6.5	7.4 *				
Golden Harvest	H7140Bt	G	7.2	3370	24100	57.9	60	8.1	27	51	81	64	30	7.3 *	6.4 *	7.8											
Golden Harvest	H6775Bt	G	6.9	3440	23700	58.6	50	8.1	25	50	82	64	30	7.1 *	5.8	7.9											
90-DAY HYBRID TRIAL AVERAGE##						58.6																					
Dairyland	HiDF3300		6.6	3540 *	24400	58.7	40	7.4	25	50	84	67	32	7.0	5.9	7.2	6.9	3670 *	25000	8.1	7.8 *	4.7	6.7				
100-DAY HYBRID TRIAL AVERAGE##						58.9																					
Dairyland	HiDF3600		6.7	3400	22700	58.9	60	7.8	28	54	81	66	27	6.8	5.5	7.8											
Spangler	LFT31	M	7.2	3360	24300	59.0	70	7.6	27	53	81	65	28	7.4 *	6.2	8.1 *											
Carharts Blue Top	CX1956Bt	G	7.3 *	3590 *	26300 *	59.1	60	7.2	26	50	84	68	32	7.3 *	6.3	8.4 *	7.6 *	3620	27600 *	8.6 *	7.9 *	6.3	7.3				
Pioneer	37R71	G	7.0	3450	24200	59.1	50	7.5	26	50	82	65	32	6.6	6.3	8.1 *											
NK Brand	N33H6		7.8 *	3370	26300 *	59.5	60	7.7	27	52	81	63	29	7.9 *	7.2 *	8.5 *											
Pioneer	37D03		7.0	3500	24700	59.5	60	7.6	26	50	83	66	32	7.1 *	6.3	7.8											
Renk	RK556		7.5 *	3450	26000 *	59.5	60	7.8	26	50	82	64	31	7.6 *	6.6 *	8.3 *	7.4	3610	26500	8.5 *	8.6 *	5.0	7.2				
CONTINUED.						7.6 *																		8.2	8.2 *	6.3	7.5 *

Table 16 (continued). North Central Zone - Late Maturity Silage Trial. (Page 2 of 2)

91 DAY RELATIVE MATURITY OR LATER, BASED ON COMPANY RATING (CHIPPEWA FALLS = CHP, MARSHFIELD = MAR, VALDERS =VAL)

BRAND	HYBRID	Genes [†]	2003											2002					2 Year Average Yield T/A								
			AVERAGE											AVERAGE													
			Yield T/A	MILK PER TON ACRE		Moist %	Kernel							CHP Yield T/A	MAR Yield T/A	VAL Yield T/A	Yield T/A	MILK PER TON ACRE		CHP Yield T/A	MAR Yield T/A	VAL Yield T/A					
Golden Harvest	H7287		7.2	3410	24700	59.7	60	7.6	27	52	81	64	29	6.8	5.9	8.9 *											
Dairyland	DST10427		6.2	3460	21700	59.9	50	8.1	26	51	82	65	29	6.4	4.7	7.6											
Kussmaul	RFS690	M	7.1	3500	25400	60.0	70	7.4	26	51	83	66	30	7.2 *	5.9	8.4 *											
Dekalb	DKC4295(RRYGCB)	GH	6.9	3510 *	24500	60.4	60	7.4	26	51	83	66	31	6.7	5.8	8.3 *											
Dairyland	HiDF4200		7.7 *	3620 *	28100 *	61.1	80	7.5	26	50	84	68	30	7.5 *	7.3 *	8.5 *	7.1	3770 *	26800	8.4	8.7 *	4.4				7.4 *	
Garst	8779		6.9	3440	23600	61.2	60	7.5	28	52	82	65	28	7.3 *	5.4	7.9	7.5	3590	27600 *	7.6	9.0 *	6.0				7.2	
105-DAY HYBRID TRIAL AVERAGE##						61.2																					
Pioneer	36N71	G	7.6 *	3490	26600 *	61.3	60	7.7	27	52	82	66	29	7.5 *	6.2	9.0 *											
Renk	RK488YGCB	G	7.2	3560 *	25900 *	61.4	50	7.2	26	50	83	66	31	7.6 *	6.2	8.1 *											
Renk	RK636YGCB	G	7.2	3520 *	25600	61.5	70	7.3	26	51	83	66	30	7.4 *	6.1	8.1 *											
Pioneer	35D45		7.6 *	3550 *	27200 *	61.9	70	8.0	26	51	83	67	28	7.9 *	6.5 *	8.4 *	8.3 *	3640	30000 *	9.1 *	8.9 *	6.8 *				7.9 *	
NK Brand	N48V8	KDM	7.3 *	3420	24900	61.9	70	7.4	29	55	81	66	24	7.5 *	6.2	8.1 *	7.8 *	3470	27000	8.4	8.8 *	6.1				7.5 *	
Dekalb	DKC5018(YGCB)	G	7.1	3590 *	25800 *	62.0	60	7.5	26	50	83	67	31	7.0	6.2	8.4 *											
Croplan Genetics	DS107RR	H	7.0	3490	24600	66.2	80	7.5	29	55	81	66	22	6.6	5.8	8.6 *											
MEAN			7.1	3440	24600	58.8	60	7.6	27	51	82	65	30	7.1	6.2	8.0	7.4	3580	26600	8.3	8.2	5.8				7.4	
LSD(0.10)**			0.5	110	2300	3.6	10	0.3	2	2	1	1	2	1.1	0.9	0.9	0.8	110	3100	1.2	1.3	1.1				0.5	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Table 17. Northern Zone Silage Trial.

RHINELANDER = RHI, SPOONER-IRRIGATED = SPI, SPOONER-SILT LOAM = SPS

BRAND	HYBRID	Genes [†]	2003											2002					2 Year Average Yield T/A					
			AVERAGE											AVERAGE			RHI	SPI		SPS				
			Yield T/A	MILK PER TON ACRE		Moist %	Kernel Milk % CP % ADF % NDF %			IVD %	NDFD %	Starch %	RHI Yield T/A	SPI Yield T/A	SPS Yield T/A	Yield T/A	Yield T/A	Yield T/A						
NK Brand	N17R3	KD	6.7	3340	22600	58.4	40	8.1	26	50	81	63	31	5.5	8.9	5.7	7.1	3610	25500	6.3	7.7	7.7	7.0	
Ragt Semences	MX027		7.1 *	3490	25100 *	60.3	40	7.3	27	51	82	66	30	5.8	9.6 *	6.0								
Golden Harvest	H6355		7.5 *	3490	26400 *	60.6	60	7.9	26	51	82	66	30	7.0 *	9.5 *	6.0	7.6	3620	27700	5.9	8.6 *	8.6 *	7.6 *	
Ragt Semences	MX128		7.8 *	3520	27700 *	60.8	50	7.5	27	51	83	66	31	6.4 *	10.4 *	6.5 *								
Dairyland	Stealth 1280		6.1	3410	21000	61.2	50	7.5	27	52	81	65	29	5.4	7.8	5.1	7.7	3570	27500	6.2	8.8 *	9.0 *	7.0	
85-DAY HYBRID TRIAL AVERAGE##						62.2																		
Dynagro	51N39		7.0 *	3330	23700	62.4	60	7.7	28	53	80	63	29	6.0 *	9.2	5.7								
Pioneer	38A25	G	7.6 *	3430	26400 *	62.6	60	7.3	28	53	82	65	29	6.0 *	10.4 *	6.5 *								
NK Brand	N2555BT	KD	7.3 *	3550	26100 *	62.7	50	7.6	25	48	83	65	33	6.7 *	7.8	7.4 *	8.1 *	3660 *	29700 *	7.8 *	7.5	9.4 *	7.8 *	
Carharts Blue Top	CR85RR	J	6.8	3400	23200	63.0	60	7.3	28	54	81	65	27	5.6	8.1	6.5 *								
NK Brand	N29A2	GD	6.6	3500	23100	63.1	60	7.7	27	53	82	67	28	5.4	8.3	5.9								
Carharts Blue Top	CR8500RB	GX	7.1 *	3400	24700 *	63.2	60	7.5	28	55	81	65	27	5.2	10.3 *	5.9	7.7	3690 *	28500	7.3	8.0 *	7.5	7.4 *	
Dairyland	Stealth 1287RR	J	6.9	3490	24100	63.2	50	7.6	26	52	82	65	31	5.9 *	9.3	5.5								
Pioneer	37F16	G	7.5 *	3410	26200 *	63.4	60	7.4	27	52	81	64	29	5.9 *	10.5 *	6.3								
90-DAY HYBRID TRIAL AVERAGE##						63.7																		
Pioneer	37D03		7.3 *	3480	25900 *	64.1	80	7.5	27	51	82	65	30	5.5	9.9 *	6.6 *	8.9 *	3690 *	32900 *	9.0 *	9.0 *	8.5	8.1 *	
Carharts Blue Top	CX8500A		6.9	3510	24400	64.4	70	8.1	27	52	82	66	29	5.4	9.7 *	5.5	8.0	3690 *	29600 *	7.6 *	8.1 *	8.6 *	7.5 *	
Renk	RK232YGCB	G	7.2 *	3460	25400 *	64.5	60	7.9	27	53	82	65	28	5.8	10.1 *	5.8								
Carharts Blue Top	CR1857RB	GX	7.3 *	3650 *	26700 *	64.7	70	7.4	26	50	84	68	31	5.7	9.7 *	6.4								
95-DAY HYBRID TRIAL AVERAGE##						64.9																		
Golden Harvest	H6675		6.8	3340	23200	65.2	60	7.7	29	55	80	63	26	5.3	9.8 *	5.4								
Hyland Seeds	HLS034		7.2 *	3410	24900 *	65.3	70	8.0	29	55	81	65	24	5.8	9.6 *	6.3								
Pioneer	37R71	G	7.3 *	3500	25900 *	65.4	60	7.5	27	52	82	65	29	5.6	9.6 *	6.8 *	8.3 *	3680 *	30500 *	8.0 *	8.0 *	8.7 *	7.8 *	
100-DAY HYBRID TRIAL AVERAGE##						65.9																		
Kaltenberg	K2727Bt	X	6.9	3550	24900 *	65.9	60	7.7	28	54	82	67	27	5.6	9.4	5.8	7.9	3710 *	29500	6.9	8.5 *	8.4	7.4 *	
Dairyland	Stealth 1297		7.6 *	3640 *	27800 *	66.2	60	7.9	26	50	83	67	29	6.3 *	10.9 *	5.7								
Renk	RK488YGCB	G	7.5 *	3590 *	27300 *	66.6	70	7.5	26	51	83	67	30	5.8	10.1 *	6.6 *								
Hyland Seeds	HLS041		6.9	3720 *	26000 *	67.0	80	7.8	26	51	84	69	28	6.0 *	9.1	5.7								
NK Brand	N33H6		7.7 *	3350	26100 *	67.8	80	7.7	29	54	80	63	24	5.9 *	10.9 *	6.1								
MEAN			7.1	3480	25200	63.7	60	7.6	27	52	82	65	29	5.8	9.6	6.1	7.8	3660	28700	7.0	8.3	8.3	7.5	
LSD(0.10)**			0.8	140	3100	2.5	10	0.4	2	2	2	2	3	1.1	1.4	0.9	0.8	90	3300	1.4	1.1	1.1	0.7	

[†] Code = Trait(Gene): B=bmr(bm3); C=IMI(IT); D=LL(T25); F,G,K,L=Bt-ECB(Bt176, Mon810, Bt11, Cry1F); H,J=RR(MonGA21, Nk603);

M=Leafy; N=Bt-CRW(Mon863); X=Unknown; respectively.

Average whole plant moisture of all hybrids in the trial as rated by the Minnesota Relative Maturity Rating System. Ratings are rounded to 5 day increments.

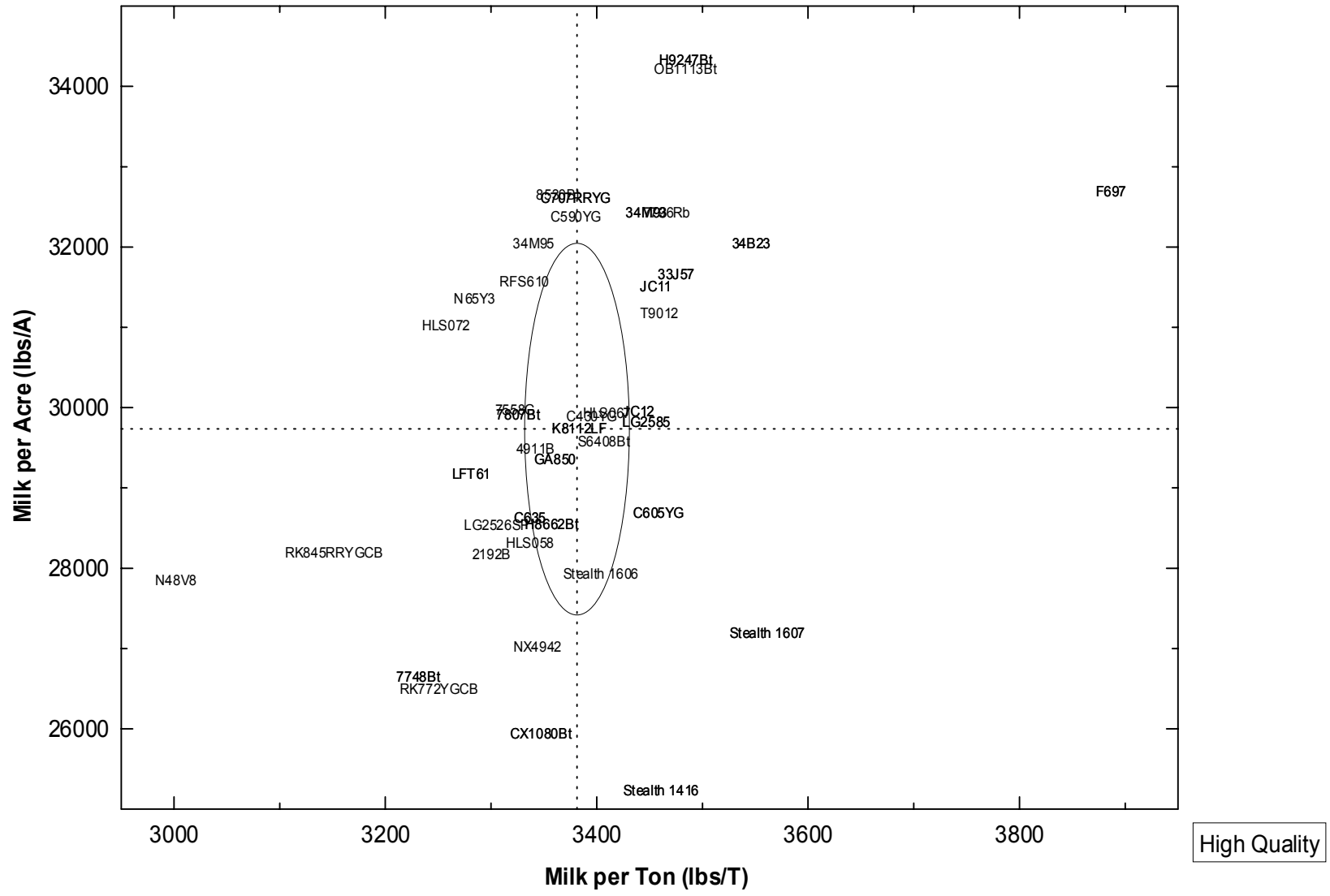
* Hybrids that performed statistically similar to the highest hybrid in the trial.

Shaded results provide the best estimate of relative hybrid performance.

Relationship between Milk per Acre and Milk per Ton of corn hybrids in the Southern Zone during 2003.

High Yield

High Yield and Quality

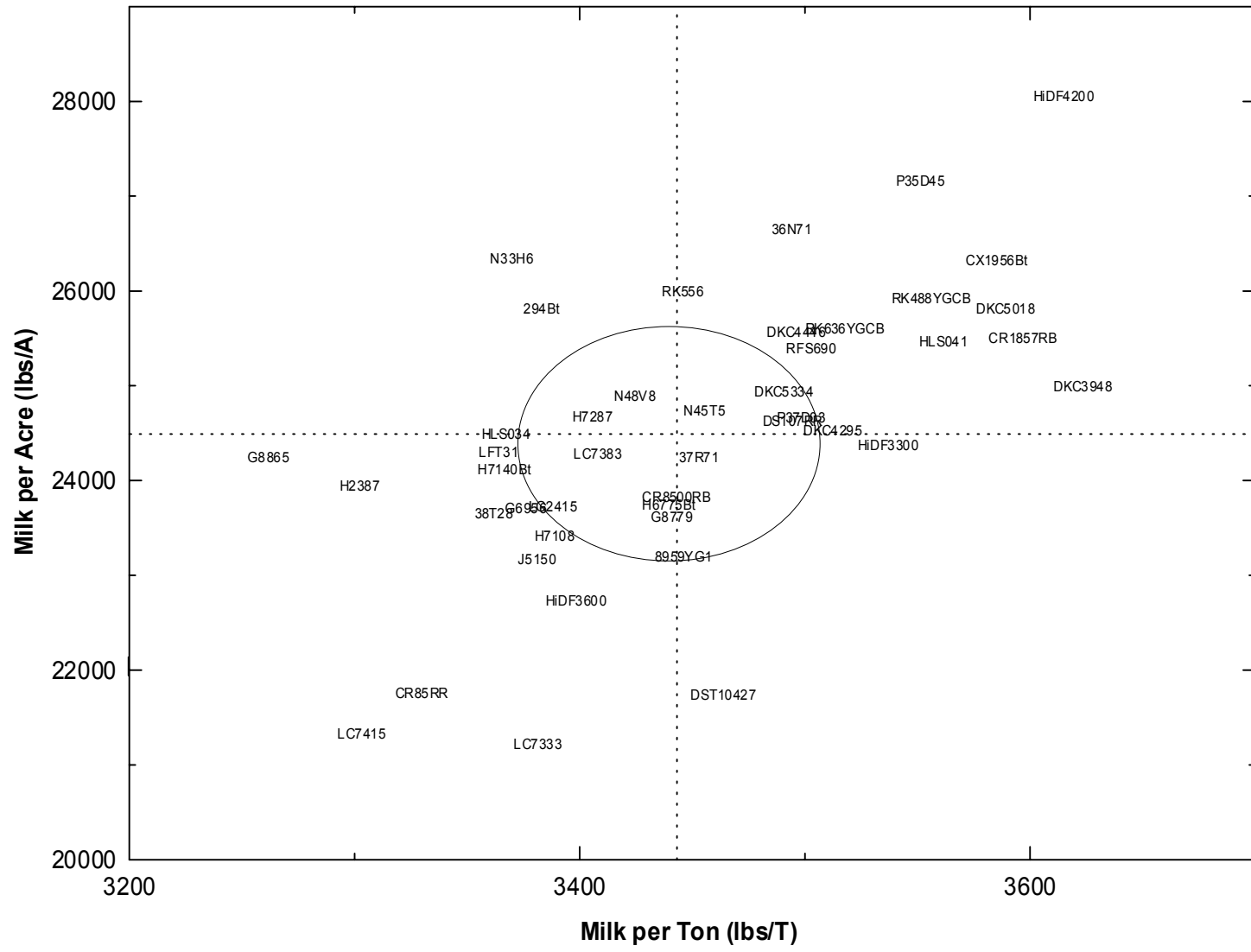


High Quality

Relationship between Milk per Acre and Milk per Ton of corn hybrids in the North Central Zone during 2003.

High Yield

High Yield and Quality

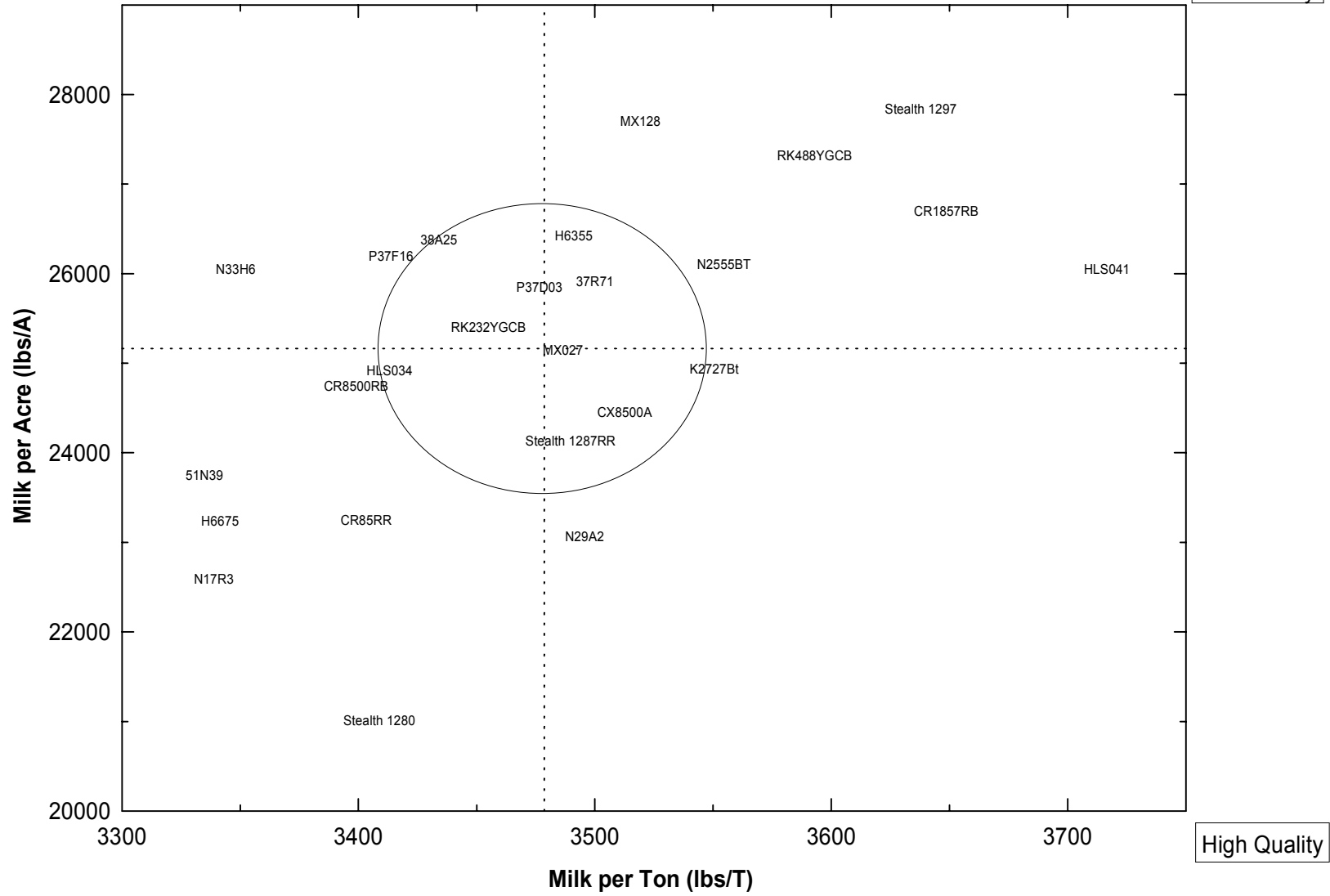


High Quality

Relationship between Milk per Acre and Milk per Ton of corn hybrids in the Northern Zone during 2003.

High Yield

High Yield and Quality



High Quality