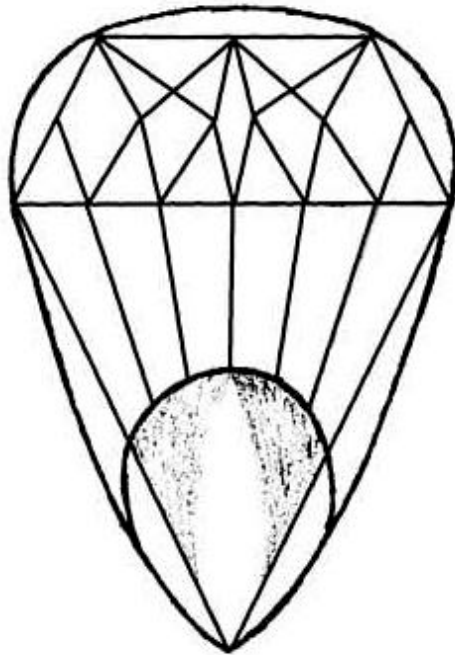


United States Department of Agriculture
Agricultural Research Service



Germplasm Enhancement of Maize

2011 GEM Cooperator Booklet

December 7th 2011

*The information in this report is shared cooperatively.
The data are not published, but are presented with the understanding
that they will not be used in publications without specific consent of the public cooperator.*

GEM Mission:

The mission of the GEM (Germplasm Enhancement of Maize) Project is to effectively increase the diversity of U.S. maize germplasm utilized by producers, global end-users and consumers. The mission will be achieved through a collaborative effort between USDA-ARS, and both public and private research scientists by utilizing exotic, public, and proprietary maize germplasm. The resulting germplasm and associated knowledge, derived via the identification and incorporation of favorable alleles for prioritized traits from exotic sources, is utilized in private and public breeding programs and ultimately contributes to increased genetic diversity of maize grown by producers and improved product performance. In addition, the GEM project provides opportunities for training plant scientists in the enhancement and utilization of un-adapted germplasm. This contributes to the global sustainability of agricultural production, economic stability and the nutrition and well being of society.

Cooperator Meeting Booklet

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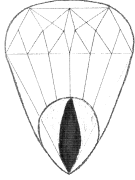
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 Germplasm Enhancement of Maize	Cooperator Meeting: DATE: December 7, 2011 HOUR: 8:30 AM-12:00 PM LOCATION: Regency Ball Room A (West Tower) Hyatt Regency Hotel, Chicago Illinois

Meeting to be called by: T. Hoegemeyer,
Technical Steering Group Chair

Agenda Topics

Minutes	N. de Leon	8:30-8:40 AM
Elections and By-Laws	T. Hoegemeyer	8:40-9:00 AM
GEM Annual Report	M. Blanco, M. Krakowsky	9:00-9:15 AM
Yield Test Results and Recommendations- Midwest & Southeast	M. Blanco, M. Krakowsky, M. Shen	9:15-10:00 AM
Break		10:00-10:15 AM
Use of Exotic Germplasm to Improve Abiotic Stress Tolerance	W. Xu	10:15-11:00 AM
Disease Trends and Germplasm	J. Dodd	11:00-11:45 AM
Discussion		11:45-12:00 AM
Adjourn		12:00

Annual Reports

2011 Annual Report of the GEM Project

GEM- Ames 2011 Highlights (Dr. Michael Blanco)

Midwest Germplasm releases and development:

- Two hundred forty-five (245) GEM releases are now available to Cooperators
- Six GEM lines from the Ames program are proposed for release to GEM Cooperators for the 2012 planting year. Yield data, and NIR results for protein, oil, and starch can be found on the CD and in the handout for 2012 released lines. Three of the releases are from accessions which have not have had previous GEM releases. This includes one from Venezuela, BG070404; one from Brazil, BR106; and one from Peru, SANM126. The other released lines include one from Brazil, BR105; and two from Thailand, NEI9004.

Table 1. Germplasm releases from Ames for 2012

GEM Code	Pedigree	Race	Type	Heterotic Group
GEMS-0224	BG070404:D27S42-B-014	Unclassified	25% Tropical	Stiff Stalk
GEMN-0225	BR105:N16a16b-B-074	Suwan	25% Tropical	Non-Stiff Stalk
GEMS-0226	BR106:S99a99e-B-053	Tuxpeño	25% Tropical	Stiff Stalk
GEMS-0227	NEI9004:S2809-B-022	Suwan	25% Tropical	Stiff Stalk
GEMS-0228	NEI9004:S2809-B-025	Suwan	25% Tropical	Stiff Stalk
GEMN-0229	SANM126:N1299b-B-033	Cuban Yellow	25% Tropical	Non-Stiff Stalk

- Approximately 230 BC1S2 families from (CUBA164xB73) x B73, and 230 BC1S2 families of (CUBA164xPHB47) x PHB47 were planted in an isolation block with LH287 for future trials. However, the hot dry conditions resulted in poor seed production and will need to be repeated.
- 136 new breeding crosses were made in Ames; 108 of these were tropical x temperate crosses using the shade house structure to induce flowering. GEM Cooperators made 10 additional breeding crosses as part of their in kind support.
- Fourteen new breeding cross populations were worked in Ames, and 9 were assigned to Cooperators for in kind support. Ten families of single seed descent (SSD) balanced bulks were advanced to S2 in Ames, and seven were advanced by Cooperators.
- Ear and kernel images of 64 GEM recommended lines and phenotypic descriptions were posted on the GEM website.

Pathology/Entomology:

Disease data for 2011 is reported on the GEM CD, and will be posted to our website (<http://www.public.iastate.edu/~usda-gem/>) in January. Pathology and entomology research collaborators from the private and public sectors screened GEM lines, top crosses, and breeding crosses for Northern Leaf Blight (NLB), Southern Leaf Blight (SLB), Goss's Wilt, Gray Leafspot (GLS), Diplodia ear rot, Aspergillus (aflatoxin and other mycotoxins), Corn ear worm (CEW), Western corn root worm (WCR), and miscellaneous tropical and southern insects.

Environmental conditions (heat, drought, winds, etc.) impacted data collection and resulted in missing plots at many locations. Appreciation is extended for the in-kind support and extensive efforts by private GEM Cooperators at DuPont/Pioneer Hi-Bred International (Bill Dolezal at Johnston, IA, and Mark Mancl at Woodland, CA). In Johnston, NLB and Diplodia data was collected; at Woodland, CA, Fusarium ear rot was evaluated. Thanks also to Professional Seed Research (Jim Dodd) for their efforts collecting data on GLS, NLB, SLB, and Goss's Wilt. This is also the first year obtaining data for NLB, Gibberella ear rot, common rust, common smut, and Eyespot in Ontario, Canada, thanks to Lana Reid of Agriculture and Agri-Food Canada. For corn insects, appreciation is extended to 3rd Millennium Genetics (Ed and Raechel Baumgartner) for tropical insect evaluations on GEM lines in Puerto Rico. Collaboration by USDA-ARS-PSRU in Raleigh, NC, included Peter Balint-Kurti (SLB) and Jim Holland (Fusarium ear rot); Xinzhi Ni, of ARS-CGBRU, in Tifton, GA, collected data for southern insects-piercing sucking type; Bruce Hibbard and Sherry Flint-Garcia, ARS-PGRU, Columbia, MO, evaluated corn rootworm; and Paul Williams and Brien Henry, ARS-CHPRRU, Mississippi State, MS, for aflatoxin in grain. Specific Cooperator Agreement (SCA) reports for disease and insect research can be found under Public Cooperator Reports for M. Bohn (WCR); and W. Xu (CEW, grain mold). The 2011 disease evaluation data is recorded on the CD and will be posted to our website soon from the following cooperators:

- USDA-ARS PSRU in Raleigh, NC (SLB)
- USDA-ARS and NC State University in Raleigh (GLS)
- DuPont/Pioneer Hi-Bred (Diplodia ear rot and NLB from Johnston, IA, and Fusarium ear rot from Woodland, CA)
- Professional Seed Research (NLB, SLB, GLS, Goss's Wilt, from IL).
- Agriculture and Agri-Food Canada (NLB, Gibberella ear rot)
- 3rd Millennium Genetics (Corn Earworm/Army Worm complex in Puerto Rico).

Aflatoxin analysis is pending by the USDA-ARS CHPRRU in Mississippi and will be posted on our web site in early 2012.

Second year disease evaluation data (2011) will be posted on our website under "GEM Germplasm Releases and Key Traits" data for the following releases. CD data includes:

- Two additional GEM lines were identified with GLS resistance (GEMN-0194, GEMN-0195); 26 total released lines with GLS resistance for all years.
- Nine additional GEM lines were identified with SLB resistance; 83 total released lines with SLB resistance over years.
- Two additional lines were identified with NLB (GEMN-0195 and GEMN-0197); 46 total released lines.
- Several lines had good Diplodia ear rot and Fusarium ratings over two years, but due to stressful conditions at both sites the lines will be re-evaluated in 2012.
- Several lines derived from NEI9004:S2809 looked good for Diplodia ear rot in 2011 (1 year data). The new release, GEMS-0228 was rated 8 (1-9 scale; 9 most resistant).

Ames 2011 Allelic Diversity:

- Approximately 415 DH lines were developed from the allelic diversity populations, representing 133 populations and 81 maize races.

- Self pollinations were made in 501 rows of BC1F1 to BC1F5 allelic diversity project germplasm to generate the BC1F2 to BC1F6 generations, representing 110 races from 13 countries.

Ames 2011 Yield Test and Other Highlights:

- Approximately 16,768 plots (3,028 entries) were managed or coordinated through Ames in 2011. Among these, 310 entries (10.2%) were in second year trials, and 2,718 entries were in first year trials.
- Two hundred-fifty-one (251) top crosses out of 3,028 entries exceeded the mean yield of the check hybrids in Midwest trials in 2011. Of the 251 hybrids that exceeded the mean, 226 were from first year trials, and 25 from second year trials.
- Approximately 7,000 nursery rows and 1,700 isolation rows were managed by Ames.
- Ninety-four (94) new breeding crosses were observed and evaluated for breeding potential in Ames, IA, Ft. Branch, IN (AgReliant), and Memphis, TN (C&S Crop Services). In addition, the Ames site evaluated 25 additional breeding crosses.
- Field Days, Publications, and Outreach: Six GEM Field Days were held as follows: Ames, IA (2); Fargo, ND (3); and Etter, TX (1). Approximately 250 people visited these sites. Six peer reviewed manuscripts and 13 abstracts related to GEM germplasm utilization were published by research scientists, and graduate students in 2011. Four presentations were made by students at Truman State University in Kirksville, MO., and other outreach consisted of workshops, invited speaker presentations, etc., and totaled nine.

Quality Traits:

- GEMS-0226, had protein content of 13.4%.
- BASF collected extensive silage quality data (milk/acre, %DM, %NDF, ADF, CP, etc.) at three locations (in-kind support). Top cross evaluation data for 15 SS and 19 NS GEM releases are on the CD.
- Texas A&M University reported reduced aflatoxin levels from a GEM line (Tx-WX11-4) derived from BR52051:N04 in the Southeastern Regional Aflatoxin Test (SERAT).

New GEM Cooperators in 2011:

Two new GEM Cooperators joined the GEM Project in 2011. Semillas Fitó, an international private company from Spain is evaluating GEM families for resistance to Maize Rough Dwarf Virus (MRDV). Genetic Resources, Inc. (Philo, IL) is providing nursery support for high amylose GEM germplasm, and conducting yield trials with normal (non-amylose) hybrids.

GEM-Raleigh Highlights (Dr. Matt Krakowsky)

Germplasm releases:

- Four GEM lines from the Raleigh program are recommended for release to GEM Cooperators for the 2012 planting year. Yield data can be found on the CD and in the handout for 2011 recommended lines (EXL7). Releases include two lines derived from CIMMYT inbreds (CML413 and CML329), and two from Caribbean accessions (St Croix Group and Cuba 164). The Cuba 164 release (CUBA164:D27-B-017-001) performed equally well on both Stiff-Stalk and non-Stiff Stalk testers.

Pedigree	Race	Type	Heterotic Gr.
CML413:N18-001-036-002	Mixed (Tropical inbred)	50% Tropical	NSSS
CUBA164:D27-B-017-001	Mixed(Creole)	50% Tropical	Other
SCR_Gp3:N14-028-003-B-002	Tusón	50% Tropical	NSSS
CML329:N18-001-020-001	Mixed (Subtropical inbred)	50% Tropical	NSSS

Germplasm development:

- Overall, there were about 4000 GEM nursery plots and 1100 GEM isolation plots in Raleigh, with additional GEM-related nursery managed by Major Goodman
- S₁ families were developed from two new breeding crosses, BR106:S42 and BR106:N42, and families from 25 GEM breeding crosses were advanced from S₁ to S₂.
- Twenty-three GEM x GEM F₁ combinations were produced, based on 2010 yield trial data, and S₁ bulk seed will be produced in winter nursery.
- Forty-four new breeding crosses were developed between seven tropical inbreds (89291, CML343, CML373, CML423, Ki43, NC296 and TZI8) and ex-PVP inbreds (LH132, NK740, NKH8431, PHV78 and PHW65) and CH732-12, a Canadian inbred. Both groups of inbreds were selected based on performance in yield trials in North Carolina.

Germplasm Evaluation in 2011:

- Overall, approximately 11,000 yield plots were coordinated from Raleigh, with approximately 6000 planted in NC and the rest planted by eight cooperators at various locations throughout the Southeast and Midwest.
- Twenty-four entries were evaluated at 13 locations in a third-year trial (EXL7), of which four will be recommended for release.
- Seventy-four entries were evaluated in second-year trials, 28 of which will be evaluated in third-year trials in 2012.
- 220 entries were evaluated in first-year trials, 64 of which will be evaluated again in 2012.
- EX25 evaluated the potential of different combinations of ex-PVPs for use as testers in 2010 and 2011, though no combinations outperformed the testers we are currently using (LH132xFR1064 and LH283xLH287).
- Evaluations of GEM releases from Raleigh and Ames were conducted in four experiments in 2010 and 2011 (EX26, EX27, EX28 and EX29) to identify those with the best potential for use in GEM x GEM crosses. EX26 (NSSS releases from Raleigh) and EX27 (SSS releases from Raleigh) were planted at locations in the southern Corn Belt and southeast, while EX28 (NSSS releases from Ames) and EX29 (SSS releases from Ames) were planted

in North Carolina and the Corn Belt. A subset of the best performing GEM lines from 2010 was planted in the 2011 trials.

- Breeding crosses were crossed on to testers and evaluated for yield potential in two trials, EX54 and EX55. EX54 consists of 50% tropical breeding crosses, while EX55 consists of mostly 25% tropical breeding crosses. Breeding crosses were also evaluated *per se* in the Raleigh nursery.

Allelic Diversity:

- Over 800 nursery rows were dedicated to the development of F₁s and BC₁s for the Allelic Diversity project and a related PhD project (Ott), along with 300 and 200 rows devoted to those projects in the winter 2010 and 2011 nurseries, respectively.
- Approximately sixty new BC₁ families were developed this summer in Raleigh.

Other GEM-Raleigh recommendations:

- Based on one year evaluations of breeding crosses in EX54 and EX55, some of the most promising are BR105:GEMN-0097, BR106:GEMN-0097, BR51501:N11a, CML287:GEMN-0155, DKXL380:S08b, CL-G1607:N11, NEI9004:S2817a, and BR105:N1643. CHIS775:S02, a white breeding cross, also performed well.
- Four of the best entries in EX26 were GEMN-0043, GEMN-0104, GEMN-0108, and GEMN-0169, all four of which were not significantly different from the check mean for yield. GEMN-0169 is derived from GEMN-0108. GEMN-0104, GEMN-0108, and GEMN-0169 all performed well in 2011 GLS evaluations at three locations in North Carolina.
- Four of the best entries from EX27 were GEMS-0006, GEMS-0018, GEMS-0027, and GEMS-0032, the last of which was not significantly different from the check mean for yield.
- Four of the best entries from EX28 were GEMN-0095, GEMN-0097, GEMN-0158, and GEMN-0193. GEMN-0097 was particularly good for Y/M.
- Four of the best entries from EX29 were GEMS-0049, GEMS-0052, GEMS-0091 and GEMS-0113, with the latter also performing well in 2011 GLS evaluations at three locations in North Carolina.

Public Cooperator Reports (GEM Ames) Funded by Specific Cooperative Agreements (SCA):

Six university projects were funded in 2011 for a total of \$87,544 (Table 2).

Table 2. Public Cooperators Supported In 2011

Name	Institute	Amount
Martin Bohn	University of Illinois	\$14,238
Mark Campbell	Truman State University	9,000
Marcelo Carena	North Dakota State University	9,000
Natalia de Leon	University of Wisconsin	16,606
Jay-lin Jane	Iowa State University	20,700
Wenwei Xu	Texas A&M University	18,000
	Total	\$87,544

A short summary of key highlights from each SCA report is included below. Significant progress was made this year by all SCA researchers. Space does not allow extensive discussion of methods, germplasm development, and results in the summaries below. **Please see the full report on the CD submitted by each cooperator.** These will also be available on the GEM website soon.

Martin Bohn, University of Illinois: GEM Germplasm-Unlocking maize diversity for improving host plant resistance against Western corn rootworm and other biotic stresses

Pest management systems integrating host plant resistance and well designed refuges are an important aspect to manage the Western Corn Rootworm (WCR). This is particularly important in light of 2008 reports of WCR developing resistance to Bt toxin under greenhouse conditions (PNAS 105:19177-19182, and J. Appl. Entomol. 132:189-204). In 2011, the first reports emerged of WCR damage on WCR-Bt hybrids in Iowa (2011.PLoS ONE 6(7): e22629.dpo:101.37/journal.pone.0022629). The goal of this project is to develop maize inbreds and hybrids adapted to the US Corn Belt with improved resistance to WCR. The work consisted of germplasm development, evaluation, and the development of a bioassay method to evaluate germplasm grown in a growth chamber in winter. For development, 1,200 nursery rows were planted May 26, 2011. The goal was to combine different resistant genes from exotic backgrounds, segregating F2's, and double haploids (DH) developed in 2010. In addition, 41 new GEM based F1 hybrids derived from crosses between inbreds developed from AR16026:N1210, UR13085:N0204, CUBA117:S1520, and FS8A(S):S0907 source populations were selfed to form new segregating F2 populations. Cycle 1 of the Illinois WCR Synthetic was grown and 100 randomly selected plants selfed to continue recurrent selection with S1 progeny. For evaluation, 41 new GEM based F1 hybrids derived from crosses between inbreds developed from AR16026:N1210, UR13085:N0204, CUBA117:S1520, and FS8A(S):S0907 were evaluated for their levels of WCR resistance. Root damage ratings (RDR) varied between 0.69 and 3.00 with an overall mean of 1.97 (0-3 node injury scale). All genotypes showed moderate root re-growth (RRG) varying between 2.47 and 5.46 (1=intensive re-growth, 6=no re-growth). Root damage ratings were significantly correlated with root size (RSZ) ($r_p=0.65$). RSZ ranged from 1.10 to 3.55 (1=large, 6=small). No significant relationship was found between RRG and the other root characteristics. A subset of 17 F1 hybrids were as resistant as resistant check PHZ51×NGSDCRW1 (RDR = 1.52). In order to test the hypothesis that teosinte carries resistance genes against WCR feeding, a set of testcrossed teosinte introgression lines developed by Dr. Flint-

Garcia (USDA-ARS, Columbia, Missouri) were evaluated for their level of resistance to WCR feeding. For the bioassay, plants were germinated in growth pouches and infested with WCR larvae. Traits were evaluated on larvae number and development over time, as well as root damage to the host plants. The bioassay is envisioned to pre-select germplasm before spring planting, and to study WCR resistance mechanisms.

Mark Campbell, A. Karn, M. Emery, A. Panthi, J. Issleib, E. Vanover, J. Burke, and E. Mauch. Truman State University: Development and evaluation of specialty starch germplasm utilizing GEM biodiversity to optimize grain quality, composition, and yield

The objectives of the Truman State University research include 1) develop inbred lines and evaluate hybrids for specialty starches with high amylose class V (*ae*), class VII (*ae sbe1::gems67*), and double mutants *wx su1*, *wx su2*, *ae du*, *ae wx*, and *ae wx sbe1::gems67* 2) continue identification of closely linked markers to aid in selection of genotypes with the amylose modifier *sbe1::gems67*, 3) investigate GEM germplasm to improve starch yield and grain quality, particularly for double mutants such as *ae wx*, 5) investigate allelic variation in *sbe2ae* locus (bin 8.06) within GEM germplasm. In 2011, 50 entries were evaluated for yield in Ames, IA. All of the entries were GEM x GEM crosses. The same pedigree was the top entry in both 2010 and 2011 and was derived from *sbe1::gems67* converted SS GEM lines originating from GEMS-0113 (CHIS775:S1911b-120-001), and AR16035:S02-615-001. The male originated from NS male conversions of AR03056:N09-191, AR03056:N09-182, and CH05015:N15-3-001. Approximately 100 lines of amylomaize VII (70% amylose) were grown in 2010 in Kirksville, MO. Harvested seed were evaluated in the lab for amylose content and grain physical properties using grain density testing, and kernel breakage. A PCR-based molecular marker was successfully developed and used to identify the *sbe1::gems67* allele originating from GEMS-0067. The primer *I* has been renamed as Primer SBE1a::GM67 after the name of the modifier allele. Screening of lines with the primer clearly identified lines which were not fixed (i.e., heterozygotes) for the gene as observed by double bands on agarose gels. However, more research is needed since the PCR product took four hours to separate from the heterozygote and better resolution is still needed. Working with collaborators at Iowa State University an insertion sequence of 8 bp was identified in the amplified allele. Future research will be focused on searching for an endonuclease enzyme with a restriction site *only* in the sequence of the modifier allele. Further research continued on double mutants of *ae wx* and their potential for use as a therapeutic food additive. These mutants have potential to provide slow digestible starch (SDS) with health benefits such as lowering glycemic index and providing prolonged energy. Molecular studies were initiated to compare *ae wx* starch with *wx* starch. Unlike *wx* starch having entirely branched amylopectin, *ae wx* starch have crystalline double-helical branches. Like resistant starch (RS) from *ae* amylomaize VII, starch from *ae wx* has slow enzyme hydrolysis but less extreme and potentially more beneficial as a therapeutic food. Studies are underway to study and improve grain quality of double mutant *ae wx* lines.

Marcelo Carena, North Dakota State University: Development of early maturity GEM lines with value-added traits: Moving US Corn Belt GEM lines Northward

The objective of the corn breeding program at NDSU is to move elite tropical and temperate germplasm northward. The premise of this research assumes that early maturing recovered versions of GEM lines can be obtained retaining grain yield, agronomic quality, and traits while

maintaining useful genetic diversity. Further development work continued in six GEM populations; CUBA117:S1520-388, DKB844:S1601-507, BR52051:N04-70, SCO1:N1310-265, FS8B(T):N1802-35, and CH05015:N12-123. Lines were selected from these families and evaluated in test crosses over two years. Results from fall 2010 indicated that lines derived from BR52051 produced hybrids with low moisture and similar yield as commercial checks. Lines developed from CH05015, CUBA117, and FS8B(T) had high grain protein and/or oil. Further testing is being conducted in 2011 with yield trials planted in up to 24 locations. The nursery in Fargo, ND was planted in May 2011 and new advanced EarlyGEM lines including ND2012, ND2014, and ND2015 were sent to cooperators for further testing. Three maize new population hybrids, [NDSM(M-FS)C9 Syn2]Syn2 x EARLYGEM 21b Syn2, NDSS Syn 2 x EARLYGEM 21a Syn 2, and BS21(R-T)C9 Syn 2 x EARLYGEM 21a Syn 2, with good yield and better protein quality including lysine, methionine, and cysteine are being further developed. Two of the most outstanding populations developed are now part of an extensive recurrent program in 2011 and include North Dakota Stiff Stalk Synthetic (NDSS) and EarlyGEM 21. Although not all 2011 data has been received, yield trial results from three experiments (Exp 21, 23, 28) conducted at three locations each are included with this report.

Natalia de Leon and Dustin T. Eilert, University of Wisconsin: Development of maize inbreds, hybrids, and enhanced GEM breeding populations for superior silage, biofeedstock yield, and compositional attributes

In 2011, The UW Corn Silage Breeding Program continued to evaluate silage yield and nutritive value of the most productive GEM crosses identified in grain yield evaluations conducted over the past several years by the GEM project throughout the U.S. Corn Belt. The 2011 silage trials focused primarily on re-testing of GEM materials and first evaluation of GEM populations 06GEM05390 (AR16021:S0908a) and DKXL212. Five trials involved GEM materials (AR16026, DK2888, DKXL212, GEMS01834, and GEMS05390. Trials were planted in triplicate at 32,800 plants/acre at Madison (May 27) and Arlington (May 24). Temperatures were average in spring, but high temperatures were observed around flowering time. Strong winds and heavy rain caused substantial damage at Arlington and many advancement decisions were based on Madison yield and dry matter. Highlights of the trials were as follows:

AR16026 highlights: Results are re-tests of the 2010 selected lines crossed to non-stiff testers. All AR16026 crosses (with one exception) exceeded the average yield of the check hybrids excluding F2F633. Dry matter content was a bit above ideal.

DK2888 highlights: This test included lines derived from DK888:N11a08a-440-001-B crossed to LH244 and LH332. The average forage yield was 9.5 t/a for testcrosses vs 9.1 t/a for the checks excluding F2F633. Dry matter content was ~4% lower than checks but still within acceptable range.

DKXL212 highlights: This test included lines derived from DKXL212:S0912-117-001 and DKXL212:S0912-012-001. Among the 19 testcrosses only one exceeded the average yield of the check mean although dry matter content was within the range of the checks.

GEM01834 highlights: This test included lines derived from GEMS-0183 and GEMS-0184 (both GUAT209:S1308a background). Five of the eight testcrosses exceeded the check mean excluding F2F633, although dry matter was ~5% below the check mean

GEMS05390: Two of 22 testcrosses exceeded the average yield of the checks excluding F2F633. Dry matter content was ~3.5% higher than the mean of the checks

GQS highlights: The GEM Quality Synthetic (GQS) is approximately 75% Stiff Stalk derived from CUBA164 and CUBA117. During the summer of 2011 the best 20 S2 lines were recombined to form cycle 2 (GQS C2). In addition, two S3 lines derived from the highest forage yielding S2's were sent to 2011-2012 winter nursery to be crossed to W604S. Selection is also continuing among the waxy GEM lines, GEMS-0185 and GEMN-0186, and seven additional non-waxy GEM families were selfed and crossed to W612S for first year trials in 2012.

Quality evaluation for neutral detergent fiber (NDF), in vitro true digestibility (IVD), in vitro NDF digestibility (IVNDFD), crude protein (CP), and starch will be done on selected test crosses from each of the experiments. Based on these values, milk/ton of forage and milk/acre will be estimated based on MILK2006, which uses forage composition (NDF, IVTD, IVNDFD, CP, and starch) to estimate potential milk production per ton of forage. Forage yield is then used to estimate potential milk per acre.

Jay-lin Jane, Y. Hanyu, and M. Reed, Iowa State University: Development of GEM line starch to improve nutritional value and bio-fuel production

Specific objectives of this research project are to (1) characterize the molecular structure and starch granule formation, and to develop analytical methods to identify germplasm for high-digestibility and resistant starch, (2) characterize and explore utilization of GEM line starch to improve nutritional value to humans and animals, and (3) characterize GEM line normal and waxy starch for bio-fuel production and to improve the yield of ethanol. For Objectives 1 and 2, three GEM lines, 06GEM02119 (normal), 03GEM00138 (high protein), and 09GEM07913 (high oil), were planted in the field of the North Central Regional Plant Introduction Station (Ames, IA) in 2010. The lines were self pollinated and harvested kernels analyzed for starch, lipid, and protein composition. The kernel starch content of these three lines was 60.1%, 62.2%, and 62.5%, respectively. The amylose content of the starch samples, analyzed using iodine potentiometric titration, were 30.8%, 31.8%, and 27.7%, respectively. The protein content of the lines was 12.5%, 11.2%, and 9.9%, respectively. The high-oil line, 09GEM07913, had a lipid content of 5.5%, which was greater than the other two lines, 06GEM02119 (3.3%) and 03GEM00138 (4.0%). The high oil line (09GEM07913) also had the lowest level of amylose (27.3%), vs. 30.8% and 31.8% for 06GEM02119 and 03GEM00138 respectively. Dry-ground corn was hydrolyzed and the isolated starch was analyzed using porcine pancreatic alpha-amylase after cooking. The starch obtained from the hydrolyzed dry-grind kernels from the high-oil 09GEM07913 line had the slowest starch-hydrolysis rate among the three, which could result from the formation of an amylose-lipid complex during cooking. There was no difference in the rate of starch hydrolysis between samples of the isolated starch. For Objective 3, thirteen GEM lines (four normal and nine waxy GEM lines) were grown in 2009 and 2010 crop years. Ethanol production studies were conducted using a cold-fermentation process. The largest ethanol yield using a raw-starch fermentation technique of waxy corn was 37.9g/100g (line 08GEM05036), which was only slightly greater than the largest ethanol yield of the normal corn (line 08GEM04701, 37.5g/100g). The total starch content of the waxy lines, ranged from 65.3% (line 08GEM05042) to 72.8% (line 08GEM05037), and was proportional to their ethanol yields ($R^2=0.76$, $p<0.01$). The average starch-to-ethanol conversion efficiency of the waxy corn (93.6%) was substantially greater than that of the normal corn (88.1%) over both years. Starch of six waxy lines (08GEM05036, 05037, 05039, 05040, 05041 and 05042) was isolated for

chemical and structural analysis, including branch-chain length distribution of amylopectin, thermal and pasting properties, and the enzymatic hydrolysis of raw starch. The enzymatic hydrolysis of isolated starch showed different kinetics from that of starch in the dry-grind corn, resulting from effects of cell wall structure and the protein matrix in the dry-grind corn. Waxy dry-grind kernels and their isolated starches had substantially higher hydrolysis rates than normal corn using B73 as a reference. Waxy corn can potentially be an important source for ethanol production if grain yield and starch levels were adequate.

Wenwei Xu, Texas A&M University: Use of GEM germplasm for evaluation and development of drought tolerance, corn ear worm (CEW) resistance, and low aflatoxin level grain

The objectives of this project include (1) select, advance, and release stress tolerant lines derived from GEM germplasm (2) evaluate GEM breeding crosses for drought and heat tolerance, corn ear worm (CEW) resistance, and agronomic performance in Texas, and (3) assay aflatoxin levels of GEM test crosses. Approximately 100 testcrosses (derived from GEM lines developed in Lubbock) were evaluated for grain yield, CEW resistance, and drought tolerance. Data can be found in the full report for yield, aflatoxin, performance under stress, and forage yield (Tables 1-4). A summary follows: The hybrids of GEM lines developed from BR52051:N04, CUBA117:S15, and DK888:N11 produced grain yields comparable to commercial hybrids, with lines from BR52051:N04 and CUBA117:S15 having excellent grain quality. Aflatoxin resistance of the GEM-line hybrids were tested in the multi-state SERAT tests for aflatoxin and yield performance in 2011. Two of the experimental hybrids (Tx-WX11-4 and Tx-WX-11-9) had low aflatoxin at College Station, TX and Starkville, MS in 2011. Tx-WX-11-4 is the testcross of a line developed from BR52051:N04 while Tx-WX-11-9 is the testcross of a line derived from and CUBA117:S15. Inbred lines from ANTIG01:N16 have nice appearance, excellent grain quality, low grain mold, but have a high ear placement. Hybrids with lines derived from ANTIGO: N16 performed well under severe drought stress and hot environment. Four testcrosses of GEM lines were included in the 2011 Texas State Silage Corn Performance Test in the High Plains. WXY10F is the testcross of a brown midrib line developed from a breeding cross made with the GEM GUAT209:N19. WXY11C is the testcross of a line derived from BR52051:N04. WXY11D and WXY11E are the testcrosses of a line from CUBA117:S15. WXY11C produced a forage yield of 35.7 tons/a, and ranked second among 43 entries (including commercial checks). The hybrids of the GEM lines usually produce tall and robust plants. When grain yield is high, these hybrids are suitable for high tonnage and high quality silage corn production.

NIR Data of 2012 GEM Releases:

Whole grain composition data for protein, oil, and starch content were generated using an NIR Infratech 1241 with a sample transport module and whole grain calibration from Iowa State Grain Quality Lab. All lab data are reported on a dry matter basis and available on the CD, and will be posted on the GEM web site. Samples are obtained from a bulk of 8 ears from self pollinated rows. NIR data on the CD includes GEM line characterizations for 2011, and two year analysis (2010-2011) of retest GEM lines (lines in second year re-test yield trials).

Data for protein, oil, and starch content for the 2012 recommended lines from Ames, IA are in Table 3. Data are from Ames and are 2 year averages (2010 and 2011).

**Table 3. Two year NIR summary (2010-2011) from self pollinated bulk seed.
2012 Line Recommendations- Ames**

GEM Code	Pedigree	Country	Protein	Oil	Starch	Density
GEMS-0224	BG070404:D27S42-B-014	Venezuela	11.8	4.5	69.0	1.292
GEMN-0225	BR105:N16a16b-B-074	Brazil	12.8	4.1	68.7	1.324
GEMS-0226	BR106:S99a99e-B-053	Brazil	13.4	4.4	68.1	1.322
GEMS-0227	NEI9004:S2809-B-022	Thailand	9.6	4.2	71.2	1.288
GEMS-0228	NEI9004:S2809-B-025	Thailand	12.2	4.9	68.4	1.315
GEMN-0229	SANM126:N1299b-B-033	Peru	12.2	3.6	69.8	1.324

GEM TSG Meeting, Sep 9, 2011- Highlights:

The GEM Technical Steering Group (TSG) meeting was held at the North Central Regional Plant Introduction Station (NCRPIS) in Ames, IA on September 9, 2011. A tour of the nurseries was hosted by Mike Blanco, Candice Gardner, Andrew Smelser, and Fred Engstrom. The tour included the photoperiod shade house, the double haploid (DH) nursery, and GEM releases from 2010 and 2011 from Ames and Raleigh programs. The By-Laws and Mission Statement were reviewed, and several revisions made to the By-Laws. No changes were recommended to the Mission statement. A presentation was made by Dr. Thomas Lübberstedt on two research projects with GEM DH's and it was suggested that consideration should be given to develop a panel of DH lines, and to form collaborations to study other traits of interest. Another topic included standardization of phenotypic data collection and reporting. It was agreed that standardization is desirable for interpretation of results, but the original data submitted by the cooperator should also be accessible. This is especially true for disease ratings from collaborators who use different scales. It is important that the original, raw disease data be presented in context with the relevant checks. It was agreed that more follow-up is needed to address how these data should be managed and implemented.

PERSONNEL UPDATE:

Ames: *USDA-ARS Plant Introduction Research Unit*

Dr. Mike Blanco, GEM Coordinator and Geneticist
 Andrew Smelser, GEM Technician
 Fred Engstrom, GEM Technician
 Dr. Mack Shen, IT Specialist
 Dr. Candice Gardner, Research Leader and Fundholder

Raleigh: *USDA-ARS Plant Science Research Unit*

Dr. Matt Krakowsky, Southeast GEM Coordinator
 Dale Dowden, Agricultural Research Technician
 Dr. Peter Balint-Kurti, Research Geneticist
 Dr. Jim Holland, Acting Research Leader, Maize Research Geneticist, Fundholder
NC State University
 Dr. Major Goodman, William Neal Reynolds Distinguished Professor

IN KIND NURSERY SUPPORT MIDWEST GEM PROJECT IN 2011:

Table 4. Private In-Kind Nursery Support – Summer 2011

3 rd Millennium Genetics (Puerto Rico)	Tropical insect evaluations
AgReliant Genetics LLC	Make new breeding crosses
	Advance S1's in BR105:S1643
	Evaluate breeding crosses
BASF Plant Science LLC	Make S1's in BR105:N99d99h
	Make S1's in Ki21:N99ap99z
	Make S1's in MDI022:N99d99z
Beck's Superior Hybrids, Inc.	Make new breeding crosses
	Advance S1's in UR13085:N0215/AR17056:N2025
Brandy Wine Seed Farms LLC	Advance S1's in CML341:S99y99ah-B
CAAS (China)	Evaluate breeding crosses for agronomic phenotypes
	Evaluate MRDV, Head Smut, Gibberella stalk rot
Cornhusker Hybrids, LLC	Make S1's in NEI9004:S2899n
FFR Cooperative	Make new breeding crosses
Forage Genetics	Make S1's in MDI022:N99d99am
G and S Crop Services LLC	Advance S1's in SANM126:N1241-B
	Breeding cross evaluations
GDU Inc	Make S1's in SCRO1:N1318
Genetic Enterprises Int'l	Make S1's in (KO679Y/GEMS-0115)/GEMS-0162
Genetic Resources, Inc.	Nursery support for amylose research
Illinois Foundation Seeds, Inc.	Make new breeding crosses
	Advance S1's in CH05015:N4049a-B
JFS & Associates, Ltd.	Top cross GEM lines
MayAgro (Turkey)	Make S1's in Ki21:N99am
	Advance S2's in NEI9004:N0846-B
MBS Genetics LLC	Top cross GEM lines from BR105:S162699aj
Monsanto	Make new breeding crosses
	Make S1's in BR105:S21z99ah
	Advance S1's in NS1:S0852
	Advance S1's in MBRC10:N1730
	Advance S1's in MBRC10:N1749
	Top cross GEM lines
Mycogen Seeds	Advance S1's in DK212T:S11b40-B
National Starch	Backcross wx into adv GEM lines
	Top cross wx GEM lines
Pioneer Hi-Bred, Int.	Allelic Diversity support
	Multiple disease evaluations of GEM lines
Professional Seed Research	Multiple disease evaluations of GEM lines
Semillas Fitó	Evaluate GEM families for MRDV disease
Syngenta Seeds, Inc.	Make S1's in CML341:S99y11
	Makes S1's in BR105:N99z11
	Advance S1's in BR105:S1641
Terrell Seed Research	Advance S1's in CUBA164:S99aa99ah
Wyffels Hybrids	Makes S1's in (GEMS-0176/S49x)-B

Table 5. Private In-Kind Nursery Support – Winter 2011-2012

AgReliant Genetics LLC	Top cross BR105:S1643
BASF Plant Science LLC	Advance S1's in Ki21:N99ap99z
Beck's Superior Hybrids, Inc.	Top cross UR13085:N0215/AR17056:N2025
Illinois Foundation Seeds, Inc.	Top cross GEM lines
Genetic Resources, Inc.	Nursery support for amylose research
Monsanto	Top cross MBRC10:N1730 and MBRC10:N1749
Mycogen Seeds	Top cross GEM lines
National Starch	Backcross wx into adv GEM lines
Pioneer Hi-Bred, Int.	Allelic Diversity Support
Semillas Tuniche	Make S1's in Ki21:S99al99y
Sursem SA (Argentina)	Make new breeding crosses
	Evaluate GEM families for Mal de Rio Cuarto disease

Table 6. Yield Trials 2011 (a separate supplementary sheet has details of mean, LSD, etc.)

Experiment	Cooperator Making Topcross*	Material	Tester	Number of Entries	Number of Reps
111301	GEM	BARBGP2:N08a46	HC33	55	5
111302	GEM	CL-00331:N1834	HC33	65	5
111303	GEM	CML323:N1550	HC33	45	5
111304	GEM	NEI9004:N0803	HC33	55	5
111305	GEM	GUAT209:N11c46	HC33	35	5
111306	GEM	GUAT209:N11c50	HC33	45	5
111307	GEM	SCROGP3:N3215	HC33	65	5
111308	GEM	CL-G1703:S17c43	LH287	65	5
111309	GEM	CUBA164:S99n99n	LH287	45	5
111310	GEM	DKXL212:S0928	LH287	65	5
111311	GEM	DKXL380:S08a15	LH287	45	5
111312	JFS	NEI9004:S2817c	JFS-NS	45	5
111313	BEC	AR16021:N2149a	TR7245HXT	70	5
111314	IFS	CML329:N1546	SGI890HXT	70	5
111315	MON	MBRC10:N1749b	MON-SS	19	6
111316	MON	DK888:S08a46	MON-nSS	79	6
111317	DAS	SANM126:S1221	DAS-nSS	75	5
111318	DAS	BR105:N1643	DAS-SS	75	5
111319	PAN	BR105:N1646	SGI890HXT	55	5
111320	FGT	DKXL212:S0950	MBS8814CBLLRW	65	6
111401	BAS	GEMN-0131/DKXL212:N11a-139-B	BAS-SS	45	8
111402	BAS	GEMN-0131/DKXL212:N11a-139-B	BAS-SS	35	8
111403	BAS	GEMN-0131/DKXL212:N11a-139-B	BAS-SS	35	8
111404	PAN	GEMS-0147/GEMS-0115	MBS8814CBLLRW	55	5
115201	GEM	AR16062:S99n	LH287	65	5
115202	GEM	BS20(S)C2:S99u	LH287	65	5
115301	GEM	AR01150:N0402	HC33	65	5
115302	GEM	AR03056:N0902	HC33	55	5
115303	GEM	AR03056:N0902a	HC33	65	5
115304	GEM	AR13026:N08a04	HC33	55	5
115305	GEM	AR17056:N2016	HC33	25	5
115306	GEM	CH05015:N4049b	HC33	15	5
115307	GEM	AR16021:S3115	LH287	65	5
115308	GEM	AR16042:S2028	LH287	55	5
115309	GEM	AR16042:S2030	LH287	65	5
115310	GEM	UR05017:S0414	LH287	55	5
115311	GEM	UR10001:S1802	LH287	55	5
115312	GEM	UR11002:S1446	LH287	75	5

Experiment	Cooperator Making Topcross*	Material	Tester	Number of Entries	Number of Reps
115313	GEM	UR11003:S17h02	LH287	55	5
115314	AGR	UR13088:S0650	AGR-nSSBT1CCR1	80	6
115401	GEM	GEMS-0002/GEMS-0149	LH287	75	5
115402	GEM	Retest	LH287	15	8
116001	GEM	Retest	MBS3633	75	8
116002	GEM	Retest	MBS8814	45	8
116003	GEM	Retest	HC33	65	8
116401	GEM	GEMN-0111/GEMN-0140	HC33	45	5
116402	GEM	GEMS-0002/GEMS-0003	LH287	65	5
116403	GEM	GEMxGEM	Various	45	5
116404	GEM	Retest	Various	35	8
116405	GEM	Retest	LH287	45	8
116406	STA	Waxy Test	Various	35	6
SF11BFF3701	BASF	Silage	Various	45	3
Total				2813	

* In Kind Support for Yield Trials in 2011 was provided by:

- AgReliant Genetics, LLC
- BASF Plant Science
- Beck's Superior Hybrids
- Dow AgroSciences
- Forage Genetics
- Genetic Resources, Inc.
- Illinois Foundation Seeds, Inc.
- Monsanto Company
- National Starch
- PANNAR Seed
- SEEDirect
- Syngenta Seeds
- Wyffels Hybrids, Inc.

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Srichuwong, S., and J. Jane, "Characterization of residual starch in distiller's dried grains with solubles (DDGS)." *Cereal Chemistry*, 88 (2011) 278-282.

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OUTREACH, PUBLIC RELATIONS AND FIELD DAYS:

24th Annual Student Research Conference, Truman State University, Kirksville, MO, March 23, 2011.

Jokerst, R.M., M.R. Campbell, and B.D. Lamp. 2011. Analysis of Maize Seed Storage Protein Diversity among Experimental Specialty Starch Lines.

Karn, Avinash, M.R. Campbell, B. Buckner, and D. Janick-Buckner. 2011. Breeding Specialty Starch Maize Using Exotic Genetic Resources for Gene Discovery of Novel Alleles and Modifiers with Materials Generated from USDA-ARS GEM Project.

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Miluski, K.M., G. Wehner, and M.R. Campbell 2011. Continued Comparison of Rumen Fermentation of Corn Starch Varying in Amylose and Amylopectin Concentration.

Other Outreach, Public Relations

Henry, B., W. Williams, G. Windham, and M. Blanco. 2011. Diallel evaluation for aflatoxin accumulation of GEM inbred lines crossed with resistant and susceptible southern adapted inbred lines. Genetics of Maize Disease Workshop, Raleigh, NC, February 20-23, 2011.

Jane, J., "Structures and properties of resistant starch and its health benefits." A plenary lecture to the 2nd EPNOE International Polysaccharide Conference, Wageningen, the Netherlands, August 29 September 2, 2011.

Jane, J., "Structures and applications of Type-2 and Type-5 resistant starch," An invited lecture to Starch Roundtable Conference, Palm Springs, CA, October 12-14, 2011.

Jiang, H., and J. Jane, "Analysis of resistant starch content using differential scanning calorimetry." A keynote lecture to North America Thermal Analysis Assoc. Des Moines, Iowa, August 7-10, 2011.

Medic, J., S. Setiawan, Y. Ai, C. Hurburgh, C. M. L. Franco, and J. Jane, "Effects of postharvest-processing conditions on endogenous amylase activities of cereal." An invited lecture to American Assoc. of Cereal Chemists International, Palm Springs, CA, October 15-19. 2011.

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Xu, W., Y. Xue, M. Blanco, W.P. Williams, and G. Odvody. 2011. Index and sampling size for evaluating corn earworm injury to corn ears. NCC167 Corn Breeding Group Annual Meeting, St. Charles, IL, March 17, 2011.

Xue, Y., W. Xu, W.P. Williams, and G. Odvody. 2011. Breeding low aflatoxin corn inbred lines. Genetics of Maize Disease Workshop, Raleigh, NC, February 20-23, 2011.

Ames, IA GEM Project (M. Blanco) 2011 Field Days:

- September 21 and 22: 54 people attended over both days. Featured were GEM releases from 2010 and 2011(Raleigh and Ames releases), new experimental lines for potential release, doubled haploid lines, breeding history, and teosintes (*Zea mays spp. parviglumis* and *Z. mays spp. mexicana*), with introgressions with B73 (from Sherry-Flint-Garcia).
- August-September: Approximately 100 international visitors from six countries (Argentina, China, Indonesia, Mexico, UK, and Turkey) toured the GEM demonstration fields and seed storage facilities at the NCRPIS.

Fargo, ND North Dakota State University (M. Carena) 2011 Field Days:

- September 9: South Dakota State University professors and graduate students (approximately 30 visitors).
- September 13: Approximately 10 Eastern European scientists, including directors of the corn genetics research laboratory at Kherson State Agrarian University in the Ukraine, and members of the National Academy of Agrarian Sciences of Ukraine (NAASU).
- September 29-30: Industry and Grower organizations (approximately 50 visitors).

Etter, TX Texas A&M University (W. Xu) 2011 Field Day:

- August 18: 2011 Texas High Plains limited irrigation field day held for corn producers, seed companies, policy makers, consultants, and underground water conservation district.

GEM Releases

Summary of the 6 GEM Ames Released Lines for 2012

GEM Code	Pedigree	Race	Type	Country	Heterotic Group	Cob Color	Grain Type	Grain Color
GEMS-0224	BG070404:D27S42-B-014	Unclassified	25% Tropical	Venezuela	SS	Red	6	3-6
GEMN-0225	BR105:N16a16b-B-074	Suwan	25% Tropical	Brazil	NS	Red	6	5
GEMS-0226	BR106:S99a99e-B-053	Tuxpeño	25% Tropical	Brazil	SS	White	6	7
GEMS-0227	NEI9004:S2809-B-022	Suwan	25% Tropical	Thailand	SS	Red	5	6
GEMS-0228	NEI9004:S2809-B-025	Suwan	25% Tropical	Thailand	SS	Red	6	6
GEMN-0229	SANM126:N1299b-B-033	Cuban Yellow	25% Tropical	Peru	NS	Red	6	5

Grain Type: 1 = Very Dent, 9 = Flint (5 similar to B73)

Grain Color: 1 = White, 9 = Orange (5 similar to B73)

Lines per se Data							NIR Data			
GEM Code	Pedigree	Days to Pollination	GDU's to Pollination	Plant Ht. (cm)	Ear Ht. (cm)	1000 k Wt (g)	2 year Average (2010-2011)			
							Protein	Oil	Starch	Density
GEMS-0224	BG070404:D27S42-B-014	78	1542	230	120	290	11.8	4.5	69.0	1.292
GEMN-0225	BR105:N16a16b-B-074	81	1628	180	90	270	12.8	4.1	68.7	1.324
GEMS-0226	BR106:S99a99e-B-053	82	1654	240	120	300	13.4	4.4	68.1	1.322
GEMS-0227	NEI9004:S2809-B-022	72	1377	205	80	280	9.6	4.2	71.2	1.288
GEMS-0228	NEI9004:S2809-B-025	72	1377	175	95	280	12.2	4.9	68.4	1.315
GEMN-0229	SANM126:N1299b-B-033	80	1600	200	105	320	12.2	3.6	69.8	1.324
Check	B73	77	1513	195	100	235	11.7	3.8	69.9	1.297

Top Cross Data													
GEM Code	Pedigree	x LH287			x MBS8814			x HC33			x MBS3633		
		Estimated	Plant	Ear	Estimated	Plant	Ear	Estimated	Plant	Ear	Estimated	Plant	Ear
		RM	Ht. (cm)	Ht. (cm)	RM	Ht. (cm)	Ht. (cm)	RM	Ht. (cm)	Ht. (cm)	RM	Ht. (cm)	Ht. (cm)
GEMS-0224	BG070404:D27S42-B-014	114	270	150	-	-	-	-	-	-	-	-	-
GEMN-0225	BR105:N16a16b-B-074	-	-	-	-	280	160	110	285	140	114	280	160
GEMS-0226	BR106:S99a99e-B-053	115	260	140	119	260	160	-	-	-	-	-	-
GEMS-0227	NEI9004:S2809-B-022	110	260	120	115	280	150	-	-	-	-	-	-
GEMS-0228	NEI9004:S2809-B-025	115	260	130	119	270	140	-	-	-	-	-	-
GEMN-0229	SANM126:N1299b-B-033	-	-	-	-	280	150	116	300	150	116	280	150
Hybrid Checks													
Check	LH200xLH262	118	278	162									
Check	HC33xLH287	109	248	104									

2012 Ames Released Lines Yield Trials

GEM Code	Pedigree	091315 (Tester MYC-nSS) 4 Reps							116405 (Tester LH287) 7 Reps						
		Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL
GEMS-0224	BG070404:D27S42-B-014	10	193.6	20.9	9.3	56.8	0.8	0.0	26	194.6	20.9	9.3	57.4	3.1	23.1
	HC33xLH287	46	171.8	19.0	9.0	57.6	0.0	0.4	45	172.2	18.1	9.5	58.0	7.1	8.4
	LH200xLH262	47	203.3	22.4	9.3	56.6	0.0	0.0	46	178.3	21.6	8.7	58.2	5.7	14.6
	Pioneer 31D58	48	194.9	22.6	9.3	56.2	0.0	0.0	47	203.1	21.3	10.0	58.3	8.0	5.4
	Pioneer 33F85	49	220.6	22.0	10.4	56.9	0.4	0.4	48	200.7	19.8	10.5	58.5	4.8	5.9
	Pioneer 34R65	50	175.6	18.9	9.3	58.2	7.7	0.0	49	156.1	18.0	8.7	60.2	5.5	11.8
	Test Entry Means		176.4	20.0	8.8	57.2	1.2	0.3		173.0	20.0	8.6	57.8	9.7	15.9
	Check Means		193.2	21.0	9.2	57.1	1.6	0.2		182.1	19.8	9.2	58.6	6.2	9.2
	CV		9.1	5.5						11.0	5.0				
	F-value		3.5	3.8						3.5	8.1				
	LSD (p=0.05)		22.8	1.6						20.2	1.1				

GEM Code	Pedigree	091317 (Tester Mon-SS) 4 Reps							116001 (Tester MBS3633) 5 Reps							116003 (Tester HC33) 6 Reps						
		Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL
GEMN-0225	BR105:N16a16b-B-074	74	231.2	26.5	8.7	55.8	5.6	0.0	57	174	19.6	8.9	57.2	7.5	4.3	61	167.4	19.4	8.6	59.6	4.9	5.2
	HC33xLH287	4	185.2	20.8	8.9	52.3	6.8	6.3	76	165.1	17.2	9.6	57.3	6.7	4.1	66	166.0	20.0	8.3	57.9	5.5	2.1
	LH200xLH262	5	207.7	26.4	7.9	54	5.0	16.1	77	193.3	20.5	10.2	56.9	3.2	5.3	67	180.0	24.6	7.3	58.0	15.9	3.8
	Pioneer 31D58	1	216.6	25.2	8.7	57.6	2.1	0.0	78	174.9	21.8	8.3	56.6	1.9	1.7	68	203.2	24.3	8.4	57.4	9.0	3.5
	Pioneer 33F85	2	208.7	24.4	8.5	57.3	8.8	7.0	79	191.7	19.4	10.2	56.7	3.8	3.7	69	205.0	21.4	9.6	57.7	10.1	2.2
	Pioneer 34R65	3	202.8	20.9	9.7	58	1.3	0.0	80	151.5	17.3	8.8	58.9	3.1	2.1	70	160.4	19.2	8.4	59.3	4.4	2.4
	Test Entry Means		203	24.9	8.2	55.3	6.1	2.8		155.0	18.6	8.3	57.7	6.4	3.2		150.7	20.4	7.4	58.5	10.1	3.1
	Check Means		204.2	23.5	8.7	55.8	4.8	5.9		179.2	19.3	9.3	57.6	3.7	3.4		182.9	21.9	8.4	58.1	9.0	2.8
	CV		12.1	6.3						13.6	6.4						14.7	8.1				
	F-value		1	4.5						2.0	4.8						2.5	8.2				
	LSD (p=0.05)		34.4	2.2						26.9	1.5						25.9	1.9				

GEM Code	Pedigree	091306 (Tester LH287) 5 Reps							116002 (Tester MBS8814) 7 Reps							116405 (Tester LH287) 7 Reps						
		Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL
GEMS-0226	BR106:S99a99e-B-053	49	198.9	23.2	8.6	55.3	2.2	7.9	15	175.7	22.9	7.7	57.4	3.2	3.1	11	195.6	19.6	10.0	58.4	10.6	10.5
	HC33xLH287	66	180.4	20.7	8.7	54.9	1.0	15.4	46	157.6	18.3	8.6	58.1	11.7	4.6	45	172.2	18.1	9.5	58.0	7.1	8.4
	LH200xLH262	67	189.7	24.7	7.9	55.2	2.5	19.7	47	155.9	22.7	6.9	58.0	3.7	3.1	46	178.3	21.6	8.7	58.2	5.7	14.6
	Pioneer 31D58	68	191.7	23.6	8.2	56.1	0.0	0.0	48	172.0	22.5	8.2	58.0	14.6	8.3	47	203.1	21.3	10.0	58.3	8.0	5.4
	Pioneer 33F85	69	202.9	23.2	8.8	55.8	1.7	5.8	49	165.3	19.7	9.0	58.5	6.4	12.6	48	200.7	19.8	10.5	58.5	4.8	5.9
	Pioneer 34R65	70	156.6	20.5	7.6	56.7	6.0	1.7	50	160.1	18.9	8.7	59.7	14.2	11.2	49	156.1	18.0	8.7	60.2	5.5	11.8
	Test Entry Means		175.1	23.4	7.5	55.1	5.1	7.8		157.4	22.5	7.0	56.4	11.6	8.3		173.0	20.0	8.6	57.8	9.7	15.9
	Check Means		184.2	22.5	8.2	55.7	2.2	8.5		162.2	20.4	7.9	58.5	10.1	7.9		182.1	19.8	9.2	58.6	6.2	9.2
	CV		12.9	6.0						16.2	5.8						11.0	5.0				
	F-value		1.5	4.2						1.3	7.9						3.5	8.1				
	LSD (p=0.05)		28.7	1.8						27.2	1.4						20.2	1.1				

GEM Code	Pedigree	091318 (Tester MON-nSS Bt) 4 Reps							116002 (Tester MBS8814) 7 Reps							116405 (Tester LH287) 7 Reps						
		Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL
GEMS-0227	NEI9004:S2809-B-022	27	242.1	19.2	12.6	55.7	0.9	0.0	39	177.2	20.7	8.6	56.5	6.2	1.8	36	182.0	18.2	10.0	57.9	6.8	3.7
GEMS-0228	NEI9004:S2809-B-025	30	227.2	23.0	9.9	56.5	1.3	0.4	40	160.8	23.5	6.8	55.7	8.5	9.0	37	183.0	20.4	9.0	58.1	12.0	13.2
	HC33xLH287	4	211.5	19.2	11.0	56.6	4.1	1.5	46	157.6	18.3	8.6	58.1	11.7	4.6	45	172.2	18.1	9.5	58.0	7.1	8.4
	LH200xLH262	5	233.4	25.6	9.2	57.9	2.6	16.0	47	155.9	22.7	6.9	58.0	3.7	3.1	46	178.3	21.6	8.7	58.2	5.7	14.6
	Pioneer 31D58	1	250.9	25.3	10.0	57.9	0.4	0.4	48	172.0	22.5	8.2	58.0	14.6	8.3	47	203.1	21.3	10.0	58.3	8.0	5.4
	Pioneer 33F85	2	236.8	23.8	10.0	56.9	2.5	0.0	49	165.3	19.7	9.0	58.5	6.4	12.6	48	200.7	19.8	10.5	58.5	4.8	5.9
	Pioneer 34R65	3	222.2	21.1	10.5	58.5	0.0	0.0	50	160.1	18.9	8.7	59.7	14.2	11.2	49	156.1	18.0	8.7	60.2	5.5	11.8
	Test Entry Means		211.7	21.8	9.7	57.1	4.9	3.3		157.4	22.5	7.0	56.4	11.6	8.3		173.0	20.0	8.6	57.8	9.7	15.9
	Check Means		231.0	23.0	10.0	57.6	1.9	3.6		162.2	20.4	7.9	58.5	10.1	7.9		182.1	19.8	9.2	58.6	6.2	9.2
	CV		7.6	5.1						16.2	5.8						11.0	5.0				
	F-value		2.6	4.7						1.3	7.9						3.5	8.1				
	LSD (p=0.05)		22.7	1.6						27.2	1.4						20.2	1.1				

GEM Code	Pedigree	091303 (Tester HC33) 5 Reps							116001 (Tester MBS3633) 6 Reps							116003 (Tester HC33) 6 Reps						
		Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL	Entry	Yield B/A	% Moist	YM	TWT	SL	RL
GEMN-0229	SANM126:N1299b-B-033	31	160.1	19.6	8.2	54.9	2.6	0.0	35	187.4	19.8	9.5	57.0	9.6	2.7	28	160.0	23.0	7.0	58.5	6.1	3.4
	HC33xLH287	65	143	18.4	7.8	55.3	1.1	0.4	76	165.1	17.2	9.6	57.3	6.7	4.1	66	166.0	20.0	8.3	57.9	5.5	2.1
	LH200xLH262	66	175.1	21.9	8.0	54.4	3.7	0.4	77	193.3	20.5	10.2	56.9	3.2	5.3	67	180.0	24.6	7.3	58.0	15.9	3.8
	Pioneer 31D58	67	183.7	21.4	8.7	55.0	0.0	1.3	78	174.9	21.8	8.3	56.6	1.9	1.7	68	203.2	24.3	8.4	57.4	9.0	3.5
	Pioneer 33F85	68	173.8	21.6	8.1	54.5	1.2	0.8	79	191.7	19.4	10.2	56.7	3.8	3.7	69	205.0	21.4	9.6	57.7	10.1	2.2
	Pioneer 34R65	69	159.2	19.3	8.3	56.1	5.5	0.0	80	151.5	17.3	8.8	58.9	3.1	2.1	70	160.4	19.2	8.4	59.3	4.4	2.4
	Test Entry Means		146.9	19.7	7.5	54.5	7.4	1.8		155.0	18.6	8.3	57.7	6.4	3.2		150.7	20.4	7.4	58.5	10.1	3.1
	Check Means		167	20.5	8.1	55.0	2.3	0.6		179.2	19.3	9.3	57.6	3.7	3.4		182.9	21.9	8.4	58.1	9.0	2.8
	CV		17.1	7.9						13.6	6.4						14.7	8.1				
	F-value		1.6	2.2						2.0	4.8						2.5	8.2				
	LSD (p=0.05)		31.9	2						26.9	1.5						25.9	1.9				

GEM Germplasm Releases and Key Traits																					
				Site	Year				Starch												
Pedigree	Code	Race	Country	Released	Released	Prot	AA	Oil	Prop.	Silage	GLS	NLB	SLB	Drought	Fumon.	Fuser	Aflatox	ASR	Diplodia	YM	
GEMS-001(PI503806xB94//B94)	GEMS-0001	Alazan	Peru	Ames	2001																
GEMS-002 (FS8A(S):S09-43-2)	GEMS-0002	Mixed	USA	Ohio St.	2003								✓		✓	✓					
BR52051(SE32):S17-B-023-001-B-B	GEMS-0003	Dente Amarelo	Brazil	NC	2003	✓		✓			✓	✓			✓	✓			✓		
DK212T:S11-B-013-002-B-B	GEMS-0004	Hybrid-tropical	Thailand	NC	2003							✓	✓			✓					
DK212T:S11-B-015-001-B-B	GEMS-0005	Hybrid-tropical	Thailand	NC	2003							✓									
DK212T:S11-B-017-001-B-B	GEMS-0006	Hybrid-tropical	Thailand	NC	2003							✓				✓					
DK212T:S11-B-018-001-B-B	GEMS-0007	Hybrid-tropical	Thailand	NC	2003	✓							✓								
DK212T:S11-B-038-001-B-B	GEMS-0008	Hybrid-tropical	Thailand	NC	2003																
DK212T:S11-B-040-001-B-B	GEMS-0009	Hybrid-tropical	Thailand	NC	2003											✓					
DK212T:S11-B-041-002-B-B	GEMS-0010	Hybrid-tropical	Thailand	NC	2003																
DK212T:S11-B-045-002-B-B	GEMS-0011	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-003-001-B-B	GEMS-0012	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-004-004-B-B	GEMS-0013	Hybrid-tropical	Thailand	NC	2003								✓								
DK888:S11-B-010-001-B-B	GEMS-0014	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-014-001-B-B	GEMS-0015	Hybrid-tropical	Thailand	NC	2003								✓								
DK888:S11-B-015-003-B-B	GEMS-0016	Hybrid-tropical	Thailand	NC	2003						✓	✓				✓					
DK888:S11-B-025-001-B-B	GEMS-0017	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-026-002-B-B	GEMS-0018	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-029-001-B-B	GEMS-0019	Hybrid-tropical	Thailand	NC	2003						✓										
DK888:S11-B-033-001-B-B	GEMS-0020	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-035-002-B-B	GEMS-0021	Hybrid-tropical	Thailand	NC	2003										✓	✓					
DK888:S11-B-035-003-B-B	GEMS-0022	Hybrid-tropical	Thailand	NC	2003																
DK888:S11-B-039-002-B-B	GEMS-0023	Hybrid-tropical	Thailand	NC	2003																
DKB830:S11-B-045-001-B-B	GEMS-0024	Hybrid-tropical	Mexico	NC	2003						✓										
DKXL370:S11-B-001-002-B-B	GEMS-0025	Hybrid-tropical	Brazil	NC	2003																
DKXL370:S11-B-025-001-B-B	GEMS-0027	Hybrid-tropical	Brazil	NC	2003							✓						✓			
DKXL370:S11-B-025-002-B-B	GEMS-0028	Hybrid-tropical	Brazil	NC	2003						✓							✓			
DKXL370:S11-B-028-001-B-B	GEMS-0029	Hybrid-tropical	Brazil	NC	2003							✓				✓					
DKXL380:S11-B-004-003-B-B	GEMS-0030	Hybrid-tropical	Brazil	NC	2003			✓			✓	✓	✓			✓	✓				
DKXL380:S11-B-028-001-B-B	GEMS-0031	Hybrid-tropical	Brazil	NC	2003	✓	✓					✓									
DKXL380:S11-B-029-001-B-B	GEMS-0032	Hybrid-tropical	Brazil	NC	2003							✓					✓				
BR51403(PE001):N16-B-044-B	GEMN-0033	Cateto	Brazil	NC	2003				✓		✓										
BR51403(PE001):N16-B-172-B	GEMN-0035	Cateto	Brazil	NC	2003				✓		✓	✓									
BR51403(PE001):N16-B-176-B	GEMN-0036	Cateto	Brazil	NC	2003				✓												
BR51403(PE001):N16-B-181-B	GEMN-0037	Cateto	Brazil	NC	2003				✓		✓										
BR51403(PE001):N16-B-239-B	GEMN-0039	Cateto	Brazil	NC	2003	✓			✓			✓									
BR51403(PE001):N16-B-431-B	GEMN-0040	Cateto	Brazil	NC	2003				✓												
BR51403(PE001):N16-B-521-B	GEMN-0041	Cateto	Brazil	NC	2003				✓												
BR51403(PE001):N16-B-705-B	GEMN-0042	Cateto	Brazil	NC	2003				✓												
BR51403(PE001):N16-B-857-B	GEMN-0043	Cateto	Brazil	NC	2003				✓												
CH05015:N12-20-1-B-B	GEMN-0044	Camelia	Chile	Ames	2003																
CH05015:N12-140-1-B-B	GEMN-0045	Camelia	Chile	Ames	2003	✓															
CH05015:N15-8-1-B-B	GEMN-0046	Camelia	Chile	Ames	2003				✓												
UR13085:N0215-014-001	GEMN-0047	Cateto Sulino	Uruguay	Ames	2003																
DKXL370:N11a20-31-1-B-B	GEMN-0048	Hybrid-tropical	Brazil	Ames	2003	✓															
DKB844:S1601-512-1-B	GEMS-0049	Hybrid-tropical	Mexico	Ames	2003	✓															
DKB844:S1601-517-1-B	GEMS-0050	Hybrid-tropical	Mexico	Ames	2003																
CUBA164:S2008a-83-1-B	GEMS-0051	Mixed (Creole)	Cuba	Ames	2003																
CUBA164:S2008a-326-1-B	GEMS-0052	Mixed (Creole)	Cuba	Ames	2003																
CUBA164:S15-192-2-B	GEMS-0053	Mixed (Creole)	Cuba	Ames	2003																
AR16035:S02-450-1-B	GEMS-0054	Cristalino Colorado	Argentina	Ames	2003																
AR16035:S02-443-1-B-B	GEMS-0055	Cristalino Colorado	Argentina	Ames	2003																
FS8B(T):N1809-946-1-B	GEMN-0056	Mixed	USA	Ames	2003																
AR01150:N04-545-1-B	GEMN-0057	Dent. Blanco Rugoso	Argentina	Ames	2003																
AR01150:N04-696-1-B	GEMN-0058	Dent. Blanco Rugoso	Argentina	Ames	2003	✓															
SCRO1:N1310-398-1-B	GEMN-0059	St. Croix	St. Croix	Ames	2003				✓												

Pedigree	Code	Race	Country	Site Released	Year Released	Prot	AA	Oil	Starch Prop.	Silage	GLS	NLB	SLB	Drought	Fumon.	Fuser	Aflatox	ASR	Diplodia	YM
CHIS775:N1912-519-1-B-B	GEMN-0060	Tuxpeño	Mexico	Ames	2003															
AR16026:S17-10-1-B-B	GEMS-0061	Cristalino Colorado	Argentina	Ames	2003			✓							✓	✓	✓			
AR16026:S17-16-1-B-B	GEMS-0062	Cristalino Colorado	Argentina	Ames	2003															
CUBA164:S1511b-325-001	GEMS-0063	Mixed (Creole)	Cuba	Ames	2003	✓														
CUBA164:S1511b-249-1-B-B	GEMS-0064	Mixed (Creole)	Cuba	Ames	2003															
CUBA117:S1520-41-1-B-B	GEMS-0065	Argentino	Cuba	Ames	2003			✓												
CUBA117:S1520-52-1-B-B	GEMS-0066	Argentino	Cuba	Ames	2003															
GUAT209:S13 x (H99ae x OH43ae)-4-4-2-1	GEMS-0067	Tusón	Guatemala	Truman St	2007															
AR16026:S1704-153-001	GEMS-0068	Cristalino Colorado	Argentina	Ames	2003															
AR16035:S19-161-001	GEMS-0069	Cristalino Colorado	Argentina	Ames	2003															
CH05015:N12-183-001	GEMN-0070	Camelia	Chile	Ames	2003															✓
CH05015:N15-003-001	GEMN-0071	Camelia	Chile	Ames	2003															✓
CHIS775:S1911b-439-001	GEMS-0072	Tuxpeño	Mexico	Ames	2003															
CUBA117:S15-372-001	GEMS-0073	Argentino	Cuba	Ames	2003		✓						✓			✓				
CUBA164:S1517-163-001	GEMS-0074	Mixed (Creole)	Cuba	Ames	2003															
CUBA164:S1517-241-002	GEMS-0075	Mixed (Creole)	Cuba	Ames	2003								✓							
DKB844:N11b-118-001	GEMN-0076	Hybrid-tropical	Mexico	Ames	2003															
DKXL370:N11a20-604-001	GEMN-0077	Hybrid-tropical	Brazil	Ames	2003						✓		✓							
FS8A(S):S09-362-001	GEMS-0078	Mixed	USA	Ames	2003								✓							
FS8B(S):S0316-802-001	GEMS-0079	Mixed	USA	Ames	2003								✓							
FS8B(S):S0316-814-001	GEMS-0080	Mixed	USA	Ames	2003								✓							
FS8B(T):N1802-382-001	GEMN-0081	Mixed	USA	Ames	2003								✓							
FS8B(T):N1802-525-001	GEMN-0082	Mixed	USA	Ames	2003						✓		✓							
GUAT209:N1925-081-001	GEMN-0083	Tusón	Guatemala	Ames	2003		✓				✓									
PASCO14:S0105-198-001	GEMS-0084	Cuban yellow	Peru	Ames	2003							✓								
UR01089:S0525-519-001	GEMS-0085	Cateto Sulino	Uruguay	Ames	2003								✓							
UR10001:S1813-257-001	GEMS-0086	Dente Branco	Uruguay	Ames	2003															
AR03056:N09-024-001	GEMN-0087	Dentado Blanco	Argentina	Ames	2004															
AR03056:N09-182-001	GEMN-0088	Dentado Blanco	Argentina	Ames	2004						✓									✓
AR03056:N09-191-001	GEMN-0089	Dentado Blanco	Argentina	Ames	2004															
AR03056:N09-250-001	GEMN-0090	Dentado Blanco	Argentina	Ames	2004															
CHIS740:S1411a-783-002	GEMS-0091	Tuxpeño/Olotillo	Mexico	Ames	2004		✓													
CUBA164:S2012-444-001	GEMS-0092	Mixed (Creole)	Cuba	Ames	2004							✓		✓		✓				
CUBA164:S2012-966-001	GEMS-0093	Mixed (Creole)	Cuba	Ames	2004															
DKXL370:N11a20-199-002	GEMN-0094	Hybrid-tropical	Brazil	Ames	2004															
DKXL370:N11a20-234-002	GEMN-0095	Hybrid-tropical	Brazil	Ames	2004						✓	✓								
DKXL370:N11a20-322-001	GEMN-0096	Hybrid-tropical	Brazil	Ames	2004				✓											✓
FS8B(T):N11a-087-001	GEMN-0097	Mixed	USA	Ames	2004											✓				✓
FS8B(T):N11a-110-001	GEMN-0098	Mixed	USA	Ames	2004															
FS8B(T):N11a-322-001	GEMN-0099	Mixed	USA	Ames	2004						✓									
UR11003:S0302-937-001	GEMS-0100	Dente Branco	Uruguay	Ames	2004											✓				✓
DK888:S11b-007-B-B	GEMS-0101	Hybrid-tropical	Thailand	NC	2004								✓							
DK888:S11b-001-B	GEMS-0102	Hybrid-tropical	Thailand	NC	2004								✓							
DK888:N11(95)-B-027-010-B-B	GEMN-0103	Hybrid-tropical	Thailand	NC	2004							✓	✓							
DK888:N11(95)-B-027-012-B-B	GEMN-0104	Hybrid-tropical	Thailand	NC	2004							✓	✓							
DK888:N11(95)-B-027-015-B-B	GEMN-0105	Hybrid-tropical	Thailand	NC	2004								✓							
DK888:N11(95)-B-022-007-B-B	GEMN-0106	Hybrid-tropical	Thailand	NC	2004															
DK888:N11(95)-B-022-012-B-B	GEMN-0107	Hybrid-tropical	Thailand	NC	2004								✓							
DK888:N11(95)-B-027-001-B-B	GEMN-0108	Hybrid-tropical	Thailand	NC	2004								✓							
DKXL380:N11-B-015-003-B-B	GEMN-0109	Hybrid-tropical	Brazil	NC	2004															
BARBGP2:N08a18-332-001	GEMN-0110	Tusón	Barbados	Ames	2005							✓								
CH05015:N1204-057-001	GEMN-0111	Camelia	Chile	Ames	2005	✓	✓	✓								✓				
CH05015:N1502-086-001	GEMN-0112	Camelia	Chile	Ames	2005	✓							✓							✓
CHIS775:S1911b-120-001	GEMS-0113	Tuxpeño	Mexico	Ames	2005	✓			✓				✓							
DK212T:N11a12-191-001	GEMN-0114	Hybrid-tropical	Thailand	Ames	2005															
DKB844:S1601-073-001	GEMS-0115	Hybrid-tropical	Mexico	Ames	2005				✓											
DKB844:S1601-003-002	GEMS-0116	Hybrid-tropical	Mexico	Ames	2005	✓			✓			✓								

Pedigree	Code	Race	Country	Site Released	Year Released	Prot	AA	Oil	Starch Prop.	Silage	GLS	NLB	SLB	Drought	Fumon.	Fuser	Aflatox	ASR	Diplodia	YM
DREP150:N2011d-624-001	GEMN-0117	Mixed	Dom. Republic	Ames	2005	✓	✓						✓							
UR11003:S0302-1011-001	GEMS-0118	Dente Branco	Uruguay	Ames	2005		✓													✓
CHS775:N19-042-001-B	GEMN-0119	Tuxpeño	Mexico	NC	2005								✓	✓						
CHS775:N19-042-003-B	GEMN-0120	Tuxpeño	Mexico	NC	2005								✓	✓						
CHS775:N19-027-010-B	GEMN-0121	Tuxpeño	Mexico	NC	2005				✓				✓	✓						
CHS775:N19-093-002-B	GEMN-0122	Tuxpeño	Mexico	NC	2005				✓				✓	✓						
CHS775:N19-030-011-B	GEMN-0123	Tuxpeño	Mexico	NC	2005				✓				✓	✓						
DK212T:N11-B-003-001-B	GEMN-0124	Hybrid-tropical	Thailand	NC	2005			✓					✓	✓		✓				
DK888:S11-B-029-001-B	GEMS-0125	Hybrid-tropical	Thailand	NC	2005								✓							
DK888:S11-B-029-006-B	GEMS-0126	Hybrid-tropical	Thailand	NC	2005								✓						✓	
DK888:N11(95)-B-017-001-B	GEMN-0127	Hybrid-tropical	Thailand	NC	2005				✓				✓							
DKXL370:N11-B-005-002-B	GEMN-0128	Hybrid-tropical	Brazil	NC	2005	✓	✓						✓							
DKXL370:N11-B-005-006-B	GEMN-0129	Hybrid-tropical	Brazil	NC	2005	✓							✓	✓						
DKXL370:N11-B-005-010-B	GEMN-0130	Hybrid-tropical	Brazil	NC	2005		✓						✓							
DKXL370:N11-B-005-011-B	GEMN-0131	Hybrid-tropical	Brazil	NC	2005	✓	✓	✓					✓		✓	✓	✓			
DKXL370:N11-B-005-021-B	GEMN-0132	Hybrid-tropical	Brazil	NC	2005	✓	✓						✓							
DKXL370:N11-B-029-002-B	GEMN-0133	Hybrid-tropical	Brazil	NC	2005	✓	✓						✓	✓						
DKXL380:N11-B-010-017-B	GEMN-0134	Hybrid-tropical	Brazil	NC	2005								✓	✓		✓				
DKXL380:N11-B-007-025-B	GEMN-0135	Hybrid-tropical	Brazil	NC	2005			✓					✓	✓						
DKXL380:N11-B-007-028-B	GEMN-0136	Hybrid-tropical	Brazil	NC	2005	✓		✓					✓							
SCR Gp3:N14-028-003-003-B	GEMN-0137	Tusón	St. Croix	NC	2005		✓						✓							
AR17056:N2035-421-001	GEMN-0138	Cristalino Colorado	Argentina	Ames	2006						✓		✓	✓						
AR17056:N2035-473-001	GEMN-0139	Cristalino Colorado	Argentina	Ames	2006						✓		✓	✓						
BR51675:N0620-033-001	GEMN-0140	Dente Amarelo	Brazil	Ames	2006						✓		✓							✓
BR51675:N0620-053-001	GEMN-0141	Dente Amarelo	Brazil	Ames	2006								✓							
BR52060:S0210-143-001	GEMS-0142	Dente Amarelo	Brazil	Ames	2006															✓
BR52060:S0210-147-001	GEMS-0143	Dente Amarelo	Brazil	Ames	2006			✓												✓
MDI022:N2120-284-001	GEMN-0144	Cuban yellow	Peru	Ames	2006								✓							
MDI022:N2120-333-001	GEMN-0145	Cuban yellow	Peru	Ames	2006			✓												
NEI9004:S2818-003-001	GEMS-0146	Suwan	Thailand	Ames	2006	✓														
NEI9004:S2818-025-001	GEMS-0147	Suwan	Thailand	Ames	2006	✓														
NEI9004:S2818-376-001	GEMS-0148	Suwan	Thailand	Ames	2006	✓														
UR05017:S0415-180-002	GEMS-0149	Semidentado Riograndense	Uruguay	Ames	2006	✓														
UR05017:S0415-187-001	GEMS-0150	Semidentado Riograndense	Uruguay	Ames	2006	✓														
CHIS775:N19-042-001-003-B-B-B	GEMN-0151	Tuxpeño	Mexico	NC	2006								✓	✓		✓				
DK212T:N11-B-016-005-B-B-B	GEMN-0152	Hybrid-tropical	Thailand	NC	2006						✓		✓	✓						
DKXL380:N11-B-007-027-B-B-B-B	GEMN-0153	Hybrid-tropical	Brazil	NC	2006								✓							
AR13026:N08b15-016	GEMN-0154	Cristalino Colorado	Argentina	Ames	2007															
AR13026:N08b15-086	GEMN-0155	Cristalino Colorado	Argentina	Ames	2007															
BR51721:N2012-098-002	GEMN-0156	Dente Amarelo	Brazil	Ames	2007				✓		✓									
BR51721:N2012-164-002	GEMN-0157	Dente Amarelo	Brazil	Ames	2007				✓				✓							
BR51721:N2012-397-001	GEMN-0158	Dente Amarelo	Brazil	Ames	2007				✓				✓			✓			✓	
CASH:N1410-018-001	GEMN-0159	Corn Belt Dent	USA	Ames	2007															✓
CUBA117:S1542-037-002	GEMS-0160	Argentino	Cuba	Ames	2007	✓														
CUBA117:S1542-057-001	GEMS-0161	Argentino	Cuba	Ames	2007	✓	✓	✓												
CUBA117:S1542-057-002	GEMS-0162	Argentino	Cuba	Ames	2007	✓		✓												
CUBA164:S2012-456-001	GEMS-0163	Mixed (Creole)	Cuba	Ames	2007															
DK212T:N11-B-003-022-B-B-B	GEMN-0164	Hybrid-tropical	Thailand	NC	2007								✓	✓						
DK888:N11(95)-B-022-012-026-B-B	GEMN-0165	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-008-B-B	GEMN-0166	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-018-B-B	GEMN-0167	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-019-B	GEMN-0168	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-027-B	GEMN-0169	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-030-B	GEMN-0170	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-037-B	GEMN-0171	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-001-040-B	GEMN-0172	Hybrid-tropical	Thailand	NC	2007									✓						
DK888:N11(95)-B-027-012-009-B	GEMN-0173	Hybrid-tropical	Thailand	NC	2007								✓	✓						

Pedigree	Code	Race	Country	Site Released	Year Released	Prot	AA	Oil	Starch Prop.	Silage	GLS	NLB	SLB	Drought	Fumon.	Fuser	Aflatox	ASR	Diplodia	YM
AR17056:N2025-574-001	GEMN-0174	Cristalino Colorado	Argentina	Ames	2008	✓			✓			✓								
BVIR155:S2012-029-001	GEMS-0175	Tusón	British Virgin Is.	Ames	2008	✓														
CUBA164:S2008c-289-001	GEMS-0176	Mixed (Creole)	Cuba	Ames	2008	✓														
DK888:N11a08a-395-001	GEMN-0177	Hybrid-tropical	Thailand	Ames	2008							✓	✓							
DK888:N11a08a-440-001	GEMN-0178	Hybrid-tropical	Thailand	Ames	2008							✓	✓							
FS8B(T):N11a08c-030-002	GEMN-0179	Mixed	USA	Ames	2008			✓				✓								
GUAT209:S1308a-047-001	GEMS-0180	Tusón	Guatemala	Ames	2008				✓			✓	✓							
GUAT209:S1308a-068-001	GEMS-0181	Tusón	Guatemala	Ames	2008						✓									
GUAT209:S1308a-084-001	GEMS-0182	Tusón	Guatemala	Ames	2008						✓		✓							
GUAT209:S1308a-104-001	GEMS-0183	Tusón	Guatemala	Ames	2008															
GUAT209:S1308a-120-001	GEMS-0184	Tusón	Guatemala	Ames	2008															
CUBA164:S2012-966-001-B wx	GEMS-0185	Mixed (Creole)	Cuba	Ames	2008															
DKXL370:N11a20-036-002-B wx	GEMN-0186	Hybrid-tropical	Brazil	Ames	2008	✓					✓		✓							
ANTIG03:N1218-056-001	GEMN-0187	Criollo	Antigua	Ames	2009															
DKXL212:S0912-012-001	GEMS-0188	Hybrid-tropical	Brazil	Ames	2009	✓														
DKXL212:S0912-117-001	GEMS-0189	Hybrid-tropical	Brazil	Ames	2009	✓														
PASCO14:N0424-078-001	GEMN-0190	Cuban yellow	Peru	Ames	2009															
SCROGP3:N2017-003-001	GEMN-0191	Tusón	St. Croix	Ames	2009															
SCROGP3:N2017-172-001	GEMN-0192	Tusón	St. Croix	Ames	2009			✓					✓							
UR11002:N0308b-086-001	GEMN-0193	Dente Branco	Uruguay	Ames	2009															
DK888:N11(95)-B-027-001-011-B	GEMN-0194	Hybrid-tropical	Thailand	NC	2009						✓		✓							
DK888:N11(95)-B-027-001-015-B	GEMN-0195	Hybrid-tropical	Thailand	NC	2009						✓	✓	✓							
DK888:N11(95)-B-003-001-001-B	GEMN-0196	Hybrid-tropical	Thailand	NC	2009								✓							
DK888:N11(95)-002-021-008-B-B	GEMN-0197	Hybrid-tropical	Thailand	NC	2009							✓	✓							
DK212T:N11-040-001-007	GEMN-0198	Hybrid-tropical	Thailand	NC	2009							✓	✓							
AR16021:S0908a-039-001	GEMS-0199	Cristalino Colorado	Argentina	Ames	2010															
BR105:S1612-008-001	GEMS-0200	Composite (Suwan)	Brazil	Ames	2010								✓							
BR105:S1612-057-001	GEMS-0201	Composite (Suwan)	Brazil	Ames	2010								✓							
BR105:S1640-128-001	GEMS-0202	Composite (Suwan)	Brazil	Ames	2010															
CUBA164:S2008dF44-012-001	GEMS-0203	Mixed (Creole)	Cuba	Ames	2010															
FS8A(T):N1804-006-001	GEMN-0204	Mixed	USA	Ames	2010								✓							
GUAD05:N3215-197-001	GEMN-0205	Early Caribbean	Guadalupe	Ames	2010								✓							
AR16035:S02-615-001-B wx	GEMS-0206	Cristalino Colorado	Argentina	Ames	2010															
BR51403(PE001):N16-B-044-004-001-001C-001	GEMN-0207	Cateto	Brazil	NC	2010								✓							
BR51403(PE001):N16-B-044-004-001-002G-003	GEMN-0208	Cateto	Brazil	NC	2010								✓							
BR51721(RN07):N20-B-017-002	GEMN-0209	Dente Amarelo	Brazil	NC	2010															
CL-G1607(CML420):N11-008-001-007	GEMN-0210	Tropical Line	CIMMYT	NC	2010															
DK212T:N11-B-016-005-B-004	GEMN-0211	Hybrid-tropical	Thailand	NC	2010															
DK888:N11-B-027-012-B-007	GEMN-0212	Hybrid-tropical	Thailand	NC	2010								✓							
DKXL380:N11-B-007-010-B-002	GEMN-0213	Hybrid-tropical	Brazil	NC	2010															
MDI022:N21-B-002-003	GEMN-0214	Cuban yellow	Peru	NC	2010															
NS1:S08-006-001-002	GEMS-0215	Suwan	Thailand	NC	2010															
PASCO14:N11b-B-001-002	GEMN-0216	Cuban Yellow	Peru	NC	2010															
DK888:N11-B-027-001-B-001	GEMN-0217	Hybrid-tropical	Thailand	NC	2010								✓							
(CUBA164:S2012-459-001-B/GEMS-0002)-B-B-011	GEMS-0218	Mixed (Creole)/Mixed	Cuba/USA	Ames	2011	✓							✓							
(CUBA164:S2012-459-001-B/GEMS-0002)-B-B-031	GEMS-0219	Mixed (Creole)/Mixed	Cuba/USA	Ames	2011	✓														
(GEMS-0113/GEMS-0091)-B-058-001	GEMS-0220	Tuxpeño/Tuxpeño	Mexico	Ames	2011															
BR105:N1641-159-001	GEMN-0221	Composite (Suwan)	Brazil	Ames	2011															
MBRC10:S1741-B-057	GEMS-0222	Multiple Borer Composite	Mexico	Ames	2011															
CUBA164:S2012-444-001-B wx	GEMS-0223	Mixed (Creole)	Cuba	Ames	2011															
BG070404:D27S42-B-014	GEMS-0224	Unclassified	Venezuela	Ames	2012															
BR105:N16a16b-B-074	GEMN-0225	Composite (Suwan)	Brazil	Ames	2012															
BR106:S99a99e-B-053	GEMS-0226	Composite (Tuxpeño)	Brazil	Ames	2012	✓														
NEI9004:S2809-B-022	GEMS-0227	Suwan	Thailand	Ames	2012															
NEI9004:S2809-B-025	GEMS-0228	Suwan	Thailand	Ames	2012															
SANM126:N1299b-B-033	GEMN-0229	Cuban yellow	Peru	Ames	2012															
CML413:N18-001-036-002	GEMN-0230	Tropical Line	CIMMYT	NC	2012															

Pedigree	Code	Race	Country	Site Released	Year Released	Prot	AA	Oil	Starch Prop.	Silage	GLS	NLB	SLB	Drought	Fumon.	Fuser	Aflatox	ASR	Diplodia	YM
CUBA164:D27-B-017-001	GEMN-0231	Mixed (Creole)	Cuba	NC	2012															
SCR_Gp3:N14-028-003-B-002	GEMN-0232	Tusón	St. Croix	NC	2012															
CML329:N18-001-020-001	GEMN-0233	Tropical Line	CIMMYT	NC	2012															
DE3 (DKXL212:N11a-191)	DE3	Hybrid-tropical	Brazil	UDEL	2002							✓								
DE4 (DKXL212:N11a-365)	DE4	Hybrid-tropical	Brazil	UDEL	2002						✓	✓	✓							
DE6 (DKXL212:N11a-234)	DE6	Hybrid-tropical	Brazil	UDEL	2005	✓														
Tx204 (AR01150:N0406)	Tx204	Dent. Blanco Rugoso	Argentina	Texas A&M	2004									✓						
Tx205 (AR01150:N0406)	Tx205	Dent. Blanco Rugoso	Argentina	Texas A&M	2004									✓						
W605S (AR17026:N1019)	W605S	Cristalino Colorado	Argentina	U of Wisc.	2004					✓										
W606S (SCRO1:N1310)	W606S	St. Croix	St. Croix	U of Wisc.	2009					✓										
W607S (BR52051:N04)	W607S	Dente Amarelo	Brazil	U of Wisc.	2009					✓										
W608S (CH05015:N15)	W608S	Camelia	Chile	U of Wisc.	2009					✓										
W609S (FS8B(T):N11a)	W609S	Mixed	USA	U of Wisc.	2009					✓										
W610S (CUBA164:S2012)	W610S	Mixed (Creole)	Cuba	U of Wisc.	2009					✓										
NY212 (FS8B(T):N1802-212)	NY212	Mixed	USA	Cornell U	2009													✓		
NY215 (FS8B(T):N1802-215)	NY215	Mixed	USA	Cornell U	2009													✓		
NY266 (AR01150:N0406-266)	NY266	Dent. Blanco Rugoso	Argentina	Cornell U	2009													✓		
DKXL212:N11a-139-001-001	DE EXP	Hybrid-tropical	Brazil	UDEL	2003		✓					✓								
Legend:																				
Agro traits = Yield, lodging, and moisture w/in 10% of check mean																				
Y/M = Yield moisture ratio similar to or above check mean																				
ECB = European corn borer tolerance																				
GLS = Gray leafspot resistance																				
MDR = Mal de Rio Cuarto virus tolerance																				
NLB = Northern leaf blight resistance																				
SLB = Southern leaf blight resistance																				
Fuser = Fusarium ear rot resistance																				
Fumonisin = Low level of fumonisin (Fusarium mycotoxin)																				
Aflatoxin = Low level of aflatoxin (Aspergillus mycotoxin)																				
ASR=Anthracnose stalk rot resistance																				
AAI = Amino acid index of lysine, methionine, and tryptophan																				
Oil = Oil content > 4.5%, Protein = Protein content > 13%, and Starch = Starch thermal property																				
Bolded codes are Crop Science Registered																				

Racial Background of 245 GEM Releases

Race	Ames Releases	NC Releases	University Releases	Total Releases
Alazan	1	0	0	1
Argentino	6	0	0	6
Camelia	7	0	1	8
Canilla	0	0	0	0
Cateto	0	11	0	11
Cateto Sulino	2	0	0	2
Composite (Suwan)	5	0	0	5
Composite (Tuxpeño)	1	0	0	1
Corn Belt Dent	1	0	0	1
Criollo	1	0	0	1
Cristalino Colorado	13	0	1	14
Cuban yellow	5	2	0	7
Dent. Blanco Rugoso	2	0	3	5
Dentado Blanco	4	0	0	4
Dente Amarelo	7	2	1	10
Dente Branco	4	0	0	4
Early Caribbean	1	0	0	1
Hybrid Blanco	0	0	0	0
Hybrid-tropical	16	71	4	91
Mixed	12	0	4	16
Mixed (Creole)	14	1	1	16
Mixed(Creole)/Mixed	2	0	0	2
Multiple Borer Composite	1	0	0	1
Semidentado Riograndense	2	0	0	2
Southern Dent	0	0	0	0
St. Croix	1	0	1	2
Suwan	5	1	0	6
Tropical Line	0	3	0	3
Tusón	10	2	1	13
Tuxpeño	3	6	0	9
Tuxpeño/Olotillo	1	0	0	1
Tuxpeño/Tuxpeño	1	0	0	1
Unclassified	1	0	0	1
Totals	129	99	17	245

Yield Trials

Ames Grain Yield Trials

111301								111302							
Tester: HC33								Tester: HC33							
Rep: 4								Rep: 5							
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
58	Pioneer 31D58	210.5	22.5	9.4	57.0	1.1	0.5	69	Pioneer 33F85	181.0	20.1	9.0	57.2	11.5	6.2
59	Pioneer 33F85	191.2	20.4	9.4	56.8	3.4	2.3	68	Pioneer 31D58	175.6	23.2	7.6	57.5	5.4	3.5
56	HC33xLH287	190.0	18.6	10.2	57.1	2.9	0.5	32	CL-00331:N1834-B-035	160.7	19.9	8.1	57.3	9.2	13.4
57	LH200xLH262	184.5	22.1	8.3	56.9	2.9	0.6	49	CL-00331:N1834-B-052	152.7	20.7	7.4	56.2	6.8	8.6
32	BARBGP2:N08a46-B-041	178.4	20.0	8.9	57.3	6.1	1.1	55	CL-00331:N1834-B-058	151.9	21.4	7.1	56.7	4.7	8.6
54	BARBGP2:N08a46-B-069	177.8	20.8	8.6	57.6	8.6	2.2	20	CL-00331:N1834-B-023	151.4	21.1	7.2	57.4	4.2	4.5
36	BARBGP2:N08a46-B-045	175.5	19.4	9.0	57.3	7.6	4.2	44	CL-00331:N1834-B-047	149.6	21.3	7.0	57.2	19.9	11.7
11	BARBGP2:N08a46-B-015	169.4	19.6	8.7	57.4	11.3	0.0	54	CL-00331:N1834-B-057	149.2	18.8	7.9	58.3	18.2	18.2
46	BARBGP2:N08a46-B-060	168.5	19.2	8.8	56.9	6.7	0.0	33	CL-00331:N1834-B-036	148.5	18.7	7.9	57.3	15.0	6.4
17	BARBGP2:N08a46-B-022	166.4	19.3	8.6	56.8	3.9	0.6	66	HC33xLH287	148.3	18.0	8.2	56.7	6.1	28.2
45	BARBGP2:N08a46-B-059	163.9	19.3	8.5	57.5	2.6	1.6	17	CL-00331:N1834-B-019	146.6	20.0	7.3	55.4	15.8	14.4
51	BARBGP2:N08a46-B-066	162.5	19.6	8.3	57.3	4.1	0.0	21	CL-00331:N1834-B-024	145.8	20.9	7.0	57.8	11.5	28.6
41	BARBGP2:N08a46-B-053	162.2	19.7	8.2	58.3	2.8	1.5	28	CL-00331:N1834-B-031	145.6	21.2	6.9	58.6	14.3	16.7
35	BARBGP2:N08a46-B-044	161.9	21.3	7.6	56.8	4.1	2.7	4	CL-00331:N1834-B-004	145.3	19.5	7.5	59.3	7.7	16.9
60	Pioneer 34R65	160.6	18.6	8.6	58.1	1.4	0.0	70	Pioneer 34R65	144.2	17.9	8.1	58.8	6.4	6.4
28	BARBGP2:N08a46-B-037	160.4	20.7	7.7	58.5	3.0	1.6	57	CL-00331:N1834-B-060	143.7	20.4	7.0	57.5	10.9	2.3
53	BARBGP2:N08a46-B-068	160.3	18.4	8.7	58.3	1.6	4.9	2	CL-00331:N1834-B-002	142.4	20.3	7.0	55.8	6.0	8.6
40	BARBGP2:N08a46-B-052	158.9	19.3	8.2	58.3	11.6	0.6	16	CL-00331:N1834-B-018	142.2	19.1	7.4	58.3	10.4	11.6
4	BARBGP2:N08a46-B-007	158.4	19.4	8.1	57.7	6.4	2.3	25	CL-00331:N1834-B-028	141.4	21.0	6.7	57.6	10.3	11.6
44	BARBGP2:N08a46-B-058	157.8	21.1	7.5	57.7	4.6	0.0	15	CL-00331:N1834-B-017	141.1	20.7	6.8	58.6	14.7	17.4
Test Entry Means		151.8	19.7	7.7	57.7	5.4	1.4	Test Entry Means		133.1	20.3	6.5	57.1	12.2	9.4
Check Means		187.3	20.4	9.2	57.2	2.3	0.8	Check Means		156.0	20.3	7.7	57.4	11.9	10.4
CV		10.2	4.0					CV		14.6	6.5				
F-value		3.1	4.1					F-value		2.5	4.4				
LSD (p=0.05)		25.5	1.3					LSD (p=0.05)		24.8	1.7				

111303								111304							
Tester: HC33								Tester: HC33							
Rep: 4								Rep: 4							
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
48	Pioneer 31D58	201.1	22.1	9.1	57.7	8.0	6.2	57	LH200xLH262	155.7	19.3	8.1	58.3	3.7	2.3
49	Pioneer 33F85	194.5	20.3	9.6	58.1	8.7	17.5	11	NEI9004:N0803-B-011	154.8	17.5	8.8	59.5	7.5	1.5
47	LH200xLH262	178.4	22.5	7.9	57.2	19.5	7.9	43	NEI9004:N0803-B-053	153.2	17.5	8.8	57.7	3.5	3.4
46	HC33xLH287	167.1	18.6	9.0	57.7	10.8	17.1	59	Pioneer 33F85	152.5	17.9	8.5	58.0	6.3	2.4
26	CML323:N1550-B-044	163.0	18.9	8.6	59.0	12.6	24.0	38	NEI9004:N0803-B-045	151.7	15.6	9.7	59.3	26.8	26.8
50	Pioneer 34R65	159.8	18.0	8.9	59.5	10.3	4.7	40	NEI9004:N0803-B-049	151.7	15.8	9.6	58.0	1.6	0.8
3	CML323:N1550-B-003	158.0	19.5	8.1	59.1	9.8	6.7	6	NEI9004:N0803-B-006	143.5	15.6	9.2	58.4	8.2	4.7
2	CML323:N1550-B-002	157.4	20.0	7.9	58.9	12.8	22.4	41	NEI9004:N0803-B-051	143.3	16.1	8.9	59.2	2.5	3.2
29	CML323:N1550-B-048	154.2	19.7	7.8	58.4	7.6	19.6	17	NEI9004:N0803-B-019	142.1	16.1	8.8	59.9	2.2	2.3
6	CML323:N1550-B-010	153.9	20.4	7.5	59.0	19.8	21.0	58	Pioneer 31D58	141.5	18.2	7.8	57.2	4.1	1.7
15	CML323:N1550-B-027	149.5	20.5	7.3	58.5	6.1	27.1	33	NEI9004:N0803-B-039	140.0	16.7	8.4	57.4	5.9	4.4
41	CML323:N1550-B-062	148.7	19.6	7.6	59.2	5.3	33.1	23	NEI9004:N0803-B-029	139.5	15.3	9.1	58.5	6.9	9.0
22	CML323:N1550-B-036	147.9	18.5	8.0	59.4	10.9	18.4	53	NEI9004:N0803-B-064	139.2	15.7	8.9	58.0	4.6	1.5
8	CML323:N1550-B-012	147.2	18.5	8.0	60.7	22.1	9.0	55	NEI9004:N0803-B-066	136.7	18.7	7.3	57.7	5.0	4.2
20	CML323:N1550-B-032	146.8	19.7	7.5	58.6	14.0	10.0	50	NEI9004:N0803-B-060	136.6	16.5	8.3	59.4	9.7	1.6
25	CML323:N1550-B-041	146.2	19.6	7.5	58.7	4.9	22.1	36	NEI9004:N0803-B-043	135.8	15.4	8.8	59.2	2.5	4.0
16	CML323:N1550-B-028	145.0	21.4	6.8	57.5	11.3	15.8	42	NEI9004:N0803-B-052	135.7	16.1	8.4	59.3	7.6	7.4
9	CML323:N1550-B-015	144.1	20.4	7.1	58.8	7.2	16.8	21	NEI9004:N0803-B-027	135.1	17.3	7.8	58.3	5.5	1.6
4	CML323:N1550-B-005	143.8	20.3	7.1	59.2	12.5	12.1	56	HC33xLH287	134.5	16.3	8.3	57.9	4.6	1.6
34	CML323:N1550-B-053	141.6	20.0	7.1	58.7	9.2	25.0	46	NEI9004:N0803-B-056	133.6	15.3	8.7	60.2	9.0	2.2
Test Entry Means		133.9	19.5	6.9	59.2	12.0	17.2	Test Entry Means		124.8	16.2	7.7	59.0	6.4	3.8
Check Means		180.2	20.3	8.9	58.0	11.5	10.6	Check Means		136.7	17.5	7.8	58.0	4.3	1.6
CV		11.6	3.6					CV		19.2	9.5				
F-value		6.6	7.8					F-value		1.4	2.2				
LSD (p=0.05)		22.6	1.0					LSD (p=0.05)		34.4	2.2				

111305

Tester: HC33

Rep: 4

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
39	Pioneer 33F85	201.9	19.9	10.2	57.7	4.2	2.0
38	Pioneer 31D58	169.4	22.2	7.6	57.1	1.9	1.5
36	HC33xLH287	168.8	17.7	9.6	57.9	3.0	1.3
37	LH200xLH262	162.6	23.1	7.0	56.9	3.4	1.5
40	Pioneer 34R65	162.2	18.2	8.9	58.9	0.8	2.9
25	GUAT209:N11c46-B-027	155.3	18.4	8.5	59.5	2.4	4.2
13	GUAT209:N11c46-B-013	154.2	20.3	7.6	57.2	4.0	3.3
17	GUAT209:N11c46-B-017	150.9	17.6	8.6	58.9	1.9	2.8
23	GUAT209:N11c46-B-023	149.1	18.4	8.1	60.3	2.4	1.6
5	GUAT209:N11c46-B-005	143.8	18.8	7.6	59.2	3.7	1.1
24	GUAT209:N11c46-B-025	143.8	18.1	7.9	59.8	4.7	0.7
7	GUAT209:N11c46-B-007	142.8	21.0	6.8	58.3	2.3	0.8
16	GUAT209:N11c46-B-016	141.8	18.9	7.5	59.2	1.6	2.6
9	GUAT209:N11c46-B-009	140.1	17.5	8.0	60.4	3.7	3.3
14	GUAT209:N11c46-B-014	140.0	18.2	7.7	58.5	12.2	1.5
26	GUAT209:N11c46-B-028	139.7	17.6	7.9	58.5	23.6	3.0
32	GUAT209:N11c46-B-040	138.9	17.6	7.9	59.7	4.4	1.9
19	GUAT209:N11c46-B-019	137.4	16.4	8.4	59.6	12.5	2.3
35	GUAT209:N11c46-B-044	136.2	19.5	7.0	58.5	1.9	1.0
3	GUAT209:N11c46-B-003	135.4	17.2	7.9	59.5	8.3	1.3
Test Entry Means		130.2	18.3	7.1	59.0	4.9	2.1
Check Means		173.0	20.2	8.6	57.7	2.7	1.8
CV		17.3	5.2				
F-value		3.1	8.9				
LSD (p=0.05)		33.1	1.3				

111306

Tester: HC33

Rep: 4

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
49	Pioneer 33F85	176.0	18.0	9.8	57.7	8.6	24.3
48	Pioneer 31D58	170.1	20.1	8.5	58.2	2.4	31.3
46	HC33xLH287	157.0	19.2	8.2	57.6	1.0	33.9
38	GUAT209:N11c50-B-055	150.3	19.2	7.8	60.6	3.5	21.5
33	GUAT209:N11c50-B-049	145.9	18.5	7.9	59.6	5.3	27.5
47	LH200xLH262	145.3	20.1	7.2	56.9	7.9	5.9
3	GUAT209:N11c50-B-003	144.7	17.4	8.3	60.3	8.3	12.9
50	Pioneer 34R65	142.3	16.2	8.8	59.9	1.0	31.1
37	GUAT209:N11c50-B-054	142.2	17.4	8.2	61.1	2.7	23.9
24	GUAT209:N11c50-B-035	140.3	16.5	8.5	60.5	5.0	16.1
28	GUAT209:N11c50-B-044	135.7	16.7	8.2	61.1	4.6	29.5
36	GUAT209:N11c50-B-052	135.6	18.7	7.3	60.7	6.2	26.1
39	GUAT209:N11c50-B-056	135.4	17.7	7.6	62.2	7.7	20.8
29	GUAT209:N11c50-B-045	133.5	18.9	7.1	60.5	7.5	15.9
10	GUAT209:N11c50-B-012	132.9	18.7	7.1	58.2	6.0	1.6
40	GUAT209:N11c50-B-057	132.4	18.9	7.0	59.5	3.9	29.3
1	GUAT209:N11c50-B-001	132.3	17.7	7.5	61.1	5.7	28.5
42	GUAT209:N11c50-B-060	131.8	16.7	7.9	61.9	2.4	18.9
23	GUAT209:N11c50-B-034	131.2	17.3	7.6	60.6	24.1	11.8
12	GUAT209:N11c50-B-015	130.0	17.9	7.3	60.2	11.6	20.8
Test Entry Means		124.0	18.3	6.8	60.2	6.9	20.5
Check Means		158.1	18.7	8.4	58.1	4.2	25.3
CV		16.9	8.2				
F-value		2.3	2.5				
LSD (p=0.05)		30.6	2.1				

111307

Tester: HC33

Rep: 4

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
67	Pioneer 31D58	179.0	18.9	9.5	58.6	3.4	10.0
68	Pioneer 33F85	175.4	18.6	9.4	58.4	7.1	7.0
7	SCROGP3:N3215-B-007	170.1	15.4	11.1	58.9	6.1	2.8
31	SCROGP3:N3215-B-035	169.4	15.6	10.9	57.8	3.7	0.0
66	LH200xLH262	164.2	18.4	8.9	57.9	6.2	3.0
41	SCROGP3:N3215-B-046	160.9	17.9	9.0	57.8	2.9	36.3
14	SCROGP3:N3215-B-017	160.4	16.9	9.5	56.6	3.0	15.9
32	SCROGP3:N3215-B-036	158.2	16.6	9.5	59.1	1.7	0.0
45	SCROGP3:N3215-B-050	156.4	17.0	9.2	58.1	5.7	26.9
15	SCROGP3:N3215-B-018	156.3	15.9	9.8	57.4	12.4	15.9
11	SCROGP3:N3215-B-013	156.3	16.3	9.6	57.7	9.4	12.8
53	SCROGP3:N3215-B-058	155.2	15.6	10.0	58.5	5.5	4.2
65	HC33xLH287	154.7	16.1	9.6	57.5	7.5	29.1
69	Pioneer 34R65	153.2	15.5	9.9	59.7	3.1	16.4
1	SCROGP3:N3215-B-001	151.4	15.1	10.0	57.4	9.0	0.0
13	SCROGP3:N3215-B-016	149.7	15.1	9.9	57.7	13.2	14.7
64	DK888:N11a08a-440-001-B-B	149.4	17.7	8.4	57.6	7.4	7.3
48	SCROGP3:N3215-B-053	148.7	16.6	9.0	57.4	11.2	13.7
26	SCROGP3:N3215-B-030	148.7	16.7	8.9	56.1	3.5	29.1
16	SCROGP3:N3215-B-019	148.4	16.2	9.1	56.1	12.8	19.9
Test Entry Means		136.8	16.7	8.2	58.0	8.1	12.5
Check Means		165.3	17.5	9.5	58.4	5.5	13.1
CV		17.3	11.2				
F-value		1.7	1.6				
LSD (p=0.05)		34.3	2.7				

111308

Tester: LH287

Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
69	Pioneer 33F85	193.1	18.6	10.4	57.3	18.9	29.9
68	Pioneer 31D58	182.2	20.6	8.9	57.7	5.1	17.2
36	CL-G1703:S17c43-B-039	178.3	21.8	8.2	55.7	6.7	35.5
23	CL-G1703:S17c43-B-026	178.2	21.5	8.3	55.0	11.6	33.4
54	CL-G1703:S17c43-B-058	174.3	20.4	8.5	55.7	8.2	29.2
20	CL-G1703:S17c43-B-023	171.6	22.1	7.8	54.5	8.2	35.9
10	CL-G1703:S17c43-B-012	170.0	19.6	8.7	55.8	7.2	32.4
11	CL-G1703:S17c43-B-013	169.7	19.5	8.7	56.9	8.4	34.9
8	CL-G1703:S17c43-B-010	169.5	21.2	8.0	55.9	4.4	32.4
62	CL-G1703:S17c43-B-066	169.4	18.5	9.1	55.6	26.4	37.7
22	CL-G1703:S17c43-B-025	169.0	20.5	8.2	55.4	9.6	32.5
61	CL-G1703:S17c43-B-065	168.6	21.4	7.9	55.3	6.1	38.6
1	CL-G1703:S17c43-B-001	166.5	20.7	8.1	55.7	13.3	51.5
65	CL-G1703:S17c43-B-069	165.8	20.7	8.0	55.2	6.7	30.6
29	CL-G1703:S17c43-B-032	165.4	19.5	8.5	55.6	6.9	33.3
9	CL-G1703:S17c43-B-011	164.7	20.1	8.2	55.3	14.9	33.2
58	CL-G1703:S17c43-B-062	164.4	20.8	7.9	56.1	12.0	34.3
18	CL-G1703:S17c43-B-021	164.4	18.6	8.8	56.1	11.4	38.8
42	CL-G1703:S17c43-B-046	164.0	22.2	7.4	54.9	7.1	34.1
30	CL-G1703:S17c43-B-033	163.3	19.1	8.6	55.2	6.4	31.4
Test Entry Means		156.2	20.5	7.6	55.5	12.7	33.7
Check Means		159.4	19.1	8.3	57.5	11.7	18.8
CV		14.1	5.9				
F-value		1.5	3.8				
LSD (p=0.05)		27.4	1.5				

111309		Tester: LH287		Rep: 5		111310		Tester: LH287		Rep: 5					
		Yield	%		%	%		Yield	%		%				
Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.	Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.
48	Pioneer 31D58	187.0	19.2	9.7	57.8	0.8	17.2	2	DKXL212:S0928-B-002	195.1	19.0	10.3	56.4	0.0	28.0
10	CUBA164:S99n99n-B-010	172.7	18.2	9.5	56.9	4.8	35.1	69	Pioneer 33F85	193.6	17.8	10.8	57.6	1.2	20.3
49	Pioneer 33F85	170.2	18.0	9.5	57.9	6.6	21.3	61	DKXL212:S0928-B-066	189.0	18.4	10.3	57.9	0.5	26.8
29	CUBA164:S99n99n-B-035	169.2	19.3	8.8	56.9	2.2	28.9	31	DKXL212:S0928-B-032	186.8	19.1	9.8	56.5	0.4	25.0
27	CUBA164:S99n99n-B-030	167.3	17.7	9.5	58.6	1.2	22.4	57	DKXL212:S0928-B-061	181.9	19.0	9.6	56.4	1.1	24.5
45	CUBA164:S99n99n-B-059	166.9	19.3	8.6	57.1	1.9	31.5	68	Pioneer 31D58	180.5	20.1	9.0	57.0	3.7	11.6
46	HC33xLH287	166.9	17.0	9.8	57.4	1.5	23.5	3	DKXL212:S0928-B-003	179.1	17.6	10.2	57.7	1.1	27.7
8	CUBA164:S99n99n-B-008	165.4	19.5	8.5	57.0	3.9	34.4	51	DKXL212:S0928-B-053	177.9	18.7	9.5	56.8	3.1	24.8
3	CUBA164:S99n99n-B-003	164.9	19.0	8.7	57.0	0.4	29.7	42	DKXL212:S0928-B-044	177.8	17.8	10.0	57.2	0.8	24.2
37	CUBA164:S99n99n-B-046	162.7	19.7	8.3	56.8	1.8	31.4	38	DKXL212:S0928-B-040	176.6	18.9	9.3	57.5	2.3	23.5
4	CUBA164:S99n99n-B-004	162.2	19.3	8.4	56.6	8.1	36.1	27	DKXL212:S0928-B-028	176.5	19.1	9.2	56.4	1.6	12.2
34	CUBA164:S99n99n-B-041	161.9	19.0	8.5	58.4	0.4	31.4	66	HC33xLH287	176.0	16.7	10.6	57.1	1.6	22.4
24	CUBA164:S99n99n-B-026	161.8	19.1	8.5	57.1	3.3	36.1	32	DKXL212:S0928-B-033	174.9	17.8	9.8	58.2	0.8	27.5
12	CUBA164:S99n99n-B-013	161.7	17.6	9.2	57.5	1.9	31.4	43	DKXL212:S0928-B-045	174.5	17.7	9.8	55.8	0.0	0.0
47	LH200xLH262	161.4	19.3	8.4	57.3	1.5	1.1	53	DKXL212:S0928-B-057	174.5	18.4	9.5	57.6	0.8	16.3
38	CUBA164:S99n99n-B-047	160.8	18.7	8.6	57.5	2.2	32.5	56	DKXL212:S0928-B-060	174.2	20.0	8.7	56.1	0.4	25.5
20	CUBA164:S99n99n-B-022	160.6	18.4	8.7	57.2	5.6	27.5	36	DKXL212:S0928-B-037	174.1	18.0	9.6	56.9	4.6	18.4
22	CUBA164:S99n99n-B-024	160.0	17.5	9.1	58.7	1.8	34.9	49	DKXL212:S0928-B-051	173.1	18.4	9.4	57.0	4.0	25.2
11	CUBA164:S99n99n-B-011	159.8	18.7	8.5	57.9	1.7	36.8	25	DKXL212:S0928-B-026	172.8	19.7	8.8	55.5	2.4	27.6
18	CUBA164:S99n99n-B-020	158.4	18.7	8.5	57.6	4.1	39.3	67	LH200xLH262	172.5	19.2	9.0	57.3	1.6	1.2
Test Entry Means		156.3	18.4	8.5	57.2	3.6	33.0	Test Entry Means		164.6	18.8	8.8	57.0	2.6	20.8
Check Means		168.1	18.0	9.4	57.8	2.2	15.1	Check Means		175.0	18.2	9.6	57.5	2.3	13.5
CV		12.2	4.6					CV		13.2	4.1				
F-value		0.9	6.7					F-value		1.6	7.0				
LSD (p=0.05)		24.1	1.1					LSD (p=0.05)		27.2	1.0				

111311		Tester: LH287		Rep: 5		111312		Tester: JFS-NS		Rep: 5					
		Yield	%			%				Yield	%			%	
Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.	Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.
49	Pioneer 33F85	202.4	18.9	10.7	58.2	3.7	14.9	47	Pioneer 31D58	197.2	21.8	9.1	57.0	0.8	5.5
3	DKXL380:S08a15-B-005	199.4	20.8	9.6	55.4	5.0	25.0	48	Pioneer 33F85	185.1	19.1	9.7	57.5	7.1	20.3
48	Pioneer 31D58	195.1	20.0	9.7	57.4	3.4	4.1	43	BR105:S1640-128-001	179.2	19.5	9.2	55.6	0.4	36.6
47	LH200xLH262	191.1	20.4	9.4	58.4	2.2	3.1	44	BR105:S1612-008-001	175.3	18.9	9.3	57.0	1.9	23.1
40	DKXL380:S08a15-B-060	189.3	20.2	9.4	55.4	4.1	23.6	18	NEI9004:S2817c-048-001	173.0	21.6	8.0	55.3	3.8	22.3
32	DKXL380:S08a15-B-047	187.1	19.8	9.4	57.1	3.3	26.8	17	NEI9004:S2817c-047-001	170.2	20.7	8.2	55.8	5.1	20.6
33	DKXL380:S08a15-B-050	185.9	20.3	9.2	55.5	1.1	39.3	45	HC33xLH287	168.5	16.7	10.1	58.0	2.2	26.4
29	DKXL380:S08a15-B-042	184.1	20.6	9.0	56.2	0.8	28.6	29	NEI9004:S2817c-086-001	168.3	20.3	8.3	57.3	3.6	10.4
41	DKXL380:S08a15-B-061	182.4	20.6	8.8	57.0	2.2	31.2	30	NEI9004:S2817c-090-001	168.3	20.7	8.1	55.8	4.3	23.8
9	DKXL380:S08a15-B-012	180.8	21.7	8.3	54.7	1.1	30.0	40	NEI9004:S2817c-124-001	168.3	21.7	7.7	55.1	1.5	4.8
15	DKXL380:S08a15-B-018	180.0	19.8	9.1	55.7	8.8	23.8	36	NEI9004:S2817c-106-001	168.1	20.6	8.2	57.5	7.8	13.9
35	DKXL380:S08a15-B-053	176.9	20.2	8.7	56.1	2.4	22.5	7	NEI9004:S2817c-017-001	167.6	21.9	7.6	55.7	2.8	26.1
4	DKXL380:S08a15-B-006	176.2	20.6	8.5	57.4	0.7	24.7	28	NEI9004:S2817c-081-001	165.3	22.8	7.3	55.3	3.0	21.5
1	DKXL380:S08a15-B-001	175.9	21.2	8.3	55.1	0.4	25.7	39	NEI9004:S2817c-123-001	164.6	20.1	8.2	55.4	4.0	22.2
46	HC33xLH287	175.9	18.2	9.7	56.6	0.8	25.8	38	NEI9004:S2817c-111-001	163.7	19.7	8.3	56.1	4.8	19.0
17	DKXL380:S08a15-B-021	175.6	20.7	8.5	57.0	3.1	35.9	13	NEI9004:S2817c-036-001	162.8	21.1	7.7	54.3	5.7	20.4
39	DKXL380:S08a15-B-059	175.6	20.2	8.7	56.6	5.1	23.7	11	NEI9004:S2817c-032-001	162.4	21.6	7.5	55.5	2.3	6.1
2	DKXL380:S08a15-B-003	175.3	19.2	9.1	55.9	1.5	27.4	32	NEI9004:S2817c-095-001	160.4	21.3	7.5	56.3	2.3	20.2
37	DKXL380:S08a15-B-055	174.5	19.8	8.8	56.6	1.2	27.3	37	NEI9004:S2817c-108-001	160.0	23.6	6.8	55.2	1.5	19.7
12	DKXL380:S08a15-B-015	173.7	18.2	9.5	56.0	1.6	30.1	35	NEI9004:S2817c-104-001	159.8	22.4	7.1	55.8	3.8	13.2
Test Entry Means		168.5	20.0	8.4	56.7	2.2	26.6	Test Entry Means		155.5	21.4	7.3	55.7	5.0	18.5
Check Means		184.4	18.9	9.7	57.9	2.2	13.2	Check Means		169.7	19.6	8.7	57.4	5.0	17.8
CV		10.1	5.2					CV		12.0	5.5				
F-value		4.0	4.6					F-value		2.9	9.0				
LSD (p=0.05)		21.5	1.3					LSD (p=0.05)		23.4	1.5				

111313

Tester: TR7245HXT Rep: 4

Ent.	Pedigree	Yield B/A	% Moist	Y/M	TWT	% S.L.	% R.L.
43	AR16021:N2149a-B-043	213.9	24.2	8.9	54.0	4.4	0.0
74	HC33 x LH287	206.2	20.2	10.2	55.7	3.4	1.0
13	AR16021:N2149a-B-013	194.8	21.8	9.0	55.2	4.4	1.5
72	Pioneer 33F85	190.4	23.9	8.0	54.4	0.5	0.0
1	AR16021:N2149a-B-001	188.6	21.6	8.7	55.1	12.2	10.3
19	AR16021:N2149a-B-019	188.2	23.5	8.0	54.5	2.0	1.0
12	AR16021:N2149a-B-012	188.1	24.7	7.6	54.1	2.4	3.9
14	AR16021:N2149a-B-014	187.1	21.9	8.6	55.1	17.2	3.0
73	Pioneer 31D58	186.9	25.1	7.5	54.0	0.5	0.0
4	AR16021:N2149a-B-004	185.2	23.5	7.9	54.5	5.9	0.5
37	AR16021:N2149a-B-037	185.1	22.1	8.4	55.0	1.0	0.0
65	AR16021:N2149a-B-065	184.7	24.0	7.7	54.2	2.5	1.0
2	AR16021:N2149a-B-002	183.7	22.9	8.0	54.7	3.4	1.5
47	AR16021:N2149a-B-047	182.4	21.8	8.4	55.0	3.4	0.0
21	AR16021:N2149a-B-021	181.5	24.1	7.5	54.1	4.4	0.0
64	AR16021:N2149a-B-064	181.1	23.6	7.7	54.3	2.0	6.9
30	AR16021:N2149a-B-030	178.4	23.7	7.5	54.4	2.4	0.0
39	AR16021:N2149a-B-039	178.3	24.2	7.4	54.1	2.4	0.0
66	AR16021:N2149a-B-066	178.2	23.3	7.6	54.5	7.4	0.5
23	AR16021:N2149a-B-023	177.4	23.1	7.7	54.6	5.4	0.5
Test Entry Means		171.8	23.2	7.4	54.6	5.5	1.8
Check Means		184.7	22.9	8.1	54.8	1.9	0.7
CV		12.4	7.5				
F-value		1.4	3.2				
LSD (p=0.05)		31.4	2.5				

111314

Tester: SGI890HXT Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/M	TWT	% S.L.	% R.L.
73	Pioneer 31D58	196.0	27.4	7.2		0.0	0.0
74	Pioneer 33F85	178.2	24.7	7.2		0.3	10.4
53	CML329:N1546-B-053	174.2	24.0	7.3		3.5	15.6
12	CML329:N1546-B-012	173.3	25.0	6.9		3.8	12.1
4	CML329:N1546-B-004	170.3	24.6	6.9		2.4	12.9
17	CML329:N1546-B-017	169.9	26.4	6.4		0.6	13.2
31	CML329:N1546-B-031	167.8	24.8	6.8		10.7	12.1
43	CML329:N1546-B-043	166.7	25.9	6.4		1.8	12.6
62	CML329:N1546-B-062	166.6	23.5	7.1		2.7	3.1
1	CML329:N1546-B-001	166.0	24.5	6.8		1.2	10.8
35	CML329:N1546-B-035	166.0	25.5	6.5		2.9	12.1
48	CML329:N1546-B-048	165.1	25.5	6.5		7.7	5.9
18	CML329:N1546-B-018	164.6	25.1	6.6		0.6	12.5
5	CML329:N1546-B-005	164.2	24.8	6.6		4.7	8.1
46	CML329:N1546-B-046	164.2	26.1	6.3		0.3	5.8
68	CML329:N1546-B-068	164.1	25.5	6.4		4.2	9.0
45	CML329:N1546-B-045	164.0	26.6	6.2		1.9	6.2
47	CML329:N1546-B-047	163.4	23.9	6.8		2.8	13.8
30	CML329:N1546-B-030	163.4	25.7	6.4		1.6	10.3
14	CML329:N1546-B-014	162.5	24.1	6.7		0.3	2.5
Test Entry Means		154.9	25.0	6.2		3.1	9.6
Check Means		167.9	24.9	6.7		1.2	9.4
CV		10.3	6.9				
F-value		2.3	2.3				
LSD (p=0.05)		20.1	2.2				

111315

Tester: MON-SS Rep: 4

Ent.	Pedigree	Yield B/A	% Moist	Y/M	TWT	% S.L.	% R.L.
3	Pioneer 31D58	224.8	24.2	9.3	57.5	1.2	3.0
4	Pioneer 33F85	214.6	20.9	10.3	57.3	5.2	10.4
1	HC33xLH287	202.7	18.8	10.8	57.0	5.9	9.0
2	LH200xLH262	200.1	24.0	8.3	56.9	10.4	17.5
8	MBRC10:N1749b-014	194.2	20.1	9.6	57.7	3.0	0.9
21	MBRC10:N1749b-093	189.1	18.9	10.0	58.9	4.9	2.1
5	Pioneer 34R65	183.6	18.9	9.7	59.0	4.6	6.3
14	MBRC10:N1749b-057	183.0	19.5	9.4	58.2	1.8	0.6
16	MBRC10:N1749b-068	182.4	17.4	10.5	57.1	7.2	1.2
20	MBRC10:N1749b-088	180.1	19.3	9.3	58.6	12.1	11.4
10	MBRC10:N1749b-022	179.5	20.2	8.9	58.3	1.5	4.6
24	MBRC10:N1749b-110	179.0	21.1	8.5	57.1	7.0	3.9
22	MBRC10:N1749b-105	178.0	19.0	9.4	58.3	6.6	0.9
23	MBRC10:N1749b-106	177.5	18.6	9.5	58.9	11.9	3.1
19	MBRC10:N1749b-086	173.4	19.0	9.1	57.9	5.9	3.2
11	MBRC10:N1749b-024	172.5	20.1	8.6	58.8	15.6	6.1
6	MBRC10:N1749b-007	172.3	17.9	9.6	60.1	7.5	4.5
18	MBRC10:N1749b-072	171.8	21.2	8.1	58.1	2.6	0.6
9	MBRC10:N1749b-018	171.8	21.2	8.1	57.9	2.9	4.6
15	MBRC10:N1749b-066	169.2	18.7	9.1	57.4	11.9	6.3
Test Entry Means		176.0	19.6	9.0	58.0	7.2	3.8
Check Means		205.1	21.3	9.6	57.6	5.4	9.2
CV		10.5	4.7				
F-value		2.7	12.1				
LSD (p=0.05)		27.2	1.4				

111316

Tester: MON-nSS Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/M	TWT	% S.L.	% R.L.
4	Pioneer 33F85	196.0	20.7	9.5	57.4	3.3	0.0
54	DK888:S08a46-082	192.6	18.2	10.6	56.8	9.5	5.3
3	Pioneer 31D58	191.4	23.9	8.0	58.1	3.8	0.0
60	DK888:S08a46-093	189.6	19.1	9.9	57.0	11.1	3.8
76	DK888:S08a46-125	184.6	20.4	9.0	57.6	7.1	2.6
49	DK888:S08a46-075	183.5	20.4	9.0	58.4	3.5	0.0
2	LH200xLH262	183.0	23.8	7.7	57.4	5.8	0.0
10	DK888:S08a46-010	182.7	19.8	9.2	56.4	12.1	0.0
70	DK888:S08a46-113	181.4	21.2	8.6	57.9	3.4	2.4
72	DK888:S08a46-117	181.1	18.2	9.9	56.6	8.1	0.7
18	DK888:S08a46-027	180.1	20.4	8.8	58.6	1.0	0.0
20	DK888:S08a46-029	180.1	19.9	9.1	58.4	2.5	0.0
24	DK888:S08a46-037	179.9	20.6	8.8	58.1	0.6	0.0
29	DK888:S08a46-045	179.7	21.4	8.4	57.1	8.4	3.2
46	DK888:S08a46-071	179.4	18.9	9.5	57.4	3.0	3.6
55	DK888:S08a46-083	179.2	21.2	8.5	57.8	2.7	0.0
33	DK888:S08a46-052	178.2	18.6	9.6	56.7	9.6	0.0
17	DK888:S08a46-023	178.1	18.7	9.5	57.6	5.9	0.0
79	DK888:S08a46-129	177.2	19.1	9.3	57.9	2.9	0.0
52	DK888:S08a46-078	177.0	18.4	9.6	56.6	8.1	3.3
Test Entry Means		168.7	19.2	8.8	57.6	8.5	1.2
Check Means		183.8	21.5	8.5	57.4	4.3	0.2
CV		11.1	7.3				
F-value		1.6	4.4				
LSD (p=0.05)		23.5	1.8				

111317

Tester: DAS-nSS

Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
3	Pioneer 31D58	189.2	19.1	9.9	58.5	1.5	4.6
2	Pioneer 33F85	176.6	17.6	10.0	59.2	1.5	3.7
4	LH200/LH262	174.7	20.6	8.5	58.2	1.1	15.9
16	SANM126:S1221-B-009	166.0	18.2	9.1	59.2	2.5	0.3
13	SANM126:S1221-B-005	165.1	18.2	9.1	57.9	2.0	1.1
24	SANM126:S1221-B-017	164.3	19.0	8.6	58.6	0.7	3.1
14	SANM126:S1221-B-006	163.4	19.0	8.6	59.0	3.6	8.0
45	SANM126:S1221-B-040	161.6	17.4	9.3	59.6	0.0	0.9
1	Pioneer 34R65	160.9	16.7	9.6	59.2	4.0	0.7
68	SANM126:S1221-B-065	160.8	20.4	7.9	57.9	0.7	11.2
22	SANM126:S1221-B-015	160.5	19.7	8.2	58.0	2.4	5.4
47	SANM126:S1221-B-042	160.4	17.7	9.1	58.0	2.8	3.6
60	SANM126:S1221-B-056	159.9	17.4	9.2	58.9	1.3	24.2
43	SANM126:S1221-B-038	159.5	18.0	8.8	58.9	3.3	4.2
21	SANM126:S1221-B-014	158.7	19.0	8.4	58.4	2.6	5.4
51	SANM126:S1221-B-046	157.8	19.1	8.2	58.1	2.7	1.3
23	SANM126:S1221-B-016	157.2	19.5	8.1	58.1	0.6	0.3
18	SANM126:S1221-B-011	157.1	18.5	8.5	58.5	3.8	5.8
5	HC33/LH287	156.1	17.4	9.0	59.0	1.4	5.2
69	SANM126:S1221-B-066	155.3	20.6	7.5	57.6	0.6	1.8
Test Entry Means		148.5	18.3	8.1	58.5	3.2	4.7
Check Means		171.5	18.3	9.4	58.8	1.9	6.0
CV		11.2	7.8				
F-value		2.2	2.0				
LSD (p=0.05)		21.0	1.8				

111318

Tester: DAS-SS

Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
47	BR105:N1643-B-036	183.7	19.7	9.3	58.5	0.0	6.0
21	BR105:N1643-B-003	183.2	20.8	8.8	58.3	3.8	18.7
3	Pioneer 31D58	181.9	19.7	9.2	58.7	2.1	1.2
56	BR105:N1643-B-050	181.3	22.1	8.2	58.2	0.7	6.2
63	BR105:N1643-B-060	179.7	21.8	8.2	57.3	0.0	6.2
48	BR105:N1643-B-037	178.0	21.6	8.2	56.6	0.3	19.1
35	BR105:N1643-B-020	176.6	19.7	8.9	57.8	2.4	11.5
38	BR105:N1643-B-023	176.5	19.8	8.9	57.3	4.0	3.0
71	BR105:N1643-B-068	174.4	20.0	8.7	58.5	1.2	4.8
4	LH200/LH262	173.8	22.0	7.9	58.1	1.5	10.9
44	BR105:N1643-B-033	173.5	18.9	9.2	58.4	4.5	17.0
23	BR105:N1643-B-006	172.7	18.5	9.3	58.5	0.0	6.7
2	Pioneer 33F85	172.0	17.8	9.6	59.0	5.4	3.0
50	BR105:N1643-B-039	171.0	18.4	9.3	58.1	3.8	2.6
54	BR105:N1643-B-047	170.8	20.3	8.4	57.8	4.6	9.8
42	BR105:N1643-B-029	170.2	20.7	8.2	57.0	1.6	12.1
22	BR105:N1643-B-004	169.6	21.2	8.0	57.5	0.8	10.1
46	BR105:N1643-B-035	168.9	20.8	8.1	56.0	0.0	10.0
70	BR105:N1643-B-067	168.3	20.9	8.1	57.9	1.2	5.8
39	BR105:N1643-B-026	168.0	21.4	7.9	57.3	2.3	5.4
Test Entry Means		159.7	20.8	7.7	57.6	1.9	8.2
Check Means		168.3	19.0	8.9	58.8	2.8	4.5
CV		12.7	7.9				
F-value		2.6	4.0				
LSD (p=0.05)		25.4	2.0				

111319

Tester: SGI890HXT

Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
59	Pioneer 33F85	206.6	21.7	9.5	56.3	0.9	20.3
58	Pioneer 31D58	200.8	24.0	8.4	55.4	0.0	20.0
1	BR105:N1646-B-002	183.5	22.4	8.2	55.2	0.0	11.5
55	BR105:N1646-B-070	180.9	23.7	7.6	56.2	0.0	21.5
19	BR105:N1646-B-023	179.0	21.2	8.4	58.2	0.0	17.0
20	BR105:N1646-B-024	178.8	24.1	7.4	56.9	1.2	10.3
40	BR105:N1646-B-050	177.9	20.5	8.7	57.3	0.0	3.0
34	BR105:N1646-B-042	174.9	24.6	7.1	55.9	0.0	2.4
50	BR105:N1646-B-063	173.3	21.8	7.9	56.0	0.3	9.1
18	BR105:N1646-B-022	173.2	22.8	7.6	56.6	0.0	11.0
7	BR105:N1646-B-009	172.9	22.1	7.8	55.7	0.0	0.0
29	BR105:N1646-B-034	172.9	23.2	7.5	58.4	0.6	10.0
15	BR105:N1646-B-018	172.1	23.0	7.5	57.2	0.0	0.0
8	BR105:N1646-B-010	171.9	22.6	7.6	57.3	0.0	6.5
27	BR105:N1646-B-032	171.6	23.3	7.4	56.4	0.0	5.2
11	BR105:N1646-B-013	171.4	23.4	7.3	56.1	0.6	2.1
22	BR105:N1646-B-026	171.3	22.5	7.6	56.6	0.0	0.0
17	BR105:N1646-B-021	171.1	23.2	7.4	55.8	0.0	10.0
36	BR105:N1646-B-046	170.8	23.9	7.1	54.5	0.0	12.7
23	BR105:N1646-B-027	170.7	23.4	7.3	57.5	0.0	3.9
Test Entry Means		162.1	23.0	7.1	56.2	0.2	5.8
Check Means		180.9	21.7	8.3	56.2	0.9	20.2
CV		12.6	7.6				
F-value		2.3	3.0				
LSD (p=0.05)		26.0	2.2				

111401

Tester: BAS-SS

Rep: 7

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
48	Pioneer 31D58	202.6	25.6	7.9	55.2	2.5	0.0
45	HC33xLH287	183.0	20.9	8.8	57.3	8.8	7.8
44	LH200xLH262	178.5	24.9	7.2	55.3	0.0	0.0
47	Pioneer 33F85	176.2	22.1	8.0	56.6	0.0	0.0
3	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-005-001	162.4	18.6	8.7	58.5	7.8	3.1
46	Pioneer 34R65	160.5	20.7	7.8	57.4	0.0	0.0
14	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-026-002	157.4	19.4	8.1	58.0	0.0	0.0
43	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-089-001	153.6	21.6	7.1	56.8	15.2	3.2
7	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-013-001	148.0	19.7	7.5	57.9	1.3	1.6
6	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-010-001	147.2	20.4	7.2	57.5	0.0	0.0
41	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-084-001	145.6	18.7	7.8	58.5	3.1	0.0
4	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-007-002	144.9	19.9	7.3	57.8	2.6	0.0
2	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-004-001	144.3	18.0	8.0	58.9	2.7	0.0
39	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-080-001	143.8	20.5	7.0	57.5	0.0	0.0
30	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-063-002	143.0	18.6	7.7	58.5	0.0	0.0
28	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-051-001	142.2	19.1	7.5	58.3	0.0	0.0
10	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-016-001	140.5	19.8	7.1	57.9	0.0	0.0
9	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-015-001	140.4	19.0	7.4	58.4	0.0	0.0
15	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-027-002	140.1	19.4	7.2	58.0	0.0	0.0
37	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-077-001	139.5	21.2	6.6	57.0	0.0	0.0
	Test Entry Means	137.1	19.3	7.1	58.2	1.6	0.2
	Check Means	180.1	22.8	7.9	56.4	2.3	1.6
	CV	12.3	7.1				
	F-value	6.3	8.6				
	LSD (p=0.05)	18.4	1.5				

111402

Tester: BAS-SS

Rep: 7

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
38	Pioneer 33F85	198.3	22.1	9.0	56.6	0.0	3.1
39	Pioneer 31D58	187.6	25.0	7.5	55.5	0.0	0.0
36	HC33xLH287	185.2	20.9	8.9	57.1	16.4	0.0
35	LH200xLH262	169.5	25.4	6.7	55.3	5.3	6.3
2	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-091-001	157.2	22.4	7.0	56.5	0.0	0.0
37	Pioneer 34R65	157.0	20.8	7.5	57.4	0.0	0.0
4	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-093-001	154.4	19.9	7.8	57.8	0.0	0.0
12	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-121-001	150.7	20.3	7.4	57.5	0.0	0.0
11	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-120-001	149.8	22.8	6.6	56.4	2.7	0.0
9	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-111-001	148.4	21.3	7.0	57.0	0.0	0.0
13	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-123-001	146.8	20.8	7.0	57.2	16.9	3.3
26	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-156-001	145.4	21.1	6.9	57.2	0.0	0.0
30	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-163-001	143.8	20.4	7.1	57.5	0.0	0.0
25	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-155-001	142.4	19.3	7.4	58.1	0.0	0.0
20	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-144-001	142.0	20.3	7.0	57.7	0.0	0.0
19	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-143-001	140.3	20.8	6.7	57.3	0.0	0.0
1	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-090-001	139.5	20.1	6.9	57.7	5.1	0.0
27	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-157-001	139.4	19.3	7.2	58.3	0.0	0.0
10	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-118-001	139.3	21.5	6.5	57.1	1.3	0.0
15	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B-B)-B-131-001	138.1	20.9	6.6	57.4	0.0	0.0
	Test Entry Means	137.5	20.3	6.8	57.6	1.2	0.1
	Check Means	179.5	22.8	7.9	56.4	4.4	1.9
	CV	12.3	6.6				
	F-value	6.7	9.5				
	LSD (p=0.05)	18.6	1.4				

111403

Tester: BAS-SS

Rep: 7

Ent.	Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
39	Pioneer 31D58	195.0	25.7	7.6	55.2	0.0	0.0
38	Pioneer 33F85	188.6	22.6	8.3	56.4	2.5	0.0
36	HC33xLH287	181.4	20.6	8.8	57.3	15.2	0.0
37	Pioneer 34R65	168.1	20.8	8.1	57.4	0.0	0.0
35	LH200xLH262	161.7	25.1	6.5	55.3	3.9	6.3
6	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-194-001	152.3	21.0	7.3	57.1	0.0	0.0
17	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-219-001	150.8	20.7	7.3	57.4	17.9	0.0
5	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-193-002	150.7	20.8	7.2	57.3	8.8	0.0
23	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-230-001	149.1	20.2	7.4	57.7	10.1	0.0
20	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-222-003	147.7	21.2	7.0	57.2	0.0	0.0
19	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-221-001	146.9	22.6	6.5	56.4	2.5	0.0
9	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-202-001	144.4	21.3	6.8	57.1	3.8	0.0
13	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-214-001	144.1	22.0	6.6	56.6	15.2	0.0
33	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-249-001	143.5	22.1	6.5	56.6	17.9	0.0
4	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-192-001	142.3	20.3	7.0	57.6	0.0	0.0
29	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-240-001	141.3	19.8	7.1	57.9	0.0	0.0
7	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-196-001	140.4	20.7	6.8	57.4	5.1	0.0
34	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-250-003	139.1	20.0	6.9	57.7	16.4	0.0
16	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-217-002	139.0	18.3	7.6	58.7	5.1	0.0
24	(GEMN-0131/DKXL212:N11a-139-001-001-B-B-B-B-B)-B-233-001	138.4	21.8	6.3	56.8	0.0	0.0
	Test Entry Means	136.7	20.3	6.7	57.6	5.9	0.0
	Check Means	178.9	22.9	7.8	56.3	4.3	1.3
	CV	12.8	5.8				
	F-value	6.2	10.6				
	LSD (p=0.05)	19.3	1.3				

111404

Tester: MBS8814CBLLRW

Rep: 5

Ent.	Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
58	Pioneer 31D58	213.5	23.5	9.1	57.2	0.3	20.0
20	(GEMS-0147/GEMS-0115)-B-B-026	211.9	23.3	9.1	52.7	0.9	2.1
10	(GEMS-0147/GEMS-0115)-B-B-012	211.6	23.7	8.9	54.5	1.8	0.0
59	Pioneer 33F85	209.5	21.4	9.8	55.9	0.3	20.0
17	(GEMS-0147/GEMS-0115)-B-B-020	203.4	24.5	8.3	53.8	1.8	0.0
36	(GEMS-0147/GEMS-0115)-B-B-044	202.9	24.7	8.2	54.5	1.5	5.2
44	(GEMS-0147/GEMS-0115)-B-B-052	202.5	24.2	8.4	54.9	0.6	0.0
53	(GEMS-0147/GEMS-0115)-B-B-062	200.2	23.8	8.4	53.5	0.3	0.0
14	(GEMS-0147/GEMS-0115)-B-B-017	200.1	22.7	8.8	55.0	3.0	0.0
23	(GEMS-0147/GEMS-0115)-B-B-029	197.8	23.5	8.4	54.4	0.0	18.2
33	(GEMS-0147/GEMS-0115)-B-B-041	196.7	24.2	8.1	52.8	0.0	11.8
57	LH200xLH262	196.3	23.5	8.4	57.5	0.9	20.0
41	(GEMS-0147/GEMS-0115)-B-B-049	196.0	22.6	8.7	55.0	1.8	8.2
13	(GEMS-0147/GEMS-0115)-B-B-016	193.8	24.3	8.0	54.3	0.0	0.0
48	(GEMS-0147/GEMS-0115)-B-B-057	193.6	24.1	8.0	53.7	0.3	6.7
42	(GEMS-0147/GEMS-0115)-B-B-050	193.4	24.0	8.0	53.0	0.6	5.1
11	(GEMS-0147/GEMS-0115)-B-B-014	193.2	22.8	8.5	55.6	6.1	10.9
5	(GEMS-0147/GEMS-0115)-B-B-007	193.0	23.9	8.1	54.8	3.3	8.8
3	(GEMS-0147/GEMS-0115)-B-B-003	192.5	25.2	7.6	55.1	0.0	0.0
12	(GEMS-0147/GEMS-0115)-B-B-015	192.0	22.3	8.6	55.0	4.6	0.0
	Test Entry Means	186.9	23.9	7.8	54.3	1.4	7.9
	Check Means	188.3	21.4	8.8	57.1	0.5	20.0
	CV	11.0	5.4				
	F-value	1.7	5.1				
	LSD (p=0.05)	25.7	1.6				

115201		Tester: LH287			Rep: 5			115202		Tester: LH287			Rep: 5		
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
69	Pioneer 33F85	194.0	19.7	9.9	57.2	5.9	33.0	69	Pioneer 33F85	185.1	20.6	9.0	56.3	10.4	33.1
43	AR16062:S99n-B-049	175.8	21.6	8.1	54.1	6.4	52.3	11	BS20(S)C2:S99u-B-011	181.4	24.4	7.4	53.6	5.1	31.1
70	Pioneer 34R65	170.5	18.8	9.1	57.7	4.9	29.9	67	LH200xLH262	180.9	23.0	7.9	55.5	3.8	0.9
68	Pioneer 31D58	169.7	21.7	7.8	57.0	9.5	32.4	68	Pioneer 31D58	175.5	22.5	7.8	56.0	2.8	21.5
67	LH200xLH262	168.2	22.5	7.5	56.3	3.8	32.9	56	BS20(S)C2:S99u-B-060	173.6	23.4	7.4	53.4	1.2	42.1
15	AR16062:S99n-B-015	167.7	19.6	8.6	55.4	8.6	62.7	18	BS20(S)C2:S99u-B-019	173.1	20.0	8.6	54.5	1.6	42.0
40	AR16062:S99n-B-042	166.9	19.3	8.7	54.8	4.8	50.0	64	BS20(S)C2:S99u-B-069	170.8	21.0	8.1	55.2	3.4	31.4
29	AR16062:S99n-B-030	164.9	19.9	8.3	56.0	11.4	46.5	66	HC33xLH287	170.0	19.0	9.0	56.3	6.6	17.4
59	AR16062:S99n-B-065	164.6	19.1	8.6	57.1	5.0	50.6	13	BS20(S)C2:S99u-B-013	165.7	20.7	8.0	55.2	2.2	47.4
63	AR16062:S99n-B-069	163.2	20.6	7.9	55.5	4.7	52.3	34	BS20(S)C2:S99u-B-037	165.7	22.6	7.3	54.1	5.7	42.2
3	AR16062:S99n-B-003	161.9	21.9	7.4	55.0	8.8	58.7	70	Pioneer 34R65	164.8	18.6	8.9	57.9	6.3	39.8
65	MBRC10:S1741-B-057	161.3	18.1	8.9	55.3	8.2	51.3	40	BS20(S)C2:S99u-B-043	164.0	21.6	7.6	55.5	2.7	42.7
48	AR16062:S99n-B-054	160.5	20.7	7.8	56.7	10.3	44.6	47	BS20(S)C2:S99u-B-051	163.9	21.5	7.6	55.2	6.1	39.7
44	AR16062:S99n-B-050	159.5	20.5	7.8	54.2	3.4	46.3	50	BS20(S)C2:S99u-B-054	163.3	23.0	7.1	54.5	1.2	52.7
24	AR16062:S99n-B-025	158.4	21.2	7.5	55.8	9.2	47.5	4	BS20(S)C2:S99u-B-004	162.7	20.8	7.8	55.1	6.1	23.8
6	AR16062:S99n-B-006	157.4	19.7	8.0	55.5	12.0	52.7	32	BS20(S)C2:S99u-B-035	162.7	23.5	6.9	55.2	2.4	44.4
30	AR16062:S99n-B-031	156.6	20.7	7.6	53.9	7.7	54.8	28	BS20(S)C2:S99u-B-031	162.0	21.8	7.4	55.4	9.2	27.7
51	AR16062:S99n-B-057	155.9	20.7	7.5	54.6	4.0	61.1	6	BS20(S)C2:S99u-B-006	161.6	21.7	7.4	55.2	1.8	24.9
14	AR16062:S99n-B-014	155.6	19.7	7.9	56.8	8.8	34.2	29	BS20(S)C2:S99u-B-032	161.5	22.1	7.3	54.9	5.5	34.2
34	AR16062:S99n-B-036	155.0	19.5	7.9	56.2	6.4	47.7	39	BS20(S)C2:S99u-B-042	161.3	20.9	7.7	54.8	5.8	41.2
Test Entry Means		143.3	20.0	7.2	55.6	8.0	50.1	Test Entry Means		150.0	22.0	6.8	54.6	5.7	38.0
Check Means		169.1	20.2	8.4	56.9	6.2	32.9	Check Means		175.3	20.7	8.5	56.4	6.0	22.6
CV		21.1	5.9					CV		15.4	6.6				
F-value		1.2	3.3					F-value		1.7	3.6				
LSD (p=0.05)		29.5	1.5					LSD (p=0.05)		29.8	1.8				

115301		Tester: HC33			Rep: 4			115302		Tester: HC33			Rep: 3		
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
69	Pioneer 33F85	191.7	19.8	9.7	58.2	8.6	19.8	59	Pioneer 33F85	212.2	20.2	10.5	57.5	5.6	7.6
4	AR01150:N0402-B-004	173.2	17.5	9.9	58.0	23.9	22.9	34	AR03056:N0902-083-001	196.0	17.7	11.1	58.2	2.0	3.0
68	Pioneer 31D58	170.7	22.0	7.8	57.4	2.8	26.4	57	LH200xLH262	178.2	21.2	8.4	58.6	4.6	10.1
1	AR01150:N0402-B-001	170.3	18.3	9.3	58.1	4.7	27.0	17	AR03056:N0902-040-001	177.8	19.2	9.2	57.1	3.5	11.3
41	AR01150:N0402-B-046	163.4	19.1	8.6	57.9	30.7	6.3	26	AR03056:N0902-064-001	176.7	18.8	9.4	55.9	4.8	6.4
65	AR01150:N0402-B-070	162.6	17.4	9.4	57.5	17.4	16.2	58	Pioneer 31D58	173.1	20.9	8.3	57.9	11.2	10.3
67	LH200xLH262	161.3	22.7	7.1	57.2	18.5	23.3	9	AR03056:N0902-018-001	169.3	19.6	8.6	58.1	4.4	4.0
32	AR01150:N0402-B-035	158.0	18.1	8.7	58.0	8.5	26.9	21	AR03056:N0902-048-001	168.1	17.8	9.4	58.1	12.5	5.9
37	AR01150:N0402-B-040	156.0	18.6	8.4	58.0	13.5	27.8	10	AR03056:N0902-023-001	165.8	16.4	10.1	58.7	8.8	5.8
35	AR01150:N0402-B-038	155.6	17.2	9.0	58.8	7.0	28.9	41	AR03056:N0902-092-001	165.6	16.2	10.2	57.8	15.4	5.0
42	AR01150:N0402-B-047	155.3	19.2	8.1	57.2	5.7	22.8	29	AR03056:N0902-068-001	164.2	17.5	9.4	56.3	11.8	4.9
24	AR01150:N0402-B-026	151.8	15.6	9.7	58.9	7.4	26.6	55	FS8A(T):N1804-006-001	161.7	17.1	9.5	59.4	8.9	3.4
45	AR01150:N0402-B-050	151.8	20.1	7.6	57.3	9.5	21.5	13	AR03056:N0902-031-001	161.0	17.1	9.4	58.7	5.0	3.7
51	AR01150:N0402-B-056	147.5	16.9	8.7	59.0	14.4	30.4	52	AR03056:N0902-114-001	158.0	17.1	9.2	59.0	8.7	14.5
70	Pioneer 34R65	146.6	17.5	8.4	59.5	8.8	26.6	40	AR03056:N0902-091-001	157.6	18.8	8.4	59.0	17.8	9.8
52	AR01150:N0402-B-057	144.4	19.8	7.3	58.2	8.0	28.6	24	AR03056:N0902-053-001	157.2	18.4	8.5	55.5	7.4	17.6
44	AR01150:N0402-B-049	144.3	17.8	8.1	57.9	10.4	28.0	35	AR03056:N0902-084-001	157.2	18.3	8.6	57.6	17.6	7.6
47	AR01150:N0402-B-052	141.1	19.5	7.3	58.0	4.3	28.3	42	AR03056:N0902-093-001	156.6	18.9	8.3	57.9	9.2	5.0
30	AR01150:N0402-B-033	140.4	19.7	7.1	57.5	11.5	21.0	19	AR03056:N0902-044-001	155.6	16.4	9.5	58.4	10.1	16.8
19	AR01150:N0402-B-021	140.2	18.1	7.7	58.3	19.3	24.2	60	Pioneer 34R65	155.6	17.6	8.8	59.3	4.3	2.7
Test Entry Means		131.0	18.3	7.2	58.1	13.4	19.8	Test Entry Means		150.5	17.6	8.5	57.9	9.0	7.9
Check Means		161.4	19.7	8.2	58.1	9.6	24.8	Check Means		173.1	19.2	9.0	58.3	6.5	8.4
CV		19.1	5.2					CV		12.7	6.2				
F-value		2.2	6.8					F-value		2.1	5.1				
LSD (p=0.05)		36.4	1.4					LSD (p=0.05)		31.4	1.8				

115303**Tester: HC33****Rep: 3**

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
68	Pioneer 31D58	201.3	21.4	9.4	58.5	2.1	1.6
67	LH200xLH262	182.7	22.0	8.3	58.4	7.2	3.4
2	AR03056:N0902a-B-002	178.1	19.1	9.3	58.1	0.0	1.0
69	Pioneer 33F85	176.6	20.1	8.8	58.0	9.2	0.0
66	HC33xLH287	172.1	17.4	9.9	57.4	3.6	0.0
37	AR03056:N0902a-B-038	170.2	20.0	8.5	58.5	4.0	0.5
33	AR03056:N0902a-B-034	166.2	21.0	7.9	57.1	6.5	3.5
43	AR03056:N0902a-B-047	164.9	18.5	8.9	57.3	3.0	4.0
22	AR03056:N0902a-B-022	162.6	20.1	8.1	58.2	1.6	3.3
5	AR03056:N0902a-B-005	161.8	20.7	7.8	57.1	2.2	1.0
39	AR03056:N0902a-B-042	160.8	17.9	9.0	60.0	8.2	3.8
9	AR03056:N0902a-B-009	157.4	18.8	8.4	58.7	3.1	1.0
11	AR03056:N0902a-B-011	157.2	18.6	8.5	57.5	9.1	5.9
21	AR03056:N0902a-B-021	156.8	17.6	8.9	59.8	16.7	2.0
70	Pioneer 34R65	156.1	18.0	8.7	59.4	2.3	1.6
1	AR03056:N0902a-B-001	156.1	19.2	8.1	58.0	5.1	0.0
24	AR03056:N0902a-B-025	155.8	18.9	8.2	59.4	4.3	1.1
13	AR03056:N0902a-B-013	155.7	20.4	7.6	57.9	6.8	2.2
14	AR03056:N0902a-B-014	155.6	20.6	7.5	57.4	0.5	0.0
32	AR03056:N0902a-B-033	154.8	18.9	8.2	58.4	7.0	3.0
Test Entry Means		144.7	18.9	7.7	58.4	6.3	2.8
Check Means		177.8	19.8	9.0	58.3	4.9	1.3
CV		12.1	5.9				
F-value		2.6	3.9				
LSD (p=0.05)		29.1	1.8				

115304**Tester: HC33****Rep: 4**

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
59	Pioneer 33F85	203.5	20.1	10.1	58.3	23.8	7.5
58	Pioneer 31D58	199.7	22.4	8.9	57.6	8.4	26.6
52	AR13026:N08a04-154-001	177.4	19.6	9.0	58.1	19.1	19.3
13	AR13026:N08a04-054-001	164.6	18.1	9.1	61.2	8.2	28.4
57	LH200xLH262	164.3	22.8	7.2	57.6	10.7	9.1
21	AR13026:N08a04-079-001	164.1	19.5	8.4	58.6	7.6	3.5
56	HC33xLH287	163.2	17.1	9.5	58.2	8.3	27.7
9	AR13026:N08a04-029-001	161.5	18.8	8.6	59.0	13.5	23.1
49	AR13026:N08a04-145-001	160.5	18.6	8.7	58.9	11.8	21.6
60	Pioneer 34R65	154.8	17.3	8.9	60.2	12.1	17.4
18	AR13026:N08a04-065-001	153.8	19.9	7.7	59.0	6.8	5.4
47	AR13026:N08a04-139-001	150.4	20.3	7.4	59.1	7.2	29.7
35	AR13026:N08a04-102-001	149.5	18.5	8.1	59.6	19.6	19.5
36	AR13026:N08a04-109-001	148.1	18.1	8.2	60.4	16.1	23.1
33	AR13026:N08a04-100-001	147.3	17.2	8.5	60.1	6.1	7.1
46	AR13026:N08a04-136-001	146.5	19.2	7.6	58.0	12.2	9.0
16	AR13026:N08a04-062-001	146.2	20.3	7.2	57.3	23.3	16.6
41	AR13026:N08a04-121-001	145.6	20.2	7.2	59.9	10.9	25.5
39	AR13026:N08a04-117-001	145.1	17.8	8.2	60.6	15.9	22.7
54	AR13026:N08a04-157-001	144.6	18.0	8.0	58.8	26.1	9.8
Test Entry Means		136.6	18.6	7.3	59.3	14.4	18.2
Check Means		177.1	19.9	8.9	58.4	12.7	17.6
CV		15.7	5.0				
F-value		2.7	6.4				
LSD (p=0.05)		31.5	1.4				

115305**Tester: HC33****Rep: 4**

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
28	Pioneer 31D58	193.8	22.1	8.8	58.3	4.9	24.4
27	LH200xLH262	180.2	23.5	7.7	56.8	9.6	9.2
29	Pioneer 33F85	178.1	19.8	9.0	57.8	15.1	15.2
26	HC33xLH287	160.7	17.8	9.1	58.0	9.6	18.1
20	AR17056:N2016-B-053	158.0	17.0	9.3	59.4	18.8	21.3
24	AR17056:N2016-B-061	157.1	17.8	8.9	59.0	6.0	25.1
25	AR17056:N2016-B-065	157.0	16.7	9.4	59.7	16.2	14.3
9	AR17056:N2016-B-024	154.6	17.9	8.6	58.7	38.9	3.4
18	AR17056:N2016-B-040	154.5	18.9	8.2	57.4	5.4	26.9
2	AR17056:N2016-B-008	154.0	18.8	8.2	59.6	8.7	29.0
5	AR17056:N2016-B-012	151.5	18.1	8.4	59.7	15.9	23.5
15	AR17056:N2016-B-037	151.1	16.6	9.1	59.3	9.3	25.0
23	AR17056:N2016-B-057	150.2	17.2	8.7	59.6	7.9	26.9
30	Pioneer 34R65	148.2	17.7	8.4	60.6	8.6	19.4
11	AR17056:N2016-B-033	147.8	18.9	7.8	58.4	23.9	9.8
17	AR17056:N2016-B-039	146.8	17.2	8.5	59.6	9.3	23.4
8	AR17056:N2016-B-021	146.7	16.5	8.9	59.7	6.2	25.8
12	AR17056:N2016-B-034	145.5	17.3	8.4	59.8	8.4	22.2
7	AR17056:N2016-B-018	142.3	16.8	8.5	58.2	5.6	23.5
4	AR17056:N2016-B-011	138.3	19.2	7.2	57.3	6.0	25.8
Test Entry Means		140.1	17.4	8.0	59.1	14.4	18.8
Check Means		172.2	20.2	8.5	58.3	9.5	17.2
CV		14.9	5.3				
F-value		2.9	11.9				
LSD (p=0.05)		31.2	1.4				

115306**Tester: HC33****Rep: 4**

Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
18	Pioneer 31D58	208.0	23.1	9.0	57.7	5.5	1.1
19	Pioneer 33F85	196.2	20.4	9.6	57.5	8.3	0.5
17	LH200xLH262	181.3	24.3	7.5	56.5	7.7	1.0
16	HC33xLH287	170.7	18.5	9.2	56.8	7.7	1.5
20	Pioneer 34R65	165.9	17.9	9.3	59.1	2.7	0.5
1	CH05015:N4049b-B-011	147.4	16.0	9.2	59.6	21.6	1.6
8	CH05015:N4049b-B-042	145.9	17.4	8.4	59.0	12.0	1.6
6	CH05015:N4049b-B-040	142.1	20.1	7.1	59.4	4.8	0.5
11	CH05015:N4049b-B-055	138.1	17.7	7.8	59.3	9.3	1.0
4	CH05015:N4049b-B-035	137.2	18.3	7.5	58.8	4.5	1.1
13	CH05015:N4049b-B-068	134.6	17.0	7.9	60.8	12.3	1.0
5	CH05015:N4049b-B-037	131.8	17.7	7.5	59.8	8.1	2.2
3	CH05015:N4049b-B-034	131.6	15.9	8.3	60.5	13.1	1.0
7	CH05015:N4049b-B-041	129.9	16.6	7.8	60.1	12.7	1.0
12	CH05015:N4049b-B-065	127.3	17.3	7.3	59.3	11.9	0.6
2	CH05015:N4049b-B-013	126.2	17.1	7.4	59.7	8.4	1.0
15	CH05015:N4049b-B-070	125.6	16.5	7.6	60.2	9.5	1.1
10	CH05015:N4049b-B-045	123.1	17.9	6.9	59.7	7.2	1.1
14	CH05015:N4049b-B-069	118.0	17.6	6.7	59.0	9.2	1.1
9	CH05015:N4049b-B-043	111.9	16.4	6.8	58.6	4.9	1.7
Test Entry Means		131.4	17.3	7.6	59.6	10.0	1.2
Check Means		184.4	20.8	8.9	57.5	6.3	0.9
CV		12.6	5.7				
F-value		8.4	18.3				
LSD (p=0.05)		25.7	1.5				

115307		Tester: LH287		Rep: 5		115308		Tester: LH287		Rep: 5					
		Yield	%			%				Yield	%			%	
Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.	Ent.	Pedigree	B/A	Moist	Y/ M	TWT	S.L.	R.L.
69	Pioneer 33F85	192.6	20.0	9.6	57.7	6.1	20.2	20	AR16042:S2028-B-031	193.9	21.1	9.2	55.9	22.0	44.8
67	LH200xLH262	192.2	24.9	7.7	56.9	5.8	12.3	29	AR16042:S2028-B-040	192.0	22.3	8.6	56.0	6.0	39.2
68	Pioneer 31D58	189.2	23.5	8.0	57.3	8.7	3.3	56	HC33xLH287	191.0	18.6	10.3	56.3	4.4	47.1
25	AR16021:S3115-B-026	178.5	18.6	9.6	55.2	17.4	22.8	58	Pioneer 31D58	188.2	21.7	8.7	56.6	2.2	21.6
16	AR16021:S3115-B-017	173.8	21.3	8.2	55.9	6.9	15.0	59	Pioneer 33F85	187.5	20.3	9.3	57.4	11.1	35.7
11	AR16021:S3115-B-012	172.6	19.4	8.9	56.3	7.6	20.3	11	AR16042:S2028-B-012	187.0	21.2	8.8	55.2	4.9	40.6
66	HC33xLH287	170.5	18.2	9.4	56.8	6.4	15.1	19	AR16042:S2028-B-030	182.9	20.9	8.8	55.5	12.7	32.3
49	AR16021:S3115-B-051	168.3	19.8	8.5	56.0	21.7	20.5	4	AR16042:S2028-B-004	181.8	20.6	8.8	56.9	3.0	45.3
27	AR16021:S3115-B-028	167.1	19.3	8.7	57.0	9.9	28.4	16	AR16042:S2028-B-022	178.3	22.3	8.0	55.8	6.1	40.6
44	AR16021:S3115-B-046	165.9	20.9	7.9	55.5	1.9	23.4	39	AR16042:S2028-B-052	177.7	22.2	8.0	55.1	3.3	22.5
21	AR16021:S3115-B-022	165.4	19.3	8.6	55.4	6.8	19.7	35	AR16042:S2028-B-048	177.2	21.3	8.3	55.6	2.2	42.6
4	AR16021:S3115-B-004	162.5	19.5	8.3	54.8	9.6	23.4	47	AR16042:S2028-B-061	175.5	21.7	8.1	56.2	4.5	48.1
23	AR16021:S3115-B-024	161.8	18.6	8.7	56.6	8.7	20.6	54	AR16042:S2028-B-069	174.5	22.0	7.9	54.2	12.2	43.4
70	Pioneer 34R65	161.8	18.1	8.9	59.2	5.7	7.0	41	AR16042:S2028-B-054	173.3	20.4	8.5	56.3	3.6	42.7
40	AR16021:S3115-B-042	161.8	19.6	8.3	57.9	9.8	12.4	1	AR16042:S2028-B-001	173.2	23.0	7.5	54.1	6.2	45.5
53	AR16021:S3115-B-056	161.4	19.4	8.3	57.2	16.7	21.7	22	AR16042:S2028-B-033	173.2	19.8	8.7	55.7	8.5	42.8
1	AR16021:S3115-B-001	160.9	18.8	8.6	56.7	5.4	34.2	57	LH200xLH262	172.3	23.3	7.4	56.2	0.8	15.2
57	AR16021:S3115-B-061	159.7	20.1	7.9	58.6	10.1	20.5	6	AR16042:S2028-B-007	171.6	22.0	7.8	55.6	6.6	37.6
32	AR16021:S3115-B-033	159.6	18.7	8.5	58.5	5.3	20.4	15	AR16042:S2028-B-020	171.4	21.2	8.1	56.3	10.5	47.3
30	AR16021:S3115-B-031	159.5	20.0	8.0	55.7	16.4	17.1	60	Pioneer 34R65	170.8	18.6	9.2	58.0	1.9	42.8
Test Entry Means		152.2	19.8	7.7	56.6	10.1	19.3	Test Entry Means		163.6	21.3	7.7	56.0	6.4	41.3
Check Means		181.3	20.9	8.7	57.6	6.5	11.6	Check Means		182.0	20.5	8.9	56.9	4.1	32.5
CV		13.4	5.0					CV		17.3	5.4				
F-value		1.8	10.3					F-value		1.3	3.6				
LSD (p=0.05)		25.8	1.2					LSD (p=0.05)		35.8	1.4				

115309		Tester: LH287			Rep: 5			115310		Tester: LH287			Rep: 5		
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
67	LH200xLH262	189.4	22.9	8.3	57.4	3.6	5.1	59	Pioneer 33F85	201.7	20.0	10.1	58.7	5.5	13.1
68	Pioneer 31D58	179.5	21.4	8.4	57.9	6.0	4.4	58	Pioneer 31D58	192.6	21.7	8.9	58.4	3.2	8.4
19	AR16042:S2030-B-022	175.0	20.8	8.4	54.7	5.3	43.3	57	LH200xLH262	187.4	22.7	8.3	57.8	7.5	10.4
52	AR16042:S2030-B-057	173.9	18.3	9.5	56.6	5.6	44.4	47	UR05017:S0414-B-056	186.0	20.5	9.1	56.7	7.1	18.7
69	Pioneer 33F85	170.0	19.7	8.6	56.5	7.5	26.1	40	UR05017:S0414-B-049	183.3	22.2	8.3	56.2	3.5	21.7
44	AR16042:S2030-B-049	169.1	19.2	8.8	55.2	5.6	41.0	23	UR05017:S0414-B-028	181.3	22.0	8.2	57.5	8.3	27.4
57	AR16042:S2030-B-062	167.5	19.4	8.6	57.2	4.5	36.8	34	UR05017:S0414-B-043	180.0	23.2	7.8	56.9	6.2	32.1
22	AR16042:S2030-B-025	167.4	19.9	8.4	55.8	4.6	31.9	33	UR05017:S0414-B-042	179.8	20.9	8.6	57.9	4.6	25.2
48	AR16042:S2030-B-053	166.0	19.2	8.7	55.9	7.5	40.6	27	UR05017:S0414-B-032	176.7	20.7	8.5	59.4	18.7	23.8
39	AR16042:S2030-B-044	165.8	21.0	7.9	54.6	2.1	53.4	44	UR05017:S0414-B-053	175.8	21.9	8.0	56.6	8.7	27.8
11	AR16042:S2030-B-012	165.4	20.3	8.1	55.4	10.5	47.6	14	UR05017:S0414-B-017	175.4	20.1	8.7	58.0	11.3	29.0
28	AR16042:S2030-B-032	165.0	20.8	7.9	55.6	5.3	43.5	18	UR05017:S0414-B-022	173.1	20.0	8.7	61.4	17.0	20.6
5	AR16042:S2030-B-006	164.8	21.6	7.6	53.6	1.2	43.2	28	UR05017:S0414-B-035	171.9	20.6	8.3	58.0	11.1	36.9
14	AR16042:S2030-B-015	164.6	18.4	9.0	57.1	5.2	25.0	1	UR05017:S0414-B-001	171.8	21.4	8.0	56.9	11.1	20.0
8	AR16042:S2030-B-009	164.5	19.2	8.6	56.9	2.7	54.6	39	UR05017:S0414-B-048	171.3	21.1	8.1	58.5	4.7	31.3
59	AR16042:S2030-B-064	164.0	20.6	8.0	55.0	7.7	41.3	45	UR05017:S0414-B-054	170.1	21.4	8.0	58.0	2.6	27.4
30	AR16042:S2030-B-034	162.7	18.9	8.6	55.9	3.4	32.3	20	UR05017:S0414-B-025	169.1	21.0	8.1	54.0	2.7	24.3
65	MBRC10:S1741-B-057	161.9	17.5	9.3	55.8	6.4	45.1	36	UR05017:S0414-B-045	169.1	22.5	7.5	57.0	4.9	28.9
70	Pioneer 34R65	161.8	18.7	8.7	58.2	3.8	23.3	29	UR05017:S0414-B-036	168.6	21.5	7.8	57.1	6.5	27.3
3	AR16042:S2030-B-004	161.7	20.9	7.7	56.0	9.5	46.9	8	UR05017:S0414-B-009	167.6	19.6	8.6	58.9	13.3	21.5
Test Entry Means								Test Entry Means							
Check Means								Check Means							
CV								CV							
F-value								F-value							
LSD (p=0.05)								LSD (p=0.05)							

115311		Tester: LH287			Rep: 4			115312		Tester: LH287			Rep: 5		
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
59	Pioneer 33F85	205.9	20.9	9.9	58.5	2.3	2.4	79	Pioneer 33F85	198.1	20.5	9.7	58.2	4.7	20.4
58	Pioneer 31D58	189.7	22.7	8.4	58.8	2.1	1.6	12	UR11002:S1446-038-001	194.7	20.8	9.3	56.8	4.0	24.9
57	LH200xLH262	185.5	23.2	8.0	58.1	2.7	6.5	78	Pioneer 31D58	189.1	23.4	8.1	57.7	3.9	3.3
40	UR10001:S1802-B-047	184.4	22.0	8.4	55.4	6.4	9.2	37	UR11002:S1446-103-001	186.4	22.7	8.2	56.9	3.6	23.3
51	UR10001:S1802-B-065	183.4	20.3	9.0	57.6	5.7	7.4	8	UR11002:S1446-021-001	184.0	23.3	7.9	55.9	3.5	23.2
37	UR10001:S1802-B-043	179.3	20.1	8.9	58.1	8.5	12.0	57	UR11002:S1446-153-001	181.1	22.7	8.0	55.8	5.0	25.9
16	UR10001:S1802-B-017	177.8	21.7	8.2	56.5	2.6	4.6	51	UR11002:S1446-137-001	180.6	20.9	8.6	59.1	6.4	25.6
56	HC33xLH287	176.1	19.0	9.3	57.6	4.3	5.0	45	UR11002:S1446-117-001	179.8	22.9	7.9	55.4	5.6	31.0
39	UR10001:S1802-B-046	175.7	19.9	8.8	58.1	2.9	9.5	77	LH200xLH262	179.4	24.5	7.3	57.8	4.9	3.2
9	UR10001:S1802-B-010	175.3	22.0	8.0	56.5	6.7	29.0	53	UR11002:S1446-144-001	175.9	21.5	8.2	56.3	4.6	32.2
33	UR10001:S1802-B-038	174.9	20.4	8.6	58.2	6.7	9.9	25	UR11002:S1446-069-001	175.7	21.9	8.0	56.8	4.9	23.7
3	UR10001:S1802-B-003	173.5	22.4	7.8	57.2	2.5	15.9	52	UR11002:S1446-140-001	175.4	22.3	7.9	57.1	9.1	27.8
8	UR10001:S1802-B-009	173.4	20.9	8.3	57.1	8.1	8.1	50	UR11002:S1446-130-001	175.0	21.5	8.1	56.5	3.6	25.0
35	UR10001:S1802-B-041	173.0	19.3	9.0	58.4	17.1	6.5	5	UR11002:S1446-011-001	174.1	22.2	7.8	56.3	2.5	24.0
20	UR10001:S1802-B-021	171.6	21.0	8.2	57.9	3.2	7.5	10	UR11002:S1446-034-001	172.7	22.6	7.6	54.7	3.7	23.7
41	UR10001:S1802-B-048	170.7	19.7	8.7	59.0	3.9	5.8	38	UR11002:S1446-105-001	172.5	21.1	8.2	57.5	5.9	23.1
54	UR10001:S1802-B-068	170.4	23.4	7.3	55.3	3.0	13.5	9	UR11002:S1446-027-001	172.2	21.0	8.2	56.7	2.7	21.9
55	UR10001:S1802-B-070	169.9	22.5	7.6	56.0	7.5	12.2	20	UR11002:S1446-055-001	171.9	21.3	8.1	55.9	4.4	18.8
23	UR10001:S1802-B-025	169.3	20.8	8.2	57.6	2.5	4.5	49	UR11002:S1446-128-001	171.8	21.2	8.1	56.2	5.6	24.3
47	UR10001:S1802-B-060	168.7	20.5	8.2	58.1	3.5	5.2	21	UR11002:S1446-058-001	171.6	21.9	7.8	58.1	7.2	21.1
Test Entry Means		162.1	20.7	7.8	57.6	5.8	8.7	Test Entry Means		162.8	21.8	7.5	56.7	4.3	22.9
Check Means		183.5	20.9	8.8	58.4	2.7	3.7	Check Means		179.0	21.3	8.4	58.1	5.1	11.8
CV		9.0	4.0					CV		11.4	5.3				
F-value		3.1	6.6					F-value		2.6	4.1				
LSD (p=0.05)		20.9	1.2					LSD (p=0.05)		23.4	1.4				

115313		Tester: LH287			Rep: 5			115314		Tester: AGR-nSSBT1C			Rep: 5		
Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.	Ent.	Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
59	Pioneer 33F85	203.8	20.1	10.1	58.7	10.9	10.3	90	Pioneer 33F85	189.9	17.5	10.8	56.9	1.7	0.0
58	Pioneer 31D58	192.0	23.6	8.1	57.9	7.2	3.1	48	UR13088:S0650-B-071	184.6	18.1	10.2	56.5	0.6	0.8
41	UR11003:S17h02-B-053	191.1	21.9	8.7	56.6	4.2	23.9	5	UR13088:S0650-B-005	184.4	20.5	9.0	55.1	0.6	0.8
50	UR11003:S17h02-B-065	183.2	21.9	8.4	55.5	2.9	22.6	72	UR13088:S0650-B-095	184.1	20.1	9.1	55.3	1.1	0.6
27	UR11003:S17h02-B-037	182.0	22.7	8.0	55.3	6.2	24.5	69	UR13088:S0650-B-092	183.0	19.1	9.6	55.8	0.0	0.6
10	UR11003:S17h02-B-017	179.4	20.2	8.9	55.5	14.9	22.4	41	UR13088:S0650-B-064	181.2	19.6	9.3	55.8	0.3	0.0
33	UR11003:S17h02-B-045	176.9	21.5	8.2	56.3	19.4	24.4	18	UR13088:S0650-B-018	181.0	19.3	9.4	55.7	0.3	0.0
20	UR11003:S17h02-B-029	176.6	21.2	8.3	57.0	8.3	21.7	16	UR13088:S0650-B-016	180.7	20.6	8.8	55.1	0.6	0.0
37	UR11003:S17h02-B-049	174.0	22.2	7.9	55.7	4.1	20.4	75	UR13088:S0650-B-098	180.2	18.2	9.9	56.5	0.8	0.0
14	UR11003:S17h02-B-021	173.7	21.4	8.1	57.7	10.6	22.9	10	UR13088:S0650-B-010	178.8	18.3	9.8	56.2	0.4	1.1
11	UR11003:S17h02-B-018	173.6	22.8	7.6	57.6	2.3	22.9	43	UR13088:S0650-B-066	178.7	19.2	9.3	55.8	0.6	0.8
57	LH200xLH262	173.5	22.8	7.6	57.4	20.6	7.0	88	Pioneer 31D58	178.1	19.1	9.3	56.1	1.1	0.0
56	HC33xLH287	172.4	19.3	8.9	57.6	6.7	18.0	36	UR13088:S0650-B-036	177.5	17.9	9.9	56.6	0.0	0.0
52	UR11003:S17h02-B-067	171.6	18.1	9.5	58.0	9.0	16.9	67	UR13088:S0650-B-090	176.6	18.2	9.7	56.3	0.8	0.0
18	UR11003:S17h02-B-026	170.9	21.3	8.0	57.3	7.2	24.7	2	UR13088:S0650-B-002	175.9	19.3	9.1	55.7	0.0	0.0
32	UR11003:S17h02-B-043	170.7	19.9	8.6	58.9	18.8	6.9	63	UR13088:S0650-B-086	175.3	19.8	8.9	55.3	1.9	1.7
30	UR11003:S17h02-B-041	168.4	20.5	8.2	56.5	10.4	23.6	37	UR13088:S0650-B-037	175.0	19.7	8.9	55.2	2.1	1.1
43	UR11003:S17h02-B-057	167.1	21.0	7.9	55.7	6.1	21.3	38	UR13088:S0650-B-038	172.9	18.0	9.6	56.5	0.0	0.0
4	UR11003:S17h02-B-006	167.0	21.0	8.0	56.1	7.8	22.1	6	UR13088:S0650-B-006	172.5	21.4	8.1	54.5	0.6	0.0
21	UR11003:S17h02-B-030	166.4	23.1	7.2	55.6	29.1	34.2	77	UR13088:S0650-B-100	170.9	19.0	9.0	55.9	0.6	0.0
Test Entry Means		160.9	20.9	7.7	56.9	11.4	21.5	Test Entry Means		165.5	19.0	8.7	55.9	0.5	0.2
Check Means		179.3	20.8	8.6	58.4	10.1	8.3	Check Means		163.6	18.0	9.1	56.5	1.0	0.0
CV		12.2	5.0					CV		12.0	4.8				
F-value		2.2	6.9					F-value		1.4	5.9				
LSD (p=0.05)		24.7	1.3					LSD (p=0.05)		24.9	1.2				

115401

Tester: LH287

Rep: 4

Ent. Pedigree	Yield		%		%	
	B/A	Moist	Y/ M	TWT	S.L.	R.L.
78 Pioneer 31D58	181.7	21.6	8.4	57.2	15.2	8.8
77 LH200xLH262	180.0	21.7	8.3	57.6	6.8	6.4
13 (GEMS-0002/GEMS-0149)-B-030-001	179.0	18.6	9.6	57.2	10.3	28.8
6 (GEMS-0002/GEMS-0149)-B-016-001	175.6	18.3	9.6	58.4	7.9	27.7
56 (GEMS-0002/GEMS-0149)-B-125-001	174.0	17.5	9.9	58.8	15.3	8.3
7 (GEMS-0002/GEMS-0149)-B-018-001	173.3	19.0	9.1	57.2	3.9	26.8
37 (GEMS-0002/GEMS-0149)-B-085-001	172.7	18.2	9.5	57.4	3.8	7.5
44 (GEMS-0002/GEMS-0149)-B-098-001	169.7	19.3	8.8	57.1	15.5	23.9
62 (GEMS-0002/GEMS-0149)-B-149-001	167.1	19.1	8.8	58.7	6.1	25.1
58 (GEMS-0002/GEMS-0149)-B-127-001	166.4	18.9	8.8	59.4	10.5	23.5
9 (GEMS-0002/GEMS-0149)-B-020-001	166.3	18.9	8.8	58.3	3.7	12.2
79 Pioneer 33F85	165.5	18.3	9.1	58.5	18.4	15.5
69 (GEMS-0002/GEMS-0149)-B-170-001	165.5	18.0	9.2	57.4	8.1	28.1
48 (GEMS-0002/GEMS-0149)-B-108-001	165.1	18.3	9.0	58.3	9.3	34.7
30 (GEMS-0002/GEMS-0149)-B-066-001	164.8	18.4	9.0	57.6	6.6	28.3
47 (GEMS-0002/GEMS-0149)-B-107-001	164.2	17.6	9.3	59.2	7.2	8.5
38 (GEMS-0002/GEMS-0149)-B-087-001	164.2	18.9	8.7	56.9	10.1	34.8
39 (GEMS-0002/GEMS-0149)-B-088-001	162.1	19.2	8.5	57.9	3.6	47.8
17 (GEMS-0002/GEMS-0149)-B-036-001	161.7	17.7	9.2	58.5	6.8	34.9
73 (GEMS-0002/GEMS-0149)-B-178-001	161.5	19.3	8.4	58.3	7.6	14.2
Test Entry Means	152.3	18.4	8.3	58.0	12.2	24.1
Check Means	164.0	19.1	8.6	58.0	11.3	14.9
CV	12.5	4.6				
F-value	1.5	4.9				
LSD (p=0.05)	26.9	1.2				

115402 (Retest)

Tester: LH287

Rep: 7

Ent. Pedigree	Yield		%		%	
	B/A	Moist	Y/ M	TWT	S.L.	R.L.
19 Pioneer 33F85	220.1	21.4	10.3	58.5	15.1	4.4
14 G39	211.3	19.0	11.1	58.3	1.6	0.0
17 LH200xLH262	178.7	26.0	6.9	57.8	23.2	10.3
8 2369	178.6	21.8	8.2	57.1	24.1	7.0
16 HC33xLH287	175.6	19.5	9.0	57.9	14.6	8.2
18 Pioneer 31D58	174.1	23.7	7.4	58.1	6.2	17.1
3 UR13085:S1912-B-050	173.8	20.7	8.4	57.9	10.2	13.9
9 HB8229	172.8	20.5	8.4	56.7	16.1	4.8
20 Pioneer 34R65	170.6	19.2	8.9	58.8	7.9	3.5
1 UR13085:S1912-B-040	169.9	20.9	8.1	58.4	6.7	16.7
2 UR13085:S1912-B-042	168.0	21.2	7.9	57.5	15.1	5.8
12 PHT55	166.1	21.9	7.6	57.7	18.8	5.2
6 AR16021:S0915-B-064	165.3	20.2	8.2	57.5	12.1	4.6
7 794	165.1	19.5	8.5	56.1	16.3	2.9
13 PHB47	158.3	19.4	8.1	58.1	18.0	5.2
5 AR16021:S0915-B-012	156.1	21.2	7.4	57.3	16.8	2.2
10 PB80	154.3	20.9	7.4	57.1	7.1	14.9
4 AR16021:S0915-B-008	149.6	20.9	7.1	57.5	7.4	16.6
11 DJ7	145.1	21.1	6.9	56.9	8.0	18.3
15 PHJ40	119.5	16.1	7.4	59.4	17.7	34.0
Test Entry Means	163.6	20.4	8.0	57.6	13.1	10.1
Check Means	183.8	21.9	8.4	58.2	13.4	8.7
CV	18.8	6.1				
F-value	2.0	10.5				
LSD (p=0.05)	38.5	1.5				

116001 (Retest)**Tester: MBS3633****Rep: 6**

Ent.	Pedigree	Yield	% Moist		% Y/ M		% TWT		% S.L.		% R.L.	
		B/A	Moist	Y/ M	TWT	S.L.	R.L.					
77	LH200xLH262	193.3	20.5	9.43	56.86	3.18	5.25					
79	Pioneer 33F85	191.7	19.417	9.87	56.72	3.83	3.7					
35	SANM126:N1299b-B-033	187.4	19.82	9.45	56.95	9.6	2.65					
78	Pioneer 31D58	174.9	21.8	8.02	56.64	1.93	1.65					
4	ANTIG01:N1699d-B-043	174.5	19.9	8.77	56.32	7.4	4.75					
57	BR105:N16a16b-B-074	174	19.6	8.88	57.16	7.48	4.28					
9	BR51403:N1611c-B-012	171.4	18.62	9.21	56.8	8.1	1.9					
51	BR105:N16a16b-B-013	171.3	20.25	8.46	56.62	2.95	1.85					
36	SANM126:N1299b-B-060	171	19.75	8.66	58.38	14.8	3.5					
74	CUBA110:N1709-B-051-001	170.6	17.767	9.6	57.58	9.63	2.48					
33	SANM126:N1299b-B-016	170.3	18.42	9.24	56.55	1.5	2.77					
34	SANM126:N1299b-B-028	169.6	20.117	8.43	56.8	8.7	7.3					
52	BR105:N16a16b-B-025	168.3	19.583	8.59	56.86	2.9	2.93					
59	BR105:N16a16b-B-077	168.1	21.3	7.89	55.6	4.48	2.88					
31	SANM126:N1299b-B-008	167.9	19.433	8.64	57.32	3.68	4.85					
47	CML329:N1834-B-033	166.4	20.117	8.27	55.94	5.6	2.85					
14	BR51403:N1611c-B-047	166.1	20.033	8.29	56.36	5.88	5.48					
19	(BR52051:N04-076-001/DKXL370:N11a20-036-002-B)-B-B-029	166.1	18.05	9.2	57.78	14.5	4.78					
20	(BR52051:N04-076-001/DKXL370:N11a20-036-002-B)-B-B-038	165.7	18.867	8.78	57.52	2.93	0.73					
5	ANTIG01:N1699d-B-062	165.3	17.267	9.57	58.4	4.93	1.55					
Test Entry Means		156.4	18.979	8.24	57.04	6.37	3.18					
Check Means		175.3	19.242	9.11	57.3	3.75	3.36					
CV		14.61	7.22									
F-value		1.58	2.98									
LSD (p=0.05)		26.53	1.58									

116002 (Retest)**Tester: MBS8814****Rep: 7**

Ent.	Pedigree	Yield	% Moist		% Y/ M		% TWT		% S.L.		% R.L.	
		B/A	Moist	Y/ M	TWT	S.L.	R.L.					
2	UR13085:S1912-B-037	183.7	23.9	7.7	55.5	13.4	5.0					
17	DKXL212:S11b-B-050	177.3	25.2	7.0	56.0	11.3	3.3					
39	NEI9004:S2809-B-022	177.2	20.7	8.6	56.5	6.2	1.8					
15	BR106:S99a99e-B-053	175.7	22.9	7.7	57.4	3.2	3.1					
9	AR16021:S0915-B-064	174.6	23.2	7.5	56.5	9.5	8.4					
23	DKXL370:S08c17b-B-046	174.3	22.4	7.8	55.4	8.9	17.7					
29	NEI9004:S2817a-B-006	172.9	21.2	8.1	57.3	14.4	4.6					
4	UR13085:S1912-B-042	172.1	22.6	7.6	55.7	10.3	2.9					
48	Pioneer 31D58	172.0	22.5	7.6	58.0	14.6	8.3					
42	NEI9004:S2809-B-054	171.5	21.9	7.8	56.8	6.8	15.6					
44	NEI9004:S2809-B-061	168.4	23.5	7.2	56.9	9.0	16.7					
12	BR106:S99a99e-B-031	167.2	23.6	7.1	56.1	5.2	3.1					
5	UR13085:S1912-B-050	165.4	21.6	7.7	57.2	12.8	5.2					
49	Pioneer 33F85	165.3	19.7	8.4	58.5	6.4	12.6					
31	BG070404:D27S42-B-019	165.2	23.2	7.1	56.2	8.9	6.3					
40	NEI9004:S2809-B-025	160.8	23.5	6.8	55.7	8.5	9.0					
50	Pioneer 34R65	160.1	18.9	8.5	59.7	14.2	11.2					
41	NEI9004:S2809-B-026	159.4	23.1	6.9	55.1	5.1	2.7					
21	DKXL370:S08c17b-B-021	159.0	23.3	6.8	55.5	8.3	14.1					
22	DKXL370:S08c17b-B-029	158.5	20.1	7.9	57.5	13.4	7.3					
Test Entry Means		157.4	22.5	7.0	56.4	11.6	8.3					
Check Means		162.2	20.4	7.9	58.5	10.1	7.9					
CV		16.2	5.8									
F-value		1.3	7.9									
LSD (p=0.05)		27.2	1.4									

116003 (Retest)**Tester: HC33****Rep: 6**

Ent. Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
69 Pioneer 33F85	205.0	21.4	9.6	57.7	10.1	2.2
68 Pioneer 31D58	203.2	24.3	8.4	57.4	9.0	3.5
67 LH200xLH262	180.0	24.6	7.3	58.0	15.9	3.8
4 FS8B(T):N11a-322-001-B-B-Sib	176.9	18.2	9.7	59.5	5.9	5.3
10 BR51403:N1611c-B-007	173.9	19.8	8.8	58.2	6.9	2.2
61 BR105:N16a16b-B-074-B	167.4	19.4	8.6	59.6	4.9	5.2
66 HC33xLH287	166.0	20.0	8.3	57.9	5.5	2.1
40 BR105:N16a16b-B-063	164.8	23.2	7.1	57.5	12.2	4.5
33 CML329:N1834-B-033	164.3	22.3	7.4	57.8	6.2	2.5
51 CUBA110:N1709-B-020-001	163.3	17.2	9.5	58.1	8.5	3.1
12 BR51403:N1611c-B-039	163.1	20.1	8.1	58.7	14.5	2.8
38 BR105:N16a16b-B-041	162.7	22.7	7.2	57.2	7.9	2.4
35 CML329:N1834-B-045	162.1	23.6	6.9	57.4	6.4	3.4
19 (BR52051:N04-076-001/DKXL370:N11a20-036-002-B)-B-B-051	161.7	19.6	8.3	58.0	9.5	3.4
53 CUBA110:N1709-B-027-002	160.6	18.7	8.6	58.8	12.9	3.0
70 Pioneer 34R65	160.4	19.2	8.4	59.3	4.4	2.4
29 SANM126:N1299b-B-060	160.3	19.4	8.2	59.0	13.1	3.5
28 SANM126:N1299b-B-033	160.0	23.0	7.0	58.5	6.1	3.4
30 SANM126:N1299b-B-067	159.8	23.0	6.9	57.6	11.1	2.8
20 (BR52051:N04-076-001/DKXL370:N11a20-036-002-B)-B-B-067	159.5	19.5	8.2	58.5	2.6	5.3
Test Entry Means	150.7	20.4	7.4	58.5	10.1	3.1
Check Means	182.9	21.9	8.4	58.1	9.0	2.8
CV	14.7	8.1				
F-value	2.5	8.2				
LSD (p=0.05)	25.9	1.9				

116401**Tester: HC33****Rep: 5**

Ent. Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
48 Pioneer 31D58	195.6	20.8	9.4	58.9	18.4	8.1
49 Pioneer 33F85	193.2	19.5	9.9	58.3	15.3	8.5
50 Pioneer 34R65	169.5	17.1	9.9	60.4	8.1	3.4
46 HC33xLH287	169.5	17.8	9.5	58.8	20.9	9.9
47 LH200xLH262	164.3	22.4	7.3	57.8	12.8	10.2
15 (GEMN-0111/GEMN-0140)-B-B-028	156.6	15.1	10.3	61.1	5.7	20.7
37 (GEMN-0111/GEMN-0140)-B-B-062	156.1	14.8	10.6	60.6	14.3	6.9
28 (GEMN-0111/GEMN-0140)-B-B-049	155.8	14.4	10.8	61.8	11.5	7.0
23 (GEMN-0111/GEMN-0140)-B-B-043	151.2	16.1	9.4	61.3	20.3	3.4
12 (GEMN-0111/GEMN-0140)-B-B-021	151.1	15.5	9.8	61.0	14.4	12.0
27 (GEMN-0111/GEMN-0140)-B-B-048	150.7	14.9	10.1	60.9	9.4	3.1
35 (GEMN-0111/GEMN-0140)-B-B-060	149.9	16.5	9.1	61.0	15.8	6.6
21 (GEMN-0111/GEMN-0140)-B-B-038	149.3	15.9	9.4	59.9	8.1	13.6
6 (GEMN-0111/GEMN-0140)-B-B-014	148.0	14.7	10.1	61.1	3.9	7.1
20 (GEMN-0111/GEMN-0140)-B-B-036	147.3	15.1	9.8	61.8	2.0	1.6
5 (GEMN-0111/GEMN-0140)-B-B-013	146.5	14.0	10.5	60.5	8.6	7.4
11 (GEMN-0111/GEMN-0140)-B-B-020	146.2	14.5	10.1	60.2	25.8	2.8
40 (GEMN-0111/GEMN-0140)-B-B-065	145.3	14.3	10.2	60.1	11.7	7.6
42 (GEMN-0111/GEMN-0140)-B-B-067	145.2	15.3	9.5	59.9	9.1	5.2
39 (GEMN-0111/GEMN-0140)-B-B-064	145.0	15.4	9.4	60.3	5.8	13.0
Test Entry Means	138.3	15.1	9.2	60.7	11.2	9.8
Check Means	178.4	19.5	9.1	58.8	15.1	8.0
CV	15.8	5.1				
F-value	2.9	21.5				
LSD (p=0.05)	28.8	1.0				

116402

Tester: LH287

Rep: 5

Ent. Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
69 Pioneer 33F85	190.6	20.4	9.4	57.6	16.7	15.2
68 Pioneer 31D58	187.6	24.3	7.7	58.1	7.9	23.5
57 (GEMS-0002/GEMS-0003)-B-B-062	174.8	19.5	9.0	56.9	10.0	29.1
67 LH200xLH262	172.8	24.6	7.0	57.6	13.1	7.5
63 (GEMS-0002/GEMS-0003)-B-B-068	169.0	17.8	9.5	56.3	22.3	3.7
22 (GEMS-0002/GEMS-0003)-B-B-022	165.9	18.8	8.8	56.9	13.9	26.2
64 (GEMS-0002/GEMS-0003)-B-B-069	165.6	21.0	7.9	56.2	10.0	30.1
18 (GEMS-0002/GEMS-0003)-B-B-018	165.3	20.1	8.2	56.6	14.8	5.7
44 (GEMS-0002/GEMS-0003)-B-B-046	165.1	18.7	8.8	57.3	19.7	6.6
8 (GEMS-0002/GEMS-0003)-B-B-008	164.9	19.9	8.3	55.7	31.6	7.3
43 (GEMS-0002/GEMS-0003)-B-B-045	164.8	20.3	8.1	57.5	13.9	21.8
11 (GEMS-0002/GEMS-0003)-B-B-011	164.5	19.6	8.4	57.8	21.4	14.5
59 (GEMS-0002/GEMS-0003)-B-B-064	164.2	20.1	8.2	57.9	34.5	7.7
4 (GEMS-0002/GEMS-0003)-B-B-004	163.5	21.5	7.6	56.7	23.9	18.0
24 (GEMS-0002/GEMS-0003)-B-B-024	163.1	18.2	9.0	56.0	17.4	27.0
51 (GEMS-0002/GEMS-0003)-B-B-053	163.0	18.8	8.7	57.2	14.8	14.9
61 (GEMS-0002/GEMS-0003)-B-B-066	162.9	19.5	8.3	57.2	10.9	9.5
41 (GEMS-0002/GEMS-0003)-B-B-043	162.4	18.9	8.6	57.3	9.8	6.6
34 (GEMS-0002/GEMS-0003)-B-B-036	162.3	19.3	8.4	57.9	24.3	7.3
66 HC33xLH287	161.4	18.5	8.7	57.5	5.5	19.1
Test Entry Means	151.7	19.2	7.9	57.5	22.1	17.6
Check Means	172.2	21.2	8.1	58.0	10.7	17.1
CV	11.5	5.6				
F-value	2.2	6.5				
LSD (p=0.05)	22.0	1.3				

116403 (Miscellaneous)

Tester: NA

Rep: 5

Ent. Pedigree	Yield B/A	% Moist	Y/ M	TWT	% S.L.	% R.L.
48 Pioneer 31D58	186.4	20.8	9.0	58.2	12.5	10.9
31 PHT55/FS8B(T):N11a-087-001-B-B-SIB-B	182.8	18.3	10.0	58.4	20.3	16.3
47 LH200xLH262	182.7	20.2	9.1	58.8	11.5	7.1
24 DJ7/FS8B(T):N11a-087-001-B-B-SIB-B	178.0	16.9	10.5	58.5	7.1	22.2
8 LH51/DKB844:S1601-073-001-B-B-B-B-B-B	177.9	19.5	9.1	58.6	17.5	6.5
44 (CUBA164:S2012-459-001-B/GEMS-0002)-B-B-031/LH287	175.2	17.2	10.2	58.8	13.5	16.2
6 J8606/DKB844:S1601-073-001-B-B-B-B-B-B	174.0	18.6	9.4	59.0	5.7	23.0
43 DKB844:S1601-073-001-B-B-B-B-B-B/FS8B(T):N11a-087-001-B-B-SIB	173.9	18.3	9.5	57.1	14.2	20.4
2 78371A/DKB844:S1601-073-001-B-B-B-B-B-B	172.9	19.9	8.7	57.9	7.1	7.4
46 HC33xLH287	172.7	17.0	10.2	58.2	13.3	22.9
34 CUBA164:S2012-966-001-B wx/DKXL370:N11a20-036-002-B wx	172.4	19.5	8.8	57.2	14.4	4.8
45 HC33/FS8B(T):N11a-087-001-B-B-Sib-B-B	172.3	15.2	11.3	58.9	4.2	27.0
14 PHV78/DKB844:S1601-073-001-B-B-B-B-B-B	172.2	19.9	8.7	55.4	9.7	25.2
23 794/FS8B(T):N11a-087-001-B-B-SIB-B	171.5	16.4	10.5	57.2	6.9	16.2
12 PHM49/DKB844:S1601-073-001-B-B-B-B-B-B	170.8	21.2	8.1	55.9	27.1	3.9
21 2369/FS8B(T):N11a-087-001-B-B-SIB-B	169.7	17.4	9.7	58.1	10.7	33.2
5 G84/DKB844:S1601-073-001-B-B-B-B-B-B	169.7	20.5	8.3	56.7	20.5	6.4
49 Pioneer 33F85	168.4	19.7	8.6	58.3	8.8	12.5
29 PB80/FS8B(T):N11a-087-001-B-B-SIB-B	167.4	16.9	9.9	58.0	18.7	9.3
39 DKB844:S1601-073-001-B-B-B-B-B-B/SCR Gp3:N14-028-003-003-B-B-B	166.8	20.4	8.2	56.2	11.5	15.3
Test Entry Means	158.0	19.1	8.3	57.4	13.6	16.2
Check Means	170.0	18.8	9.0	58.9	10.8	12.3
CV	11.5	8.1				
F-value	3.6	10.1				
LSD (p=0.05)	23.3	2.0				

116404 (Retest)**Tester: NA****Rep: 6**

Ent.	Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
38	Pioneer 31D58	204.8	21.7	9.5	57.6	1.0	3.6
37	LH200xLH262	193.7	22.0	8.8	57.7	3.5	0.6
36	HC33xLH287	191.0	18.4	10.4	58.6	2.5	1.2
5	DK888:N11a08a-440-001-B-B/HC33	188.2	19.7	9.6	58.2	6.8	3.3
39	Pioneer 33F85	187.7	19.2	9.8	59.0	7.6	2.1
30	MBST/HC33	183.9	19.0	9.7	58.9	3.5	1.0
28	LH150/HC33	178.6	20.8	8.6	59.0	14.9	2.8
31	PHN47/HC33	173.0	21.2	8.2	58.0	5.6	3.1
16	LH51/HC33	171.5	17.6	9.8	60.4	3.2	1.2
6	PHB47/FS8B(T):N11a-087-001-B-B-SIB	170.5	16.1	10.6	59.6	2.9	1.7
1	HC33/FS8B(T):N11a-087-001-B-B-Sib-B-B	169.3	16.6	10.2	60.1	1.7	1.5
13	CH05015:N3215-041-001/HC33	168.7	18.9	8.9	57.3	4.0	2.8
20	PHV78/HC33	168.0	18.8	8.9	58.7	12.0	2.8
3	FS8A(T):N1804-006-001/HC33	165.6	18.6	8.9	59.2	3.7	2.2
33	PHW79/HC33	164.7	20.0	8.2	58.6	2.5	1.9
40	Pioneer 34R65	163.3	17.2	9.5	60.8	5.4	0.7
10	UR13085:N0228-147-001/HC33	162.4	17.6	9.2	59.9	4.9	2.9
15	78371A/HC33	161.5	19.6	8.3	59.1	4.8	3.0
18	J8606/HC33	161.3	17.8	9.1	59.5	1.4	3.0
2	CH05015:N15-008-001-B-B-SIB-B/HC33	160.4	17.6	9.1	59.1	3.7	0.6
	Test Entry Means	157.6	18.0	8.7	59.6	5.3	2.9
	Check Means	188.1	19.7	9.6	58.7	4.0	1.6
	CV	10.8	7.9				
	F-value	6.6	6.7				
	LSD (p=0.05)	20.3	1.7				

116405 (Retest)**Tester: LH287****Rep: 7**

Ent.	Pedigree	Yield B/A	% Moist	% Y/ M	TWT	% S.L.	% R.L.
47	Pioneer 31D58	203.1	21.3	9.5	58.3	8.0	5.4
48	Pioneer 33F85	200.7	19.8	10.1	58.5	4.8	5.9
11	BR106:S99a99e-B-053	195.6	19.6	10.0	58.4	10.6	10.5
26	BG070404:D27S42-B-014	194.6	20.9	9.3	57.4	3.1	23.1
2	BR105:S1640-128-001	189.1	20.6	9.2	56.8	16.7	12.5
3	BR105:S1612-008-001	186.6	18.7	10.0	58.9	10.2	17.5
44	NEI9004:S2809-B-076-B	184.9	20.2	9.2	57.1	20.0	16.1
42	NEI9004:S2809-B-059-B	184.5	19.4	9.5	58.2	17.1	12.5
25	NEI9004:S2817a-B-068	184.0	20.8	8.8	56.9	11.5	11.0
32	BG070404:D27S42-B-045	183.7	19.0	9.7	58.2	7.5	20.6
37	NEI9004:S2809-B-025	183.0	20.4	9.0	58.1	12.0	13.2
43	NEI9004:S2809-B-063-B	182.2	21.3	8.6	57.4	8.9	16.3
36	NEI9004:S2809-B-022	182.0	18.2	10.0	57.9	6.8	3.7
18	DKXL370:S08c17b-B-049	181.2	21.6	8.4	56.1	14.8	13.5
35	NEI9004:S2809-B-012	180.5	21.2	8.5	57.1	17.4	8.2
7	BR106:S99a99e-B-031	179.4	20.1	8.9	58.1	4.5	23.5
29	BG070404:D27S42-B-029	179.1	19.0	9.4	57.8	4.5	21.5
46	LH200xLH262	178.3	21.6	8.2	58.2	5.7	14.6
1	DKB844:S1601-073-001-B-B-B-B	178.2	21.6	8.3	56.4	10.7	11.1
10	BR106:S99a99e-B-050	177.6	19.5	9.1	57.8	9.6	9.2
	Test Entry Means	173.0	20.0	8.6	57.8	9.7	15.9
	Check Means	182.1	19.8	9.2	58.6	6.2	9.2
	CV	11.0	5.0				
	F-value	3.5	8.1				
	LSD (p=0.05)	20.2	1.1				

Ent.	Pedigree	Yield	% Moist		Y/ M	TWT	% S.L.		% R.L.
		B/A							
37	Pioneer 31D58	178.2	22.4	8.0	59.5	2.5	0.0		
36	HC33xLH287	168.5	17.9	9.4	58.9	1.7	0.0		
38	Pioneer 33F85	167.6	21.0	8.0	59.1	0.0	0.0		
3	wxAR16035:S02-615-1-B x wxM11	161.6	22.9	7.1	59.9	0.0	0.0		
39	Pioneer 34R65	160.4	18.1	8.8	60.3	0.0	0.0		
22	wxDKB844:S1601-073-001/5/-92 x wxDKXL370:N11a20-36-2-B	154.4	25.2	6.1	56.0	0.0	0.0		
5	wxFm1 x wxFS8B(T):N1802-525-2-B/4/-63 (R)	154.2	24.3	6.3	58.8	3.5	2.4		
35	LH200xLH262	153.9	23.5	6.6	57.8	4.0	0.0		
31	CUBA164:S2012-966-001-B wx/DKXL370:N11a20-036-002-B wx	151.8	23.5	6.5	57.3	2.6	1.7		
9	wxCHIS775:S1911b-120-001/3/(0301)-81 x wxUR13085:N0215-14-1-B	150.1	21.4	7.0	60.9	4.1	4.9		
24	wxCH05015:N12-183-1-B x wxCuba164:S2012-966-1-B	144.9	22.3	6.5	58.1	2.6	0.0		
12	wxFm1 x wxBR51721:N2012-164-002/3/(0310)-82 (R)	143.9	19.5	7.4	62.0	1.7	0.0		
21	wxCuba117:S1542-057-001/5/-92 x wxDKXL370:N11a20-36-2-B	141.5	26.1	5.4	56.5	0.0	0.0		
34	AR16035:S02-615-001-B wx/UR13085:N0215-014-001-B wx	140.3	25.2	5.6	55.9	1.7	0.8		
17	wxCuba164:S2012-966-1-B x wxDKXL370:N11a20-36-2-B	139.9	23.9	5.8	57.4	5.3	3.7		
23	wxFS8B(T):N1802-525-2-B/5/-7000 x wxCuba164:S2012-966-1-B	139.8	24.4	5.7	58.2	2.8	1.3		
8	wxFS8A(S):S09-362-1-B x wxUR13085:N0215-14-1-B	139.6	18.4	7.6	62.3	5.0	19.8		
29	wxBR51721:N2012-164-002/5/-91 x wxCuba164:S2012-966-1-B	139.0	20.1	6.9	59.0	3.0	3.9		
2	wxFm1 x wxSCR01:N1310-509-1-B/5/-61 (R)	138.6	23.2	6.0	60.5	0.0	0.0		
7	wxCuba164:S2012-966-1-B x wxUR13085:N0215-14-1-B	137.7	21.8	6.3	58.1	6.6	10.5		
	Test Entry Means	136.3	23.1	5.9	58.4	2.7	2.1		
	Check Means	165.7	20.6	8.1	59.1	1.6	0.0		
	CV	11.6	4.4						
	F-value	3.4	18.8						
	LSD (p=0.05)	22.8	1.4						

2011 GEM Yield Trial Summary

Expt #	Material	Tester	Source	Total Entry	# Reps	Entry Yield Ave.	Check Yield Ave	CV (%)	LSD	# above check avg.
111301	BARBGP2:N08a46	HC33	GEM	60	3	151.8	187.3	10.2	25.5	0
111302	CL-00331:N1834	HC33	GEM	70	5	133.1	156.0	14.6	24.8	1
111303	CML323:N1550	HC33	GEM	50	4	133.9	180.2	11.6	22.6	0
111304	NEI9004:N0803	HC33	GEM	60	4	124.8	136.7	19.2	34.4	10
111305	GUAT209:N11c46	HC33	GEM	40	4	130.2	173.0	17.3	33.1	0
111306	GUAT209:N11c50	HC33	GEM	50	4	124.0	158.1	16.9	30.6	0
111307	SCROGP3:N3215	HC33	GEM	70	4	136.8	165.3	17.3	34.3	2
111308	CL-G1703:S17c43	LH287	GEM	70	5	156.2	159.4	14.1	27.4	28
111309	CUBA164:S99n99n	LH287	GEM	50	5	156.3	168.1	12.2	24.1	2
111310	DKXL212:S0928	LH287	GEM	70	5	164.6	175.0	13.2	27.2	9
111311	DKXL380:S08a15	LH287	GEM	50	5	168.5	184.4	10.1	21.5	4
111312	NEI9004:S2817c	JFS-NS	JFS	50	5	155.5	169.7	12.0	23.4	4
111313	AR16021:N2149a	TR7245HXT	BEC	75	4	171.8	184.7	12.4	31.4	10
111314	CML329:N1546	SGI890HXT	IFS	75	5	154.9	167.9	10.3	20.1	4
111315	MBRC10:N1749b	MON-SS	MON	24	4	176.0	205.1	10.5	27.2	0
111316	DK888:S08a46	MON-nSS	MON	84	5	168.7	183.8	11.1	23.5	3
111317	SANM126:S1221	DAS-nSS	DAS	80	5	148.5	171.5	11.2	21.0	0
111318	BR105:N1643	DAS-SS	DAS	80	5	159.7	168.3	12.7	25.4	16
111319	BR105:N1646	SGI890HXT	PAN	60	5	162.1	180.9	12.6	26.0	1
111401	GEMN-0131/DKXL212:N11a-139-B	BAS-SS*	BAS	50	7	137.1	180.1	12.3	18.4	0
111402	GEMN-0131/DKXL212:N11a-139-B	BAS-SS*	BAS	40	7	137.5	179.5	12.3	18.6	0
111403	GEMN-0131/DKXL212:N11a-139-B	BAS-SS*	BAS	40	7	136.7	178.9	12.8	19.3	0
111404	GEMS-0147/GEMS-0115	MBS8814CBLLRW	PAN	60	5	186.9	188.3	11.0	25.7	27
115201	AR16062:S99n	LH287	GEM	70	5	143.3	169.1	21.1	29.5	1
115202	BS20(S)C2:S99u	LH287	GEM	70	5	150.0	175.3	15.4	29.8	1
115301	AR01150:N0402	HC33	GEM	70	4	131.0	161.4	19.1	36.4	4
115302	AR03056:N0902	HC33	GEM	60	3	150.5	173.1	12.7	31.4	3
115303	AR03056:N0902a	HC33	GEM	70	3	144.7	177.8	12.1	29.1	1
115304	AR13026:N08a04	HC33	GEM	60	4	136.6	177.1	15.7	31.5	1
115305	AR17056:N2016	HC33	GEM	30	4	140.1	172.2	14.9	31.2	0
115306	CH05015:N4049b	HC33	GEM	20	4	131.4	184.4	12.6	25.7	0
115307	AR16021:S3115	LH287	GEM	70	5	152.2	181.3	13.4	25.8	0
115308	AR16042:S2028	LH287	GEM	60	5	163.6	182.0	17.3	35.8	4
115309	AR16042:S2030	LH287	GEM	70	5	153.8	172.4	14.3	27.9	2
115310	UR05017:S0414	LH287	GEM	60	5	155.7	177.3	13.7	27.1	5
115311	UR10001:S1802	LH287	GEM	60	5	162.1	183.5	9.0	20.9	1
115312	UR11002:S1446	LH287	GEM	80	5	162.8	179.0	11.4	23.4	6

Expt #	Material	Tester	Source	Total Entry	# Reps	Entry Yield Ave.	Check Yield Ave	CV (%)	LSD	# above check avg.
115313	UR11003:S17h02	LH287	GEM	60	5	160.9	179.3	12.2	24.7	4
115314	UR13088:S0650	AGR-nSSBT1CCR1	AGR	90	5	165.5	163.6	12.0	24.9	45
115401	GEMS-0002/GEMS-0149	LH287	GEM	80	4	152.3	164.0	12.5	26.9	14
115402	Retest	LH287	GEM	20	7	163.6	183.8	18.8	38.5	0
116001	Retest	MBS3633	GEM	80	6	156.4	175.3	14.6	26.5	1
116002	Retest	MBS8814	GEM	50	7	157.4	162.2	16.2	27.2	13
116003	Retest	HC33	GEM	70	6	150.7	182.9	14.7	25.9	0
116401	GEMN-0111/GEMN-0140	HC33	GEM	50	5	138.3	178.4	15.8	28.8	0
116402	GEMS-0002/GEMS-0003	LH287	GEM	70	5	151.7	172.2	11.5	22.0	1
116403	Miscellaneous	NA	GEM	50	5	158.0	170.0	11.5	23.3	12
116404	Retest	NA	GEM	40	6	157.6	188.1	10.8	20.3	1
116405	Retest	LH287	GEM	50	7	173.0	182.1	11.0	20.2	10
116406	wx Test	NA	STA	40	4	136.3	165.7	11.6	22.8	0
								13.5		251
* Traits = Glyphosphate, Rootworm, and Corn Borer										
Total number of entries above the check means =		251								
The number of the reps lost		41								
Percentage of reps lost (%)		14.3								

EXL7: Third Year Trial of GEM families, 24 locations in 2010 and 2011

Pedigree	Source	ENT	YLD (bu/ac)	MST	Y/M	% Erect Plants
BR105:S16-373-008-006 x LH283.LH287	4886-006/06	1	151	19.4	7.8	89
BR105:S16-373-008-009 x LH283.LH287	4886-009/06	2	154	19.0	8.1	92
BR105:S16-373-008-011 x LH283.LH287	4886-011/06	3	161	20.2	8.0	90
BR105:S16-373-008-001-002 x LH283.LH287	5242-002/07	4	152	19.9	7.6	93
BR105:S16-373-008-001-006 x LH283.LH287	5242-006/07	5	156	19.8	7.8	91
BR105:S16-373-008-001-007 x LH283.LH287	5242-007/07	6	159	19.5	8.1	91
CML413:N18-001-011-002 x LH245.LH244	3155-002/07	7	142	17.4	8.2	95
CML413:N18-001-012-001 x LH245.LH244	3156-001/07	8	146	17.4	8.4	94
CML413:N18-001-015-002 x LH245.LH244	3157-002/07	9	144	17.5	8.2	91
CML413:N18-001-016-003 x LH245.LH244	3158-003/07	10	140	17.8	7.9	91
CML413:N18-001-027-001 x LH245.LH244	3164-001/07	11	143	18.0	8.0	92
CML413:N18-001-030-003 x LH245.LH244	3167-003/07	12	143	17.7	8.1	93
CML413:N18-001-036-002 x LH245.LH244	3173-002/07	13	151	17.7	8.5	93
CML413:N18-002-044-003 x LH245.LH244	3176-003/07	14	141	17.9	7.9	94
CML413:N18-002-055-001 x LH245.LH244	3185-001/07	15	144	17.8	8.1	94
CML413:N18-002-055-003 x LH245.LH244	3185-003/07	16	142	18.0	7.9	96
CUBA164:D27-B-004-001 x LH283.LH287	2984-001N	17	145	18.5	7.8	93
CUBA164:D27-B-004-001 x LH245.LH244	2984-001S	18	138	18.2	7.5	93
CUBA164:D27-B-017-001 x LH283.LH287	2997-001N	19	147	20.1	7.3	90
CUBA164:D27-B-017-001 x LH245.LH244	2997-001S	20	147	19.2	7.6	94
SCR_Gp3:N14-028-003-B-002 x LH132.FR1064	h7115-02/03	21	157	17.9	8.8	95
CML329:N18-001-020-001 x LH245.LH244	3141-001/07	22	147	16.9	8.7	94
LH269 x LH244.LH245	2DHAX2P18F	23	151	17.3	8.7	93
LH287 x LH244.LH245	KC1680t02	24	156	16.6	9.4	86
LH353 x LH244.LH245	8T1XX8P18F	25	146	16.6	8.8	94
LH354 x LH244.LH245	2E7YX2P18R	26	150	16.5	9.1	91
LH244 x LH283.LH287	BJOWMOt06	27	144	16.5	8.8	92
LH310 x LH283.LH287	8EKPX1P18F	28	148	17.8	8.3	91
LH382 x LH283.LH287	2EEFX1P18R	29	160	17.2	9.3	88
LH383 x LH283.LH287	4JEWX1P18F	30	160	18.3	8.8	92
Pioneer 31G98	P31G98	31	174	16.8	10.4	95
Pioneer 31D58	P31D58	32	168	18.9	8.9	97
Pioneer 31P41	P31P41	33	180	18.3	9.8	97
DeKalb 697	DK697	34	161	18.4	8.8	95
HC33 x TR7322	HC33.TR7322	35	147	15.4	9.5	94
Garst 8288	G8288	36	161	18.4	8.7	89
Experiment Mean			152	18.0	8.4	93
Check Mean (P31G98, P31D58, P31P41, DK697, G8288)			169	18.2	9.3	95
LSD 0.05			12.1	0.9		6.3
CV			11.2	6.8		9.5

EX26: Raleigh NSSS GEM Releases, 20 locations in 2010 and 2011

Pedigree	Source	Yld (bu/ac)	Mst	Y/M	% Erect Plants
GEMN-0034 BR51403(PE001):N16-B-062-B x LH132.FR1064	Ames26439	136	17.0	8.0	92
GEMN-0037 BR51403(PE001):N16-B-181-B x LH132.FR1064	PI639500	142	18.1	7.9	94
GEMN-0043 BR51403(PE001):N16-B-857-B x LH132.FR1064	PI639505	148	16.8	8.8	88
GEMN-0103 DK888:N11(95)-B-027-010-B x LH132.FR1064	1931-b/03	151	19.7	7.7	92
GEMN-0104 DK888:N11(95)-B-027-012-B x LH132.FR1064	1936-b/03	155	18.4	8.4	94
GEMN-0107 DK888:N11(95)-B-022-012-B x LH132.FR1064	1916-blk/03	141	17.7	8.0	92
GEMN-0108 DK888:N11(95)-B-027-001-B x LH132.FR1064	1921-blk/03	155	18.6	8.3	94
GEMN-0109 DKXL380:N11-B-015-003-B x LH132.FR1064	1946-blk/03	145	17.7	8.2	86
GEMN-0119 CHS775:N19-042-001-B x LH132.FR1064	3961-blk/01	139	17.2	8.1	94
GEMN-0120 CHS775:N19-042-003-B x LH132.FR1064	3969-blk/01	141	18.4	7.6	92
GEMN-0121 CHS775:N19-027-010-B x LH132.FR1064	3871-blk/01	133	17.2	7.7	94
GEMN-0123 CHS775:N19-030-011-B x LH132.FR1064	3977-blk/01	133	17.1	7.8	89
GEMN-0124 DK212T:N11-B-003-001-B x LH132.FR1064	1895-blk/03	143	18.4	7.8	92
GEMN-0133 DKXL370:N11-B-029-002-B x LH132.FR1064	1671-blk/03	141	16.9	8.4	90
GEMN-0135 DKXL380:N11-B-007-025-B x LH132.FR1064	2180-blk/01	143	17.2	8.3	92
GEMN-0136 DKXL380:N11-B-007-028-B x LH132.FR1064	3955-blk/01	141	18.1	7.8	90
GEMN-0151 CHS775:N19-042-001-003-B x LH132.FR1064	341-blk/05	138	18.6	7.4	91
GEMN-0153 DKXL380:N11-B-007-027-B x LH132.FR1064	381-blk/05	141	18.0	7.9	86
GEMN-0165 DK888:N11(95)-B-022-001-026-B x LH132.FR1064	2616-b/07	140	17.5	8.0	92
GEMN-0166 DK888:N11(95)-B-027-001-008-B x LH132.FR1064	2621-bk/07	141	19.3	7.3	94
GEMN-0168 DK888:N11(95)-B-027-001-019-B x LH132.FR1064	4812-bk/06	146	19.4	7.5	92
GEMN-0169 DK888:N11(95)-B-027-001-027-B x LH132.FR1064	4816-bk/06	155	19.3	8.0	93
GEMN-0170 DK888:N11(95)-B-027-001-030-B x LH132.FR1064	4826-bk/06	151	19.6	7.7	91
GEMN-0171 DK888:N11(95)-B-027-001-037-B x LH132.FR1064	4837-bk/06	148	18.1	8.2	93
GEMN-0173 DK888:N11(95)-B-027-012-009-B x LH132.FR1064	4877-bk/06	146	17.8	8.2	93
GEMN-0194 DK888:N11-B-027-001-011-B x LH132.FR1064	5553-blk/08	143	19.2	7.5	93
GEMN-0195 DK888:N11-B-027-001-015-B x LH132.FR1064	5581-blk/08	147	18.8	7.8	93
GEMN-0196 DK888:N11-B-003-001-001-B x LH132.FR1064	5574-blk/08	141	17.9	7.9	90
GEMN-0197 DK888:N11-002-021-008-B x LH132.FR1064	5584-blk/08	137	18.4	7.4	93
GEMN-0198 DK212T:N11-040-001-007-B x LH132.FR1064	5564-blk/08	136	18.1	7.5	92
Pioneer 31D58	P31D58	166	18.3	9.1	96
Pioneer 31P41	P31P41	171	17.9	9.5	95
DeKalb 697	DK697	152	18.2	8.3	91
HC33 x TR7322	HC33.TR7322	137	15.7	8.7	88
Experiment Mean		144	18.1	8.0	92
Check Mean (P31D58, P31P41, DK697)		162	18.3	9.0	94
LSD 0.05		12.3	0.9		6.0
CV		11.1	6.2		8.5

EX27: Raleigh SSS GEM Releases, 19 locations in 2010 and 2011

Pedigree	Source	YLD	% Erect		
		(bu/ac)	MST	Y/M	Plants
GEMS-0004_DK212T:S11-B-013-002-B x LH283.LH287	9151-Bk38/00	149	16.6	9.0	88
GEMS-0005_DK212T:S11-B-015-001-B x LH283.LH287	9154-Bk20/00	142	17.8	8.0	89
GEMS-0006_DK212T:S11-B-017-001-B x LH283.LH287	9157-Bk29/00	154	17.1	9.0	88
GEMS-0007_DK212T:S11-B-018-001-B x LH283.LH287	9160-Bk22/00	151	17.1	8.8	90
GEMS-0008_DK212T:S11-B-038-001-B x LH283.LH287	9163-Bk19/00	146	17.2	8.5	87
GEMS-0009_DK212T:S11-B-040-001-B x LH283.LH287	9166-Bk31/00	144	17.2	8.4	87
GEMS-0010_DK212T:S11-B-041-002-B x LH283.LH287	9169-Bk20/00	147	17.0	8.6	87
GEMS-0011_DK212T:S11-B-045-002-B x LH283.LH287	9172-Bk28/00	150	17.1	8.8	88
GEMS-0012_DK888:S11-B-003-001-B x LH283.LH287	9175-Bk28/00	150	18.8	8.0	90
GEMS-0015_DK888:S11-B-014-001-B x LH283.LH287	9184-Bk20/00	154	18.5	8.3	87
GEMS-0016_DK888:S11-B-015-003-B x LH283.LH287	9187-Bk22/00	150	17.6	8.5	87
GEMS-0017_DK888:S11-B-025-001-B x LH283.LH287	9190-Bk19/00	152	18.3	8.3	92
GEMS-0018_DK888:S11-B-026-002-B x LH283.LH287	9193-Bk19/00	153	17.4	8.8	92
GEMS-0020_DK888:S11-B-033-001-B x LH283.LH287	9199-Bk16/00	151	18.8	8.0	87
GEMS-0021_DK888:S11-B-035-002-B x LH283.LH287	Bulk/97-99	146	17.4	8.4	88
GEMS-0023_DK888:S11-B-039-002-B x LH283.LH287	h92847-B13/00	147	17.0	8.7	87
GEMS-0024_DKB830:S11-B-045-001-B x LH283.LH287	9208-Bk27/00	149	17.0	8.8	90
GEMS-0026_DKXL370:S11-B-003-003-B x LH283.LH287	PI Station/09	152	17.3	8.8	88
GEMS-0027_DKXL370:S11-B-025-001-B x LH283.LH287	9214-Bk21/00	152	16.6	9.2	92
GEMS-0028_DKXL370:S11-B-025-002-B x LH283.LH287	9217-Bk21/00	144	17.0	8.4	87
GEMS-0031_DKXL380:S11-B-028-001-B x LH283.LH287	9226-Bk26/00	148	17.5	8.5	91
GEMS-0032_DKXL380:S11-B-029-001-B x LH283.LH287	9229-Bk20/00	157	18.1	8.7	84
LH354 x LH132.FR1064		142	16.0	8.9	85
Pioneer 31D58		176	18.0	9.8	94
Pioneer 31P41		180	17.6	10.2	95
DeKalb 697		167	17.6	9.5	89
HC33 x TR7322		138	15.5	8.9	91
Pioneer 33M54		167	17.1	9.8	95
Garst 8288		161	17.6	9.2	94
Experiment Mean		152	17.4	8.8	89
Check Mean (P31D58, P31P41, DK697, P33M54, G8288)		167	17.5	9.7	93
LSD 0.05		10.0	0.6		6.3
CV		11.1	5.4		12.0

EX28: Ames NSSS GEM Releases, 18 locations in 2010 and 2011

Pedigree	Source	YLD		% Erect	
		(bu/ac)	MST	Yld/Mst	Plants
GEMN-0048_DKXL370:N11a20-031-001-B x LH132.FR1064	Ames27201	153	17.7	8.6	98
GEMN-0082_FS8B(T):N1802-525-001-B x LH132.FR1064	06GEM05175	153	18.9	8.1	97
GEMN-0087_AR03056:N09-024-001-B x LH132.FR1064	04GEM00767	151	17.4	8.7	97
GEMN-0089_AR03056:N09-191-001-B x LH132.FR1064	04GEM00769	146	16.9	8.6	95
GEMN-0090_AR03056:N09-250-001-B x LH132.FR1064	04GEM00770	142	17.0	8.4	95
GEMN-0094_DKXL370:N11a20-199-002-B x LH132.FR1064	04GEM00775	146	17.3	8.5	94
GEMN-0095_DKXL370:N11a20-234-002-B x LH132.FR1064	04GEM00776	157	18.5	8.5	94
GEMN-0097_FS8B(T):N11a-087-001-B x LH132.FR1064	04GEM00778	160	15.7	10.2	97
GEMN-0099_FS8B(T):N11a-322-001-B x LH132.FR1064	04GEM00780	149	16.2	9.2	97
GEMN-0110_BARBGP2:N08a18-332-001-B x LH132.FR1064	05GEM06025	152	17.3	8.8	97
GEMN-0112_CH05015:N1502-086-001-B x LH132.FR1064	05GEM06027	143	14.9	9.6	97
GEMN-0117_DREP150:N2011d-624-001-B x LH132.FR1064	05GEM06032	143	17.2	8.3	95
GEMN-0138_AR17056:N2035-421-001-B x LH132.FR1064	06GEM02093	149	17.1	8.7	95
GEMN-0140_BR51675:N0620-033-001-B x LH132.FR1064	06GEM02095	142	15.4	9.2	96
GEMN-0141_BR51675:N0620-053-001-B x LH132.FR1064	06GEM02096	145	17.3	8.4	94
GEMN-0155_AR13026:N08b15-086-B x LH132.FR1064	07GEM02959	148	16.8	8.8	94
GEMN-0157_BR51721:N2012-164-002-B x LH132.FR1064	07GEM02961	144	15.7	9.2	95
GEMN-0158_BR51721:N2012-397-001-B x LH132.FR1064	07GEM02962	153	16.8	9.1	96
GEMN-0177_DK888:N11a08a-395-001-B x LH132.FR1064	08GEM05047	145	17.7	8.2	96
GEMN-0178_DK888:N11a08a-440-001-B x LH132.FR1064	08GEM05048	160	19.0	8.4	96
GEMN-0187_ANTIG03:N1218-056-001-B x LH132.FR1064	08GEM04577	155	17.7	8.8	94
GEMN-0190_PASCO14:N0424-078-001-B x LH132.FR1064	08GEM04450	142	17.7	8.0	98
GEMN-0192_SCROGP3:N2017-172-001-B x LH132.FR1064	08GEM04561	149	16.1	9.3	95
GEMN-0193_UR11002:N0308b-086-001-B x LH132.FR1064	08GEM04432	153	16.7	9.2	95
Pioneer 31D58		180	19.4	9.3	99
Pioneer 31P41		192	19.2	10.0	99
DeKalb 697		159	19.1	8.3	93
HC33 x TR7322		142	15.4	9.3	98
Experiment Mean		152	17.2	8.8	96
Check Mean (P31D58, P31P41, DK697)		176	19.1	9.2	97
LSD 0.05		9.2	0.6		4.3
CV		10.3	6.3		7.5

EX29: Ames SSS GEM Releases, 20 locations in 2010 and 2011

Pedigree	Source	YLD (bu/ac)	MST	Yld/ Mst	% Erect Plants
GEMS-0049_DKB844:S1601-512-001-B x LH283.LH287	Ames27202	155	18.1	8.5	90
GEMS-0050_DKB844:S1601-517-001-B x LH283.LH287	Ames27203	152	19.2	7.9	91
GEMS-0051_CUBA164:S2008a-083-001-B x LH283.LH287	Ames27204	144	17.2	8.4	89
GEMS-0052_CUBA164:S2008a-326-001-B x LH283.LH287	Ames27205	151	17.7	8.5	94
GEMS-0062_AR16026:S17-0016-001-B x LH283.LH287	Ames27215	147	17.7	8.3	91
GEMS-0064_CUB164:S1511b-00249-001-B x LH283.LH287	Ames27217	150	18.5	8.1	92
GEMS-0066_CUBA117:S1520-0052-001BB x LH283.LH287	Ames27219	141	18.5	7.6	93
GEMS-0072_CHS775:S1911b-439-001-B x LH283.LH287	03GEM00437	149	17.4	8.6	93
GEMS-0079_FS8B(S):S0316-00802-001-B x LH283.LH287	06GEM01675	145	17.0	8.5	89
GEMS-0080_FS8B(S):S0316-814-001-B x LH283.LH287	07GEM02563	146	17.1	8.5	91
GEMS-0091_CHS740:S1411a-783-002-B x LH283.LH287	04GEM00771	153	16.8	9.1	84
GEMS-0092_CUBA164:S2012-00444-001-B x LH283.LH287	04GEM00773	142	18.3	7.7	91
GEMS-0093_CUBA164:S2012-966-001-B x LH283.LH287	04GEM00774	143	17.8	8.0	91
GEMS-0113_CHS775:S1911b-120-001-B x LH283.LH287	05GEM06028	159	17.2	9.2	91
GEMS-0115_DKB844:S1601-073-001-B x LH283.LH287	05GEM06031	151	18.3	8.2	94
GEMS-0116_DKB844:S1601-003-002-B x LH283.LH287	05GEM06030	143	18.1	7.9	87
GEMS-0142_BR52060:S0210-143-001-B x LH283.LH287	06GEM02104	146	17.5	8.3	92
GEMS-0146_NEI9004:S2818-003-001-B x LH283.LH287	06GEM02100	149	18.2	8.2	87
GEMS-0147_NEI9004:S2818-025-001-B x LH283.LH287	06GEM02101	146	18.5	7.9	93
GEMS-0148_NEI9004:S2818-376-001-B x LH283.LH287	06GEM02102	140	17.7	7.9	87
GEMS-0150_UR05017:S0415-187-001-B x LH283.LH287	06GEM02105	142	18.3	7.8	91
GEMS-0160_CUBA117:S1542-037-002-B x LH283.LH287	07GEM02964	151	18.4	8.2	89
GEMS-0161_CUBA117:S1542-057-001-B x LH283.LH287	07GEM02965	148	18.6	8.0	92
GEMS-0163_CUB164:S2012-456-001-B x LH283.LH287	07GEM02967	139	16.4	8.4	93
GEMS-0181_GUAT209:S1308a-068-001-B x LH283.LH287	08GEM05051	147	18.3	8.1	91
GEMS-0182_GUAT209:S1308a-084-001-B x LH283.LH287	08GEM05052	146	16.6	8.8	93
GEMS-0183_GUAT209:S1308a-104-001-B x LH283.LH287	08GEM05053	143	18.3	7.8	89
GEMS-0184_GUAT209:S1308a-120-001-B x LH283.LH287	07GEM02288	151	18.7	8.1	93
GEMS-0188_DKXL212:S0912-012-001-B x LH283.LH287	08GEM04468	142	15.8	9.0	90
GEMS-0189_DKXL212:S0912-117-001-B x LH283.LH287	08GEM04471	143	16.1	8.9	92
LH310 x LH283.LH287 Holden's		147	17.9	8.2	91
LH383 x LH283.LH287 Holden's		144	17.6	8.2	90
Pioneer 31P41		183	18.6	9.8	94
Pioneer 31D58		179	18.6	9.6	96
DeKalb 697		158	18.7	8.4	93
HC33 x TR7322		144	15.8	9.1	93
Experiment Mean		149	17.7	8.4	91
Check Mean (P31D58, P31P41, DK697)		174	18.6	9.3	94
LSD 0.05		9.1	0.6		5.1
CV		10.3	6.0		9.5

SF11BFF3701 (BASF Silage Trial)												
GEM Code	Pedigree - 2011 GEM YT (Average 3 Locations) Sorted by DM YIELD Rk	Maturity	Entry #	DM YIELD Rk	DM YIELD YIELD	DM YIELD %Ck	MILK AC	MILKAC %Ck	MILK TN	MILKTN %Ck	%CP	%CP %Mn
GEMN-0178	((DK888)/N11A08A-440-001-B-B)/Tester B		14	1	10.9	122	38506.67	121	3536.33	99	6.7	93
GEMN-0154	((AR13026)/N08B15-086)/Tester B		6	2	10.5	118	38171.67	120	3623.67	101	7.1	99
	Tester 2 - Dual Purpose Hybrid	111	47	3	10.2	115	36888.33	116	3614.00	101	7.2	100
GEMN-0097	((FS8B(T))/N11A-087-001)/Tester B		16	4	10.1	113	34837.67	109	3438.00	96	6.5	89
GEMN-0187	((ANTIG03/N1218-056-001)/Tester B		1	5	10.1	113	35598.00	112	3545.00	99	7.2	100
	Tester 1 - Dual Purpose Hybrid	111	46	6	9.8	110	34663.33	109	3556.00	99	7.5	104
GEMS-0115	((DKB844)/(S1601)-073-001-B-B-B-B)/Tester C		38	7	9.6	108	34073.67	107	3547.67	99	6.9	95
GEMS-0143	((BR52060/S0210147-001)/Tester D		21	8	9.6	107	33013.67	104	3447.33	96	7.1	99
GEMN-0159	((CASH)/N1410-018-001)/Tester B		12	9	9.5	107	33482.67	105	3544.00	99	7.2	100
GEMN-0156	((BR51721)/N2012-098-002)/Tester B		10	10	9.5	107	33541.00	105	3548.67	99	7.1	98
GEMS-0091	((CHIS740)/(S1411A)-783-002)/Tester D		22	11	9.4	106	32770.33	103	3495.67	98	7.3	101
GEMN-0098	((FS8B(T))/N11A-110-001)/Tester B		17	12	9.4	106	33746.33	106	3584.67	100	6.8	94
GEMN-0094	((DKXL370)/(N11A20)-199-002-B-B-B)/Tester B		15	13	9.3	104	32346.33	101	3480.67	97	7.4	102
GEMS-0086	((UR10001/S1813-257-001)/Tester D		32	14	9.3	104	31793.33	100	3448.33	96	7.3	101
GEMS-0073	((CUBA117)/S15-372-001)/Tester D		24	15	9.3	104	32415.00	102	3497.67	98	7.2	100
GEMN-0157	((BR51721)/N2012-164-002)/Tester B		11	16	9.2	103	32468.33	102	3547.33	99	6.6	91
GEMN-0193	((UR11002/N0308B-086-001-B)/Tester B		20	17	9.1	103	33539.00	105	3676.00	103	7.0	97
GEMS-0146	((NEI9004/S2818-003-001)/Tester D		29	17	9.1	103	31470.33	99	3461.67	97	7.7	106
GEMS-0149	((UR05017/S0415-180-002)/Tester D		31	17	9.1	103	32110.00	101	3527.33	99	7.8	107
GEMN-0154	((AR13026)/N08B15-016)/Tester B		5	20	9.1	102	31531.67	99	3466.00	97	7.4	102
GEMN-0088	((AR03056)/N09-182-001)/Tester B		3	21	9.1	102	31037.67	97	3434.67	96	7.6	105
	Tester 5 - Dual Purpose Hybrid	109	50	21	9.1	102	32398.33	102	3577.67	100	7.2	99
GEMS-0181	((GUAT209/S1308A-068-001)/Tester C		40	23	9.0	101	31823.33	100	3540.67	99	7.3	101
GEMN-0087	((AR03056)/N09-024-001)/Tester B		2	24	9.0	101	30612.33	96	3421.00	96	7.4	102
GEMS-0185	((CUBA164)/S2012-966-001-B wx)/Tester C		37	24	9.0	101	32064.33	101	3581.33	100	7.1	98
GEMN-0127	((DK888)/N11-017-001-B-B)/Tester B		13	26	8.9	100	31304.00	98	3509.00	98	6.5	89
GEMS-0075	((CUBA164)/(S1517)-241-002)/Tester D		25	27	8.9	100	30518.33	96	3450.33	96	8.1	112
GEMS-0147	((NEI9004/S2818-025-001)/Tester D		30	27	8.9	100	29891.33	94	3380.33	94	7.8	107
GEMS-0093	((CUBA164)/S2012-966-001)/Tester D		27	29	8.8	99	29448.67	92	3353.00	94	7.6	105
GEMS-0147	((NEI9004/S2818-025-001)/Tester C		41	29	8.8	99	31441.67	99	3572.33	100	7.3	100
GEMN-0099	((FS8B(T))/N11A-322-001)/Tester B		18	31	8.8	99	30797.67	97	3500.33	98	6.8	94
GEMS-0113	((CHIS775)/S1911B-120-001)/Tester D		23	31	8.8	99	31017.00	97	3545.00	99	7.8	108
GEMS-0073	((CUBA117)/S15-372-001)/Tester C		34	31	8.8	99	29114.33	91	3310.00	92	7.1	98
GEMN-0191	((SCROGP3/N2017-003-001)/Tester B		19	34	8.7	98	31022.67	97	3567.67	100	7.1	98
GEMS-0118	((UR11003)/(S0302)-1011-001)/Tester D		33	34	8.7	98	28818.00	90	3309.33	92	7.3	101
GEMS-0163	((CUBA164)/S2012-456-001)/Tester C		36	36	8.6	97	28952.00	91	3350.00	94	6.9	95
GEMS-0163	((CUBA164)/S2012-456-001)/Tester D		26	37	8.5	96	27883.00	87	3267.67	91	7.2	100
GEMN-0090	((AR03056)/N09-250-001)/Tester B		4	38	8.4	95	27836.33	87	3296.67	92	7.2	100
GEMS-0086	((UR10001/S1813-257-001)/Tester C		42	39	8.4	95	29127.33	91	3455.00	97	7.1	98
GEMN-0140	((BR51675)/N0620-033-001)/Tester B		9	40	8.4	94	29816.33	94	3579.00	100	6.9	95
GEMS-0189	((DKXL212)/S0912-117-001)/Tester C		39	41	8.3	94	29797.67	93	3582.67	100	7.0	96
GEMN-0174	((AR17056)/N2025-574-001)/Tester B		7	42	8.3	93	29989.67	94	3610.67	101	8.5	118
GEMN-0139	((AR17056)/N2035-473-001)/Tester B		8	43	8.2	93	27441.00	86	3358.33	94	6.7	93
	Filler	103	43	44	8.2	92	29864.33	94	3642.67	102	7.3	101
	Filler	103	45	45	8.0	90	28976.67	91	3638.33	102	7.5	104
	Tester 4 - Dual Purpose Hybrid	113	49	46	7.9	88	28048.00	88	3564.33	100	7.1	98
	Tester 3 - Silage Hybrid	113	48	47	7.6	86	27429.67	86	3588.67	100	7.6	105
GEMS-0075	((CUBA164)/(S1517)-241-002)/Tester C		35	48	7.6	85	24314.33	76	3208.00	90	7.5	104
GEMS-0182	((GUAT209/S1308A-084-001)/Tester D		28	49	7.2	81	23251.67	73	3230.33	90	7.0	96
	Filler	103	44	49	7.2	81	26482.33	83	3678.67	103	7.5	103
	46061:WI Janesville				9.1	9.2	32916.16	34195.60	3604.46	3696.40	7.2	
	46062:WI Beaver Dam				9.3	9.6	30406.32	32654.20	3270.10	3412.00	7.2	
	66061:IL Mendota				8.3	7.9	30126.76	28806.80	3606.82	3632.00	7.3	
	#Locs			3			3		3		3	
	Mn			8.9			31149.75		3493.79		7.2	
	CkMn			8.9			31885.53		3580.13		7.3	
	CVErr											
	LSD(.05)			1.3			5244.96		246.36		0.7	
	LSD(.10)			1.0			4388.61		206.13		0.6	
	Tester B - Corn Root Worm, RoundUp											
	Tester C - Corn Bore and Liberty Link											
	Tester D - Herculex Corn Bore 1											

GEM 99 Decode

Type	KEY:	
SS	LH132	a
NS	LH123	b
NS	DE4	c
NS	PHG35	d
SS	PHG39	e
SS	B73	f
SS	N28	g
NS	LH39	h
NS	LH38	i
SS	6103	j
SS	LH74	k
SS	G80	l
NS	LH51	m
SS	PHB47	n
NS	MDF-13D	o
NS	MBNA	p
NS	LH57	q
NS	207	r
SS	GEMS-0002	s
SS	GEMS-0006	t
SS	CUBA117:S1520-156-1-B-B	u
NS	PHZ51	v
SS	NEI9004	w
SS	PHW17	x
SS	GEMS-0115	y
NS	GEMN-0097	z

Type	KEY:	
SS	GEMS-0149	aa
NS	GEMN-0133	ab
NS	GEMN-0137	ac
SS	GEMS-0016	ad
NS	GEMN-0179	ae
NS	GEMN-0174	af
SS	790	ag
SS	GEMS-0162	ah
NS	GEMN-0155	ai
SS	GEMS-0175	aj
NS	GEMN-0156	ak
SS	DJ7	al
NS	Seagull Seventeen (SG17)	am
NS	PHR36	an
NS	PHV63	ao
NS	LH52	ap
SS	GEMS-0163	aq
NS	PHG47	ar
NS	HBA1	as
SS	87916W	at
SS	4676A	au
SS	GEMS-0188	av
NS	GEMN-0177	aw
NS	PHT60	ax
SS	Mp717	ay
SS	794	az
NS	LH82	ba
NS	LH61	bb
NS	PHK76	bc
SS	PHJ40	bd
SS	LH202	be
NS	LH162	bf
NS	LH220HT	bg
SS	Wilson 903	bh
NS	L 139	bi
NS	GEMN-0192	bj
NS	GEMN-0205	bk
NS	GEMS-0219	bl
SS	H8431	bm
SS	PHW20	bn