

2013 State Silage Corn Performance Test on the Texas High Plains

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Introduction

The significant dairy and beef industries in the Texas High Plains require large amounts of high quality and low cost grain and silage corn. Selection of a hybrid with high tonnage potential and acceptable quality is a key decision that a producer continually faces. We initiated the state silage corn performance test at the Texas A&M AgriLife North Plains Research Field at Etter in 2007, and at the Texas A&M AgriLife Research Station at Halfway in 2008 (Xu et al, 2007; 2009, 2010, 2011, 2012). Since then, we have conducted the tests at both locations annually. The interest among producers and the seed industry regarding this program's data remains strong. Almost all seed companies that offer corn hybrids in this region have participated in the tests, and the number of hybrids entered annually continues to grow at the Etter location while remaining the same at the Halfway location. For a fee, commercial seed companies have an opportunity to enter hybrids at either or both test sites. To our knowledge, this is the only public comparative field testing program available in the Texas High Plains. The goal is to provide producers with timely and unbiased performance information regarding yield, quality, and agronomic traits.

Entries of 2013 State Silage Corn Performance Test at Etter and Halfway:

A total of 40 hybrids from nine companies entered into the Etter test and 32 hybrids from seven companies were tested at the Halfway location. One commercial hybrid was dropped from both locations at the data analysis stage due to poor seed quality and less than desirable stands. In addition, 10 experimental hybrids developed by the Texas A&M AgriLife corn breeding program in Lubbock were included at both locations (Tables 1 and 3). Relative maturity is reported as per the seed companies and ranges from 107-123 days.

Experimental Designs:

The test was conducted under a center pivot field at the Texas A&M AgriLife North Plains Research Field at Etter and at the Texas A&M AgriLife Research Station at Halfway. The tests used a randomized complete block design with three replications. Each plot consisted of four rows, 18 feet long with 2-foot alleys. Row-spacing was 30-inches at Etter and 40 inches at Halfway. The two center rows of each plot were harvested for yield.

Agronomic Practices at Etter:

The test was planted on April 26 and harvested on September 9, 2013. The previous crop was wheat, followed by summer fallow. Pre-plant fertilizers were applied at the rate of 108 (N)

lbs/a and 78 (P) lbs/a with a strip till rig on April 24. An additional 140 lbs. of nitrogen was applied through the pivot on June 20 through July 30. An herbicide mixture of Bicep Lite II Magnum at 1.25 qt/a, Balance Flex at 3 oz/a, Medal II at 8 pt/a, and Makaze at 1.5 pt/a was applied on April 12 and incorporated into the soil to control weeds before planting. On June 12, Option at 1.5 oz/a and Status at 8 oz/a were applied to control Johnson grass and other grassy weeds. Lorsban 15G was applied at 6.5 lbs/a through the planter units to control corn rootworm. At the three-leaf stage, seedlings were hand-thinned to a uniform target population of 32,912 plants/a. Strip till management was implemented without the listing of seedbeds. The test site had an adequate soil moisture profile level at planting. Monthly rainfall during the growing season was as follows: May – 0.17”, June –1.19”, July 2.28”, and August 2.10”. Total rainfall from planting to harvest (May to August) was 5.74”. The field was irrigated regularly at the 100% ET level through a center-pivot irrigation system fitted with LESA nozzles at 60” spacing. A total of 26.75 inches of water was applied during the season.

Agronomic Practices at Halfway:

The test was planted on April 22 and harvested on August 27, 2013. The previous crop was cotton. Pre-plant fertilizers were applied on March 15 at the rate of 150 lbs. N/a and 50 lbs. P/a. Fertilizers were immediately incorporated into the soil by using an offset disc. Herbicides Bicep at 3 pts/a and Roundup at 32 oz/a were applied on April 25 and activated by watering the field with the pivot. At three-leaf stage, seedlings were hand-thinned to achieve a uniform target population of 30,618 plants/a. On June 11, the liquid fertilizers were side dressed at 100 lbs. N/a using a coulter rig. A total of 3.1 inches of water was applied between April 6 and April 20 prior to planting. From planting to harvest, a total of 21.34 inches of water was applied at regular intervals (3.6” from April 27 to May 27, 4.51” from June 1 to 30, 7.83” from July 1 to 31, and 5.4 on August 1 to 25). In-season rainfall totaled 9.60 inches (April – 0, May 0, June 4.33”, July 3.67”, August 1.6”). With the high temperature and wind, the amount of irrigation water did not meet the plant evapotranspiration demand at 100% level.

Data collected:

Data was recorded for stand, flowering dates, plant and ear height, and root and stalk lodging. Stand is reported as a percentage of the target plant population. There were few plants with root or stalk lodging in the field at harvest in either location. The two-center rows of each plot were harvested with a John Deere 5200 small-plot silage chopper equipped with a Hagie silage plot weighing system. A mechanical problem with the silage chopper delayed harvesting 5-10 days later than the target date (average milk line at 50%), especially at Halfway where irrigation was withheld in preparation for harvesting. Plants were cut 5 inches above the ground. Approximately 2 lbs of a chopped sub-sample were collected from each plot, weighed for the fresh weight, dried at 50°C, weighed for dry weight, and then analyzed for silage quality using NIR methods by the Dairy One Forage Lab (Ithaca, NY). The moisture content was calculated by using fresh and dry weight of the sub-samples. Yields were measured on a plot basis, converted to short tons per acre, and adjusted to a 65% moisture level.

Test Results:

The mean yield of all hybrids was 30.6 and 31.1 tons per acre at Etter and Halfway respectively (Tables 1 and 3). Due to dry and windy conditions and near-freezing temperatures

in late April and early May, plant heights at both Etter and Halfway were shorter than previous years.

Silage quality was analyzed with NIR and all analyzed quality traits were highly different among the entries (Tables 2 and 4). The NIR data for the third replication at Etter was questionable for unknown reasons, and therefore, forage quality results at Etter were based on only two replications. Users should consider different quality traits, but TDN and IVTN24 are commonly used to represent forage digestibility. The average TDN values were 78.9% at Etter and 79.8% at Halfway; the average IVTD24 values were 81.5% at Etter and 82.6% at Halfway (Tables 3 and 4). A high value of TDN and IVTD24 indicates a higher digestibility. Digestibility of corn silage is also highly correlated to the amount of grain produced and also the chemical composition of the stalk.

Hybrid selection is an important decision for silage corn producers. A good silage hybrid should have a strong adaptation to local environment, appropriate maturity, high tonnage and digestibility, and stable production performance across varying environments. This combination of qualities make the complex and challenging task of maximizing feedstuff potential for cattle more efficient and leads to higher producing cattle operations in the Texas high plains. All silage corn in the High Plains is virtually produced with irrigation water derived from the Ogallala Aquifer. More tonnage per acre and better forage quality is a good indicator of genetic improvement of crop water use efficiency and better genetics adapted to this environment.

These results are available at the State Crop Performance Test Program (<http://varietytesting.tamu.edu>) and the Texas A&M AgriLife Research Lubbock Center websites (<http://lubbock.tamu.edu>). These results will help producers, Extension specialists and consultants select commercial hybrids best suited in the Texas High Plains.

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Table 1. Means of stand, days to pollen shed (DTP), plant height (PHT), ear height (EHT), stalk lodging (STL), root lodging (RTL), moisture at harvest, and forage yield adjusted to 65% moisture of the State Silage Corn Performance Test at Etter, Texas in 2013.

| Hybrid | Company | RM | Trait | Stand % | DTP days | PHT cm | EHT cm | Moist % | Yield Tons/a | % of test mean | Yield rank |
|-----------------|--------------|-----|--------------|---------|----------|--------|--------|---------|--------------|----------------|------------|
| 1555 PRO3 | Armor | 114 | VT2PRO | 95.0 | 78.0 | 256.0 | 105.0 | 52.2 | 28.70 | 93.8 | 39 |
| 1550 PRO2 | Armor | 115 | VT3PRO | 93.9 | 78.0 | 227.0 | 92.0 | 55.3 | 30.41 | 99.4 | 29 |
| 1880 PRO2 | Armor | 117 | VT2PRO | 95.3 | 78.0 | 260.0 | 91.0 | 53.8 | 31.76 | 103.8 | 16 |
| BH 8732 VTTP | B-H Genetics | 118 | Genuity VT3P | 102.5 | 77.0 | 275.0 | 104.0 | 54.5 | 33.41 | 109.2 | 5 |
| BH 8830 VTTP | B-H Genetics | 117 | Genuity VT3P | 90.9 | 78.0 | 261.0 | 95.0 | 51.1 | 31.59 | 103.2 | 18 |
| BH 8895 VT2P | B-H Genetics | 118 | Genuity VT2P | 97.3 | 77.0 | 264.0 | 97.0 | 53.0 | 30.55 | 99.8 | 28 |
| BH 8900 VIP3111 | B-H Genetics | 118 | Viptera 3111 | 96.9 | 77.0 | 284.0 | 96.0 | 53.3 | 28.32 | 92.5 | 42 |
| BH 8977 RR/HX | B-H Genetics | 117 | RR/HX | 103.0 | 78.0 | 274.0 | 104.0 | 55.8 | 31.18 | 101.9 | 22 |
| BH 9029 VTTP | B-H Genetics | 119 | Genuity VT3P | 101.0 | 76.0 | 262.0 | 88.0 | 53.1 | 28.89 | 94.4 | 37 |
| X 12111 LF | B-H Genetics | 116 | N/A | 97.5 | 81.0 | 302.0 | 112.0 | 53.1 | 31.60 | 103.3 | 17 |
| XP 8890 RR | B-H Genetics | 119 | RR | 96.2 | 79.0 | 270.0 | 105.0 | 55.2 | 27.18 | 88.8 | 45 |
| 67H49 | Blue River | 113 | None | 101.5 | 76.0 | 278.0 | 91.0 | 55.9 | 25.79 | 84.3 | 49 |
| 70R50 | Blue River | 114 | None | 91.7 | 77.0 | 269.0 | 108.0 | 53.7 | 32.48 | 106.1 | 12 |
| 73B33 | Blue River | 116 | None | 94.4 | 79.0 | 275.0 | 110.0 | 52.1 | 31.09 | 101.6 | 24 |
| 75B89 | Blue River | 116 | None | 103.1 | 79.0 | 261.0 | 99.0 | 50.6 | 31.35 | 102.5 | 20 |
| 75L99 | Blue River | 116 | None | 93.6 | 80.0 | 276.0 | 115.0 | 50.9 | 34.38 | 112.4 | 3 |
| 76H50 | Blue River | 117 | None | 93.3 | 78.0 | 255.0 | 95.0 | 55.2 | 29.63 | 96.8 | 35 |
| D53VC13 | CPS/DynaGro | 113 | VT2PRO | 92.5 | 77.0 | 248.0 | 98.0 | 53.9 | 30.57 | 99.9 | 27 |
| D55GT73 | CPS/DynaGro | 115 | GT | 100.8 | 77.0 | 271.0 | 93.0 | 51.3 | 29.40 | 96.1 | 36 |
| D57VP75 | CPS/DynaGro | 117 | VT3PRO | 104.5 | 76.0 | 276.0 | 109.0 | 55.1 | 31.20 | 102.0 | 21 |
| D 59HR50 | CPS/DynaGro | 119 | RR HX | 90.1 | 79.0 | 291.0 | 105.0 | 55.7 | 32.57 | 106.4 | 11 |
| G7601 | Golden Acres | 117 | VT3P | 99.7 | 77.0 | 277.0 | 109.0 | 53.8 | 32.92 | 107.6 | 7 |
| G8551 | Golden Acres | 118 | VT3P | 97.1 | 79.0 | 289.0 | 123.0 | 46.6 | 32.72 | 106.9 | 10 |
| DKC 66-42 | Monsanto | 116 | GENSS | 101.5 | 76.0 | 264.0 | 103.0 | 53.5 | 31.80 | 103.9 | 15 |
| DKC 66-87 | Monsanto | 116 | GENVT2P | 101.0 | 76.0 | 254.0 | 99.0 | 53.4 | 30.30 | 99.0 | 30 |

Table 1. Means of stand, days to pollen shed (DTP), plant height (PHT), ear height (EHT), stalk lodging (STL), root lodging (RTL), moisture at harvest, and forage yield adjusted to 65% moisture of the State Silage Corn Performance Test at Etter, Texas in 2013 (continued).

| Hybrid | Company | RM | Trait | Stand % | DTP days | PHT cm | EHT cm | Moist % | Yield Tons/a | % of test mean | Yield Rank |
|------------------|------------------|-----|----------------|---------|----------|--------|--------|---------|--------------|----------------|------------|
| DKC 67-88 | Monsanto | 117 | GENVT3P | 100.7 | 77.0 | 276.0 | 111.0 | 48.5 | 35.21 | 115.1 | 2 |
| TMF 2H747 | Mycogen | 113 | SSX | 100.0 | 78.0 | 273.0 | 113.0 | 45.3 | 32.77 | 107.1 | 9 |
| TMF 2H918 | Mycogen | 123 | HXI RR | 88.6 | 81.0 | 313.0 | 135.0 | 61.1 | 31.47 | 102.8 | 19 |
| TMF 2L825 | Mycogen | 117 | HXI RR | 101.5 | 79.0 | 286.0 | 125.0 | 48.5 | 31.85 | 104.1 | 14 |
| TMF 2L874 | Mycogen | 118 | SSX | 102.4 | 79.0 | 296.0 | 140.0 | 57.9 | 31.14 | 101.8 | 23 |
| 1358S | Triumph | 113 | SmartStacx | 99.0 | 79.0 | 272.0 | 109.0 | 49.7 | 32.79 | 107.2 | 8 |
| 1725H | Triumph | 117 | HXI/RR | 94.9 | 76.0 | 279.0 | 110.0 | 57.7 | 32.12 | 105.0 | 13 |
| 1801H | Triumph | 118 | HXI/RR | 100.0 | 80.0 | 279.0 | 129.0 | 38.7 | 36.32 | 118.7 | 1 |
| REV 17HR73 | Terral Seed, Inc | 107 | HXI/LL/RR | 99.5 | 76.0 | 259.0 | 96.0 | 46.7 | 28.44 | 92.9 | 40 |
| REV 18BHR84 | Terral Seed, Inc | 108 | YGCB/HXI/LL/RR | 99.0 | 76.0 | 240.0 | 81.0 | 49.0 | 28.40 | 92.8 | 41 |
| REV 22BHR54 | Terral Seed, Inc | 112 | YGCB/HXI/LL/RR | 89.9 | 76.0 | 246.0 | 87.0 | 54.0 | 26.95 | 88.1 | 46 |
| REV 25BHR44 | Terral Seed, Inc | 115 | YGCB/HXI/LL/RR | 97.6 | 79.0 | 271.0 | 97.0 | 48.1 | 30.61 | 100.0 | 26 |
| REV 26BHR50 | Terral Seed, Inc | 116 | YGCB/HXI/LL/RR | 102.5 | 78.0 | 274.0 | 93.0 | 51.9 | 29.82 | 97.4 | 33 |
| REV 28HR20 | Terral Seed, Inc | 118 | HXI/LL/RR | 96.0 | 79.0 | 281.0 | 103.0 | 47.6 | 33.45 | 109.3 | 4 |
| CUBA1 x BR-1 | Texas A&M | 116 | | 97.6 | 79.0 | 298.0 | 133.0 | 57.1 | 29.79 | 97.4 | 34 |
| DK7 x SS1 | Texas A&M | 118 | | 92.2 | 79.0 | 284.0 | 119.0 | 55.0 | 26.53 | 86.7 | 47 |
| PBC1 x NS1 | Texas A&M | 116 | | 89.4 | 78.0 | 272.0 | 98.0 | 63.3 | 28.77 | 94.0 | 38 |
| S1C2W64A1 x SS1 | Texas A&M | 115 | | 86.9 | 79.0 | 271.0 | 115.0 | 54.1 | 30.13 | 98.5 | 31 |
| S1C2W64A2 x SS1 | Texas A&M | 115 | | 98.0 | 79.0 | 266.0 | 98.0 | 46.3 | 30.06 | 98.2 | 32 |
| CUBA1TEO30 x NS1 | Texas A&M | 115 | | 90.0 | 77.0 | 271.0 | 115.0 | 45.6 | 30.92 | 101.0 | 25 |
| CUBA1TEO33 x NS1 | Texas A&M | 115 | | 90.4 | 76.0 | 269.0 | 105.0 | 48.8 | 27.41 | 89.6 | 43 |
| CUBA1TEO71 x NS1 | Texas A&M | 115 | | 94.9 | 77.0 | 261.0 | 103.0 | 40.6 | 25.83 | 84.4 | 48 |
| CUBA1TEO72 x NS1 | Texas A&M | 115 | | 91.4 | 77.0 | 272.0 | 105.0 | 43.5 | 27.21 | 88.9 | 44 |
| CUBA1TEO56 x NS2 | Texas A&M | 115 | | 102.0 | 78.0 | 278.0 | 121.0 | 35.4 | 33.06 | 108.0 | 6 |
| Test Mean | | | | 96.7 | 77.9 | 271.6 | 105.9 | 51.6 | 30.6 | 100.1 | |
| CV% | | | | 7.1 | 1.5 | 4.1 | 11.6 | 7.2 | 8.16 | | |
| LSD 0.05 | | | | 11.1 | 1.9 | 18.0 | 19.9 | 6.0 | 4.05 | | |

Table 2. Forage quality of the State Silage Corn Performance Test at Etter, Texas in 2013[§].

| Hybrid | Company | CP | ADF | NDF | Lignin | NFC | Starch | TDN | IVTD24 | NDFD24 | MILK1 | MILK2 |
|-----------------|--------------|-----|------|------|--------|------|--------|------|--------|--------|--------|--------|
| 1555 PRO3 | Armor | 8.3 | 18.3 | 32.7 | 2.4 | 54.1 | 45.8 | 79.0 | 82.5 | 45.0 | 3240.0 | 3610.5 |
| 1550 PRO2 | Armor | 8.7 | 18.5 | 33.4 | 3.0 | 53.1 | 43.5 | 79.0 | 82.0 | 46.0 | 3239.0 | 3591.0 |
| 1880 PRO2 | Armor | 8.5 | 20.0 | 35.6 | 3.0 | 51.6 | 41.9 | 78.0 | 80.5 | 45.0 | 3213.0 | 3551.5 |
| BH 8732 VTTP | B-H Genetics | 8.0 | 21.4 | 37.6 | 2.8 | 49.9 | 40.4 | 78.0 | 79.5 | 45.5 | 3267.0 | 3594.5 |
| BH 8830 VTTP | B-H Genetics | 8.4 | 19.5 | 34.4 | 2.6 | 52.6 | 43.2 | 78.0 | 80.5 | 43.5 | 3213.0 | 3563.0 |
| BH 8895 VT2P | B-H Genetics | 7.7 | 19.1 | 33.5 | 2.5 | 53.6 | 45.6 | 78.0 | 82.0 | 45.0 | 3159.0 | 3528.5 |
| BH 8900 VIP3111 | B-H Genetics | 9.1 | 19.0 | 33.9 | 3.0 | 52.7 | 43.1 | 79.0 | 83.0 | 49.5 | 3248.0 | 3597.0 |
| BH 8977 RR/HX | B-H Genetics | 8.3 | 17.3 | 31.2 | 2.5 | 55.7 | 47.7 | 80.0 | 83.5 | 47.0 | 3271.0 | 3657.0 |
| BH 9029 VTTP | B-H Genetics | 8.2 | 21.2 | 37.5 | 2.7 | 49.4 | 40.8 | 78.0 | 80.0 | 47.0 | 3246.0 | 3576.5 |
| X 12111 LF | B-H Genetics | 8.7 | 22.3 | 39.1 | 3.1 | 47.4 | 37.1 | 77.0 | 79.5 | 48.0 | 3222.0 | 3522.5 |
| XP 8890 RR | B-H Genetics | 8.4 | 17.2 | 31.0 | 2.3 | 56.5 | 47.9 | 79.0 | 83.0 | 44.5 | 3217.0 | 3604.0 |
| 67H49 | Blue River | 8.7 | 18.9 | 33.4 | 3.0 | 53.4 | 43.6 | 79.0 | 81.5 | 44.5 | 3256.0 | 3608.5 |
| 70R50 | Blue River | 8.4 | 21.4 | 37.4 | 2.9 | 49.5 | 39.7 | 78.0 | 80.0 | 46.0 | 3239.0 | 3560.0 |
| 73B33 | Blue River | 8.6 | 19.2 | 33.5 | 2.9 | 52.7 | 43.9 | 80.0 | 82.0 | 47.0 | 3324.0 | 3657.5 |
| 75B89 | Blue River | 8.5 | 18.6 | 33.9 | 2.8 | 53.2 | 44.1 | 80.0 | 82.5 | 49.0 | 3317.0 | 3662.0 |
| 75L99 | Blue River | 8.3 | 21.7 | 38.6 | 2.5 | 48.0 | 38.6 | 79.0 | 80.5 | 49.5 | 3330.0 | 3638.5 |
| 76H50 | Blue River | 8.7 | 22.4 | 39.6 | 3.1 | 47.0 | 37.0 | 78.0 | 79.0 | 47.5 | 3273.0 | 3572.0 |
| D53VC13 | CPS/DynaGro | 8.0 | 20.2 | 35.9 | 2.6 | 51.5 | 42.6 | 79.0 | 81.0 | 47.0 | 3251.0 | 3596.5 |
| D55GT73 | CPS/DynaGro | 8.3 | 17.5 | 31.1 | 2.7 | 55.4 | 47.3 | 81.0 | 83.5 | 45.5 | 3309.0 | 3692.0 |
| D57VP75 | CPS/DynaGro | 8.6 | 18.1 | 32.2 | 2.5 | 54.5 | 46.8 | 80.0 | 83.0 | 46.5 | 3269.0 | 3647.5 |
| D 59HR50 | CPS/DynaGro | 8.7 | 20.6 | 36.4 | 2.8 | 50.4 | 40.3 | 78.0 | 80.5 | 46.0 | 3213.0 | 3539.5 |
| G7601 | Golden Acres | 8.3 | 17.8 | 32.6 | 2.5 | 54.4 | 45.4 | 80.0 | 82.5 | 47.0 | 3319.0 | 3686.5 |
| G8551 | Golden Acres | 7.9 | 20.6 | 35.4 | 2.9 | 52.2 | 43.4 | 77.0 | 80.5 | 44.5 | 3138.0 | 3489.5 |
| DKC 66-42 | Monsanto | 7.6 | 22.0 | 39.7 | 2.7 | 48.0 | 39.1 | 76.0 | 78.5 | 45.5 | 3133.0 | 3449.5 |
| DKC 66-87 | Monsanto | 8.3 | 17.1 | 31.2 | 2.7 | 55.9 | 47.0 | 80.0 | 83.0 | 46.0 | 3245.0 | 3625.5 |

Table 2. Forage quality of the State Silage Corn Performance Test at Etter, Texas in 2013 (continued).

| Hybrid | Company | CP | ADF | NDF | Lignin | NFC | Starch | TDN | IVTD24 | NDFD24 | MILK1 | MILK2 |
|------------------|------------------|-----|------|------|--------|------|--------|------|--------|--------|--------|--------|
| DKC 67-88 | Monsanto | 8.1 | 21.6 | 37.4 | 2.8 | 49.6 | 40.7 | 78.0 | 80.0 | 46.0 | 3211.0 | 3540.5 |
| TMF 2H747 | Mycogen | 8.1 | 19.2 | 34.3 | 2.3 | 52.7 | 44.2 | 79.0 | 82.0 | 47.5 | 3264.0 | 3621.5 |
| TMF 2H918 | Mycogen | 8.5 | 22.2 | 38.3 | 2.8 | 48.4 | 38.5 | 78.0 | 79.5 | 46.5 | 3297.0 | 3609.0 |
| TMF 2L825 | Mycogen | 7.2 | 22.6 | 40.3 | 2.7 | 46.7 | 38.7 | 76.0 | 78.5 | 46.5 | 3120.0 | 3433.5 |
| TMF 2L874 | Mycogen | 8.0 | 26.5 | 45.1 | 3.5 | 42.2 | 33.0 | 75.0 | 75.5 | 46.0 | 3129.0 | 3396.0 |
| 1358S | Triumph | 7.7 | 18.7 | 33.4 | 2.7 | 54.0 | 46.2 | 79.0 | 82.0 | 46.0 | 3193.0 | 3567.0 |
| 1725H | Triumph | 8.5 | 18.4 | 32.6 | 2.6 | 54.3 | 46.3 | 79.0 | 82.5 | 46.5 | 3201.0 | 3576.5 |
| 1801H | Triumph | 7.8 | 19.9 | 34.7 | 2.6 | 52.8 | 44.2 | 78.0 | 80.5 | 43.5 | 3165.0 | 3523.5 |
| REV 17HR73 | Terral Seed, Inc | 8.1 | 16.3 | 29.4 | 2.5 | 57.6 | 48.9 | 82.0 | 84.5 | 47.0 | 3336.0 | 3695.0 |
| REV 18BHR84 | Terral Seed, Inc | 8.4 | 15.3 | 27.8 | 2.3 | 59.0 | 50.7 | 82.0 | 85.0 | 45.5 | 3331.0 | 3742.0 |
| REV 22BHR54 | Terral Seed, Inc | 8.2 | 18.5 | 33.1 | 3.1 | 54.5 | 44.6 | 80.0 | 83.0 | 48.5 | 3319.0 | 3658.5 |
| REV 25BHR44 | Terral Seed, Inc | 8.6 | 16.3 | 28.8 | 2.4 | 58.5 | 49.7 | 80.0 | 84.0 | 44.5 | 3217.0 | 3619.5 |
| REV 26BHR50 | Terral Seed, Inc | 8.4 | 17.6 | 30.7 | 2.8 | 55.9 | 46.9 | 81.0 | 83.5 | 46.5 | 3344.0 | 3694.5 |
| REV 28HR20 | Terral Seed, Inc | 8.8 | 18.8 | 32.8 | 3.0 | 54.1 | 45.3 | 80.0 | 83.0 | 48.0 | 3295.0 | 3661.0 |
| CUBA1 x BR-1 | Texas A&M | 9.5 | 20.7 | 36.5 | 2.9 | 49.6 | 39.2 | 79.0 | 81.0 | 48.0 | 3311.0 | 3628.0 |
| DK7 x SS1 | Texas A&M | 8.7 | 22.3 | 38.3 | 3.0 | 48.0 | 39.0 | 77.0 | 79.0 | 46.0 | 3195.0 | 3511.0 |
| PBC1 x NS1 | Texas A&M | 9.0 | 23.0 | 40.5 | 2.7 | 46.0 | 34.9 | 77.0 | 79.0 | 48.5 | 3234.0 | 3516.5 |
| S1C2W64A1 x SS1 | Texas A&M | 9.3 | 19.4 | 33.1 | 3.0 | 53.2 | 42.8 | 80.0 | 82.5 | 47.0 | 3284.0 | 3631.0 |
| S1C2W64A2 x SS1 | Texas A&M | 8.8 | 20.3 | 35.3 | 3.0 | 51.2 | 41.1 | 79.0 | 81.5 | 48.5 | 3313.0 | 3646.5 |
| CUBA1TEO30 x NS1 | Texas A&M | 8.2 | 19.2 | 34.2 | 2.9 | 52.8 | 44.4 | 80.0 | 82.5 | 49.5 | 3300.0 | 3659.5 |
| CUBA1TEO33 x NS1 | Texas A&M | 8.1 | 18.6 | 33.6 | 2.3 | 53.7 | 44.5 | 80.0 | 82.5 | 48.5 | 3314.0 | 3674.0 |
| CUBA1TEO71 x NS1 | Texas A&M | 7.7 | 17.5 | 32.5 | 2.2 | 55.4 | 46.8 | 80.0 | 83.0 | 46.5 | 3302.0 | 3680.5 |
| CUBA1TEO72 x NS1 | Texas A&M | 7.7 | 20.0 | 36.1 | 2.4 | 51.8 | 42.9 | 79.0 | 81.0 | 47.5 | 3267.0 | 3614.5 |
| CUBA1TEO56 x NS2 | Texas A&M | 8.5 | 18.7 | 33.4 | 2.5 | 53.8 | 44.4 | 81.0 | 82.5 | 47.5 | 3346.0 | 3704.0 |
| Test Mean | | 8.3 | 19.6 | 34.7 | 2.7 | 52.2 | 43.1 | 78.9 | 81.5 | 46.6 | 3253.9 | 3600.5 |
| CV% | | 3.7 | 9.3 | 8.7 | 9.6 | 5.8 | 7.5 | 1.5 | 2.0 | 3.0 | 1.5 | 1.6 |
| LSD 0.05 | | 0.6 | 3.7 | 6.1 | 0.5 | 6.1 | 6.5 | 2.4 | 3.2 | 2.8 | 100.4 | 113.2 |

[§]: Forage nutritional values based on NIR analysis. CP = Crude protein, the total protein in the sample including true protein and non-protein nitrogen. ADF = Acid detergent fiber, a measure of cellulose and lignin. ADF is negatively correlated with overall digestibility. NDF = Neutral detergent fiber, a measure of hemicellulose, cellulose and lignin representing the fibrous bulk of the forage. NDF is negatively correlated with intake. Lignin = undigestible plant component and has a negative impact on cellulose digestibility. NFC = Percentage of non-fibrous carbohydrates; estimates the amount of rapidly digestible carbohydrates in a forage. Starch is primarily in the grain and later maturing hybrids have lower starch since all hybrids were harvested at the same time. IVTD24 = *In vitro* true digestibility (IVTD) after 24 hours of incubation in rumen fluid. It measures digestibility and can be used to estimate energy. A higher value of IVTD 24 hr presents a better forage quality. NDFD24 = Percentage of NDF that is digestible by *in vitro* incubation. TDN = Total digestible nutrients. It represents the sum of the digestible protein, digestible nitrogen-free extract, digestible crude fiber and 2.25x the digestible fat. MILK 1 = Estimated lbs. of milk produced per ton of dry matter. MILK 2 = Estimated lbs. of milk produced per ton of processed dry matter.

Table 3. Means of stand, days to pollen shed (DTP), plant height (PHT), ear height (EHT), stalk lodging (STL), root lodging (RTL), moisture at harvest, and forage yield adjusted to 65% moisture of the State Silage Corn Performance Test at Halfway, Texas in 2013.

| Hybrid | Company | RM | Trait | Stand % | DTP days | PHT cm | EHT cm | Moist % | Yield Tons/a | % of test mean | Yield rank |
|-----------------|------------------|-----|----------------|---------|----------|--------|--------|---------|--------------|----------------|------------|
| 1555 PRO3 | Armor | 114 | VT3PRO | 92.5 | 73.7 | 211.0 | 90.0 | 54.5 | 32.4 | 104.2 | 9 |
| 1550 PRO2 | Armor | 115 | VT2PRO | 98.8 | 73.0 | 216.0 | 89.0 | 51.1 | 30.6 | 98.5 | 26 |
| 1880 PRO2 | Armor | 117 | VT2PRO | 97.4 | 74.7 | 236.0 | 98.0 | 55.5 | 32.3 | 103.8 | 10 |
| BH 8732 VTTP | B-H Genetics | 118 | Genuity VT3P | 106.5 | 74.3 | 258.0 | 118.0 | 57.1 | 34.6 | 111.3 | 1 |
| BH 8830 VTTP | B-H Genetics | 117 | Genuity VT3P | 94.3 | 74.7 | 249.0 | 105.0 | 53.8 | 31.4 | 101.0 | 20 |
| BH 8895 VT2P | B-H Genetics | 118 | Genuity VT2P | 96.7 | 76.3 | 264.0 | 106.0 | 58.5 | 29.9 | 96.2 | 31 |
| BH 8900 VIP3111 | B-H Genetics | 118 | Viptera 3111 | 101.6 | 75.3 | 250.0 | 99.0 | 57.3 | 32.5 | 104.5 | 8 |
| BH 9029 VTTP | B-H Genetics | 119 | Genuity VT3P | 100.8 | 75.0 | 252.0 | 109.0 | 58.6 | 31.3 | 100.8 | 22 |
| X 12111 LF | B-H Genetics | 116 | N/A | 83.7 | 78.7 | 284.0 | 98.0 | 55.1 | 32.1 | 103.2 | 12 |
| XP 8910 RR | B-H Genetics | 119 | RR | 96.0 | 74.7 | 267.0 | 105.0 | 57.8 | 31.6 | 101.6 | 18 |
| X11139 RR | B-H Genetics | 119 | RR | 95.1 | 73.3 | 257.0 | 127.0 | 54.7 | 32.0 | 102.8 | 14 |
| D53VC13 | CPS/DynaGro | 113 | VT2PRO | 84.3 | 73.3 | 231.0 | 95.0 | 52.6 | 31.2 | 100.2 | 25 |
| D55GT73 | CPS/DynaGro | 115 | GT | 103.7 | 75.0 | 242.0 | 94.0 | 56.6 | 30.5 | 98.2 | 27 |
| D57VP75 | CPS/DynaGro | 117 | VT3PRO | 96.7 | 74.3 | 238.0 | 109.0 | 56.9 | 32.1 | 103.2 | 13 |
| D 59HR50 | CPS/DynaGro | 119 | RR HX | 82.3 | 76.7 | 271.0 | 108.0 | 57.2 | 32.0 | 102.8 | 15 |
| DKC 67-88 | Monsanto | 117 | GENVT3P | 100.0 | 75.0 | 250.0 | 120.0 | 57.2 | 30.4 | 97.7 | 29 |
| DKC 66-87 | Monsanto | 116 | GENVT2P | 103.3 | 73.3 | 243.0 | 85.0 | 54.1 | 29.7 | 95.4 | 34 |
| DKC 66-42 | Monsanto | 116 | GENSS | 101.2 | 75.0 | 237.0 | 106.0 | 55.2 | 33.1 | 106.3 | 6 |
| TMF 2H747 | Mycogen | 113 | SSX | 104.9 | 77.3 | 254.0 | 115.0 | 59.0 | 32.9 | 105.9 | 7 |
| TMF 2H918 | Mycogen | 123 | HXI RR | 91.1 | 78.0 | 271.0 | 118.0 | 57.9 | 31.7 | 101.9 | 17 |
| TMF 2L825 | Mycogen | 117 | HXI RR | 96.3 | 78.0 | 264.0 | 103.0 | 59.2 | 31.8 | 102.3 | 16 |
| TMF 2L874 | Mycogen | 118 | SSX | 93.5 | 79.0 | 271.0 | 133.0 | 60.9 | 30.5 | 98.0 | 28 |
| REV 17HR73 | Terral Seed, Inc | 107 | HXI/LL/RR | 105.3 | 73.0 | 241.0 | 94.0 | 49.4 | 31.3 | 100.6 | 23 |
| REV 18BHR84 | Terral Seed, Inc | 108 | YGCB/HXI/LL/RR | 99.6 | 72.7 | 225.0 | 82.0 | 50.0 | 28.0 | 90.1 | 42 |
| REV 22BHR54 | Terral Seed, Inc | 112 | YGCB/HXI/LL/RR | 99.2 | 73.0 | 232.0 | 97.0 | 50.6 | 32.2 | 103.6 | 11 |

Table 3. Means of stand, days to pollen shed (DTP), plant height (PHT), ear height (EHT), stalk lodging (STL), root lodging (RTL), moisture at harvest, and forage yield adjusted to 65% moisture of the State Silage Corn Performance Test at Halfway, Texas in 2013 (continued).

| Hybrid | Company | RM | Trait | Stand % | DTP days | PHT cm | EHT cm | Moist % | Yield Tons/a | % of test mean | Yield rank |
|------------------|------------------|-----|----------------|---------|----------|--------|--------|---------|--------------|----------------|------------|
| REV 25BHR44 | Terral Seed, Inc | 115 | YGCB/HXI/LL/RR | 102.8 | 74.0 | 250.0 | 97.0 | 56.2 | 30.0 | 96.6 | 30 |
| REV 26BHR50 | Terral Seed, Inc | 116 | YGCB/HXI/LL/RR | 101.2 | 74.3 | 231.0 | 89.0 | 55.0 | 29.8 | 95.7 | 33 |
| REV 28HR20 | Terral Seed, Inc | 118 | HXI/LL/RR | 99.6 | 77.7 | 240.0 | 89.0 | 54.5 | 31.4 | 101.0 | 21 |
| 1358S | Triumph | 113 | SmartStacx | 101.6 | 78.7 | 244.0 | 111.0 | 59.5 | 29.5 | 94.9 | 39 |
| 1725H | Triumph | 117 | HXI/RR | 98.4 | 73.7 | 246.0 | 103.0 | 59.6 | 29.9 | 96.0 | 32 |
| 1801H | Triumph | 118 | HXI/RR | 101.6 | 78.7 | 255.0 | 112.0 | 59.5 | 31.6 | 101.6 | 19 |
| CUBA1 x BR-1 | Texas A&M | 116 | | 98.0 | 77.3 | 258.0 | 118.0 | 54.3 | 29.2 | 94.0 | 40 |
| DK7 x SS1 | Texas A&M | 118 | | 80.5 | 78.3 | 261.0 | 111.0 | 55.8 | 29.5 | 94.9 | 38 |
| PBC1 x NS1 | Texas A&M | 116 | | 83.0 | 75.0 | 247.0 | 98.0 | 58.3 | 31.2 | 100.4 | 24 |
| S1C2W64A1 x SS1 | Texas A&M | 115 | | 79.7 | 77.3 | 250.0 | 98.0 | 56.6 | 29.2 | 93.9 | 41 |
| S1C2W64A2 x SS1 | Texas A&M | 115 | | 87.8 | 76.0 | 245.0 | 97.0 | 52.1 | 33.1 | 106.4 | 5 |
| CUBA1TEO30 x NS1 | Texas A&M | 115 | | 100.6 | 74.7 | 233.0 | 101.0 | 51.7 | 33.5 | 107.8 | 3 |
| CUBA1TEO33 x NS1 | Texas A&M | 115 | | 81.3 | 73.3 | 245.0 | 93.0 | 49.7 | 29.6 | 95.1 | 35 |
| CUBA1TEO71 x NS1 | Texas A&M | 115 | | 89.4 | 74.0 | 220.0 | 82.0 | 47.0 | 26.4 | 84.9 | 43 |
| CUBA1TEO72 x NS1 | Texas A&M | 115 | | 93.1 | 73.7 | 245.0 | 91.0 | 45.6 | 29.5 | 94.9 | 37 |
| CUBA1TEO56 x NS2 | Texas A&M | 115 | | 90.7 | 74.3 | 248.0 | 103.0 | 48.2 | 33.2 | 106.6 | 4 |
| Fill 1 | Fill 1 | 116 | RW/HX1/LL/RR2 | 100.7 | 76.7 | 241.0 | 99.0 | 48.9 | 33.7 | 108.4 | 2 |
| Fill 2 | Fill 2 | 116 | HXI/LL/RR2 | 102.4 | 74.3 | 252.0 | 98.0 | 50.1 | 29.5 | 95.0 | 36 |
| Test mean | | | | 95.7 | 75.3 | 247.1 | 102.2 | 54.7 | 31.1 | 100.1 | |
| CV% | | | | 6.8 | 2.0 | 5.6 | 9.1 | 4.4 | 7.2 | | |
| LSD 0.05 | | | | 10.7 | 2.5 | 22.3 | 15.0 | 3.9 | 3.7 | | |

Table 4. Forage quality of the State Silage Corn Performance Test at Halfway, Texas in 2013.

| Hybrid | Company | RM | CP | ADF | NDF | Lignin | NFC | Starch | TDN | IVTD24 | NDFD24 | MILK1 | MILK2 |
|-----------------|------------------|-----|-----|------|------|--------|------|--------|------|--------|--------|--------|--------|
| 1555 PRO3 | Armor | 114 | 9.0 | 19.0 | 34.2 | 2.4 | 52.0 | 41.1 | 81.0 | 82.7 | 49.7 | 3430.0 | 3693.0 |
| 1550 PRO2 | Armor | 115 | 8.5 | 19.0 | 34.9 | 2.5 | 52.0 | 40.6 | 81.0 | 82.0 | 49.0 | 3413.0 | 3678.0 |
| 1880 PRO2 | Armor | 117 | 8.8 | 21.0 | 36.9 | 3.0 | 49.0 | 38.7 | 79.0 | 81.0 | 48.0 | 3354.0 | 3662.0 |
| BH 8732 VTTP | B-H Genetics | 118 | 8.6 | 20.0 | 36.5 | 2.7 | 50.0 | 38.6 | 80.0 | 82.0 | 50.3 | 3379.0 | 3651.0 |
| BH 8830 VTTP | B-H Genetics | 117 | 8.6 | 20.0 | 35.9 | 2.4 | 51.0 | 40.2 | 80.0 | 81.3 | 47.7 | 3411.0 | 3687.0 |
| BH 8895 VT2P | B-H Genetics | 118 | 9.3 | 20.0 | 35.9 | 2.6 | 50.0 | 38.3 | 79.0 | 83.0 | 53.0 | 3354.0 | 3662.0 |
| BH 8900 VIP3111 | B-H Genetics | 118 | 8.3 | 22.0 | 38.5 | 2.8 | 48.0 | 37.9 | 78.0 | 80.7 | 50.3 | 3293.0 | 3600.0 |
| BH 9029 VTTP | B-H Genetics | 119 | 8.7 | 20.0 | 36.5 | 2.4 | 50.0 | 39.3 | 79.0 | 82.0 | 50.0 | 3338.0 | 3647.0 |
| X 12111 LF | B-H Genetics | 116 | 9.1 | 21.0 | 37.3 | 2.8 | 48.0 | 36.9 | 79.0 | 81.3 | 50.7 | 3350.0 | 3648.0 |
| XP 8910 RR | B-H Genetics | 119 | 8.7 | 23.0 | 40.1 | 3.0 | 46.0 | 35.4 | 77.0 | 81.0 | 52.3 | 3281.0 | 3568.0 |
| X11139 RR | B-H Genetics | 119 | 8.5 | 21.0 | 36.9 | 2.7 | 50.0 | 39.1 | 80.0 | 81.3 | 49.0 | 3397.0 | 3656.0 |
| D53VC13 | CPS/DynaGro | 113 | 8.7 | 15.0 | 27.8 | 2.3 | 59.0 | 49.3 | 83.0 | 85.3 | 47.7 | 3436.0 | 3732.0 |
| D55GT73 | CPS/DynaGro | 115 | 8.9 | 20.0 | 35.6 | 2.6 | 51.0 | 39.3 | 80.0 | 82.7 | 51.0 | 3396.0 | 3678.0 |
| D57VP75 | CPS/DynaGro | 117 | 8.9 | 20.0 | 36.4 | 2.5 | 49.0 | 38.0 | 80.0 | 82.3 | 51.3 | 3389.0 | 3669.0 |
| D 59HR50 | CPS/DynaGro | 119 | 8.4 | 19.0 | 35.6 | 2.7 | 51.0 | 41.0 | 79.0 | 83.3 | 52.0 | 3311.0 | 3608.0 |
| DKC 67-88 | Monsanto | 117 | 9.0 | 20.0 | 35.2 | 2.6 | 51.0 | 39.8 | 80.0 | 82.3 | 50.3 | 3362.0 | 3670.0 |
| DKC 66-87 | Monsanto | 116 | 8.9 | 21.0 | 37.1 | 2.7 | 49.0 | 38.2 | 79.0 | 81.7 | 50.3 | 3322.0 | 3623.0 |
| DKC 66-42 | Monsanto | 116 | 8.6 | 19.0 | 33.6 | 2.5 | 53.0 | 42.3 | 81.0 | 82.7 | 48.0 | 3411.0 | 3704.0 |
| TMF 2H747 | Mycogen | 113 | 8.5 | 19.0 | 35.3 | 2.8 | 51.0 | 41.8 | 80.0 | 82.7 | 51.3 | 3350.0 | 3664.0 |
| TMF 2H918 | Mycogen | 123 | 8.5 | 22.0 | 39.5 | 2.8 | 47.0 | 35.8 | 78.0 | 80.7 | 51.0 | 3352.0 | 3642.0 |
| TMF 2L825 | Mycogen | 117 | 8.0 | 23.0 | 40.8 | 2.7 | 46.0 | 35.4 | 78.0 | 79.0 | 48.7 | 3280.0 | 3567.0 |
| TMF 2L874 | Mycogen | 118 | 8.8 | 22.0 | 38.8 | 2.8 | 47.0 | 35.4 | 78.0 | 82.0 | 53.3 | 3348.0 | 3629.0 |
| REV 17HR73 | Terral Seed, Inc | 107 | 8.6 | 17.0 | 30.7 | 2.7 | 55.0 | 45.5 | 81.0 | 85.0 | 51.3 | 3359.0 | 3707.0 |
| REV 18BHR84 | Terral Seed, Inc | 108 | 8.9 | 18.0 | 31.5 | 2.7 | 54.0 | 44.4 | 82.0 | 85.0 | 52.0 | 3438.0 | 3716.0 |
| REV 22BHR54 | Terral Seed, Inc | 112 | 8.7 | 18.0 | 33.2 | 2.7 | 53.0 | 42.0 | 81.0 | 85.0 | 53.3 | 3404.0 | 3698.0 |

Table 4. Forage quality of the State Silage Corn Performance Test at Halfway, Texas in 2013 (continued).

| Hybrid | Company | RM | CP | ADF | NDF | Lignin | NFC | Starch | TDN | IVTD24 | NDFD24 | MILK1 | MILK2 |
|------------------|------------------|-----|-----|------|------|--------|------|--------|------|--------|--------|--------|--------|
| REV 25BHR44 | Terral Seed, Inc | 115 | 8.7 | 20.0 | 35.5 | 2.6 | 51.0 | 41.1 | 80.0 | 82.7 | 51.0 | 3315.0 | 3645.0 |
| REV 26BHR50 | Terral Seed, Inc | 116 | 9.2 | 19.0 | 33.5 | 2.6 | 52.0 | 41.5 | 81.0 | 83.3 | 50.7 | 3422.0 | 3704.0 |
| REV 28HR20 | Terral Seed, Inc | 118 | 9.2 | 21.0 | 36.5 | 2.9 | 49.0 | 38.4 | 79.0 | 82.7 | 52.7 | 3351.0 | 3640.0 |
| 1358S | Triumph | 113 | 8.7 | 21.0 | 37.8 | 2.7 | 49.0 | 38.6 | 79.0 | 82.3 | 52.7 | 3340.0 | 3633.0 |
| 1725H | Triumph | 117 | 8.6 | 19.0 | 34.6 | 2.4 | 52.0 | 41.8 | 81.0 | 83.3 | 52.0 | 3395.0 | 3687.0 |
| 1801H | Triumph | 118 | 8.1 | 23.0 | 40.9 | 3.0 | 46.0 | 35.2 | 77.0 | 79.3 | 49.3 | 3259.0 | 3544.0 |
| CUBA1 x BR-1 | Texas A&M | 116 | 9.2 | 24.0 | 41.8 | 2.9 | 44.0 | 31.8 | 77.0 | 80.3 | 53.7 | 3334.0 | 3591.0 |
| DK7 x SS1 | Texas A&M | 118 | 8.8 | 21.0 | 36.0 | 2.8 | 50.0 | 39.1 | 79.0 | 81.7 | 48.7 | 3346.0 | 3663.0 |
| PBC1 x NS1 | Texas A&M | 116 | 9.2 | 22.0 | 37.9 | 2.8 | 47.0 | 34.8 | 78.0 | 82.3 | 53.3 | 3342.0 | 3623.0 |
| S1C2W64A1 x SS1 | Texas A&M | 115 | 9.2 | 22.0 | 38.4 | 2.8 | 47.0 | 35.4 | 78.0 | 82.7 | 54.7 | 3288.0 | 3575.0 |
| S1C2W64A2 x SS1 | Texas A&M | 115 | 8.6 | 23.0 | 39.2 | 2.7 | 47.0 | 35.8 | 78.0 | 81.0 | 52.3 | 3304.0 | 3587.0 |
| CUBA1TEO30 x NS1 | Texas A&M | 115 | 8.8 | 19.0 | 33.6 | 2.6 | 52.0 | 41.3 | 81.0 | 84.7 | 54.0 | 3394.0 | 3691.0 |
| CUBA1TEO33 x NS1 | Texas A&M | 115 | 8.4 | 18.0 | 32.2 | 2.3 | 54.0 | 43.3 | 82.0 | 84.7 | 52.7 | 3434.0 | 3710.0 |
| CUBA1TEO71 x NS1 | Texas A&M | 115 | 8.1 | 16.0 | 29.8 | 2.5 | 57.0 | 47.5 | 83.0 | 85.7 | 52.7 | 3439.0 | 3729.0 |
| CUBA1TEO72 x NS1 | Texas A&M | 115 | 7.9 | 17.0 | 30.8 | 2.3 | 56.0 | 46.4 | 82.0 | 84.7 | 49.7 | 3458.0 | 3722.0 |
| CUBA1TEO56 x NS2 | Texas A&M | 115 | 8.6 | 20.0 | 35.1 | 2.5 | 51.0 | 39.7 | 80.0 | 83.7 | 53.7 | 3397.0 | 3677.0 |
| Fill 1 | Fill 1 | 116 | 8.7 | 18.0 | 32.5 | 2.7 | 53.0 | 43.0 | 81.0 | 84.0 | 50.3 | 3407.0 | 3705.0 |
| Fill 2 | Fill 2 | 116 | 8.4 | 17.0 | 31.4 | 2.6 | 55.0 | 45.0 | 82.0 | 85.3 | 53.0 | 3408.0 | 3711.0 |
| Test mean | | | 8.7 | 20.0 | 35.6 | 2.7 | 50.6 | 39.9 | 79.8 | 82.6 | 51.1 | 3367.2 | 3658.0 |
| CV% | | | 4.0 | 11.7 | 10.7 | 8.1 | 7.5 | 10.3 | 2.3 | 2.2 | 3.8 | 1.8 | 1.7 |
| LSD 0.05 | | | 0.6 | 3.8 | 6.2 | 0.4 | 6.1 | 6.7 | 3.0 | 3.0 | 3.2 | 98.3 | 97.8 |