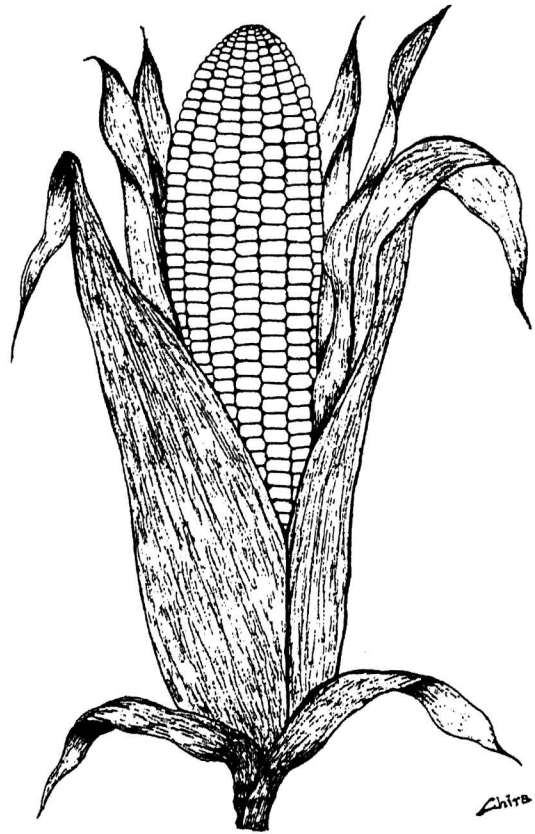


WHITE FOOD CORN

1998 Performance Tests



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http://www.agron.missouri.edu/ars_columbia/fcpt&fd.html

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INTRODUCTION

The 1998 Late White Food Corn Performance Test (LWFCPT) included 30 white hybrids and three yellow hybrid checks submitted by 12 commercial seed producers and the University of Tennessee (Table 1). Fifteen white hybrids were new to the test in 1998. Fifteen locations were planted in the agronomic evaluation. Data were received from locations in Illinois, Indiana, Kansas, Kentucky, Missouri, Tennessee, and Texas. Tests grown at Columbia and Miami, MO, and Knoxville and Union City, TN, were discarded before harvest. First and second generation European corn borer (*Ostrinia nubilalis* Hübner) data were observed at Columbia and Novelty, MO. Stewart's wilt (*Erwinia stewartii* [Smith] Dye) resistance was evaluated at Urbana, IL. Grain samples were evaluated for quality by the Illinois Crop Improvement Association, Inc.

The 1998 Early White Food Corn Performance Test (EWFCPT) included 33 white hybrids and two yellow hybrid checks. Entries were submitted by 13 commercial seed producers (Table 1). Twelve white hybrids were new to the test in 1998. Fifteen total locations were planted in Illinois, Indiana, Iowa, Ohio, Missouri, Nebraska, South Dakota, Tennessee, and Ontario, Canada. The tests planted at Lebanon, IN, and Knoxville, TN were abandoned. Data Ottawa, Ontario, Canada, were not included in the combined data analyses. First and second generation European corn borer data were observed at Columbia and Novelty, MO. Stewart's wilt resistance was evaluated at Urbana, IL. Grain samples were evaluated for quality by the Illinois Crop Improvement Association, Inc.

ENTRIES AND SEED SOURCES

Contributors of seed for the 1998 evaluations are listed in Table 1. Hybrids entered in the LWFCPT and EWFCPT are listed in Table 2 giving company-provided days relative maturity. Those entries that have an EXP as part of the hybrid name, such as DEKALB EXP868W¹, have not been released. The last hybrids in each table are yellow kernel hybrid checks.

For averages over years, entry names have been changed to current designations, so that an experimental hybrid from an earlier year is now identified as the released hybrid. Where a previously entered hybrid was entered by a new company, changes have been made to prior naming so the hybrid appears in the summaries over years (if continuously entered). Changes affecting the 1998 tests follow: Asgrow RX776W was previously tested as Asgrow XP7767W. DEKALB DK665W was released as DEKALB EXP766W. Garst 8419W was released from Garst N4309W. LG Seeds X58-605W was released as LG Seeds LG2558W. Pioneer Brand 32Y65 was released from Pioneer Brand X1186KW.

The yellow hybrid checks Pioneer Brand 3245 and 3394 were contributed by Dr. C. T. Cunnyngham, Pioneer Hi-Bred International, Windfall, IN.

¹ Mention of a trademark or proprietary product does not constitute a guarantee, warranty, or recommendation of the product by the U.S. Department of Agriculture or the University of Missouri and does not imply its approval to the exclusion of other products that may also be suitable.

LOCATIONS AND AGRONOMIC PRACTICES

Table 3 lists the locations of the LWFCPT and EWFCPT from which acceptable data were returned, together with a record of the agronomic practices. Note that tests at Scandia and Topeka, KS; Clay Center and Gothenburg, NE; and College Station and Springlake, TX, were irrigated. Partial irrigation may have been used elsewhere. Figure 1 shows map locations where tests were planted.

DATA COLLECTED

Yield

Yields were measured on a plot basis, converted to bushels per acre (56 lb bu/a), and adjusted to 15.5% moisture. Adjustment for yield for plot stand was done when the efficiency of adjustment exceeded 104% (ratio of unadjusted to adjusted error mean squares). Adjustment was done for data from Paris, IL, and Springlake, TX, for the LWFCPT and from Marion, IA; Clay Center, NE; Hoytville, OH; and Ottawa, Ontario, Canada for the EWFCPT.

Stand

Stand is expressed as a percentage of the optimum plot stand or planted stand.

Root and stalk lodging

Lodging is expressed as a percentage of the total plants for each hybrid. Generally, a plant was rated as root lodged if it leaned more than 30° from vertical and as stalk lodged if it was broken at or below the ear node. Breakage above the ear was not counted.

Ear height

Ear height was measured from the soil level to the top ear leaf collar. Heights are expressed in inches.

Days to flowering

The number of days from planting to mid-tassel or mid-silk is shown. Depending on weather conditions, the total number of days from planting to physiological maturity might be taken as 1.6 to 1.8 times the number of days to flowering.

Grain moisture

Grain moisture was measured at harvest or when the grain was weighed.

Environmental yield response (b_1) and standard deviation of fit

These statistics are shown in Table 15 for the entry means combined over all locations for the 1998 LWFCPT and in Table 37 for the EWFCPT. The yield response (b_1) is expressed as bu/a/unit increase in the environmental index (I), where the index for a location is the average performance of all hybrids

at the location. The deviation of fit is given in bu/a. The origin and use of these statistics are fully described later.

European corn borer

Leaf feeding by the first generation of the European corn borer was rated in nine classes. A score of 1 represented no feeding and 9 represented extensive damage. Plants in each plot were infested with about 160 larvae during the whorl stage of plant development. Ratings for leaf feeding were made three weeks later.

Feeding by the second generation of the European corn borer was determined by splitting stalks of five randomly infested plants per plot, counting the number of tunnels, and visually estimating the length of tunneling in inches. The minimum tunnel length associated with one hole was 1 inch. About 160 larvae were applied at flowering, and stalks were split six or more weeks later.

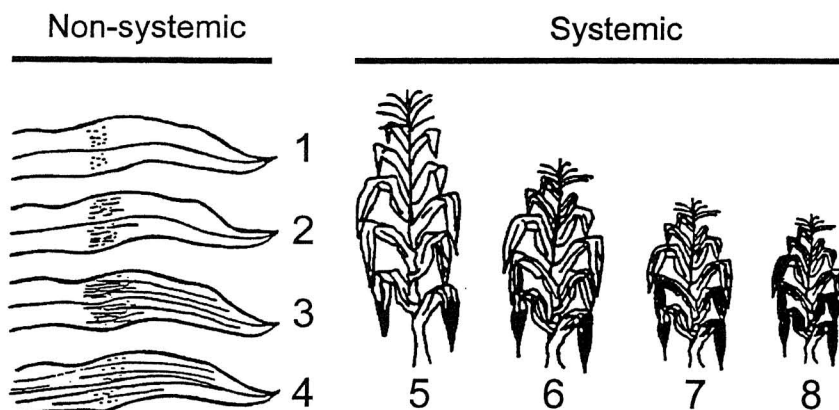
Stewart's wilt

Planting for Stewart's wilt ratings was on 17MAY at Urbana, IL. For these data, four replications of a randomized complete block design with 15 plants/plot were used. Entries from both the late and early tests and 22 other white food corn hybrids were included. Plants were inoculated by using the pinprick method on 11, 16, 23, and 29JUN98. Plants were rated for Stewart's wilt on 7JUL98 for the seedling blight phase and on 13AUG for the leaf blight phase. Rating was on a 1 to 9 scale where:

- 1 = No appreciable spread of symptoms from pinpricks.
- 2 = Limited water-soaking, chlorosis or necrosis within 3 cm of pinpricks.
- 3 = Limited spread from pinpricks; water-soaking, chlorosis or necrosis predominantly towards tip end of leaves.
- 4 = Abundant spread from pinpricks; water-soaking, chlorosis or necrosis towards both ends of leaves.
- 5 = Limited systemic infection; a few small, linear streaks of symptoms on non-inoculated leaves.
- 6 = Abundant systemic infection; 5 to 25% symptomatic leaf area of non-inoculated leaves; slight stunting.
- 7 = Abundant systemic infection; 25 to 50% symptomatic leaf area of non-inoculated leaves; stunting.
- 8 = Severe systemic infection and stunting; 50 to 90% of tissue symptomatic.
- 9 = 90 to 100% symptomatic tissue and severe necrosis; or dead plants.

The rating scale is depicted in the following diagram:

Stewart's Wilt Rating Scale



Test weight

Bulk density was determined by measuring the weight of a pint of grain and converting that weight to pounds per bushel.

100-kernel weight

Weight of 100 whole, cleaned kernels was measured in grams.

Kernel size

Kernel size was determined using a helium gas pycnometer and expressed in cc.

Thins

Thins were obtained by determining the percent of a 250-kernel sample that passed through a 20/64" round-hole sieve using 30 back-and-forth cycles on a Gamet shaker.

Density

Density was determined using a helium gas pycnometer and expressed in g/cc.

Percentage horny endosperm

The percentage horny endosperm was visually estimated using a candling light. Fifteen kernels per entry per location were evaluated.

STATISTICAL ANALYSES AND INTERPRETATIONS

Data from the LWFCPT and EWFCPT were analyzed as a three-replication, randomized-complete-block-design experiment at each location. If an observation was missing in one replication, the average of those observations in the remaining replications was used to approximate the missing observation. The least significant differences at probability level 0.05 (LSD 0.05) and coefficients of variation percentages (CV%) were calculated from the location analyses of variance (AOV). Where differences among hybrids were not significant for a character, no LSD or CV% is shown. Where data were missing or observed in only one or two replications, a footnote is used to identify those situations.

The LSD 0.05 is used to compare the performance of two specific hybrids at a time. It should not be used, however, to compare all pairs of hybrids. If the mean of hybrid "X" exceeds the mean for hybrid "Y" by the LSD 0.05 or more, the difference observed is a true difference in 19 out of 20 instances when the two hybrids are grown under conditions of this test.

The CV% relates error of measurement and the mean of the observed character. Values of the CV% for root and stalk lodging are sometimes much higher than for other characters and are generally associated with nonsignificant differences among hybrids.

Agronomic data combined from 11 locations of the 1998 LWFCPT with an appropriate LSD 0.05 for each character are shown in Table 15. Table 37 gives combined results for the 1998 EWFCPT. The combined LSD 0.05 is based on the entries \times locations interaction vs. the pooled error from the combined AOV. When a character was not observed at a location, dots show in the location analysis; the combined mean and LSD 0.05 have been adjusted accordingly.

Stability analysis gives information on the responsiveness of hybrids to changes in environment and the reliability with which these responses may be predicted. Mean performance of all hybrids at a location was the measure used to rate the environment. This environmental index (I) was then used as the independent variable in a regression analysis with the individual hybrid's performance at each location. A hybrid that is stable will have a regression coefficient (b_i) equal to 1.0, which means that an increase in the environmental index would result in an equal increase in the hybrid's yield. Regression coefficients greater than 1.0 indicate relatively better performance in good environments. Hybrids with b_i values less than 1.0 would have a relative advantage in poor environments.

Deviation from fit reflects the accuracy with which the regression line given by b_i represents probable performance. Low deviation indicates that a hybrid has greater predictability of performance.

Overall, a desirable hybrid would have a high mean yield, b_i near 1.0, and low deviation from fit. If a grower knew he or she was producing on the high side of the environments sampled, then a hybrid with b_i greater than 1.0 would be more responsive than one with $b_i = 1.0$, and would be likely to yield more if mean yield levels were equivalent. Conversely, if a grower knew he or she was producing on the low side of the environments sampled, then a hybrid with b_i less than 1.0 would be less influenced by environment than one with $b_i = 1.0$, and would be likely to yield more if mean yield levels were equivalent.

NARRATIVE SUMMARY

1998 Late White Food Corn Performance Test

Yields from individual locations ranged from 122.8 bu/a at Novelty, MO, to 178.5 bu/a at Topeka, KS. The overall average for 11 locations was 155.6 bu/a compared to 147.0 bu/a in 1997. Plot stands averaged 96.1% and all locations exceeded or equaled 90%, which is very good. Adjustment of yield for plot stand was done when the efficiency of adjustment exceeded 104% (ratio of unadjusted to adjusted error mean squares); adjustment was done for data Paris, IL, and Springlake, TX.

Root lodging was near zero (1.3% average) with the highest amounts occurring at College Station, TX, (10.15%). Stalk lodging averaged only 4.4%, and only College Station, TX (26.9%), had more than 10%.

The number of days to flowering was recorded at six locations. A 18.3-day spread was observed, ranging from 62.0 days at Lexington, KY, to 80.3 days at Champaign, IL. Low grain moisture percentages can be observed where plots were harvested and dried before shelling and weighing, however, most locations were combine harvested. Details of individual location data are in Tables 4 to 14 with the combined data in Table 15. Yield data from all 11 locations are given in Table 16.

Combined agronomic data from 11 locations (Table 15)

Three white hybrids and one yellow check hybrid yielded significantly more than the mean for all entries (155.6 bu/a): Pioneer Brand 3203W (171.9 bu/a), Pioneer Brand X1167BW (171.0 bu/a), Wilson E8051 (170.1 bu/a), and the yellow check Pioneer Brand 3245 (169.5 bu/a). Other hybrids that did not differ significantly from the top-yielding hybrid in the test included Pioneer Brand X1177PW (167.0 bu/a), Whisnand 50AW (166.4 bu/a), Garst N6278W (164.0 bu/a), Novartis N71-T7 (163.4 bu/a), Zimmerman Z64W (162.0 bu/a), Whisnand 51AW (160.4 bu/a), IFSI 95-1 (158.7 bu/a), and IFSI 98-1 (158.4 bu/a).

Four entries yielded significantly less than the mean of all entries: Garst 8419W (141.7 bu/a), DEKALB EXP868W (139.6 bu/a), Vineyard Vx4517 (139.2 bu/a), and DEKALB DK665W (136.5 bu/a). The entries \times locations interaction was significant, indicating different entry responses in different environments.

Plot stands were good and averaged 96.1%. Stand for the yellow check Pioneer Brand 3245 (99.8%) was better than the average entry. Stands for IFSI 90-1 (92.8%), DEKALB EXP868W (92.7%), and Zimmerman Z74W (92.3%) were significantly below average, however, even the lowest stands are in a range considered wholly acceptable.

Root lodging was low, averaging 1.3% and differences among hybrids over the 11 locations reporting data were not significant. Stalk lodging averaged 4.4% for all entries, and as for root lodging, hybrid differences for the 11 locations were not significant. These are some of the lowest levels of root and stalk lodging ever observed in this test.

Six white hybrids and one yellow check hybrid had ear heights significantly below the mean for all entries (45.1 inches): DEKALB EXP868W (39.9 inches), Garst 8419W (40.7 inches), DEKALB DK665W

(40.8 inches), Vineyard Vx4596 (41.1 inches), Pioneer Brand 32Y65 (41.4 inches), the yellow check Pioneer Brand 3245 (41.4 inches), and Wilson 1780W (42.3 inches). Three white hybrids' ear heights were more than one LSD above the mean for all entries. These included Garst N6278W, Whisnand 50AW, and IFSI 98-1. The range of observed ear heights is narrower than in past LWFCPTs, and no hybrid was more than two LSDs above the mean for all hybrids.

Seven white hybrids had a significantly lower number of days to flower (earlier) than the 74.8-day mean for all entries: DEKALB EXP868W (72.8 days), Garst 8419W (72.8 days), Pioneer Brand 32H39 (72.9 days), Pioneer Brand 32Y65 (73.0 days), Vineyard Vx4337 (73.2 days), Pioneer Brand X1177PW (73.3 days) and Vineyard Vx4596 (73.3 days). The following white hybrids flowered significantly later than the average hybrid: NC+ RE652W (76.2 days), Zimmerman Z64W (77.1 days), Wilson E8051 (77.2 days), Zimmerman Z62W (77.2 days), Tennessee TN 98-1 (77.4 days), and Zimmerman Z75W (77.9 days). Because the LWFCPT is grown primarily in the southern Corn Belt, some of the earlier maturity hybrids may be at a yield disadvantage in not using the full growing season.

Differences in grain moisture measured during early-season combine harvesting are reduced when averaged with moistures after prolonged field drying. Grain moistures ranged from 15.4% for the yellow check Pioneer Brand 3394 to 22.4% for IFSI 95-1, with an overall average of 19.3%. Four white hybrids and three yellow hybrid checks had grain moistures that were significantly less than the mean for all entries. Included were the yellow check Pioneer Brand 3394 (15.4%), the yellow check B73 × Mo17 (16.4%), DEKALB EXP868W (16.7%), the yellow check Pioneer Brand 3245 (17.2%), Novartis N71-T7 (17.9%), Pioneer Brand X1167BW (18.0%), and Pioneer Brand 32H39 (18.0%). Nine hybrids, including Vineyard Vx4517, Vineyard Vx4596, NC+ RE652W, Asgrow RX901W, Wilson E8051, NC+ 6989W, Tennessee TN 98-1, Zimmerman Z64W, and IFSI 95-1, had higher grain moistures than the average entry.

Two white hybrids [DEKALB EXP868W (72.8 days, 16.7%) and Pioneer Brand 32H39 (72.9 days, 18.0%)] had both number of days to flower and grain moisture that were significantly below the means for all entries. The range of days to flower and grain moistures observed indicate that seed producers are offering a range of maturities in white hybrids.

The environmental response coefficients (b_e) and standard deviations of fit are shown in the last two columns of Table 15. (A difference of ± 0.16 from 1.00 is necessary for significance. The LSD should be used when comparing coefficients of two hybrids.) Nine white hybrids had b_e s that were significantly greater than 1.00, indicating greater than average response to better environmental conditions, but poor performance in adverse environments. Nine white hybrids and the yellow check hybrids Pioneer Brand 3394 had environmental responses that were significantly less than 1.00.

Pioneer Brand X1167BW (171.0 bu/a, $b_i = 1.58$ bu/a/I), Wilson E8051 (170.1 bu/a, $b_i = 1.33$ bu/a/I), Zimmerman Z64W (162.0 bu/a, $b_i = 1.23$ bu/a/I), Pioneer Brand X1177PW (167.0 bu/a, $b_i = 1.18$ bu/a/I) had yields not differing significantly from the highest yielding entry and a b_i that was significantly greater than 1.0. These would be good selections when a favorable environment was anticipated.

Usually, low responsiveness is associated with low mean yields. Exceptions are occasionally found

that are high yielding and have a relatively low b_1 . Examples in this year's test include Whisnand 51AW (160.4 bu/a, $b_1 = 0.84$ bu/a/I) and IFSI 98-1 (158.4 bu/a, $b_1 = 0.73$ bu/a/I). This type of response would be desirable where adverse conditions were frequently encountered.

The standard deviations of fit varied for similar environmental response coefficients. For example, Zimmerman Z64W (162.0 bu/a, $b_1 = 1.23$ bu/a/I) and Vineyard Vx4337 (155.8 bu/a, $b_1 = 1.23$ bu/a/I) had standard deviations of 10.8 and 18.7 bu/a, respectively. Zimmerman Z64W would be expected to be a more predictable performer in response to varied environments than Vineyard Vx4337.

In choosing a hybrid, all agronomic factors must be considered in relation to the anticipated environment. Data from several locations are usually more reliable than data from a single location evaluated for two or three years.

European corn borer resistance data for the 1998 LWFCPT (Table 17)

First-generation leaf-feeding ratings were obtained at Columbia and Novelty, MO. Significant differences were found among entries at both locations and for the combined data. For the combined means, two hybrids were significantly better (lower rating) than the mean of all entries (2.9 rating): Novartis N71-T7 (1.3 rating) and Asgrow RX901W (2.0 rating). Ratings in the 1-to-3 range are generally considered as indicating resistance. Novartis N71-T7 is the first BT hybrid evaluated in the LWFCPT and its resistance to European corn borer leaf feeding was significantly better than the two resistant checks (Mycogen 7250 and Pioneer Brand 3184). For 1998, only Pioneer Brand 3394 (3.8 rating) was more susceptible to leaf-feeding damage than the average entry. It would be considered to have intermediate resistance to first-generation European corn borer.

Significant differences among entries were not found for second-generation data for number of tunnels or tunnel length in the combined analysis for the two locations. Levels of damage for both characters were very low averaging only 1.4 inches of tunneling overall.

Reactions to Stewart's bacterial wilt for the 1998 LWFCPT, EWFCPT, and other white food corn hybrids (Table 18)

Stewart's wilt ratings for the seedling wilt phase and the leaf blight phase were highly correlated ($r = 0.96^{**}$), so entries can be compared by means. Mean ratings (means of seedling wilt and leaf blight) ranged from 1.3 to 5.7 for all entries (including checks) and from 1.3 to 4.5 for the 63 white entries in the WFCPTs. Entries rated below 1.75 were not different from the entry with the lowest mean rating. These entries should be considered to be highly resistant to Stewart's wilt. Stewart's wilt symptoms were significantly more severe for entries with ratings of 2.2 than for the group of highly resistant entries, however, systemic infection (ratings of 4.0 and above; NC+ RE372W) occurred for only one of the 63 white entries in the WFCPTs. The Stewart's wilt resistance of most of the entries in the WFCPTs and other white corn hybrids in this test was sufficient to prevent substantial reductions in yield or grain quality due to infection by *E. stewartii*.

Kernel quality evaluation of entries in the 1998 Late White Food Corn Performance Test (Table 19)

Milling quality of entries in the 1998 LWFCPT was evaluated by the Illinois Crop Improvement Association, Inc. Target values were kernel weight of 37 g or more per 100 kernels, density equal to or exceeding 1.20 g/cc, and 90% or more horny endosperm. Significant differences among entries were found for all quality traits measured.

In 1998, the mean 100-kernel weight was 33.2 g and no entries met or exceeded the target value of 37 g/100 kernels. Low 100-kernel weights are a reflection of relatively lower yields at locations for grain sampling and a trend toward smaller, somewhat more dense kernels. Hybrids with significantly greater 100-kernel weights than the mean included the yellow check Pioneer Brand 3245 (36.8 g), Zimmerman Z74W (36.8 g), DEKALB EXP868W (36.4 g), Tennessee TN 98-1 (36.3 g), and DEKALB DK665W (36.3 g). Hybrids with 100-kernel weights significantly lower than the mean were IFSI 95-1 (30.3 g), Asgrow RX901W (30.3 g), NC+ 6989W (29.3 g), and Novartis N71-T7 (29.2 g).

All entries except the yellow check B73 × Mo17 had kernel densities greater than or equal to 1.3 g/cc. Seventeen white hybrids had densities equal to or exceeding 1.33 g/cc, which is very good.

Meeting the 90% or more horny endosperm criterion were 18 white hybrids that included Zimmerman Z74W (95%), NC+ 6989W (94%), Zimmerman Z75W (94%), the yellow check Pioneer Brand 3245 (94%), Vineyard Vx4517 (93%), IFSI 95-1 (92%), Pioneer Brand 32Y65 (92%), Asgrow RX901W (91%), IFSI 90-1 (91%), Pioneer Brand X1167BW (91%), Pioneer Brand 32H39 (91%), Vineyard Vx4596 (91%), DEKALB DK665W (90%), Garst 8419W (90%), Garst N6278W (90%), Pioneer Brand X1177PW (90%), Whisnand 51AW (90%), Wilson E8051 (90%), and Zimmerman Z64W (90%).

Twelve white hybrids and one yellow check had horny endosperm percentages ranging from 89 to 86%; and these percentages would probably all be judged acceptable to millers. The yellow check B73 × Mo17 had significantly less horny endosperm as compared to any other entry (79%).

Two-, three-, four-, and five-year mean yields and agronomic performance (Tables 20 to 23)

Data were summarized for common entries in the last two, three, four, and five years of the LWFCPT. Individual year means were averaged without weighting for the varying numbers of locations over the years when they differed. For the past five years, the number of locations with acceptable data ranged from 10 for 1995 to 13 for 1996. Approximate values of 9.9 bu/a for the two-year means, 8.0 bu/a for the three-year means, 6.7 bu/a for the four-year means, and 5.7 bu/a for the five-year means could be used to compare yields of individual entries in the respective tables.

Among the hybrids included in the 1994 to 1998 tests (five-year means), the yellow check Pioneer Brand 3245 (174.5 bu/a) and Pioneer Brand 3203W (169.8 bu/a) were better yielding than the average entry. Relatively poorer performing over this period was the yellow check B73 × Mo17 (153.7 bu/a).

For the four-year means, the yellow check Pioneer Brand 3245 (170.6 bu/a) would be judged to yield above the average, and it yielded significantly more than any other entry. Lower yielding than the average for all entries was the yellow check B73 × Mo17 (147.0 bu/a).

1998 Early White Food Corn Performance Test

Yields in the EWFCPT ranged from 141.6 bu/a at Hoytville, OH, to 207.4 bu/a at Gothenburg, NE, with an overall average for 12 locations of 174.8 bu/a, up substantially from 136.2 bu/a in 1997. Ten locations had yields averaging more than 150 bu/a. Stands averaged 96.4% overall, ranging from 87.7% at Ogden, IA, to 105.0% at Clay Center, NE. Adjustment of yield for plot stand was done when the efficiency of adjustment exceeded 104% (ratio of unadjusted to adjusted error mean squares); adjustment was done for data from Marion, IA; Clay Center, NE; Hoytville, OH; and Ottawa, Ontario, Canada.

Root lodging averaged 8.8% for 10 locations reporting data, ranging from 0.0% at Wanatah, IN; Hoytville, OH; Beresford, SD, and Ridgetown, Ontario to 68.5% at St. Joseph, MO. Stalk lodging ranged from 0.6% at St. Joseph, MO, to 8.0% at Ogden, IA, averaging only 2.8% for the 10 locations with data.

Days to flowering were recorded only at Champaign, IL; Marion, IA; and Ridgetown, Ontario, with a mean of 77.2 days. Harvest grain moistures averaged 22.0%. The Gothenburg, NE, location had 16.1% moisture at harvest, while Galesburg, IL, had 29.4% grain moisture at harvest.

Thirteen white hybrids and the yellow checks B73 × Mo17 and Pioneer Brand 3394 were grown in both the LWFCPT and EWFCPT. Further testing may define the more suitable environments for each hybrid. There will be hybrids, however, that are intermediate to the maturity zones of the two tests and will continue to be entered in both tests.

The test was also grown at Knoxville, TN (no data), and Ottawa, Ontario, Canada (Table 35), but data were not included in the combined analysis for the Corn Belt locations. Individual location data are shown in Tables 24 to 36 with the combined data in Table 37. Yield data from the 12 Corn Belt locations are given in Table 38.

Combined agronomic data from 12 Corn Belt locations (Table 37)

The average yield from 12 Corn Belt locations was 174.8 bu/a. Three white hybrids yielded significantly more than the average entry: Pioneer Brand X1127FW (204.6 bu/a), Wilson E8051 (192.3 bu/a), and Pioneer Brand X1127DW (188.7 bu/a). Pioneer Brand X1127FW was also significantly higher yielding than any other entry, except for Wilson E8051. Included among hybrids that yielded significantly lower than the average entry were Garst 8419W (160.1 bu/a), Asgrow XP7308W (156.6 bu/a), LG Seeds LG2558W (156.5 bu/a), Garst 8527W (141.5 bu/a), and NC+ RE372W (135.9 bu/a).

Differences among hybrids for stand percentage were significant. No entry, however, was significantly better than the average for all entries of 96.4%. Percentages exceeding 100 occur when a cooperator plants "X" kernels and expects a 10% loss at germination. If that loss does not occur, then values exceeding 100% happen when the analysis performed uses 90% of the number of kernels planted as the number for converting counted stands to percentage stands. IFSI 90-1 (93.3%), Asgrow XP8118W (92.3%), and Garst 8527W (85.5%) had significantly lower stand percentages than the average entry.

Differences among entries for root lodging observed at 10 locations were not significant, averaging 8.8%. Severe root lodging occurred at St. Joseph, but not elsewhere.

Significant differences among entries for stalk lodging occurred and the average stalk lodging was only 2.8%. No entry was significantly better than the mean. All entries, except Vineyard Vx4337 (5.6%), had less than or equal to 5% stalk lodging. Higher levels of stalk lodging have been the norm in the past.

Ear heights ranged from 38.2 inches for Garst 8527W to 61.6 inches for IFSI 95-2. Eight white hybrids were more than one LSD below the average of all entries: Garst 8527W (38.2 inches), Asgrow RX776W (38.6 inches), LG Seeds LG2558W (40.5 inches), Pioneer Brand X1127DW (40.9 inches), LG Seeds LG2596W (40.9 inches), DEKALB EXP868W (42.0 inches), Asgrow XP7308W (43.6 inches), and Pioneer Brand 34P93 (44.5 inches).

Ten white hybrids were 53.4 inches or more in ear height and that was significantly taller than the average entry. These included Novartis N71-T7, NC+ 5633W, Vineyard V424W, AgriGold A6680W, Whisnand 51AW, IFSI 90-1, LG Seeds NB749W, IFSI 98-2, Whisnand 50AW, and IFSI 95-2.

The numbers of days to flowering were recorded at Champaign, IL; Marion, IA; and Ridgetown, Ontario. Entries that were significantly earlier flowering than the average entry were DEKALB EXP868W (74.3 days), Garst 8527W (74.6 days), Pioneer Brand 3463W (75.1 days), Pioneer Brand X1127DW (75.3 days), LG Seeds LG2596W (75.4 days), LG Seeds LG2558W (75.6 days), and NC+ RE372W (75.6 days). Requiring 79 or more days to flowering were Vineyard V424W, Whisnand 50AW, Wilson E8051, and Whisnand 51AW. None exceeded 80 days to flower.

Eight white hybrids and one yellow check hybrid had harvest moistures significantly less than that of the average entry (22.0%). Included were Garst 8527W (19.0%), Pioneer Brand 3463W (19.1%), NC+ RE372W (19.3%), the yellow check Pioneer Brand 3394 (19.4%), DEKALB EXP868W (20.0%), Pioneer Brand 34P93 (20.0%), LG Seeds LG2558W (20.3%), Pioneer Brand X1127DW (20.5%), and Asgrow XP7308W (20.5%). Hybrids with moistures significantly greater than the mean included IFSI 90-1, Asgrow XP8118W, Diener DB 114W, Wilson 1790W, AgriGold A6680W, Vineyard V424W, IFSI 98-2, LG Seeds NB749W, Wilson 1780W, and Wilson E8051.

The environmental response coefficients (b_1) and standard deviations of fit for the EWFCPT are shown in the last two columns of Table 37. (A difference of ± 0.13 from 1.00 is necessary for significance. The LSD should be used when comparing coefficients of two hybrids.) Eight white hybrids had b_1 s that were significantly greater than 1.00, indicating greater than average response to better environmental conditions, but poor performance in adverse environments. Of these, Wilson E8051 (192.3 bu/a, $b_1 = 1.18$ bu/a/I) had a mean yield significantly greater than the average entry, and a high b_1 . These hybrids would be very responsive in good environments.

Eleven white hybrids and one yellow check hybrid had environmental responses that were significantly lower than 1.00. Usually, low response is associated with low mean yields. Hybrids can usually be found, however, that have high mean yield and hold up under adverse environments. In this test, Pioneer Brand X1127DW (188.7 bu/a, $b_1 = 0.83$ bu/a/I) typified that response. Response of such

a hybrid would be desirable where adverse conditions were frequently encountered.

The standard deviations of fit varied for similar environmental response coefficients. For example, IFSI 90-1 (179.9 bu/a, $b_1 = 0.97$ bu/a/I) and Pioneer Brand X1127FW (204.6 bu/a, $b_1 = 0.97$ bu/a/I) had standard deviations of 8.5 and 20.1 bu/a, respectively. IFSI 90-1 would be expected to be a more predictable performer in response to varied environments than Pioneer Brand X1127FW.

European corn borer susceptibility data for the 1998 EWFCPT (Table 39)

First-generation leaf-feeding ratings were obtained at Columbia and Novelty, MO. Significant differences were found among entries for both locations and in the combined analysis. In the combined analysis, Novartis N71-T7 (1.3 rating) and Wilson E8051 (2.2 rating) had significantly less damage than the average for all entries. Novartis N71-T7 is the first BT hybrid evaluated in the EWFCPT, and as in the LWFCPT, its resistance to European corn borer leaf feeding was significantly better than the two resistant checks (Mycogen 7250 and Pioneer Brand 3184) or anything else in the test. Wilson 1780W (4.2 rating) was damaged more than the average entry (3.0 rating). Most other entries (2.3 to 3.5 rating) were all in the range that is considered resistant.

Significant differences among entries were found for second-generation number of tunnels, but not for stalk tunnel length. For tunnel numbers, Novartis N71-T7 (0.1) had significantly fewer tunnels than the average entry (1.2) and the yellow check B73 × Mo17 (1.9), Garst 8527W (1.9), and Whisnand 51AW (2.0) had significantly more tunnels. Little second-generation tunneling damage occurred as no combined tunnel length mean exceeded 2.2 inches except for the susceptible check Wf9 × W182E which had 3.6 inches of tunneling.

Reactions to Stewart's bacterial wilt for the 1998 LWFCPT, EWFCPT, and other white food corn hybrids (Table 18)

See page 12 for discussion of the Stewart's wilt reactions for the EWFCPT. All white food corn entries were evaluated in a common test and results are not separated by test maturity.

Kernel quality evaluation of entries in the 1998 Early White Food Corn Performance Test (Table 40)

Milling quality of entries in the 1998 EWFCPT was evaluated by the Illinois Crop Improvement Association, Inc. Target values were a kernel weight of 37 g or more per 100 kernels, density equal to or exceeding 1.20 g/cc, and 90% or more horny endosperm. Significant differences were found among entries for all quality traits.

Two white hybrids met the 37 g/100 kernel target value: Wilson E8051 (39.2 g) and DEKALB DK665W (37.8 g). In addition to these two hybrids, IFSI 98-2 (36.8 g) and DEKALB EXP868W (36.4 g) were significantly better than the mean for all entries. Six white hybrids had 100-kernel weights significantly lower than the average hybrid: Asgrow XP8118W (30.3 g), Asgrow RX776W (30.1 g), NC+ RE372W (30.0 g), Asgrow XP7308W (29.7 g), NC+ 5633W (28.4 g), and AgriGold A6530W (27.5 g).

All entries had kernel densities greater than 1.20 g/cc. Six white hybrids had kernel densities that were significantly above that of the average hybrid (1.32 g/cc): Asgrow XP8118W (1.34 g/cc), Asgrow XP7308W (1.34 g/cc), Wilson E8051 (1.34 g/cc), Garst 8419W (1.34 g/cc), and Pioneer Brand X1127DW (1.34 g/cc).

Eleven white hybrids met the 90% or more horny endosperm criterion: Pioneer Brand 34P93 (95%), Pioneer Brand X1127DW (95%), LG Seeds LG2596W (94%), Asgrow XP7308W (94%), Pioneer Brand X1127FW (93%), Vineyard V438W (92%), Garst 8419W (92%), IFSI 98-2 (91%), DEKALB DK665W (91%), IFSI 95-2 (90%), and Pioneer Brand 32H39 (90%). This represents performance similar to 1997 when 12 hybrids met the 90% criterion. Only four white hybrids and one yellow check had less than 85% horny endosperm: DEKALB EXP868W, Novartis N71-T7, AgriGold A6530W, NC+ 5633W, and the yellow check B73 × Mo17 .

Two-, three-, four-, and five-year mean yields and agronomic performance (Tables 41 to 44)

Data were summarized for the last two, three, four, and five years of the EWFCPT. Year means were averaged without weighting for the varying numbers of locations over the years. For the past five years, the number of locations with acceptable data has ranged from six in 1994 to 12 in 1998. Although an LSD cannot be directly calculated, approximate values of 9.9 bu/a for the two-year means, 8.3 bu/a for the three-year means, 7.0 bu/a for the four-year means, and 6.5 bu/a for the five-year means can be used to compare yields of individual entries.

For the five-year means, Wilson 1780W (162.6 bu/a) yielded significantly more than the average of the other seven entries. IFSI 90-1 (160.4 bu/a), Wilson 1790W (160.1 bu/a), Vineyard V424W (157.4 bu/a), the yellow check B73 × Mo17 (156.6 bu/a), and Whisnand 51AW (155.7 bu/a) could not be statistically distinguished from Wilson 1780W. Vineyard V438W (148.6 bu/a) and Pioneer Brand 3463W (145.6 bu/a) yielded significantly less than the 155.9 bu/a average for all entries.

Results from calculating four-year means showed that only the yellow check Pioneer Brand 3394 (160.6 bu/a) yielded more than the mean for all entries (151.1 bu/a). Hybrids not differing significantly from the top yielding hybrid included Wilson 1780W (157.0 bu/a), Wilson 1790W (154.0 bu/a), and IFSI 95-2 (153.7 bu/a). Relatively lower yielding than other entries were Vineyard V438W (143.0 bu/a), and Pioneer Brand 3463W (140.1 bu/a).

Table 1. Sources of commercial white endosperm food corn hybrids entered in the 1998 Late White Food Corn Performance Test and the 1998 Early White Food Corn Performance Test.

Brand	Firm [†]	Address/telephone/FAX
Akin	Akin Seed Company	RR#1, Box 203, St. Francisville, IL 62460 Tel. 800/262-7333 FAX 618/943-7333
Asgrow	Asgrow Seed Company	4140 114 th Street, P. O. Box 7570 Urbandale, IA 50322 Tel. 800/828-9283 FAX 515/331-7140
Cargill/Vineyard	Cargill Hybrid Seeds	P. O. Box 5645, Minneapolis, MN 55440 Tel. 612/742-6725 FAX 612/742-7233
DEKALB Genetics	DEKALB Genetics Corp.	3100 Sycamore Road, DeKalb, IL 60115 Tel. 800/335-2676 FAX 815/748-3927
Diener	Diener Seed, Inc.	371 North Diener Road, Reynolds, IN 47980 Tel. 800/545-8611 FAX 219/984-5364
Garst	Garst Seed Company	2369 330 th Street, P. O. Box 500, Slater, IA 50244 Tel. 515/685-5000 FAX 515/685-5080
IFSI	Illinois Foundation Seeds, Inc.	P. O. Box 722, Champaign, IL 61824-0722 Tel. 217/485-6420 FAX 217/485-5223
LG Seeds	LG Seeds	N. Wycles Road, P. O. Box 950, Decatur, IL 62525 Tel. 800/397-5010 FAX 217/422-2194
NC+	NC+ Hybrids	3820 N. 56 th Street, Lincoln, NE 68504-0408 Tel. 402/467-2517 FAX 402/467-4217
Novartis	Novartis Seeds, Inc.	P. O. Box 959, Minneapolis, MN 55440 Tel. 612/593-7333 FAX 612/593-7801
Pioneer Brand	Pioneer Hi-Bred International	c/o Clive Holland, Product Manager, 7100 N.W. 62 nd Avenue Johnston, IA 50131-1150 Tel. 800/247-6803 FAX 515/334-6569
Whisnand	Whisnand Hybrids	1220 East State Route 133, Arcola, IL 61910 Tel. 217/268-3714 FAX 217/268-3291
Wilson	Wilson Seeds, Inc.	P. O. Box 391, Harlan, IA 51537 Tel. 712/755-3841 FAX 712/755-2394
Zimmerman	Zimmerman Hybrids, Inc.	5147 West Franklin Road Evansville, IN 47712 Tel. 812/985-2449 FAX 812/985-3309

[†] Mention of a trademark or proprietary product does not constitute a guarantee, warranty, or recommendation of the product by the U.S. Department of Agriculture or the University of Missouri and does not imply its approval to the exclusion of other products that may also be suitable.

Table 2. Hybrid entries and company-provided days relative maturity (DRM) for the 1998 LWFCPT and EWFCPT. New entries for 1998 are shown in italics.

Entry no.	Entry	DRM	Entry no.	Entry	DRM
LWFCPT					
13 companies are participating and there are 15 new entries					
New entries for the 1998 test are shown in italics					
01	<i>Asgrow RX901W</i>	120	18	<i>Pioneer Brand X1177PW</i>	117
02	DEKALB DK665W	116	19	<i>Tennessee TN 98-1</i>	115
03	<i>DEKALB EXP868W</i>	118	20	<i>Vineyard Vx4337</i>	113
04	<i>Garst 8419W</i>	113	21	<i>Vineyard Vx4517</i>	117
05	Garst 8490W	114	22	Vineyard Vx4596	118
06	<i>Garst N6278W</i>	112	23	Whisnand 50AW	111
07	IFSI 90-1	114	24	Whisnand 51AW	112
08	IFSI 95-1	118	25	Wilson 1780W	114
09	<i>IFSI 98-1</i>	115	26	<i>Wilson E8051</i>	116
10	LG Seeds NB749W	114	27	Zimmerman Z62W	113
11	NC+ 6989W	118	28	Zimmerman Z64W	115
12	<i>NC+ RE652W</i>	117	29	<i>Zimmerman Z74W</i>	114
13	<i>Novartis N71-T7†</i>	113	30	<i>Zimmerman Z75W</i>	113
14	Pioneer Brand 3203W	118	31	Yellow check B73 × Mo17	115
15	Pioneer Brand 32H39	114	32	Yellow check Pioneer Brand 3245	115
16	Pioneer Brand 32Y65	115	33	Yellow check Pioneer Brand 3394	110
17	<i>Pioneer Brand X1167BW</i>	115			
EWFCPT					
13 companies are participating and there are 12 new entries					
New entries for the 1998 test are shown in italics					
01	<i>AgriGold A6530W</i>	115	19	<i>NC+ RE372W</i>	108
02	AgriGold A6680W	117	20	<i>Novartis N71-T7†</i>	113
03	Asgrow RX776W	114	21	Pioneer Brand 3463W	108
04	<i>Asgrow XP7308W</i>	112	22	Pioneer Brand 32H39	114
05	<i>Asgrow XP8118W</i>	115	23	<i>Pioneer Brand 34P93</i>	110
06	DEKALB DK665W	116	24	<i>Pioneer Brand X1127DW</i>	111
07	<i>DEKALB EXP868W</i>	118	25	<i>Pioneer Brand X1127FW</i>	114
08	Diener DB 114W	114	26	Vineyard V424W	115
09	Garst 8419W	113	27	Vineyard V438W	114
10	Garst 8490W	114	28	<i>Vineyard Vx4337</i>	113
11	Garst 8527W	108	29	Whisnand 50AW	111
12	IFSI 90-1	114	30	Whisnand 51AW	112
13	IFSI 95-2	112	31	Wilson 1780W	114
14	<i>IFSI 98-2</i>	114	32	Wilson 1790W	113
15	LG Seeds LG2558W	111	33	<i>Wilson E8051</i>	116
16	LG Seeds LG2596W	112	34	Yellow check B73 × Mo17	115
17	LG Seeds NB749W	114	35	Yellow check Pioneer Brand 3394	110
18	NC+ 5633W	114			

† Contains the BT11 event (NK Brand YieldGard) for resistance to European Corn borer.

Table 3. Locations and agronomic conditions for yield tests.

Location	Mean yield (bu/a)	Previous crop	Fertilizer (lb/a)			Date planted	Herbicide	Insecticide	Plant density (plants/a)
			N	P ₂ O ₅	K ₂ O				
Late White Food Corn Performance Test									
Champaign, IL	151.5	Soybean	187	50	250	28APR98	Atrazine, bentazon, metolachlor	Chlorpyrifos	27,100
Paris, IL	169.8	Soybean	165	46	150	27APR98	Acetochlor, atrazine	----- [†]	27,100
Winchester, IL	169.5	Soybean	150	92	300	-----	Atrazine, metolachlor	-----	27,100
West Lafayette, IN	155.2	Soybean	180	0	0	19MAY98	Alachlor, atrazine, cyanazine	Chlorpyrifos	24,800
Scandia, KS [‡]	170.6	Soybean	200	30	0	22APR98	Acetochlor, atrazine	-----	31,200
Topeka, KS [‡]	178.5	Soybean	162	40	0	17APR98	Alachlor, atrazine	-----	24,000
Franklin, KY	148.3	Soybean	200	0	0	23APR98	Acetochlor, atrazine	Lamba-cyhalothrin	26,100
Lexington, KY	174.5	Corn	225	0	72	13MAY98	Alachlor, atrazine bentazon, glyphosate	Tefluthrin	23,870
Novelty, MO	122.8	Soybean	160	50	80	15MAY98	Acetochlor, crop oil conc.	-----	21,780
College Station, TX [‡]	123.9	Corn	144	96	48	3MAR98	Atrazine, metolachlor, nicosulfuron	Tefluthrin	30,000
Springlake, TX [‡]	146.8	Cotton	287	35	70	21APR98	Atrazine, metolachlor, trifluralin	Cyhalothrin, permethrin	27,000

Table 3. Continued.

Location	Mean yield (bu/a)	Previous crop	Fertilizer (lb/a)			Date planted	Herbicide	Insecticide	Plant density (plants/a)
			N	P ₂ O ₅	K ₂ O				
Early White Food Corn Performance Test									
Champaign, IL	157.2	Soybean	187	50	250	28APR98	Atrazine, bentazon, metolachlor	Chlorpyrifos	27,100
Galesburg, IL	165.9	Soybean	180	75	320	9MAY98	Acetochlor, atrazine, dicamba	----	27,100
Wanatah, IN	169.1	Soybean	160	0	0	12MAY98	Atrazine, metolachlor	Chlorpyrifos	24,800
Harlan, IA	183.0	Soybean	160	183	48	5MAY98	Acetochlor, atrazine	----	27,580
Marion, IA	206.4	Corn	240	180	200	10MAY98	Atrazine, bentazon, metolachlor	Chlorpyrifos, terbufos	28,000
Ogden, IA	146.1	Soybean	169	30	50	1MAY98	Atrazine, bentazon, metolachlor	----	28,500
St. Joseph, MO	158.9	Soybean	160	52	62	5MAY98	Clopyralid, metolachlor	----	26,000
Clay Center, NE [†]	177.8	Soybean	135	0	0	20APR98	Acetochlor, atrazine	----	28,000
Gothenburg, NE [†]	207.4	Corn	145	41	0	28APR98	Atrazine, benoxacor, metolachlor	Chlorpyrifos, cyfluthrin, phosphorothioate	31,600
Hoytville, OH	141.6	Soybean	260	92	48	15MAY98	Bromoxynil, flumetsulan, metolachlor, metribuzin	----	30,000
Beresford, SD	181.0	Soybean	118	0	0	6MAY98	Cyanazine, metolachlor	Tefluthrin	26,720
Ottawa, Ontario	83.9	Corn	124	40	40	8MAY98	Metolachlor, nicosulfuron, rimsulfurom	----	28,652
Ridgetown, Ontario	203.4	Wheat	190	215	113	29APR98	Dicamba, metolachlor	----	30,000

[†] Dashes indicate none used or data missing.

[‡] Irrigated location.



Fig. 1. Planted locations for the 1998 late and early white food corn performance tests.

Table 4. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Champaign, IL. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower [†] (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	82.6	93.8	0.0	18.2	.	80.0	25.3
DEKALB DK665W	2	138.0	94.8	1.0	3.0	.	80.5	24.3
<i>DEKALB EXP868W</i>	3	125.0	94.3	1.0	6.1	.	79.5	18.8
<i>Garst 8419W</i>	4	112.9	95.7	0.5	8.0	.	77.0	22.2
Garst 8490W	5	183.6 [†]	96.2	0.0	4.5	.	79.0	21.8 [†]
<i>Garst N6278W</i>	6	177.7	94.3	1.5	4.1	.	80.0	22.8
IFSI 90-1	7	140.6	90.0	0.5	0.0	.	79.5	25.4
IFSI 95-1	8	161.9	92.9	0.0	3.6	.	83.5	28.0
<i>IFSI 98-1</i>	9	173.3	93.3	0.0	0.0	.	81.0	23.6
LG Seeds NB749W	10	161.4	93.3	0.0	4.6	.	82.0	25.6
NC+ 6989W	11	165.6	92.9	4.2	1.1	.	81.0	24.6
<i>NC+ RE652W</i>	12	122.1	94.3	1.0	13.8	.	83.0	25.3
<i>Novartis N71-T7</i>	13	133.4	92.4	0.0	11.9	.	80.0	20.9
Pioneer Brand 3203W	14	181.2	96.2	0.0	2.0	.	80.5	23.9
Pioneer Brand 32H39	15	169.6	95.2	1.5	2.5	.	78.0	20.6
Pioneer Brand 32Y65	16	164.0	92.9	0.0	3.6	.	77.5	20.9
<i>Pioneer Brand X1167BW</i>	17	150.9	94.8	1.0	6.5	.	79.0	21.5
<i>Pioneer Brand X1177PW</i>	18	113.4	92.9	1.0	13.9	.	78.5	21.7
<i>Tennessee TN 98-1</i>	19	109.9	93.3	1.0	13.4	.	82.5	28.0
<i>Vineyard Vx4337</i>	20	104.2 [†]	92.9	2.0	22.0	.	77.0	22.8 [†]
<i>Vineyard Vx4517</i>	21	140.4	94.8	0.0	2.5	.	78.5	23.4
<i>Vineyard Vx4596</i>	22	136.8	95.2	0.0	2.0	.	77.0	26.0
Whisnand 50AW	23	182.2	94.8	3.6	2.0	.	80.5	22.6
Whisnand 51AW	24	173.1	91.9	0.0	3.7	.	84.0	24.1
Wilson 1780W	25	173.4	95.7	0.0	0.5	.	82.0	24.9
<i>Wilson E8051</i>	26	191.5	95.7	2.0	2.0	.	83.0	25.1
Zimmerman Z62W	27	150.9	91.9	2.0	3.1	.	82.5	23.0
Zimmerman Z64W	28	157.2	92.9	2.0	2.0	.	82.5	25.7
<i>Zimmerman Z74W</i>	29	161.7	95.2	2.0	1.0	.	77.0	24.3
<i>Zimmerman Z75W</i>	30	148.8	94.3	0.0	2.1	.	82.5	26.3
Yellow check B73 × Mo17	31	179.3	93.3	0.5	2.1	.	80.3 [‡]	20.3
Yellow check Pioneer Brand 3245	32	174.7	96.7	0.0 [†]	0.0	.	80.3 [‡]	19.4
Yellow check Pioneer Brand 3394	33	158.1	92.4	0.0	3.1	.	80.3 [‡]	17.7
Mean		151.5	94.0	0.9	5.1	.	80.3	23.4
LSD 0.05		34.5	3.3	ns	10.6		2.4	1.9
CV%		13.9	2.2		127.3		1.5	4.9

[†] Data from two replications.

[‡] Data missing from all replications; location mean used.

Table 5. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Paris, IL. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	175.4	98.1	0.0	0.0	49.7	.	23.4
DEKALB DK665W	2	137.7	106.7	0.0	0.0	42.0	.	18.0
<i>DEKALB EXP868W</i>	3	161.3	87.1	0.0	0.0	41.3	.	15.7
<i>Garst 8419W</i>	4	149.8	108.6	0.0	0.0	42.7	.	19.3
Garst 8490W	5	175.6	100.5	0.0	0.0	46.3	.	17.3
<i>Garst N6278W</i>	6	194.7	100.5	0.0	0.0	50.7	.	18.2
IFSI 90-1	7	165.9	87.6	0.0	0.0	49.3	.	18.5
IFSI 95-1	8	185.3	96.2	0.0	0.0	51.3	.	24.4
<i>IFSI 98-1</i>	9	170.5	91.4	0.0	0.0	50.7	.	22.7
LG Seeds NB749W	10	148.9	107.1	0.0	0.0	45.3	.	20.6
NC+ 6989W	11	151.2	100.5	0.0	0.0	44.0	.	26.3
<i>NC+ RE652W</i>	12	180.6	108.6	0.0	0.0	46.7	.	21.8
<i>Novartis N71-T7</i>	13	182.4	105.7	0.0	0.0	49.0	.	16.9
Pioneer Brand 3203W	14	196.1	92.9	0.0	0.0	47.0	.	23.0
Pioneer Brand 32H39	15	163.6	100.5	2.7	0.0	48.3	.	17.1
Pioneer Brand 32Y65	16	174.8	94.8	0.0	0.0	45.0	.	19.2
<i>Pioneer Brand X1167BW</i>	17	203.4	91.4	0.0	0.0	50.0	.	18.2
<i>Pioneer Brand X1177PW</i>	18	192.5	97.6	0.0	0.0	42.7	.	19.1
<i>Tennessee TN 98-1</i>	19	174.6	92.9	0.0	0.0	46.3	.	24.4
<i>Vineyard Vx4337</i>	20	185.3	92.4	0.0	0.0	43.0	.	18.2
<i>Vineyard Vx4517</i>	21	155.0	93.8	0.0	0.0	48.0	.	21.3
<i>Vineyard Vx4596</i>	22	157.5	101.4	0.0	0.0	42.0	.	23.2
Whisnand 50AW	23	184.4	103.3	0.0	0.0	52.7	.	19.0
Whisnand 51AW	24	158.1	95.7	0.0	0.0	49.7	.	19.7
Wilson 1780W	25	160.9	87.6	0.0	0.0	44.7	.	23.0
<i>Wilson E8051</i>	26	183.9	99.0	0.0	0.0	45.3	.	26.7
Zimmerman Z62W	27	155.9	104.3	0.0	0.0	48.0	.	23.3
Zimmerman Z64W	28	160.0	101.0	0.0	0.0	50.7	.	27.2
<i>Zimmerman Z74W</i>	29	174.8	93.3	0.0	0.0	51.3	.	22.8
<i>Zimmerman Z75W</i>	30	144.6	106.2	0.0	0.0	48.7	.	20.5
Yellow check B73×Mo17	31	171.6	99.5	0.0	0.0	46.3	.	15.1
Yellow check Pioneer Brand 3245	32	169.6	108.6	0.0	0.0	41.7	.	16.5
Yellow check Pioneer Brand 3394	33	158.7	108.1	0.0	0.0	44.3	.	13.8
Mean		169.8	98.9	0.1	0.0	46.8	.	20.4
LSD 0.05		27.1	11.9	ns	ns	4.9		3.3
CV%		9.8	7.4			6.4		9.9

Table 6. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Winchester, IL. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	176.7	108.1	0.0	0.0	58.7	.	22.1
DEKALB DK665W	2	137.6	104.3	2.3	14.3	55.3	.	20.5
<i>DEKALB EXP868W</i>	3	153.8	97.6	2.0	2.4	55.7	.	18.1
<i>Garst 8419W</i>	4	165.2	98.6	0.0	5.3	47.7	.	21.1
Garst 8490W	5	196.0	98.6	7.2	4.7	60.3	.	20.5
<i>Garst N6278W</i>	6	159.0	97.1	27.6	2.9	62.7	.	19.8
IFSI 90-1	7	161.9	94.3	0.0	27.9	59.3	.	20.8
IFSI 95-1	8	181.9	96.2	0.0	1.9	56.3	.	24.7
<i>IFSI 98-1</i>	9	186.4	102.4	0.5	1.4	62.0	.	21.3
LG Seeds NB749W	10	175.3	107.1	0.0	13.5	59.3	.	20.3
NC+ 6989W	11	186.4	96.2	0.0	2.1	59.0	.	23.1
<i>NC+ RE652W</i>	12	203.6	102.9	0.0	3.4	60.3	.	21.9
<i>Novartis N71-T7</i>	13	147.6	101.4	23.6	10.4	53.7	.	19.4
Pioneer Brand 3203W	14	188.2	98.6	1.4	10.3	61.3	.	20.2
Pioneer Brand 32H39	15	187.5	101.4	2.8	2.3	56.0	.	19.6
Pioneer Brand 32Y65	16	168.5	100.5	7.8	4.0	55.3	.	21.8
<i>Pioneer Brand X1167BW</i>	17	190.7	102.9	0.0	4.2	56.7	.	19.0
<i>Pioneer Brand X1177PW</i>	18	197.1	98.1	0.0	23.7	57.7	.	18.6
<i>Tennessee TN 98-1</i>	19	153.6	103.8	6.4	4.8	61.3	.	24.0
<i>Vineyard Vx4337</i>	20	178.1	96.7	9.5	20.7	54.7	.	19.9
<i>Vineyard Vx4517</i>	21	136.1	103.8	0.0	0.5	54.0	.	21.7
<i>Vineyard Vx4596</i>	22	165.4	99.5	0.0	1.4	52.0	.	22.7
Whisnand 50AW	23	159.4	101.9	0.9	5.7	62.3	.	20.9
Whisnand 51AW	24	161.8	98.1	0.5	27.4	57.7	.	21.3
Wilson 1780W	25	132.5	98.6	2.5	15.1	58.3	.	22.7
<i>Wilson E8051</i>	26	192.7	95.7	5.0	2.4	53.3	.	22.1
<i>Zimmerman Z62W</i>	27	181.4	99.5	0.0	1.4	60.7	.	20.6
<i>Zimmerman Z64W</i>	28	194.7	102.9	0.9	2.0	57.0	.	21.5
<i>Zimmerman Z74W</i>	29	171.6	98.1	2.0	0.9	65.0	.	21.6
<i>Zimmerman Z75W</i>	30	177.6	104.8	2.8	0.0	59.0	.	18.9
Yellow check B73 × Mo17	31	104.7	105.2	0.0	56.5	53.7	.	18.0
Yellow check Pioneer Brand 3245	32	198.0	106.2	6.4	1.4	52.7	.	19.5
Yellow check Pioneer Brand 3394	33	121.0	104.8	1.4	46.5	58.0	.	18.0
Mean		169.5	100.8	3.4	9.7	57.5	.	20.8
LSD 0.05		25.9	ns	ns	24.6	5.9		1.1
CV%		9.4			154.4	6.3		3.3

Table 7. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at West Lafayette, IN. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	150.3	95.5	0.0	0.0	.	.	36.1
DEKALB DK665W	2	133.0	92.3	0.0	0.0	.	.	31.4
<i>DEKALB EXP868W</i>	3	119.2	91.0	0.0	0.0	.	.	25.5
<i>Garst 8419W</i>	4	146.9	96.4	0.0	0.0	.	.	29.2
Garst 8490W	5	129.7	88.7	0.0	0.0	.	.	30.4
<i>Garst N6278W</i>	6	139.6	91.4	0.5	0.5	.	.	25.2
IFSI 90-1	7	162.9	90.5	0.0	0.0	.	.	31.7
IFSI 95-1	8	157.4	91.0	0.0	0.0	.	.	36.1
<i>IFSI 98-1</i>	9	148.6	91.0	0.0	0.0	.	.	33.1
LG Seeds NB749W	10	167.0	91.0	0.0	0.0	.	.	32.7
NC+ 6989W	11	148.7	95.9	0.0	0.0	.	.	36.4
NC+ <i>RE652W</i>	12	143.2	95.9	0.0	0.0	.	.	35.4
<i>Novartis N71-T7</i>	13	182.1	92.3	0.0	0.0	.	.	24.8
Pioneer Brand 3203W	14	152.8	95.5	0.0	0.0	.	.	31.5
Pioneer Brand 32H39	15	151.7	96.4	0.0	0.0	.	.	28.5
Pioneer Brand 32Y65	16	155.0	96.4	0.0	0.0	.	.	31.6
<i>Pioneer Brand X1167BW</i>	17	187.4	95.5	0.0	0.0	.	.	22.5
<i>Pioneer Brand X1177PW</i>	18	177.4	96.8	0.0	0.0	.	.	29.0
<i>Tennessee TN 98-1</i>	19	165.9	95.5	0.0	0.0	.	.	32.4
<i>Vineyard Vx4337</i>	20	164.1	95.9	0.0	0.0	.	.	27.2
<i>Vineyard Vx4517</i>	21	154.7	94.6	0.0	0.0	.	.	32.5
Vineyard Vx4596	22	154.7	95.5	0.0	0.0	.	.	32.1
Whisnand 50AW	23	149.5	98.2	0.0	0.0	.	.	25.6
Whisnand 51AW	24	163.5	93.2	0.0	0.0	.	.	30.1
Wilson 1780W	25	168.1	90.5	0.0	0.0	.	.	29.6
<i>Wilson E8051</i>	26	154.6	90.5	0.0	0.0	.	.	36.1
Zimmerman Z62W	27	157.6	94.1	0.0	0.0	.	.	33.8
Zimmerman Z64W	28	155.0	95.5	0.0	0.0	.	.	37.5
<i>Zimmerman Z74W</i>	29	139.9	91.0	0.0	0.0	.	.	35.5
<i>Zimmerman Z75W</i>	30	145.6	91.9	0.0	0.0	.	.	34.5
Yellow check B73 × Mo17	31	177.1	94.6	0.0	0.0	.	.	23.1
Yellow check Pioneer Brand 3245	32	158.5	95.5	0.0	0.0	.	.	27.0
Yellow check Pioneer Brand 3394	33	159.0	91.0	0.0	0.0	.	.	18.9
Mean		155.2	93.7	0.0	0.0	.	.	30.5
LSD 0.05		17.3	5.3	ns	ns			2.7
CV%		6.8	3.5					5.3

Table 8. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Scandia, KS. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	195.4	98.0	0.0	0.0	35.7	82.7	16.6
DEKALB DK665W	2	141.3	97.6	0.0	10.2	36.0	78.0	16.1
<i>DEKALB EXP868W</i>	3	144.4	98.0	0.0	1.6	36.7	77.3	15.2
<i>Garst 8419W</i>	4	146.9	98.8	0.0	2.8	35.3	78.0	16.3
Garst 8490W	5	142.0	99.2	0.0	5.7	37.7	78.3	16.4
<i>Garst N6278W</i>	6	181.6	96.4	0.0	8.2	40.3	79.0	15.9
IFSI 90-1	7	138.0	97.6	0.0	8.1	32.0	80.7	16.7
IFSI 95-1	8	170.0	97.6	0.0	4.9	32.3	82.3	17.9
<i>IFSI 98-1</i>	9	150.8	98.0	0.0	7.7	39.0	74.7	16.1
LG Seeds NB749W	10	159.9	98.8	0.0	8.1	39.7	80.7	17.1
NC+ 6989W	11	173.1	101.2	0.0	1.2	38.0	79.0	16.3
<i>NC+ RE652W</i>	12	175.2	98.4	0.0	4.1	37.7	82.7	18.3
<i>Novartis N71-T7</i>	13	184.3	99.6	0.0	4.3	37.3	78.0	15.7
Pioneer Brand 3203W	14	186.2	96.0	0.0	0.8	38.0	80.0	16.6
Pioneer Brand 32H39	15	187.3	99.6	0.0	0.4	35.3	77.3	16.5
Pioneer Brand 32Y65	16	181.0	97.6	0.0	0.0	30.7	77.3	16.5
<i>Pioneer Brand X1167BW</i>	17	199.8	95.6	0.0	0.0	42.0	78.0	17.4
<i>Pioneer Brand X1177PW</i>	18	185.3	100.4	0.0	4.8	30.3	77.0	16.5
<i>Tennessee TN 98-1</i>	19	161.2	98.4	0.0	9.7	41.7	82.7	18.5
<i>Vineyard Vx4337</i>	20	160.8	96.4	0.0	2.1	33.7	78.3	15.7
<i>Vineyard Vx4517</i>	21	176.2	98.4	0.0	0.0	39.0	82.7	18.0
Vineyard Vx4596	22	180.1	96.8	0.0	1.2	32.0	78.3	17.7
Whisnand 50AW	23	171.7	98.8	0.0	6.5	39.0	78.3	16.3
Whisnand 51AW	24	177.0	97.6	0.0	10.6	37.3	78.7	15.9
Wilson 1780W	25	189.1	98.0	0.0	9.3	37.3	77.0	15.9
<i>Wilson E8051</i>	26	193.4	99.2	0.0	0.8	38.3	82.3	17.3
Zimmerman Z62W	27	153.9	98.8	0.0	8.4	32.0	82.3	16.0
Zimmerman Z64W	28	180.9	97.6	0.0	7.0	39.7	81.7	17.5
<i>Zimmerman Z74W</i>	29	157.2	98.8	0.0	4.0	34.7	80.0	15.6
<i>Zimmerman Z75W</i>	30	155.4	99.2	0.0	3.9	38.0	82.7	15.6
Yellow check B73×Mo17	31	165.1	99.2	0.0	6.8	36.3	78.7	15.4
Yellow check Pioneer Brand 3245	32	191.2	95.6	0.0	0.0	34.0	78.0	15.5
Yellow check Pioneer Brand 3394	33	172.5	100.8	0.0	0.4	38.7	78.7	15.7
Mean		170.6	98.3	0.0	4.3	36.5	79.4	16.5
LSD 0.05		8.8	ns	ns	5.3	1.0	2.0	1.0
CV%		3.2			74.3	1.7	1.5	3.7

Table 11. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Lexington, KY. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	169.7	100.0	0.0	1.4	39.1	63.0	20.4
DEKALB DK665W	2	157.5	100.0	0.0	1.4	38.9	60.0	17.2
<i>DEKALB EXP868W</i>	3	177.3	100.0	0.0	0.9	34.8	58.0	15.8
<i>Garst 8419W</i>	4	172.2	100.0	0.0	0.0	42.6	60.0	16.8
Garst 8490W	5	164.4	100.0	0.5	1.9	43.9	61.7	15.9
<i>Garst N6278W</i>	6	185.6	100.0	0.0	1.4	52.1	62.3	17.2
IFSI 90-1	7	165.4	100.0	0.0	0.0	45.4	61.7	17.3
IFSI 95-1	8	183.6	100.0	0.0	0.9	45.5	63.7	21.0
<i>IFSI 98-1</i>	9	163.4	100.0	0.5	0.9	62.1	61.0	18.0
LG Seeds NB749W	10	171.3	100.0	0.0	0.0	47.2	62.3	18.4
NC+ 6989W	11	169.0	100.0	0.0	2.8	49.4	65.3	18.5
<i>NC+ RE652W</i>	12	169.5	100.0	0.0	0.5	48.4	63.0	18.9
<i>Novartis N71-T7</i>	13	185.5	100.0	0.0	0.0	42.4	61.0	17.9
Pioneer Brand 3203W	14	191.7	100.0	0.0	1.9	46.0	63.0	18.4
Pioneer Brand 32H39	15	178.9	100.0	0.5	1.9	41.2	60.0	17.3
Pioneer Brand 32Y65	16	190.2	99.5	0.5	2.8	40.8	59.0	17.7
<i>Pioneer Brand X1167BW</i>	17	177.9	100.0	0.0	1.4	45.0	62.3	16.8
<i>Pioneer Brand X1177PW</i>	18	188.8	100.0	0.0	1.9	43.6	61.0	15.9
<i>Tennessee TN 98-1</i>	19	174.3	100.0	0.5	1.9	49.7	63.7	18.6
<i>Vineyard Vx4337</i>	20	197.2	100.0	0.0	1.4	41.1	60.0	17.6
<i>Vineyard Vx4517</i>	21	152.3	100.0	0.0	1.4	41.9	63.0	18.8
Vineyard Vx4596	22	177.8	100.0	0.0	0.0	41.5	60.0	18.1
Whisnand 50AW	23	205.6	100.0	0.0	3.2	55.3	62.3	17.8
Whisnand 51AW	24	184.6	100.0	0.0	0.0	48.8	61.0	18.0
Wilson 1780W	25	163.6	100.0	0.0	1.9	39.1	61.7	18.9
<i>Wilson E8051</i>	26	180.5	100.0	0.0	0.5	44.3	65.3	18.5
Zimmerman Z62W	27	152.9	100.0	0.0	0.9	46.5	65.0	18.0
Zimmerman Z64W	28	180.5	100.0	0.0	0.9	48.5	64.3	19.4
<i>Zimmerman Z74W</i>	29	154.6	100.0	0.5	0.5	46.9	62.3	17.5
<i>Zimmerman Z75W</i>	30	147.6	100.0	0.0	0.0	49.4	66.0	15.9
Yellow check B73×Mo17	31	168.7	100.0	0.5	1.4	43.0	61.0	15.8
Yellow check Pioneer Brand 3245	32	185.0	100.0	0.0	1.4	43.3	61.7	16.9
Yellow check Pioneer Brand 3394	33	169.5	100.0	0.0	1.4	43.4	61.0	14.7
Mean		174.5	100.0	0.1	1.2	45.2	62.0	17.7
LSD 0.05		15.3	ns	ns	ns	9.1	1.9	1.6
CV%		5.4				12.4	1.9	5.4

Table 12. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Novelty, MO. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	114.6	94.2	0.0	0.0	45.6	.	23.4
DEKALB DK665W	2	110.7	100.0	0.0	0.0	39.3	.	20.4
<i>DEKALB EXP868W</i>	3	125.2	94.9	0.0	0.0	41.1	.	19.2
<i>Garst 8419W</i>	4	94.9	93.6	0.0	0.0	38.2	.	21.6
Garst 8490W	5	129.9	96.8	0.0	1.3	48.4	.	20.4
<i>Garst N6278W</i>	6	130.3	100.0	0.0	0.0	56.3	.	20.8
IFSI 90-1	7	109.4	92.3	0.0	0.7	48.5	.	21.2
IFSI 95-1	8	123.3	96.8	0.0	0.6	50.1	.	23.1
<i>IFSI 98-1</i>	9	144.7	94.9	0.0	0.0	54.1	.	20.7
LG Seeds NB749W	10	112.6	94.2	0.7	0.7	50.2	.	21.4
NC+ 6989W	11	136.5	95.5	0.0	0.0	49.0	.	22.2
<i>NC+ RE652W</i>	12	129.7	99.4	0.0	0.0	51.9	.	22.7
<i>Novartis N71-T7</i>	13	123.5	96.2	0.0	0.0	49.4	.	21.3
Pioneer Brand 3203W	14	117.6	92.9	0.0	0.7	48.5	.	21.1
Pioneer Brand 32H39	15	116.7	100.0	0.0	0.0	45.1	.	19.2
Pioneer Brand 32Y65	16	92.9	100.6	0.0	1.9	41.7	.	21.9
<i>Pioneer Brand X1167BW</i>	17	116.2	97.4	0.0	1.3	46.4	.	20.5
<i>Pioneer Brand X1177PW</i>	18	146.7	100.0	0.0	0.6	42.4	.	19.1
<i>Tennessee TN 98-1</i>	19	121.1	100.0	0.0	0.6	51.2	.	22.5
<i>Vineyard Vx4337</i>	20	118.2	97.4	0.0	3.3	41.7	.	21.7
<i>Vineyard Vx4517</i>	21	116.7	98.7	0.0	2.0	43.8	.	22.6
Vineyard Vx4596	22	111.8	100.0	0.0	0.0	41.2	.	22.8
Whisnand 50AW	23	147.8	98.1	0.0	0.0	55.4	.	20.2
Whisnand 51AW	24	139.2	98.7	0.0	0.7	51.6	.	20.6
Wilson 1780W	25	126.7	96.2	0.0	0.0	44.3	.	23.1
<i>Wilson E8051</i>	26	126.2	90.4	0.0	0.0	46.9	.	22.8
Zimmerman Z62W	27	126.7	100.0	0.0	0.6	49.8	.	19.4
Zimmerman Z64W	28	112.1	98.7	0.0	1.3	52.7	.	21.4
<i>Zimmerman Z74W</i>	29	101.6	95.5	0.0	0.7	53.8	.	21.1
<i>Zimmerman Z75W</i>	30	107.6	93.6	0.0	0.0	46.4	.	20.1
Yellow check B73×Mo17	31	148.7	96.2	0.0	1.3	50.2	.	20.4
Yellow check Pioneer Brand 3245	32	134.5	100.0	0.0	1.3	39.9	.	18.8
Yellow check Pioneer Brand 3394	33	138.5	100.0	0.0	0.6	44.6	.	18.0
Mean		122.8	97.1	0.0	0.6	47.3	.	21.1
LSD 0.05		27.8	ns	ns	ns	3.2		1.8
CV%		13.9				4.2		5.3

Table 13. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at College College Station, TX. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	128.3	92.5	1.7	6.9	40.0	77.7	13.0
DEKALB DK665W	2	133.6	92.1	10.4	1.3	38.0	79.3	14.2
<i>DEKALB EXP868W</i>	3	99.1	84.2	3.6	7.6	39.0	77.0	11.0
<i>Garst 8419W</i>	4	128.8	92.5	6.4	36.8	39.3	77.3	11.6
Garst 8490W	5	146.7	88.8	4.1	11.6	44.0	79.0	11.6
<i>Garst N6278W</i>	6	143.7	93.3	44.6	22.0	47.0	79.3	11.1
IFSI 90-1	7	126.0	86.7	16.1	24.8	44.7	79.0	12.0
IFSI 95-1	8	141.9	89.2	5.8	19.9	45.7	78.7	12.6
<i>IFSI 98-1</i>	9	117.4	87.9	25.2	43.3	49.3	79.0	8.9
LG Seeds NB749W	10	115.9	87.5	8.9	9.6	41.0	80.0	12.6
NC+ 6989W	11	87.4	75.8	3.2	3.4	41.0	80.0	13.0
<i>NC+ RE652W</i>	12	108.0	81.3	7.7	45.0	44.7	79.0	11.9
<i>Novartis N71-T7</i>	13	139.2	91.3	4.5	21.1	41.0	78.0	11.7
Pioneer Brand 3203W	14	155.1	90.0	12.8	23.7	44.0	81.3	11.5
Pioneer Brand 32H39	15	105.6	94.2	31.0	50.2	43.3	77.0	10.6
Pioneer Brand 32Y65	16	118.3	90.4	8.6	35.8	38.3	78.0	11.2
<i>Pioneer Brand X1167BW</i>	17	107.1	80.8	1.3	45.9	42.0	79.0	11.2
<i>Pioneer Brand X1177PW</i>	18	125.0	95.8	10.0	36.8	42.3	77.7	10.7
<i>Tennessee TN 98-1</i>	19	117.7	97.9	17.8	41.7	43.7	79.7	11.7
<i>Vineyard Vx4337</i>	20	125.6	89.2	7.3	44.5	44.0	78.3	10.9
<i>Vineyard Vx4517</i>	21	94.6	86.3	9.8	18.1	40.7	80.0	13.4
Vineyard Vx4596	22	123.2	96.3	4.8	38.1	39.0	78.7	12.1
Whisnand 50AW	23	126.4	95.0	37.5	28.3	44.7	79.7	10.8
Whisnand 51AW	24	112.1	91.7	5.5	27.2	44.0	80.0	11.2
Wilson 1780W	25	132.9	85.4	0.5	36.7	35.3	78.3	11.4
<i>Wilson E8051</i>	26	121.4	84.2	4.0	20.0	40.3	81.0	13.0
Zimmerman Z62W	27	154.3	96.3	1.7	45.6	43.3	79.3	10.7
Zimmerman Z64W	28	133.1	102.1	10.0	35.8	48.3	80.7	11.7
<i>Zimmerman Z74W</i>	29	103.0	71.3	4.9	23.2	44.7	80.0	11.8
<i>Zimmerman Z75W</i>	30	123.6	85.0	0.0	11.3	40.0	82.0	10.8
Yellow check B73×Mo17	31	131.3	95.8	9.6	28.9	43.0	77.3	10.3
Yellow check Pioneer Brand 3245	32	138.4	97.5	9.2	14.7	37.0	80.0	10.9
Yellow check Pioneer Brand 3394	33	122.6	100.8	4.2	28.9	37.7	78.3	10.3
Mean		123.9	90.0	10.1	26.9	42.1	79.1	11.6
LSD 0.05		ns	14.7	19.4	ns	5.8	1.4	1.4
CV%			10.0	117.6		8.5	1.1	7.6

Table 14. Yield and agronomic data from the 1998 Late White Food Corn Performance Test at Springlake, TX. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>Asgrow RX901W</i>	1	165.1	93.8	0.0	0.0	40.0	75.3	18.5
DEKALB DK665W	2	133.2	94.6	0.0	0.0	33.7	74.3	19.4
<i>DEKALB EXP868W</i>	3	143.6	84.2	0.0	0.0	27.3	74.3	15.4
<i>Garst 8419W</i>	4	149.3	95.5	0.0	0.0	36.7	74.7	17.5
Garst 8490W	5	165.7	90.2	0.0	0.0	41.0	75.3	18.8
<i>Garst N6278W</i>	6	123.5	100.3	0.0	0.0	48.3	77.0	16.5
IFSI 90-1	7	163.1	88.4	0.0	0.3	40.7	75.0	19.5
IFSI 95-1	8	146.0	91.1	0.0	0.0	40.0	76.0	19.6
<i>IFSI 98-1</i>	9	153.5	88.4	0.0	0.0	45.7	75.0	18.8
LG Seeds NB749W	10	173.1	102.1	0.0	0.0	45.0	75.7	19.4
NC+ 6989W	11	133.2	98.5	0.0	0.0	40.7	76.0	19.6
NC+ <i>RE652W</i>	12	175.8	100.3	0.0	0.3	45.0	76.0	20.2
<i>Novartis N71-T7</i>	13	166.8	99.4	0.0	0.0	42.0	74.7	16.7
Pioneer Brand 3203W	14	168.0	91.4	0.0	0.4	37.7	76.0	18.0
Pioneer Brand 32H39	15	139.9	96.4	0.0	0.3	38.7	75.0	16.8
Pioneer Brand 32Y65	16	132.8	99.7	0.0	0.0	36.7	75.7	16.6
<i>Pioneer Brand X1167BW</i>	17	172.1	92.9	0.0	0.0	41.0	75.7	19.2
<i>Pioneer Brand X1177PW</i>	18	159.6	95.8	0.0	0.0	38.7	75.0	18.6
<i>Tennessee TN 98-1</i>	19	121.8	96.7	0.0	0.3	46.0	78.3	20.7
<i>Vineyard Vx4337</i>	20	154.8	94.0	0.0	0.0	39.7	75.0	17.2
<i>Vineyard Vx4517</i>	21	119.0	87.8	0.0	0.0	37.7	76.0	19.2
<i>Vineyard Vx4596</i>	22	144.6	96.1	0.0	0.0	36.3	75.7	19.0
Whisnand 50AW	23	155.1	90.8	0.0	0.0	47.7	76.0	16.7
Whisnand 51AW	24	169.3	92.6	0.0	0.0	38.3	74.7	17.4
Wilson 1780W	25	152.8	97.0	0.0	0.0	37.3	75.3	18.3
<i>Wilson E8051</i>	26	157.3	95.5	0.0	0.0	44.0	76.0	18.3
Zimmerman Z62W	27	111.9	94.3	0.0	0.0	41.3	77.7	16.4
Zimmerman Z64W	28	147.7	92.3	0.0	0.3	48.0	76.7	19.2
<i>Zimmerman Z74W</i>	29	109.4	86.9	0.4	0.0	46.0	76.0	16.2
<i>Zimmerman Z75W</i>	30	124.4	99.7	0.0	0.3	42.7	77.7	15.3
Yellow check B73×Mo17	31	120.3	95.5	0.0	0.0	38.7	75.0	14.7
Yellow check Pioneer Brand 3245	32	148.8	99.7	0.0	0.3	37.3	75.0	15.6
Yellow check Pioneer Brand 3394	33	142.4	95.8	0.0	0.0	34.7	74.0	14.4
Mean		146.8	94.5	0.0	0.1	40.4	75.6	17.8
LSD 0.05		33.7	7.4	ns	ns	4.3	1.3	2.0
CV%		14.1	4.8			6.4	1.1	6.8

Table 15. Combined yield and agronomic data from 11 locations of the 1998 Late White Food Corn Performance Test. New entries for 1998 are in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)	b ₁ (bu/a/I)	Std. devn. (bu/a)
<i>Asgrow RX901W</i>	1	152.0	96.5	0.2	2.5	44.6	74.9	21.2	1.12	25.5
DEKALB DK665W	2	136.5	97.2	1.2	2.8	40.8	73.8	19.6	0.65	12.7
<i>DEKALB EXP868W</i>	3	139.6	92.7	0.6	1.7	39.9	72.8	16.7	0.84	15.0
<i>Garst 8419W</i>	4	141.7	97.5	0.6	4.8	40.7	72.8	18.9	0.92	14.5
Garst 8490W	5	157.4	94.7	1.1	2.8	45.8	74.3	18.6	0.61	21.4
<i>Garst N6278W</i>	6	164.0	97.2	6.7	3.5	50.4	75.0	18.1	0.98	18.5
IFSI 90-1	7	150.1	92.8	1.5	5.6	45.4	74.5	19.6	0.77	12.8
IFSI 95-1	8	158.7	94.3	0.5	2.9	45.9	75.9	22.4	0.94	12.1
<i>IFSI 98-1</i>	9	158.4	94.4	2.4	4.8	50.7	73.8	19.7	0.73	13.3
LG Seeds NB749W	10	156.3	97.7	0.9	3.4	46.7	75.7	20.2	1.00	13.9
NC+ 6989W	11	152.9	95.4	0.7	1.0	45.8	75.9	21.5	1.19	16.4
<i>NC+ RE652W</i>	12	156.9	97.8	0.8	6.1	47.2	76.2	21.1	1.32	20.3
<i>Novartis N71-T7</i>	13	163.4	97.1	2.6	4.3	45.0	74.0	17.9	0.86	16.9
Pioneer Brand 3203W	14	171.9	94.5	1.3	3.6	45.8	75.7	19.7	1.03	12.6
Pioneer Brand 32H39	15	157.4	97.4	3.5	5.4	43.7	72.9	18.0	1.34	10.4
Pioneer Brand 32Y65	16	154.9	96.5	1.5	4.4	41.4	73.0	19.1	1.53	9.0
<i>Pioneer Brand X1167BW</i>	17	171.0	94.8	0.2	5.4	46.3	74.2	18.0	1.58	14.0
<i>Pioneer Brand X1177PW</i>	18	167.0	97.5	1.0	7.4	43.1	73.3	18.4	1.18	18.7
<i>Tennessee TN 98-1</i>	19	148.4	97.0	2.3	6.7	48.2	77.4	21.6	1.09	16.0
<i>Vineyard Vx4337</i>	20	155.8	95.2	1.7	8.7	42.8	73.2	18.4	1.23	18.7
<i>Vineyard Vx4517</i>	21	139.2	95.3	0.9	2.3	43.9	75.7	20.6	1.13	14.1
Vineyard Vx4596	22	148.6	97.1	0.5	3.9	41.1	73.3	20.9	1.06	10.9
Whisnand 50AW	23	166.4	98.0	3.8	4.3	50.4	74.6	18.3	0.95	14.5
Whisnand 51AW	24	160.4	94.9	0.5	6.3	46.8	74.8	19.1	0.84	12.9
Wilson 1780W	25	154.4	94.4	0.3	5.8	42.3	74.4	20.1	0.67	17.4
<i>Wilson E8051</i>	26	170.1	94.3	1.0	2.4	44.8	77.2	21.4	1.33	12.0
Zimmerman Z62W	27	153.8	96.9	0.3	5.5	45.8	77.2	19.4	0.60	17.8
Zimmerman Z64W	28	162.0	97.1	1.2	4.5	48.6	77.1	21.7	1.23	10.8
<i>Zimmerman Z74W</i>	29	143.2	92.3	0.9	2.8	48.6	74.4	20.0	1.13	16.2
<i>Zimmerman Z75W</i>	30	146.2	96.9	0.3	1.8	46.6	77.9	19.1	1.03	14.1
Yellow check B73 × Mo17	31	154.0	97.0	1.0	8.9	44.4	73.9	16.4	0.46	25.5
Yellow check Pioneer Brand 3245	32	169.5	99.8	1.4	1.8	41.4	74.3	17.2	1.00	10.6
Yellow check Pioneer Brand 3394	33	151.3	98.5	0.5	7.5	43.2	73.8	15.4	0.66	15.8
Mean		155.6	96.1	1.3	4.4	45.1	74.8	19.3	1.00	15.3
LSD 0.05		13.7	2.9	ns	ns	2.7	1.4	1.3	0.16	
CV%		11.1	5.0			7.3	1.6	6.0		

Table 15. Continued.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)	b ₁ (bu/a/I)	Std. devn. (bu/a)
Location means: Champaign, IL		151.5	94.0	0.9	5.1	.	80.3	23.4		
Paris, IL		169.8	98.9	0.1	0.0	46.8	.	20.4		
Winchester, IL		169.5	100.8	3.4	9.7	57.5	.	20.8		
West Lafayette, IN		155.2	93.7	0.0	0.0	.	.	30.5		
Scandia, KS [†]		170.6	98.3	0.0	4.3	36.5	79.4	16.5		
Topeka, KS [†]		178.5	90.2	0.0	0.1	44.9	72.3	17.9		
Franklin, KY		148.3	99.6	0.0	0.5	.	.	15.1		
Lexington, KY		174.5	100.0	0.1	1.2	45.2	62.0	17.7		
Novelty, MO		122.8	97.1	0.0	0.6	47.3	.	21.1		
College Station, TX [†]		123.9	90.0	10.1	26.9	42.1	79.1	11.6		
Springlake, TX [†]		146.8	94.5	0.0	0.1	40.4	75.6	17.8		

[†] Irrigated location.

Table 16. Yield data (bu/a) from 11 locations of the 1998 Late White Food Corn Performance Test. New entries for 1998 are shown in italics.

Entry	No.	Cham- paign, IL	Paris, IL	Win- chester, IL	W. Laf- ayette, IN	Scan- dia, KS †	Top- eka, KS †	Frank- lin, KY	Lex- ington, KY	Nov- elty, MO	College Station, TX †	Spring- lake, TX †	Com- bined
<i>Asgrow RX901W</i>	1	82.6	175.4	176.7	150.3	195.4	166.4	147.2	169.7	114.6	128.3	165.1	152.0
DEKALB DK665W	2	138.0	137.7	137.6	133.0	141.3	170.0	109.2	157.5	110.7	133.6	133.2	136.5
<i>DEKALB EXP868W</i>	3	125.0	161.3	153.8	119.2	144.4	142.6	143.8	177.3	125.2	99.1	143.6	139.6
<i>Garst 8419W</i>	4	112.9	149.8	165.2	146.9	146.9	155.6	135.9	172.2	94.9	128.8	149.3	141.7
Garst 8490W	5	183.6	175.6	196.0	129.7	142.0	169.7	128.6	164.4	129.9	146.7	165.7	157.4
<i>Garst N6278W</i>	6	177.7	194.7	159.0	139.6	181.6	191.8	176.3	185.6	130.3	143.7	123.5	164.0
IFSI 90-1	7	140.6	165.9	161.9	162.9	138.0	166.4	151.8	165.4	109.4	126.0	163.1	150.1
IFSI 95-1	8	161.9	185.3	181.9	157.4	170.0	165.1	129.5	183.6	123.3	141.9	146.0	158.7
<i>IFSI 98-1</i>	9	173.3	170.5	186.4	148.6	150.8	177.6	156.8	163.4	144.7	117.4	153.5	158.4
LG Seeds NB749W	10	161.4	148.9	175.3	167.0	159.9	184.6	149.4	171.3	112.6	115.9	173.1	156.3
NC+ 6989W	11	165.6	151.2	186.4	148.7	173.1	180.7	150.2	169.0	136.5	87.4	133.2	152.9
<i>NC+ RE652W</i>	12	122.1	180.6	203.6	143.2	175.2	191.5	126.4	169.5	129.7	108.0	175.8	156.9
<i>Novartis N71-T7</i>	13	133.4	182.4	147.6	182.1	184.3	178.3	174.6	185.5	123.5	139.2	166.8	163.4
Pioneer Brand 3203W	14	181.2	196.1	188.2	152.8	186.2	186.3	168.0	191.7	117.6	155.1	168.0	171.9
Pioneer Brand 32H39	15	169.6	163.6	187.5	151.7	187.3	179.2	151.0	178.9	116.7	105.6	139.9	157.4
Pioneer Brand 32Y65	16	164.0	174.8	168.5	155.0	181.0	185.7	141.2	190.2	92.9	118.3	132.8	154.9
<i>Pioneer Brand X1167BW</i>	17	150.9	203.4	190.7	187.4	199.8	202.2	173.4	177.9	116.2	107.1	172.1	171.0
<i>Pioneer Brand X1177PW</i>	18	113.4	192.5	197.1	177.4	185.3	192.5	158.6	188.8	146.7	125.0	159.6	167.0
<i>Tennessee TN 98-1</i>	19	109.9	174.6	153.6	165.9	161.2	180.1	152.7	174.3	121.1	117.7	121.8	148.4
<i>Vineyard Vx4337</i>	20	104.2	185.3	178.1	164.1	160.8	178.6	146.9	197.2	118.2	125.6	154.8	155.8
<i>Vineyard Vx4517</i>	21	140.4	155.0	136.1	154.7	176.2	170.8	114.9	152.3	116.7	94.6	119.0	139.2
Vineyard Vx4596	22	136.8	157.5	165.4	154.7	180.1	160.3	122.5	177.8	111.8	123.2	144.6	148.6
Whisnand 50AW	23	182.2	184.4	159.4	149.5	171.7	191.2	156.6	205.6	147.8	126.4	155.1	166.4
Whisnand 51AW	24	173.1	158.1	161.8	163.5	177.0	172.6	153.5	184.6	139.2	112.1	169.3	160.4
Wilson 1780W	25	173.4	160.9	132.5	168.1	189.1	168.3	129.7	163.6	126.7	132.9	152.8	154.4
<i>Wilson E8051</i>	26	191.5	183.9	192.7	154.6	193.4	206.6	162.6	180.5	126.2	121.4	157.3	170.1
Zimmerman Z62W	27	150.9	155.9	181.4	157.6	153.9	183.2	162.9	152.9	126.7	154.3	111.9	153.8
Zimmerman Z64W	28	157.2	160.0	194.7	155.0	180.9	198.8	162.2	180.5	112.1	133.1	147.7	162.0
<i>Zimmerman Z74W</i>	29	161.7	174.8	171.6	139.9	157.2	149.3	152.2	154.6	101.6	103.0	109.4	143.2
<i>Zimmerman Z75W</i>	30	148.8	144.6	177.6	145.6	155.4	193.0	140.1	147.6	107.6	123.6	124.4	146.2

Table 16. Continued.

Entry	No.	Cham- paign, IL	Paris, IL	Win- chester, IL	W. Laf- ayette, IN	Scan- dia, KS [†]	Top- eka, KS [†]	Frank- lin, KY	Lex- ington, KY	Nov- elty, MO	College Station, TX [†]	Spring- lake, TX [†]	Com- bined
Yellow check B73 × Mo17	31	179.3	171.6	104.7	177.1	165.1	179.9	147.4	168.7	148.7	131.3	120.3	154.0
Yellow check Pioneer Brand 3245	32	174.7	169.6	198.0	158.5	191.2	190.2	176.0	185.0	134.5	138.4	148.8	169.5
Yellow check Pioneer Brand 3394	33	158.1	158.7	121.0	159.0	172.5	180.2	141.2	169.5	138.5	122.6	142.4	151.3
Mean		151.5	169.8	169.5	155.2	170.6	178.5	148.3	174.5	122.8	123.9	146.8	155.6
LSD 0.05		34.5	27.1	25.9	17.3	8.8	23.2	30.7	15.3	27.8	ns	33.7	13.7
CV%		13.9	9.8	9.4	6.8	3.2	8.0	12.7	5.4	13.9		14.1	11.1

[†] Irrigated location.

Table 17. European corn borer whorl-leaf feeding and stalk tunneling data from Columbia and Novelty, MO, for the 1998 Late White Food Corn Performance Test. New entries for 1998 are shown in italics.

Entry	No.	Columbia			Novelty			Combined		
		Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length [†] (in)	Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length (in)	Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length (in)
<i>Asgrow RX901W</i>	1	2.0	0.8	0.9	2.0	0.7	0.8	2.0	0.8	0.9
DEKALB DK665W	2	3.0 [†]	1.8	2.0	2.7	0.8	1.1	2.8	1.3	1.6
<i>DEKALB EXP868W</i>	3	3.3	2.3	2.7	3.3	2.7	2.7	3.3	2.5	2.7
<i>Garst 8419W</i>	4	4.0	2.0	2.2	2.0	2.2	2.2	3.0	2.1	2.2
<i>Garst 8490W</i>	5	3.7	1.8	2.0	2.3	1.7	1.9	3.0	1.7	1.9
<i>Garst N6278W</i>	6	3.0	1.0	1.3	3.3	0.3	0.3	3.2	0.7	0.8
IFSI 90-1	7	4.0	2.1	2.2	3.3	0.7	0.7	3.7	1.4	1.5
IFSI 95-1	8	3.0	1.0	1.0	3.0	0.9	1.1	3.0	0.9	1.0
<i>IFSI 98-1</i>	9	3.0	3.2	3.3	2.7	0.9	0.9	2.8	2.0	2.1
LG Seeds NB749W	10	3.7	3.1	3.6	3.0	1.1	1.1	3.3	2.1	2.4
NC+ 6989W	11	3.3	2.0	2.5	2.0	1.0	1.1	2.7	1.5	1.8
<i>NC+ RE652W</i>	12	2.7	0.6	0.7	2.7	1.1	1.1	2.7	0.8	0.9
<i>Novartis N71-T7[‡]</i>	13	1.0	0.3	0.3	1.7	0.0	0.0	1.3	0.2	0.2
Pioneer Brand 3203W	14	4.0	2.1	2.4	2.0	0.7	0.7	3.0	1.4	1.5
Pioneer Brand 32H39	15	3.3	1.3	1.3	2.3	0.8	0.9	2.8	1.1	1.1
Pioneer Brand 32Y65	16	3.3	1.8	2.0	2.7	1.2	1.3	3.0	1.5	1.7
<i>Pioneer Brand X1167BW</i>	17	3.3	0.5	0.6	2.0	0.8	0.8	2.7	0.7	0.7
<i>Pioneer Brand X1177PW</i>	18	3.0	1.2	1.2	2.7	0.7	0.7	2.8	0.9	0.9
<i>Tennessee TN 98-1</i>	19	3.7	2.8	2.9	3.7	1.1	1.1	3.7	2.0	2.0
<i>Vineyard Vx4337</i>	20	2.3	1.8	1.8	2.7	0.7	0.7	2.5	1.2	1.2
<i>Vineyard Vx4517</i>	21	3.0	1.2	1.3	3.0	1.2	1.4	3.0	1.2	1.4
<i>Vineyard Vx4596</i>	22	3.0 [†]	1.7	1.7	3.0	0.9	0.9	3.0	1.3	1.3
Whisnand 50AW	23	3.0	2.8	3.1	2.7	0.4	0.6	2.8	1.6	1.9
Whisnand 51AW	24	3.0	1.8	2.1	3.0	1.0	1.2	3.0	1.4	1.7
Wilson 1780W	25	4.3	2.7	2.9	3.0	0.5	0.5	3.7	1.6	1.7
<i>Wilson E8051</i>	26	3.0	0.9	0.9	2.7	0.4	0.4	2.8	0.7	0.7
Zimmerman Z62W	27	3.3	2.4	2.6	2.0	0.8	0.8	2.7	1.6	1.7
Zimmerman Z64W	28	3.0	1.2	1.3	2.7	0.5	0.5	2.8	0.9	0.9
<i>Zimmerman Z74W</i>	29	2.7	1.5	1.6	2.7	0.9	0.9	2.7	1.2	1.2
<i>Zimmerman Z75W</i>	30	2.7	1.3	1.3	2.0	0.5	0.6	2.3	0.9	1.0
Yellow check B73 × Mo17	31	4.0	1.5	1.5	3.0	1.4	1.6	3.5	1.5	1.6
Yellow check Pioneer Brand 3245	32	3.7	1.9	1.9	3.7	0.7	0.7	3.7	1.3	1.3
Yellow check Pioneer Brand 3394	33	4.3	1.7	1.8	3.3	1.3	1.5	3.8	1.5	1.6
Susceptible check (Ki3)		4.0	1.8	2.0	4.0	0.7	0.7	4.0	1.3	1.4
Susceptible check (Wf9 × W182E)		5.0	4.7	4.9	3.0	2.1	2.3	4.0	3.4	3.6
Resistant check (Mycogen 7250)		3.0	1.1	1.1	2.0	0.9	0.9	2.5	1.0	1.0
Resistant check (Pioneer Brand 3184)		3.0	0.7	0.9	2.0	0.2	0.2	2.5	0.5	0.6
Mean		3.2	1.7	1.8	2.7	0.9	1.0	2.9	1.3	1.4
LSD 0.05		1.4	ns	1.6	1.1	0.9	1.0	0.9	ns	ns
CV%		27.6		43.4	25.8	62.4	63.8	27.0		

[†] Data from two replications.

[‡] Contains the BT11 event (NK Brand YieldGard) for resistance to European Corn borer.

Table 18. Reactions to the seedling wilt and leaf blight phases of Stewart's bacterial wilt following inoculation at Urbana, IL, for entries in the Late and Early White Food Corn Performance Tests and for 22 other white food corn hybrids. New entries for 1998 are shown in italics.

Entry	No.	Mean rating (1-9)	Seedling wilt (1-9 rating)	Leaf blight (1-9 rating)
Late White Food Corn Performance Test				
<i>Asgrow RX901W</i>	1	2.2	2.3	2.1
DEKALB DK665W	2	2.0	1.8	2.3
<i>DEKALB EXP868W</i>	3	1.9	1.7	2.0
<i>Garst 8419W</i>	4	1.4	1.4	1.4
Garst 8490W	5	1.3	1.1	1.5
<i>Garst N6278W</i>	6	1.7	1.5	1.9
IFSI 90-1	7	1.4	1.2	1.7
IFSI 95-1	8	1.6	1.4	1.8
<i>IFSI 98-1</i>	9	1.5	1.2	1.8
LG Seeds NB749W	10	1.4	1.3	1.6
NC+ 6989W	11	1.5	1.3	1.7
NC+ <i>RE652W</i>	12	2.2	1.8	2.7
<i>Novartis N71-T7</i>	13	1.8	1.8	1.8
Pioneer Brand 3203W	14	2.0	1.9	2.0
Pioneer Brand 32H39	15	2.0	2.1	2.0
Pioneer Brand 32Y65	16	2.9	3.1	2.8
<i>Pioneer Brand X1167BW</i>	17	2.1	2.0	2.3
<i>Pioneer Brand X1177PW</i>	18	1.8	1.8	1.9
<i>Tennessee TN 98-1</i>	19	1.7	1.5	1.9
<i>Vineyard Vx4337</i>	20	1.8	1.3	2.3
<i>Vineyard Vx4517</i>	21	1.4	1.0	1.8
Vineyard Vx4596	22	1.6	1.5	1.7
Whisnand 50AW	23	1.7	1.5	1.9
Whisnand 51AW	24	1.3	1.2	1.4
Wilson 1780W	25	1.7	1.5	1.8
<i>Wilson E8051</i>	26	1.7	1.6	1.8
Zimmerman Z62W	27	1.5	1.3	1.7
Zimmerman Z64W	28	1.8	1.9	1.8
<i>Zimmerman Z74W</i>	29	1.6	1.6	1.7
<i>Zimmerman Z75W</i>	30	1.9	1.7	2.1
Yellow check B73 × Mo17	31	2.0	1.8	2.2
Yellow check Pioneer Brand 3245	32	2.7	2.7	2.7
Yellow check Pioneer Brand 3394	33	1.9	1.9	1.9
Mean		1.8	1.7	1.9

Table 18. Continued.

Entry	No.	Mean rating (1-9)	Seedling wilt (1-9 rating)	Leaf blight (1-9 rating)
Early White Food Corn Performance Test				
<i>AgriGold A6530W</i>	1	2.0	1.8	2.2
<i>AgriGold A6680W</i>	2	1.5	1.3	1.8
<i>Asgrow RX776W</i>	3	2.0	2.0	2.1
<i>Asgrow XP7308W</i>	4	2.8	2.9	2.7
<i>Asgrow XP8118W</i>	5	1.7	1.5	1.8
DEKALB DK665W	6	2.0	1.8	2.3
<i>DEKALB EXP868W</i>	7	1.9	1.7	2.0
Diener DB 114W	8	1.8	1.7	1.8
Garst 8419W	9	1.4	1.4	1.4
Garst 8490W	10	1.3	1.1	1.5
Garst 8527W	11	1.8	1.8	1.8
IFSI 90-1	12	1.4	1.2	1.7
IFSI 95-2	13	1.8	1.6	1.9
<i>IFSI 98-2</i>	14	1.6	1.3	1.9
LG Seeds LG2558W	15	2.8	2.7	3.0
LG Seeds LG2596W	16	2.4	2.2	2.6
LG Seeds NB749W	17	1.4	1.3	1.6
NC+ 5633W	18	1.9	1.8	2.0
<i>NC+ RE372W</i>	19	4.5	5.0	4.0
<i>Novartis N71-T7</i>	20	1.8	1.8	1.8
Pioneer Brand 3463W	21	2.0	2.1	2.0
Pioneer Brand 32H39	22	2.0	2.1	2.0
<i>Pioneer Brand 34P93</i>	23	2.4	2.6	2.2
<i>Pioneer Brand X1127DW</i>	24	1.8	1.7	1.8
<i>Pioneer Brand X1127FW</i>	25	2.4	2.3	2.6
Vineyard V424W	26	1.6	1.5	1.8
Vineyard V438W	27	1.8	1.6	2.0
<i>Vineyard Vx4337</i>	28	1.8	1.3	2.3
Whisnand 50AW	29	1.7	1.5	1.9
Whisnand 51AW	30	1.3	1.2	1.4
Wilson 1780W	31	1.7	1.5	1.8
Wilson 1790W	32	1.8	1.4	2.2
<i>Wilson E8051</i>	33	1.7	1.6	1.8
Yellow check B73 × Mo17	34	2.0	1.8	2.2
Yellow check Pioneer Brand 3394	35	1.9	1.9	1.9
Mean		1.9	1.8	2.1

Table 18. Continued.

Entry	No.	Mean rating (1-9)	Seedling wilt (1-9 rating)	Leaf blight (1-9 rating)
Other White Food Corn Hybrids				
DEKALB DK555W	1	3.1	3.2	3.0
DEKALB DK631W	2	2.6	2.6	2.7
DEKALB DK703W	3	1.5	1.2	1.8
DEKALB DK739W	4	2.1	2.0	2.2
DEKALB DK742W	5	1.5	1.4	1.7
DEKALB EXP866W	6	2.3	1.9	2.6
IFSI 98-3	7	2.0	1.9	2.1
IFSI 98-4	8	2.1	1.9	2.3
IFSI 98-5	9	1.9	1.7	2.2
Pioneer Brand 3281W	10	2.0	1.9	2.0
Pioneer Brand 3283W	11	1.5	1.4	1.7
Pioneer Brand 3287W	12	2.4	2.3	2.5
Pioneer Brand 3392W	13	2.2	2.0	2.3
Pioneer Brand 3443W	14	2.7	2.5	2.8
Trisler 4113W	15	1.3	1.1	1.6
Trisler 4211W	16	1.5	1.3	1.6
Trisler 4214W	17	1.5	1.3	1.7
Vineyard V413W	18	2.1	2.1	2.1
Vineyard V414W	19	2.0	1.7	2.3
Vineyard V448W	20	2.0	1.8	2.3
Vineyard V449W	21	2.1	1.8	2.5
Vineyard V453W	22	1.7	1.6	1.8
Mean		2.0	1.9	2.2
Checks:				
Bonus sweetcorn (resistant)		1.6	1.5	1.8
Jubilee sweetcorn (susceptible)		5.7	6.2	5.2
Overall mean		1.9	1.8	2.0
LSD 0.05		0.42	0.63	0.51
CV%		14.6	22.3	16.6

† Stewart's wilt rated on a scale from 1 to 9 where 1 = little or no spread of *E. stewartii* and 9 = plants dead from systemic infection.

Table 19. Combined grain quality data from the 1998 Late White Food Corn Performance Test grown at West Lafayette, IN; Lexington, KY; Columbia, MO; Knoxville, TN; and Springlake, TX.

Entry	No.	Test weight (lb/bu)	100-kernel weight (g)	Kernel size (cc)	Thins [†] (%)	Kernel density (g/cc)	Horny endosp. (%)
<i>Asgrow RX901W</i>	1	63.3	30.3	0.23	42.3	1.33	91
DEKALB DK665W	2	63.4	36.3	0.27	15.8	1.33	90
<i>DEKALB EXP868W</i>	3	59.6	36.4	0.28	8.4	1.30	86
<i>Garst 8419W</i>	4	63.7	34.7	0.26	21.9	1.33	90
<i>Garst 8490W</i>	5	61.3	32.3	0.25	31.7	1.30	88
<i>Garst N6278W</i>	6	62.3	30.5	0.23	35.2	1.31	90
IFSI 90-1	7	63.3	33.1	0.25	23.1	1.33	91
IFSI 95-1	8	62.9	30.3	0.23	36.4	1.34	92
<i>IFSI 98-1</i>	9	61.8	34.2	0.26	16.9	1.32	88
LG Seeds NB749W	10	62.7	31.1	0.23	32.3	1.32	88
NC+ 6989W	11	63.4	29.3	0.22	33.0	1.34	94
<i>NC+ RE652W</i>	12	61.7	33.8	0.25	21.5	1.33	88
<i>Novartis N71-T7</i>	13	62.2	29.2	0.22	45.1	1.32	87
Pioneer Brand 3203W	14	60.7	33.8	0.26	19.0	1.30	89
Pioneer Brand 32H39	15	62.1	30.9	0.23	38.8	1.33	91
Pioneer Brand 32Y65	16	62.1	32.7	0.25	33.7	1.32	92
<i>Pioneer Brand X1167BW</i>	17	62.3	35.3	0.26	17.3	1.33	91
<i>Pioneer Brand X1177PW</i>	18	62.0	32.7	0.25	20.6	1.33	90
<i>Tennessee TN 98-1</i>	19	60.0	36.3	0.28	6.9	1.30	86
<i>Vineyard Vx4337</i>	20	61.2	33.5	0.26	53.7	1.31	87
<i>Vineyard Vx4517</i>	21	62.8	32.2	0.24	39.2	1.33	93
<i>Vineyard Vx4596</i>	22	63.4	34.2	0.26	23.4	1.33	91
Whisnand 50AW	23	62.7	32.5	0.24	28.4	1.33	89
Whisnand 51AW	24	63.3	32.5	0.24	27.5	1.34	90
Wilson 1780W	25	60.8	30.6	0.24	17.0	1.30	86
<i>Wilson E8051</i>	26	60.9	35.3	0.27	6.3	1.33	90
Zimmerman Z62W	27	60.8	34.9	0.26	8.4	1.32	89
Zimmerman Z64W	28	60.1	33.0	0.25	14.7	1.32	90
<i>Zimmerman Z74W</i>	29	63.0	36.8	0.28	11.9	1.34	95
<i>Zimmerman Z75W</i>	30	60.6	34.0	0.26	14.8	1.30	94
Yellow check B73×Mo17	31	58.8	32.0	0.25	21.0	1.27	79
Yellow check Pioneer Brand 3245	32	62.3	36.8	0.27	21.9	1.33	94
Yellow check Pioneer Brand 3394	33	59.9	35.1	0.27	19.4	1.30	86
Mean		61.9	33.2	0.25	24.5	1.32	90
LSD 0.05		1.1	2.9	0.02	11.6	0.02	3.5
CV%		1.4	6.9	6.7	37.5	1.0	3.1

[†] Percent of a 250-kernel sample passing through a 20/64" round-hole sieve.

Table 20. Yield and agronomic data from common entries in the 1997-1998 Late White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
DEKALB DK665W	2	136.8	96.5	1.3	2.7	41.7	77.2	19.6
Garst 8490W	2	155.9	93.8	0.9	4.2	47.2	77.3	18.7
IFSI 90-1	2	153.6	93.5	1.0	6.1	49.4	77.5	19.5
IFSI 95-1	2	158.1	94.7	0.4	4.4	47.9	79.1	22.5
LG Seeds NB749W	2	149.6	96.8	1.2	4.2	48.5	78.4	20.3
Pioneer Brand 3203W	2	162.3	95.0	1.5	3.7	46.0	79.2	20.1
Pioneer Brand 32H39	2	163.2	96.3	2.8	3.5	44.6	76.3	18.5
Pioneer Brand 32Y65	2	154.4	97.4	1.7	4.0	44.6	76.4	19.5
Vineyard Vx4596	2	150.9	97.0	0.3	3.7	44.0	76.9	21.2
Whisnand 50AW	2	160.7	96.6	3.1	4.0	53.0	77.9	18.6
Whisnand 51AW	2	155.5	95.4	1.2	5.4	49.7	78.0	19.4
Zimmerman Z62W	2	156.0	95.9	0.5	3.5	48.3	79.8	19.3
Zimmerman Z64W	2	157.3	96.4	1.2	3.9	50.3	79.9	21.9
Yellow check B73×Mo17	2	149.4	96.9	1.6	8.2	47.6	77.2	17.2
Yellow check Pioneer Brand 3245	2	170.0	98.1	1.4	3.5	42.7	77.9	17.9
Yellow check Pioneer Brand 3394	2	159.6	98.1	0.5	4.8	45.0	76.6	15.9
Mean		155.8	96.1	1.3	4.3	46.9	77.8	19.4

Table 21. Yield and agronomic data from common entries in the 1996-1998 Late White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
IFSI 90-1	3	158.8	94.8	0.8	7.4	49.5	76.1	19.4
IFSI 95-1	3	159.5	95.0	0.4	5.8	47.1	77.3	22.3
LG Seeds NB749W	3	154.0	97.5	0.8	6.7	47.8	77.1	20.1
Pioneer Brand 3203W	3	167.1	96.6	1.0	6.2	45.8	77.7	20.2
Pioneer Brand 32H39	3	167.6	97.2	2.4	5.3	44.2	74.4	18.6
Whisnand 51AW	3	156.5	95.7	0.9	6.8	49.3	76.5	19.3
Zimmerman Z62W	3	161.1	96.3	0.3	4.9	47.6	78.1	19.1
Zimmerman Z64W	3	161.1	97.1	1.0	5.3	49.9	78.2	21.4
Yellow check B73 × Mo17	3	150.6	95.8	1.2	8.3	47.0	75.5	17.5
Yellow check Pioneer Brand 3245	3	174.1	97.8	1.0	5.1	42.3	76.6	18.0
Yellow check Pioneer Brand 3394	3	162.4	98.0	0.5	5.8	44.4	74.6	16.3
Mean		161.2	96.5	0.9	6.1	46.8	76.5	19.3

Table 22. Yield and agronomic data from common entries in the 1995-1998 Late White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
IFSI 90-1	4	154.1	95.7	0.6	5.9	48.8	76.2	19.1
IFSI 95-1	4	155.5	96.2	0.3	4.6	46.1	77.3	22.1
LG Seeds NB749W	4	151.6	97.7	0.7	5.4	47.1	77.0	19.9
Pioneer Brand 3203W	4	162.4	96.9	0.9	5.4	44.9	77.8	19.7
Whisnand 51AW	4	151.9	96.5	0.8	5.6	47.6	76.5	19.2
Zimmerman Z62W	4	156.7	97.0	0.4	4.1	46.7	78.1	18.7
Zimmerman Z64W	4	158.2	96.9	1.3	4.4	49.2	78.4	21.1
Yellow check B73 × Mo17	4	147.0	95.2	1.2	6.5	46.3	75.6	17.3
Yellow check Pioneer Brand 3245	4	170.6	97.8	0.8	4.2	41.8	76.8	17.8
Yellow check Pioneer Brand 3394	4	158.9	97.8	0.5	4.6	43.5	74.8	16.3
Mean		156.7	96.8	0.7	5.1	46.2	76.8	19.1

Table 23. Yield and agronomic data from common entries in the 1994-1998 Late White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
Pioneer Brand 3203W	5	169.8	95.5	0.7	4.6	45.0	77.1	19.8
Whisnand 51AW	5	158.9	95.6	0.6	4.7	47.8	75.9	19.3
Zimmerman Z62W	5	162.7	96.4	0.4	3.5	46.9	77.5	18.9
Zimmerman Z64W	5	163.6	96.1	1.1	4.1	49.0	77.9	21.4
Yellow check B73 × Mo17	5	153.7	94.4	1.0	5.3	46.3	75.1	17.7
Yellow check Pioneer Brand 3245	5	174.5	97.5	0.7	3.6	41.3	76.2	17.9
Mean		163.8	95.9	0.8	4.3	46.0	76.6	19.2

Table 24. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Champaign, IL. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	194.4	94.3	0.0	1.0	.	74.5	21.1
<i>AgriGold A6680W</i>	2	175.5	95.7	0.0	0.0	.	75.5	24.9
<i>Asgrow RX776W</i>	3	113.3	94.3	14.7	18.3	.	77.5	22.0
<i>Asgrow XP7308W</i>	4	108.5	94.8	1.0	6.1	.	77.0	18.7
<i>Asgrow XP8118W</i>	5	115.7	91.0	0.0	8.5	.	77.0	22.7
DEKALB DK665W	6	134.5	93.8	0.0	5.7	.	77.5	23.4
<i>DEKALB EXP868W</i>	7	167.5	92.9	0.0	4.1	.	75.5	19.1
Diener DB 114W	8	171.7	94.3	0.0	0.5	.	78.0	22.6
Garst 8419W	9	123.9	95.7	1.5	5.5	.	77.5	22.9
Garst 8490W	10	166.4	93.3	2.1	4.6	.	77.5	20.5
Garst 8527W	11	102.1	90.5	0.0	12.6	.	75.0	16.4
IFSI 90-1	12	157.1	90.0	0.0	4.2	.	77.5	23.0
IFSI 95-2	13	185.4	92.9	3.6	4.6	.	78.5	20.8
<i>IFSI 98-2</i>	14	141.3	90.0	0.0	2.1	.	78.5	24.5
LG Seeds LG2558W	15	124.9	91.0	0.0	4.3	.	76.0	17.7
LG Seeds LG2596W	16	170.5	90.5	0.0	1.0	.	75.5	19.7
LG Seeds NB749W	17	187.2	93.8	0.0	0.0	.	77.0	23.8
NC+ 5633W	18	184.0	94.8	0.5	4.0	.	77.5	20.6
<i>NC+ RE372W</i>	19	102.4	86.7	0.0	1.1	.	76.5	16.4
<i>Novartis N71-T7</i>	20	146.7	95.7	0.0	6.4	.	77.5	19.3
Pioneer Brand 3463W	21	167.8	91.9	0.0	0.5	.	76.0	17.8
Pioneer Brand 32H39	22	161.0	95.2	2.0	4.0	.	76.5	21.4
<i>Pioneer Brand 34P93</i>	23	173.2	93.8	0.5	0.5	.	78.5	17.4
<i>Pioneer Brand X1127DW</i>	24	184.6	92.9	0.0	1.5	.	75.5	18.3
<i>Pioneer Brand X1127FW</i>	25	187.4	93.8	0.0	0.0	.	79.0	19.9
Vineyard V424W	26	158.0	91.4	3.6	3.1	.	80.0	23.3
Vineyard V438W	27	183.6 [†]	95.2	0.0	1.0	.	78.5	21.7 [†]
<i>Vineyard Vx4337</i>	28	98.7	92.4	0.0	14.4	.	77.0	21.5
Whisnand 50AW	29	168.4	95.2	7.1	5.5	.	80.5	21.9
Whisnand 51AW	30	165.9	93.8	0.0	1.5	.	81.0	23.6
Wilson 1780W	31	183.8	95.2	0.0	0.0	.	77.5	23.4
Wilson 1790W	32	192.5	93.3	0.5	0.0	.	77.0	22.1
<i>Wilson E8051</i>	33	163.1	92.9	0.0	1.0	.	81.5	23.3
Yellow check B73×Mo17	34	199.7	94.3	0.5	2.0	.	77.4 [‡]	19.7
Yellow check Pioneer Brand 3394	35	141.4	93.3	1.0	12.9	.	77.4 [‡]	17.3
Mean		157.2	93.2	1.1	4.1	.	77.4	20.9
LSD 0.05		45.7	4.0	ns	7.8		1.6	1.7
CV%		17.8	2.6		116.7		1.1	5.1

[†] Data from two replications.

[‡] Data missing from all replications; location mean used.

Table 25. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Galesburg, IL. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	181.4	103.8	1.4	1.4	.	.	29.6
<i>AgriGold A6680W</i>	2	179.9	108.1	9.1	1.4	.	.	31.4
<i>Asgrow RX776W</i>	3	135.1	101.4	0.0	0.0	.	.	33.0
<i>Asgrow XP7308W</i>	4	163.8	106.7	10.8	2.2	.	.	30.5
<i>Asgrow XP8118W</i>	5	160.8	91.9	0.0	1.9	.	.	31.9
DEKALB DK665W	6	112.1	102.4	4.2	0.0	.	.	30.7
<i>DEKALB EXP868W</i>	7	99.3	98.6	13.3	1.0	.	.	26.7
Diener DB 114W	8	192.2	99.5	0.0	3.3	.	.	30.5
Garst 8419W	9	125.3	103.8	0.0	4.5	.	.	27.8
Garst 8490W	10	182.4	101.9	1.9	1.4	.	.	29.8
Garst 8527W	11	105.8	89.0	1.0	4.7	.	.	22.4
IFSI 90-1	12	186.6	97.1	2.5	0.0	.	.	30.5
IFSI 95-2	13	190.3	103.8	0.0 [†]	3.2	.	.	29.6
<i>IFSI 98-2</i>	14	165.1	99.5	3.5	0.5	.	.	34.0
LG Seeds LG2558W	15	154.7	96.7	2.0	1.6	.	.	23.4
LG Seeds LG2596W	16	128.2	104.3	31.6	0.0	.	.	25.4
LG Seeds NB749W	17	145.0	101.9	6.7	6.2	.	.	31.5
NC+ 5633W	18	191.4	106.2	0.0	4.0	.	.	28.0
<i>NC+ RE372W</i>	19	142.0	98.6	0.0	4.3	.	.	23.8
<i>Novartis N71-T7</i>	20	160.5	106.2	1.4	3.1	.	.	27.4
Pioneer Brand 3463W	21	160.0	105.2	0.9	1.9	.	.	22.3
Pioneer Brand 32H39	22	190.1	102.4	9.7	2.4	.	.	31.3
<i>Pioneer Brand 34P93</i>	23	203.5	106.2	7.7	8.8	.	.	25.7
<i>Pioneer Brand X1127DW</i>	24	216.9	102.9	0.0	1.4	.	.	25.5
<i>Pioneer Brand X1127FW</i>	25	226.1	103.3	0.4	2.3	.	.	29.4
Vineyard V424W	26	191.7	101.9	0.0	0.0	.	.	34.0
Vineyard V438W	27	190.7	105.2	2.3	2.3	.	.	32.3
<i>Vineyard Vx4337</i>	28	153.7	95.7	5.2	6.3	.	.	29.4
Whisnand 50AW	29	169.8	102.9	2.8	2.3	.	.	29.4
Whisnand 51AW	30	161.0	101.4	1.9	1.3	.	.	32.8
Wilson 1780W	31	177.6	100.5	7.2	1.4	.	.	35.0
Wilson 1790W	32	196.2	98.6	0.0	2.4	.	.	32.2
<i>Wilson E8051</i>	33	156.5	100.5	7.5	1.4	.	.	42.0
Yellow check B73×Mo17	34	180.3	105.2	4.5	0.5	.	.	27.3
Yellow check Pioneer Brand 3394	35	129.9	100.5	6.1	1.4	.	.	22.5
Mean		165.9	101.5	4.2	2.3	.	.	29.4
LSD 0.05		33.3	7.0	9.9	4.4			2.7
CV%		12.3	4.2	145.6	116.9			5.6

[†] Data from two replications.

Table 26. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Wanatah, IN. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	181.8	96.4	0.0	1.9	52.7	.	18.8
<i>AgriGold A6680W</i>	2	157.4	95.0	0.0	0.0	52.0	.	19.7
<i>Asgrow RX776W</i>	3	153.3	95.9	0.0	0.5	31.9	.	20.1
<i>Asgrow XP7308W</i>	4	151.4	91.9	0.0	1.9	34.5	.	17.3
<i>Asgrow XP8118W</i>	5	173.3	88.3	0.0	1.0	43.6	.	18.6
DEKALB DK665W	6	166.5	94.1	0.0	0.0	44.2	.	18.4
<i>DEKALB EXP868W</i>	7	179.1	95.9	0.5	3.2	35.8	.	16.0
Diener DB 114W	8	153.3	91.9	0.0	0.5	47.5	.	20.7
Garst 8419W	9	158.2	92.3	0.0	1.9	41.0	.	17.3
Garst 8490W	10	173.1	91.9	0.0	0.0	49.4	.	18.8
Garst 8527W	11	154.8	88.3	0.0	0.5	31.2	.	15.2
IFSI 90-1	12	163.6	90.1	0.0	1.0	48.8	.	19.0
IFSI 95-2	13	179.8	95.5	0.0	0.5	63.1	.	18.2
<i>IFSI 98-2</i>	14	164.6	96.4	0.0	1.9	59.8	.	21.9
LG Seeds LG2558W	15	164.1	94.6	0.0	0.0	35.1	.	17.1
LG Seeds LG2596W	16	172.4	96.8	0.0	0.5	35.1	.	17.0
LG Seeds NB749W	17	167.9	93.7	0.0	0.0	54.6	.	20.9
NC+ 5633W	18	175.6	96.4	0.0	0.0	52.7	.	18.1
<i>NC+ RE372W</i>	19	147.6	98.2	0.0	0.9	42.9	.	15.7
<i>Novartis N71-T7</i>	20	177.4	96.8	0.0	0.0	49.4	.	17.3
Pioneer Brand 3463W	21	148.8	93.7	0.0	0.0	46.2	.	15.3
Pioneer Brand 32H39	22	179.0	98.2	0.0	0.5	44.9	.	16.8
<i>Pioneer Brand 34P93</i>	23	154.7	96.4	0.0	4.7	36.4	.	16.5
<i>Pioneer Brand X1127DW</i>	24	188.4	95.5	0.0	0.0	33.2	.	16.2
<i>Pioneer Brand X1127FW</i>	25	191.4	95.9	0.0	2.3	42.3	.	17.6
Vineyard V424W	26	151.8	95.9	0.0	0.0	51.4	.	20.2
Vineyard V438W	27	162.9	92.8	0.0	0.0	44.9	.	19.0
<i>Vineyard Vx4337</i>	28	183.3	93.7	0.0	1.4	43.6	.	19.0
Whisnand 50AW	29	179.2	95.0	0.0	0.5	57.9	.	18.7
Whisnand 51AW	30	162.8	96.4	0.0	0.5	55.3	.	18.4
Wilson 1780W	31	173.7	97.3	0.0	0.0	41.6	.	21.0
Wilson 1790W	32	182.1	95.9	0.0	0.5	46.8	.	20.5
<i>Wilson E8051</i>	33	164.1	93.7	0.0	1.0	46.8	.	23.0
Yellow check B73×Mo17	34	192.8	95.0	0.0	0.0	42.9	.	19.4
Yellow check Pioneer Brand 3394	35	188.9	98.2	0.0	1.4	42.9	.	15.7
Mean		169.1	94.7	0.0	0.8	45.2	.	18.4
LSD 0.05		16.8	5.1	ns	2.3	7.8		1.2
CV%		6.1	3.3		71.5	10.5		3.9

Table 27. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Harlan, IA. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	204.9	100.9	2.6	4.4	.	.	20.7
<i>AgriGold A6680W</i>	2	200.7	100.0	2.7	0.0	.	.	23.0
<i>Asgrow RX776W</i>	3	183.4	96.1	0.0	1.8	.	.	22.0
<i>Asgrow XP7308W</i>	4	157.5	98.7	7.7	3.2	.	.	20.0
<i>Asgrow XP8118W</i>	5	165.6	85.5	0.5	0.5	.	.	21.0
DEKALB DK665W	6	174.2	94.3	6.7	0.5	.	.	23.3
<i>DEKALB EXP868W</i>	7	167.1	95.6	0.9	3.7	.	.	18.3
Diener DB 114W	8	185.7	92.5	3.9	5.7	.	.	22.7
Garst 8419W	9	180.2	100.4	2.6	2.7	.	.	21.7
Garst 8490W	10	189.3	85.5	6.1	5.8	.	.	22.0
Garst 8527W	11	155.7	81.6	0.0	0.6	.	.	17.7
IFSI 90-1	12	176.8	92.5	3.9	0.9	.	.	22.3
IFSI 95-2	13	182.1	96.1	15.2	6.1	.	.	21.7
<i>IFSI 98-2</i>	14	171.5	95.6	2.2	6.1	.	.	22.0
LG Seeds LG2558W	15	128.4	95.2	0.9	5.5	.	.	19.0
LG Seeds LG2596W	16	167.0	92.5	3.7	0.0	.	.	21.3
LG Seeds NB749W	17	193.2	94.7	6.0	0.5	.	.	23.7
NC+ 5633W	18	198.4	94.3	0.9	4.5	.	.	20.0
<i>NC+ RE372W</i>	19	144.6	95.2	2.9	2.3	.	.	18.0
<i>Novartis N71-T7</i>	20	194.3	96.9	4.0	1.8	.	.	20.0
Pioneer Brand 3463W	21	160.8	95.6	0.0	1.4	.	.	18.3
Pioneer Brand 32H39	22	202.8	93.0	2.4	0.5	.	.	20.7
<i>Pioneer Brand 34P93</i>	23	187.9	93.9	2.4	1.9	.	.	18.3
<i>Pioneer Brand X1127DW</i>	24	216.2	96.1	0.0	0.9	.	.	18.7
<i>Pioneer Brand X1127FW</i>	25	214.7 [†]	98.7	1.8	1.8	.	.	20.0 [†]
Vineyard V424W	26	176.7	95.6	6.3	0.9	.	.	22.3
Vineyard V438W	27	186.1	98.7	6.3	1.8	.	.	21.7
<i>Vineyard Vx4337</i>	28	179.7	100.4	0.8	9.1	.	.	21.0
Whisnand 50AW	29	205.4	93.4	11.8	5.5	.	.	22.0
Whisnand 51AW	30	191.1	97.4	7.3	1.8	.	.	21.3
Wilson 1780W	31	174.8	96.5	2.7	3.1	.	.	24.0
Wilson 1790W	32	183.8	96.9	4.1	2.5	.	.	22.7
<i>Wilson E8051</i>	33	216.6	95.2	5.7	0.4	.	.	24.3
Yellow check B73×Mo17	34	188.2	99.6	9.6	4.8	.	.	21.7
Yellow check Pioneer Brand 3394	35	200.4	98.2	0.0	1.3	.	.	18.3
Mean		183.0	95.2	3.8	2.7	.	.	21.0
LSD 0.05		24.1	8.5	5.8	4.7			1.1
CV%		8.1	5.5	91.9	106.0			3.3

[†] Data from two replications.

Table 28. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Marion, IA. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower [†] (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	206.0	93.5	.	.	46.3	70.0	25.5
<i>AgriGold A6680W</i>	2	231.5	92.3	.	.	57.7	70.0	24.4
<i>Asgrow RX776W</i>	3	219.5	95.2	.	.	42.0	72.0	21.6
<i>Asgrow XP7308W</i>	4	208.3	100.6	.	.	51.0	72.0	17.9
<i>Asgrow XP8118W</i>	5	209.5	88.7	.	.	51.0	70.0	25.7
DEKALB DK665W	6	204.9	96.4	.	.	52.0	71.0	22.3
<i>DEKALB EXP868W</i>	7	200.0	83.3	.	.	48.3	68.0	22.1
Diener DB 114W	8	199.0	96.4	.	.	51.0	72.0	22.9
Garst 8419W	9	205.6	94.6	.	.	50.3	70.0	25.8
Garst 8490W	10	217.7	97.6	.	.	51.0	72.0	24.2
Garst 8527W	11	191.9	92.3	.	.	47.7	69.0	19.8
IFSI 90-1	12	212.5	94.0	.	.	61.7	72.0	25.3
IFSI 95-2	13	214.0	93.5	.	.	65.0	72.0	24.4
<i>IFSI 98-2</i>	14	255.7	92.3	.	.	60.3	73.0	20.8
LG Seeds LG2558W	15	203.4	89.9	.	.	47.0	68.0	22.8
LG Seeds LG2596W	16	186.9	98.8	.	.	46.7	68.0	20.7
LG Seeds NB749W	17	217.8	86.9	.	.	58.7	73.0	27.7
NC+ 5633W	18	202.4	89.9	.	.	53.0	71.0	26.9
<i>NC+ RE372W</i>	19	187.3	99.4	.	.	50.3	69.0	18.5
<i>Novartis N71-T7</i>	20	187.5	98.2	.	.	57.7	72.0	27.5
Pioneer Brand 3463W	21	189.2	95.8	.	.	51.0	69.0	19.0
Pioneer Brand 32H39	22	227.0	88.1	.	.	52.3	71.0	23.5
<i>Pioneer Brand 34P93</i>	23	177.5	103.0	.	.	54.0	70.0	20.7
<i>Pioneer Brand X1127DW</i>	24	191.4	93.5	.	.	48.0	70.0	24.3
<i>Pioneer Brand X1127FW</i>	25	217.6	91.7	.	.	53.0	72.0	24.4
Vineyard V424W	26	188.5	92.3	.	.	59.7	72.0	25.1
Vineyard V438W	27	197.9	98.2	.	.	44.0	71.0	22.2
<i>Vineyard Vx4337</i>	28	225.5	90.5	.	.	54.0	69.0	23.9
Whisnand 50AW	29	212.6	93.5	.	.	59.0	73.0	24.3
Whisnand 51AW	30	216.8	103.6	.	.	60.0	73.0	23.0
Wilson 1780W	31	212.1	95.8	.	.	52.3	72.0	25.7
Wilson 1790W	32	210.7	93.5	.	.	55.0	72.0	23.1
<i>Wilson E8051</i>	33	211.6	86.3	.	.	51.3	72.0	19.6
Yellow check B73×Mo17	34	209.2	94.0	.	.	58.0	71.0	21.9
Yellow check Pioneer Brand 3394	35	175.2	93.5	.	.	56.0	72.0	23.3
Mean		206.4	93.9	.	.	53.0	70.9	23.2
LSD 0.05		28.5	ns			8.8		3.2
CV%		8.5				10.2		8.6

[†] Data from one replication.

Table 29. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Ogden, IA. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	154.5	94.3	0.6	7.9	.	.	18.3
<i>AgriGold A6680W</i>	2	143.3	88.5	6.9	7.6	.	.	19.7
<i>Asgrow RX776W</i>	3	151.6	86.8	0.0	3.9	.	.	18.2
<i>Asgrow XP7308W</i>	4	140.6	90.2	0.0	4.5	.	.	17.2
<i>Asgrow XP8118W</i>	5	151.4	82.2	0.7	5.5	.	.	19.4
DEKALB DK665W	6	124.0	89.7	3.1	3.9	.	.	17.5
<i>DEKALB EXP868W</i>	7	133.1	86.2	0.0	15.5	.	.	15.5
Diener DB 114W	8	142.4	85.6	1.2	2.7	.	.	19.9
Garst 8419W	9	152.3	92.0	2.5	9.5	.	.	18.1
Garst 8490W	10	144.1	87.4	0.0	7.2	.	.	16.1
Garst 8527W	11	103.0	74.1	0.0	7.0	.	.	15.3
IFSI 90-1	12	150.7	81.0	3.7	13.0	.	.	19.2
IFSI 95-2	13	148.8	83.9	11.8	15.9	.	.	18.8
<i>IFSI 98-2</i>	14	122.6	77.0	0.0	19.9	.	.	19.3
LG Seeds LG2558W	15	114.0	84.5	1.5	12.4	.	.	16.2
LG Seeds LG2596W	16	133.2	87.9	0.0	1.9	.	.	18.1
LG Seeds NB749W	17	150.5	93.1	1.2	11.1	.	.	19.5
NC+ 5633W	18	160.8	93.7	0.0	11.7	.	.	17.5
<i>NC+ RE372W</i>	19	120.8	81.6	2.2	9.0	.	.	16.1
<i>Novartis N71-T7</i>	20	136.2	87.4	3.7	7.1	.	.	19.0
Pioneer Brand 3463W	21	130.4	90.2	1.9	2.0	.	.	14.9
Pioneer Brand 32H39	22	166.7	93.1	1.3	7.9	.	.	16.2
<i>Pioneer Brand 34P93</i>	23	157.8	94.3	0.0	4.9	.	.	16.1
<i>Pioneer Brand X1127DW</i>	24	160.9	89.7	0.0	2.0	.	.	16.3
<i>Pioneer Brand X1127FW</i>	25	160.3	88.5	0.7	9.8	.	.	18.5
Vineyard V424W	26	167.7	86.8	3.5	3.8	.	.	20.5
Vineyard V438W	27	146.8	81.6	6.3	2.9	.	.	19.8
<i>Vineyard Vx4337</i>	28	159.4	87.9	0.7	6.7	.	.	18.2
Whisnand 50AW	29	148.3	93.1	3.7	20.4	.	.	18.8
Whisnand 51AW	30	136.9	87.9	4.0	11.0	.	.	17.9
Wilson 1780W	31	164.1	90.2	0.0	5.8	.	.	20.4
Wilson 1790W	32	162.2	90.8	5.0	3.8	.	.	18.6
<i>Wilson E8051</i>	33	166.9	87.4	5.2	1.3	.	.	22.6
Yellow check B73×Mo17	34	147.6	89.7	0.0	8.1	.	.	16.6
Yellow check Pioneer Brand 3394	35	159.7	92.0	0.0	10.7	.	.	15.5
Mean		146.1	87.7	2.0	8.0	.	.	18.0
LSD 0.05		27.2	8.9	5.2	9.4			1.8
CV%		11.4	6.2	157.3	72.6			6.0

Table 30. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at St. Joseph, MO. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	139.6	100.0	74.5	0.0	.	.	19.3
<i>AgriGold A6680W</i>	2	160.0	100.0	97.2	0.0	.	.	18.3
<i>Asgrow RX776W</i>	3	162.5	100.0	11.1	0.0	.	.	18.0
<i>Asgrow XP7308W</i>	4	138.3	100.0	69.4	0.0	.	.	17.6
<i>Asgrow XP8118W</i>	5	148.9	100.0	94.4	0.0	.	.	19.5
DEKALB DK665W	6	188.5	100.0	36.1	0.0	.	.	21.4
<i>DEKALB EXP868W</i>	7	145.7	100.0	34.4	2.8	.	.	16.9
Diener DB 114W	8	120.4	100.0	100.0	0.0	.	.	19.7
Garst 8419W	9	150.6	100.0	83.3	0.0	.	.	18.2
Garst 8490W	10	108.8	100.0	100.0	0.0	.	.	19.0
Garst 8527W	11	123.4	100.0	5.6	2.8	.	.	17.9
IFSI 90-1	12	165.4	100.0	72.2	0.0	.	.	21.9
IFSI 95-2	13	82.1	100.0	100.0	0.0	.	.	18.7
<i>IFSI 98-2</i>	14	166.7	100.0	86.1	0.0	.	.	19.1
LG Seeds LG2558W	15	168.8	100.0	4.4	2.8	.	.	18.8
LG Seeds LG2596W	16	180.0	100.0	41.7	2.8	.	.	17.0
LG Seeds NB749W	17	166.8	100.0	88.9	0.0	.	.	20.3
NC+ 5633W	18	157.6	100.0	52.8	2.8	.	.	20.3
<i>NC+ RE372W</i>	19	105.7	100.0	83.3	0.0	.	.	19.1
<i>Novartis N71-T7</i>	20	184.1	100.0	72.2	0.0	.	.	18.3
Pioneer Brand 3463W	21	168.7	100.0	36.1	2.8	.	.	16.5
Pioneer Brand 32H39	22	167.7	100.0	94.4	0.0	.	.	19.0
<i>Pioneer Brand 34P93</i>	23	168.0	100.0	66.7	1.1	.	.	18.3
<i>Pioneer Brand X1127DW</i>	24	154.6	100.0	44.4	0.0	.	.	17.8
<i>Pioneer Brand X1127FW</i>	25	225.9	100.0	58.3	1.1	.	.	17.9
Vineyard V424W	26	177.2	100.0	66.7	0.0	.	.	19.2
Vineyard V438W	27	168.7	100.0	27.8	0.6	.	.	20.0
<i>Vineyard Vx4337</i>	28	181.9	100.0	72.2	0.0	.	.	19.1
Whisnand 50AW	29	182.1	100.0	97.2	0.0	.	.	18.5
Whisnand 51AW	30	165.3	100.0	77.8	0.0	.	.	20.0
Wilson 1780W	31	185.8	100.0	97.2	0.0	.	.	19.8
Wilson 1790W	32	134.8	100.0	97.2	0.0	.	.	20.3
<i>Wilson E8051</i>	33	211.9	100.0	100.0	0.0	.	.	20.1
Yellow check B73×Mo17	34	137.2	100.0	91.7	0.0	.	.	17.3
Yellow check Pioneer Brand 3394	35	166.8	100.0	61.1	0.0	.	.	16.4
Mean		158.9	100.0	68.5	0.6	.	.	18.8
LSD 0.05		60.1	ns	48.8	ns			ns
CV%		23.2		43.7				

Table 31. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Clay Center, NE. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	198.7	109.4	.	.	.	.	26.0
<i>AgriGold A6680W</i>	2	173.1	101.0	.	.	.	.	27.8
<i>Asgrow RX776W</i>	3	172.0	103.1	.	.	.	.	26.5
<i>Asgrow XP7308W</i>	4	153.4	101.0	.	.	.	.	23.3
<i>Asgrow XP8118W</i>	5	173.3	103.1	.	.	.	.	27.5
DEKALB DK665W	6	156.6	112.5	.	.	.	.	26.7
<i>DEKALB EXP868W</i>	7	147.5	101.0	.	.	.	.	23.8
Diener DB 114W	8	183.7	95.8	.	.	.	.	27.5
Garst 8419W	9	149.3	108.3	.	.	.	.	27.3
Garst 8490W	10	193.7	103.1	.	.	.	.	25.3
Garst 8527W	11	145.8	81.3	.	.	.	.	23.6
IFSI 90-1	12	173.2	102.1	.	.	.	.	25.6
IFSI 95-2	13	184.2	109.9	.	.	.	.	26.1
<i>IFSI 98-2</i>	14	161.5	107.8	.	.	.	.	28.4
LG Seeds LG2558W	15	157.3	101.0	.	.	.	.	25.2
LG Seeds LG2596W	16	181.5	97.9	.	.	.	.	25.9
LG Seeds NB749W	17	167.9	105.2	.	.	.	.	26.8
NC+ 5633W	18	188.5	112.5	.	.	.	.	26.3
<i>NC+ RE372W</i>	19	151.7	104.2	.	.	.	.	23.3
<i>Novartis N71-T7</i>	20	199.9	105.2	.	.	.	.	26.8
Pioneer Brand 3463W	21	156.9	103.1	.	.	.	.	24.5
Pioneer Brand 32H39	22	182.6	104.2	.	.	.	.	27.4
<i>Pioneer Brand 34P93</i>	23	204.8	106.3	.	.	.	.	24.1
<i>Pioneer Brand X1127DW</i>	24	187.2	109.9	.	.	.	.	24.7
<i>Pioneer Brand X1127FW</i>	25	213.4	112.5	.	.	.	.	27.0
Vineyard V424W	26	180.0	113.0	.	.	.	.	27.7
Vineyard V438W	27	166.9	105.2	.	.	.	.	27.4
<i>Vineyard Vx4337</i>	28	195.0	101.0	.	.	.	.	26.8
Whisnand 50AW	29	186.6	114.1	.	.	.	.	26.5
Whisnand 51AW	30	161.7	106.8	.	.	.	.	26.4
Wilson 1780W	31	179.9	101.6	.	.	.	.	27.4
Wilson 1790W	32	199.9	110.4	.	.	.	.	27.2
<i>Wilson E8051</i>	33	203.9	108.3	.	.	.	.	30.7
Yellow check B73×Mo17	34	191.2	103.6	.	.	.	.	25.4
Yellow check Pioneer Brand 3394	35	201.2	110.9	.	.	.	.	24.0
Mean		177.8	105.0	.	.	.	.	26.2
LSD 0.05		25.5	10.3					2.0
CV%		8.8	6.0					4.6

Table 32. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Gothenburg, NE. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	226.7 [†]	89.0	23.6	2.3	.	.	15.8 [†]
<i>AgriGold A6680W</i>	2	202.4	98.0	12.6	1.4	.	.	16.7
<i>Asgrow RX776W</i>	3	210.1	95.3	0.7	0.0	.	.	16.5
<i>Asgrow XP7308W</i>	4	182.3	95.0	1.8	0.0	.	.	15.5
<i>Asgrow XP8118W</i>	5	230.2	94.7	7.1	0.0	.	.	15.7
DEKALB DK665W	6	168.7	97.3	10.7	0.7	.	.	16.3
<i>DEKALB EXP868W</i>	7	203.6	86.7	3.2	0.7	.	.	15.2
Diener DB 114W	8	217.3	93.7	4.9	0.0	.	.	17.6
Garst 8419W	9	177.3	97.7	8.8	1.3	.	.	16.4
Garst 8490W	10	201.7	90.3	11.7	1.4	.	.	16.0
Garst 8527W	11	147.4	68.3	3.0	0.9	.	.	14.7
IFSI 90-1	12	217.3	87.3	10.0	1.5	.	.	16.3
IFSI 95-2	13	226.6	91.7	15.6	6.6	.	.	15.5
<i>IFSI 98-2</i>	14	216.8	91.0	4.2	0.8	.	.	16.5
LG Seeds LG2558W	15	179.1	91.0	5.4	0.8	.	.	15.9
LG Seeds LG2596W	16	200.6	93.3	4.5	0.7	.	.	16.3
LG Seeds NB749W	17	203.2	94.3	11.7	1.3	.	.	16.8
NC+ 5633W	18	212.0	97.3	19.5	0.0	.	.	15.3
<i>NC+ RE372W</i>	19	146.4	95.0	3.2	0.0	.	.	14.9
<i>Novartis N71-T7</i>	20	223.9	93.3	15.1	0.0	.	.	15.9
Pioneer Brand 3463W	21	169.4	102.0	3.9	0.6	.	.	14.7
Pioneer Brand 32H39	22	203.0	98.3	1.6	0.0	.	.	16.2
<i>Pioneer Brand 34P93</i>	23	225.1	99.3	5.8	0.6	.	.	13.5
<i>Pioneer Brand X1127DW</i>	24	216.9	91.0	1.6	0.8	.	.	15.4
<i>Pioneer Brand X1127FW</i>	25	250.0	92.3	14.3	0.7	.	.	16.1
Vineyard V424W	26	230.9	95.7	6.0	2.1	.	.	16.4
Vineyard V438W	27	197.0	99.0	2.7	0.0	.	.	16.9
<i>Vineyard Vx4337</i>	28	218.1	92.7	6.2	0.7	.	.	16.2
Whisnand 50AW	29	232.4 [†]	94.3	15.5	1.4	.	.	15.4 [†]
Whisnand 51AW	30	178.1	97.0	18.3	1.4	.	.	15.7
Wilson 1780W	31	203.2	93.3	10.5	0.7	.	.	20.4
Wilson 1790W	32	239.1 [†]	93.3	10.4	1.5	.	.	17.6 [†]
<i>Wilson E8051</i>	33	249.7	90.0	1.5	0.0	.	.	19.3
Yellow check B73×Mo17	34	233.7	101.7	8.9	1.9	.	.	16.0
Yellow check Pioneer Brand 3394	35	219.3	98.7	5.4	0.7	.	.	14.8
Mean		207.4	93.7	8.3	1.0	.	.	16.1
LSD 0.05		29.4	11.2	7.8	ns			0.9
CV%		8.7	7.3	58.0				3.6

[†] Data from two replications.

Table 33. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Hoytville, OH. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	139.4	98.5	0.0	1.9	.	.	24.7
<i>AgriGold A6680W</i>	2	150.0	95.4	0.0	9.4	.	.	25.3
<i>Asgrow RX776W</i>	3	141.0	93.1	0.0	1.3	.	.	25.9
<i>Asgrow XP7308W</i>	4	127.4	95.4	0.0	10.4	.	.	23.1
<i>Asgrow XP8118W</i>	5	137.9	85.4	0.0	0.9	.	.	27.2
DEKALB DK665W	6	140.5	99.2	0.0	0.8	.	.	24.6
<i>DEKALB EXP868W</i>	7	148.6	87.0	0.0	5.9	.	.	24.0
Diener DB 114W	8	141.0	101.5	0.0	2.9	.	.	26.1
Garst 8419W	9	143.1	98.1	0.0	15.7	.	.	24.4
Garst 8490W	10	136.0	80.1	0.0	7.9	.	.	23.6
Garst 8527W	11	132.6	64.0	0.0	0.0	.	.	22.9
IFSI 90-1	12	156.0	85.8	0.0	9.3	.	.	24.1
IFSI 95-2	13	142.1	101.9	0.0	0.4	.	.	24.2
<i>IFSI 98-2</i>	14	140.8	80.1	0.0	1.9	.	.	27.5
LG Seeds LG2558W	15	130.8	90.0	0.0	0.5	.	.	23.9
LG Seeds LG2596W	16	121.8	91.6	0.0	3.7	.	.	24.3
LG Seeds NB749W	17	140.9	97.7	0.0	3.6	.	.	25.1
NC+ 5633W	18	148.0	101.1	0.0	2.6	.	.	24.3
<i>NC+ RE372W</i>	19	99.2	89.3	0.0	3.2	.	.	23.8
<i>Novartis N71-T7</i>	20	133.8	99.6	0.0	2.6	.	.	24.8
Pioneer Brand 3463W	21	128.6	97.7	0.0	3.1	.	.	22.2
Pioneer Brand 32H39	22	142.5	97.3	0.0	2.9	.	.	22.9
<i>Pioneer Brand 34P93</i>	23	126.8	98.5	0.0	20.0	.	.	24.6
<i>Pioneer Brand X1127DW</i>	24	146.7	80.5	0.0	1.4	.	.	23.7
<i>Pioneer Brand X1127FW</i>	25	151.9	96.2	0.0	10.3	.	.	24.9
Vineyard V424W	26	155.3	95.4	0.0	3.6	.	.	25.0
Vineyard V438W	27	131.3	98.1	0.0	1.6	.	.	25.7
<i>Vineyard Vx4337</i>	28	168.8	85.4	0.0	14.0	.	.	26.0
Whisnand 50AW	29	150.2	101.1	0.0	8.6	.	.	23.3
Whisnand 51AW	30	145.8	94.6	0.0	4.4	.	.	24.0
Wilson 1780W	31	138.3	103.8	0.0	1.8	.	.	26.8
Wilson 1790W	32	151.2	88.9	0.0	6.7	.	.	26.1
<i>Wilson E8051</i>	33	143.3	101.5	0.0	3.1	.	.	27.8
Yellow check B73×Mo17	34	158.2	87.7	0.0	4.7	.	.	25.1
Yellow check Pioneer Brand 3394	35	164.9	99.2	0.0	7.5	.	.	22.8
Mean		141.6	93.2	0.0	5.1	.	.	24.7
LSD 0.05		11.7	9.6	ns	7.5			0.9
CV%		5.1	6.3		89.7			2.3

Table 34. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Beresford, SC. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	182.4	99.6	0.0	0.4	56.0	.	22.5
<i>AgriGold A6680W</i>	2	183.4	100.0	0.0	1.3	61.8	.	23.8
<i>Asgrow RX776W</i>	3	189.6	100.0	0.0	0.4	42.9	.	23.2
<i>Asgrow XP7308W</i>	4	160.0	100.0	0.0	0.4	51.5	.	21.3
<i>Asgrow XP8118W</i>	5	171.2	98.3	0.0	4.2	55.9	.	22.6
DEKALB DK665W	6	172.6	100.0	0.0	1.7	53.7	.	23.3
<i>DEKALB EXP868W</i>	7	167.6	99.6	0.0	3.8	48.9	.	20.2
Diener DB 114W	8	185.4	99.6	0.0	2.5	56.3	.	24.2
Garst 8419W	9	172.5	100.0	0.0	2.1	54.9	.	22.3
Garst 8490W	10	201.8	100.4	0.0	1.7	57.3	.	22.5
Garst 8527W	11	165.6	98.3	0.0	2.1	42.3	.	19.2
IFSI 90-1	12	188.4	100.0	0.0	0.4	62.1	.	22.5
IFSI 95-2	13	189.4	99.2	0.0	5.5	64.9	.	21.7
<i>IFSI 98-2</i>	14	176.3	99.2	0.0	3.8	62.4	.	23.8
LG Seeds LG2558W	15	162.7	100.0	0.0	4.6	48.5	.	21.1
LG Seeds LG2596W	16	177.4	99.6	0.0	1.3	46.8	.	22.5
LG Seeds NB749W	17	186.0	100.0	0.0	1.7	62.9	.	23.4
NC+ 5633W	18	182.3	100.0	0.0	2.1	58.9	.	22.1
<i>NC+ RE372W</i>	19	145.4	100.0	0.0	1.7	54.1	.	20.0
<i>Novartis N71-T7</i>	20	182.3	100.0	0.0	0.4	61.4	.	21.7
Pioneer Brand 3463W	21	162.4	99.6	0.0	0.4	49.1	.	20.0
Pioneer Brand 32H39	22	179.9	100.0	0.0	1.3	50.6	.	22.2
<i>Pioneer Brand 34P93</i>	23	176.7	98.8	0.0	0.4	49.0	.	20.5
<i>Pioneer Brand X1127DW</i>	24	180.7	99.2	0.0	0.4	45.6	.	20.9
<i>Pioneer Brand X1127FW</i>	25	189.0	100.0	0.0	2.1	52.7	.	21.8
Vineyard V424W	26	188.9	100.0	0.0	0.8	61.1	.	23.4
Vineyard V438W	27	182.4	102.1	0.0	1.2	54.7	.	22.5
<i>Vineyard Vx4337</i>	28	192.1	99.2	0.0	2.1	51.2	.	22.9
Whisnand 50AW	29	193.8	100.0	0.0	2.5	67.9	.	22.5
Whisnand 51AW	30	179.4	98.8	0.0	3.4	59.9	.	22.8
Wilson 1780W	31	205.2	100.0	0.0	1.3	55.1	.	24.5
Wilson 1790W	32	190.8	99.2	0.0	1.7	56.0	.	24.6
<i>Wilson E8051</i>	33	199.3	100.0	0.0	0.0	56.0	.	24.8
Yellow check B73×Mo17	34	193.9	100.4	0.0	1.7	53.3	.	22.1
Yellow check Pioneer Brand 3394	35	176.8	99.6	0.0	1.7	52.7	.	20.1
Mean		181.0	99.7	0.0	1.8	54.8	.	22.3
LSD 0.05		17.3	ns	ns	ns	4.2		0.8
CV%		5.8				4.7		2.3

Table 35. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Ottawa, Ontario. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	80.6	92.3	4.5	3.7	55.8	.	37.9
<i>AgriGold A6680W</i>	2	82.3	88.7	2.4	1.2	52.7	.	38.7
<i>Asgrow RX776W</i>	3	75.1	88.7	0.3	0.4	45.6	.	39.3
<i>Asgrow XP7308W</i>	4	66.8	94.0	8.6	0.7	48.5	.	37.9
<i>Asgrow XP8118W</i>	5	76.7	84.3	2.8	2.8	56.2	.	37.9
DEKALB DK665W	6	70.9	87.0	0.8	0.3	48.9	.	37.2
<i>DEKALB EXP868W</i>	7	86.5	89.0	14.5	4.1	52.4	.	37.3
Diener DB 114W	8	85.2	85.3	4.1	1.6	48.2	.	37.0
Garst 8419W	9	84.0	96.0	5.1	0.7	48.9	.	35.0
Garst 8490W	10	98.7	89.3	18.8	2.9	56.2	.	37.8
Garst 8527W	11	104.3	87.3	1.9	1.6	44.5	.	35.1
IFSI 90-1	12	79.8	77.0	3.7	0.0	57.7	.	39.1
IFSI 95-2	13	82.0	83.0	11.9	1.2	60.2	.	39.7
<i>IFSI 98-2</i>	14	78.1	78.7	1.3	2.7	57.7	.	37.5
LG Seeds LG2558W	15	82.4	84.3	2.3	0.8	42.3	.	38.1
LG Seeds LG2596W	16	80.8	97.3	0.4	1.3	45.6	.	38.0
LG Seeds NB749W	17	70.8	91.3	11.8	0.0	54.5	.	38.8
NC+ 5633W	18	95.1	90.3	1.2	2.3	55.1	.	38.1
<i>NC+ RE372W</i>	19	88.0	93.7	2.0	3.0	55.9	.	35.8
<i>Novartis N71-T7</i>	20	88.6	85.3	4.6	0.0	54.3	.	37.0
Pioneer Brand 3463W	21	94.8	91.7	9.1	0.7	51.5	.	37.0
Pioneer Brand 32H39	22	89.1	93.3	4.2	1.4	52.1	.	37.3
<i>Pioneer Brand 34P93</i>	23	83.6	83.7	1.6	1.6	50.7	.	36.0
<i>Pioneer Brand X1127DW</i>	24	98.5	85.7	0.8	0.8	44.6	.	33.1
<i>Pioneer Brand X1127FW</i>	25	84.4	87.3	5.8	3.5	50.4	.	32.1
Vineyard V424W	26	75.4	86.3	13.9	1.5	55.5	.	40.7
Vineyard V438W	27	63.6	88.0	4.5	1.1	50.1	.	40.7
<i>Vineyard Vx4337</i>	28	83.6	89.3	3.3	0.4	50.4	.	39.6
Whisnand 50AW	29	81.1	89.3	6.8	1.4	62.4	.	39.1
Whisnand 51AW	30	90.1	86.7	4.8	0.8	56.0	.	38.4
Wilson 1780W	31	82.1	94.0	17.4	0.7	53.7	.	39.0
Wilson 1790W	32	95.6	93.7	0.4	0.4	54.9	.	38.6
<i>Wilson E8051</i>	33	75.3	90.0	27.8	0.0	52.4	.	41.3
Yellow check B73×Mo17	34	94.3	96.0	0.7	0.4	56.6 [†]	.	36.2
Yellow check Pioneer Brand 3394	35	88.7	91.0	2.2	1.1	53.0	.	36.4
Mean		83.9	88.8	5.9	1.3	52.4	.	37.7
LSD 0.05		18.2	9.1	13.5	2.1	5.3		2.5
CV%		13.3	6.3	140.7	97.8	6.2		4.0

[†] Data from two replications.

Table 36. Yield and agronomic data from the 1998 Early White Food Corn Performance Test at Ridgetown, Ontario. New entries for 1998 are shown in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
<i>AgriGold A6530W</i>	1	195.5	99.4	0.0	1.8	46.7	84.0	24.8
<i>AgriGold A6680W</i>	2	216.1	98.8	0.0	1.8	50.1	84.3	27.7
<i>Asgrow RX776W</i>	3	198.2	98.2	0.0	1.2	37.8	84.0	27.3
<i>Asgrow XP7308W</i>	4	187.9	98.2	0.0	1.2	37.3	82.3	23.4
<i>Asgrow XP8118W</i>	5	197.5	98.8	0.0	2.4	46.0	85.0	25.3
DEKALB DK665W	6	205.2	100.0	0.0	3.6	46.5	83.0	26.0
<i>DEKALB EXP868W</i>	7	184.7	100.0	0.0	2.4	35.0	79.3	22.3
Diener DB 114W	8	206.0	97.6	0.0	1.8	41.6	84.0	25.5
Garst 8419W	9	183.5	100.0	0.0	0.6	40.8	81.7	23.8
Garst 8490W	10	219.9	99.4	0.0	1.8	48.4	84.7	27.3
Garst 8527W	11	170.5	98.2	0.0	1.8	31.7	79.7	22.8
IFSI 90-1	12	211.1	99.4	0.0	1.8	53.6	84.7	26.9
IFSI 95-2	13	220.2	97.6	0.0	1.2	53.4	85.0	25.5
<i>IFSI 98-2</i>	14	223.0	99.4	0.0	1.2	50.8	84.0	27.8
LG Seeds LG2558W	15	190.1	100.0	0.0	1.2	31.3	82.7	22.9
LG Seeds LG2596W	16	180.3	100.0	0.0	1.8	34.8	82.7	26.5
LG Seeds NB749W	17	217.4	99.4	0.0	2.4	51.0	85.0	27.7
NC+ 5633W	18	198.7	98.2	0.0	0.6	50.8	84.3	26.5
<i>NC+ RE372W</i>	19	138.1	99.4	0.0	1.8	39.9	81.3	21.6
<i>Novartis N71-T7</i>	20	224.4	99.4	0.0	1.2	45.0	83.7	24.7
Pioneer Brand 3463W	21	204.9	100.0	0.0	4.8	41.1	80.3	23.9
Pioneer Brand 32H39	22	193.2	99.4	0.0	0.6	43.8	83.7	27.6
<i>Pioneer Brand 34P93</i>	23	199.8	100.0	0.0	0.6	38.7	82.3	23.7
<i>Pioneer Brand X1127DW</i>	24	219.8	99.4	0.0	2.4	36.8	80.3	24.3
<i>Pioneer Brand X1127FW</i>	25	228.0	100.0	0.0	3.0	43.4	83.0	26.0
Vineyard V424W	26	204.9	99.4	0.0	1.2	45.5	85.0	27.1
Vineyard V438W	27	192.4	100.0	0.0	1.8	43.0	84.7	25.6
<i>Vineyard Vx4337</i>	28	223.3	98.8	0.0	1.2	43.2	82.3	26.3
Whisnand 50AW	29	215.9	100.0	0.0	3.0	56.0	85.0	25.9
Whisnand 51AW	30	214.8	99.4	0.0	1.2	46.4	85.7	26.2
Wilson 1780W	31	219.1	100.0	0.0	1.2	41.5	84.0	25.6
Wilson 1790W	32	201.9	100.0	0.0	1.8	39.8	83.0	25.9
<i>Wilson E8051</i>	33	221.3	98.2	0.0	0.6	45.8	86.3	28.1
Yellow check B73×Mo17	34	195.3	98.8	0.0	1.8	49.3	83.3	26.0
Yellow check Pioneer Brand 3394	35	215.0	100.0	0.0	3.0	45.5	81.3	22.1
Mean		203.4	99.3	0.0	1.8	43.8	83.3	25.4
LSD 0.05		26.9	ns	ns	ns	5.2	1.5	1.3
CV%		8.1				7.3	1.1	3.0

Table 37. Combined yield and agronomic data from 12 northern locations of the 1998 Early White Food Corn Performance Test. New entries for 1998 are in italics.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)	b _f (bu/a/I)	Std. devn. (bu/a)
<i>AgriGold A6530W</i>	1	183.8	98.3	10.3	2.3	50.4	76.2	22.3	0.98	16.2
<i>AgriGold A6680W</i>	2	181.1	97.7	12.9	2.3	55.4	76.6	23.6	1.10	11.7
<i>Asgrow RX776W</i>	3	169.1	96.6	2.7	2.7	38.6	77.8	22.9	1.24	16.7
<i>Asgrow XP7308W</i>	4	156.6	97.7	9.1	3.0	43.6	77.1	20.5	1.06	13.8
<i>Asgrow XP8118W</i>	5	169.6	92.3	10.3	2.5	49.1	77.3	23.1	1.24	15.0
DEKALB DK665W	6	162.4	98.3	6.1	1.7	49.1	77.2	22.8	0.94	22.4
<i>DEKALB EXP868W</i>	7	162.0	93.9	5.2	4.3	42.0	74.3	20.0	0.92	21.9
Diener DB 114W	8	174.8	95.7	11.0	2.0	49.1	78.0	23.3	1.10	16.8
Garst 8419W	9	160.1	98.6	9.9	4.4	46.7	76.4	22.2	0.85	15.7
Garst 8490W	10	177.9	94.2	12.2	3.2	51.5	78.1	22.1	1.28	18.7
Garst 8527W	11	141.5	85.5	1.0	3.3	38.2	74.6	19.0	0.99	19.2
IFSI 90-1	12	179.9	93.3	9.2	3.2	56.5	78.1	23.1	0.97	8.5
IFSI 95-2	13	178.8	97.2	14.6	4.2	61.6	78.5	22.1	1.31	27.4
<i>IFSI 98-2</i>	14	175.5	94.0	9.6	3.8	58.3	78.5	23.8	1.56	15.6
LG Seeds LG2558W	15	156.5	94.5	1.5	3.4	40.5	75.6	20.3	0.96	17.7
LG Seeds LG2596W	16	166.6	96.1	8.2	1.4	40.9	75.4	21.2	0.85	17.1
LG Seeds NB749W	17	178.6	96.7	11.4	2.7	56.8	78.3	23.9	1.03	13.5
NC+ 5633W	18	183.3	98.7	7.4	3.2	53.8	77.6	22.2	0.77	9.6
<i>NC+ RE372W</i>	19	135.9	95.6	9.2	2.4	46.8	75.6	19.3	0.86	16.8
<i>Novartis N71-T7</i>	20	179.2	98.2	9.6	2.3	53.4	77.7	21.9	1.18	15.0
Pioneer Brand 3463W	21	162.3	97.9	4.3	1.7	46.8	75.1	19.1	0.75	13.7
Pioneer Brand 32H39	22	183.0	97.4	11.1	2.0	47.9	77.1	22.1	0.87	11.3
<i>Pioneer Brand 34P93</i>	23	179.7	99.2	8.3	4.4	44.5	76.9	20.0	0.84	19.6
<i>Pioneer Brand X1127DW</i>	24	188.7	95.9	4.6	1.1	40.9	75.3	20.5	0.83	18.1
<i>Pioneer Brand X1127FW</i>	25	204.6	97.7	7.5	3.3	47.8	78.0	22.0	0.97	20.1
Vineyard V424W	26	181.0	97.3	8.6	1.6	54.4	79.0	23.7	0.77	14.8
Vineyard V438W	27	175.6	98.0	4.5	1.3	46.7	78.1	22.9	0.75	12.7
<i>Vineyard Vx4337</i>	28	181.6	94.8	8.5	5.6	48.0	76.1	22.5	1.18	24.1
Whisnand 50AW	29	187.1	98.6	13.8	5.0	60.2	79.5	22.3	1.12	7.4
Whisnand 51AW	30	173.3	98.1	10.9	2.7	55.4	79.9	22.7	0.94	12.9
Wilson 1780W	31	184.8	97.9	11.8	1.5	47.6	77.8	24.5	0.85	12.5
Wilson 1790W	32	187.1	96.7	11.7	2.1	49.4	77.3	23.4	0.98	17.5
<i>Wilson E8051</i>	33	192.3	96.2	12.0	0.9	50.0	79.9	25.5	1.18	19.5
Yellow check B73 × Mo17	34	185.6	97.5	11.5	2.5	50.9	77.1	21.5	0.93	17.4
Yellow check Pioneer Brand 3394	35	178.3	98.7	7.4	4.1	49.3	76.8	19.4	0.84	21.4
Mean		174.8	96.4	8.8	2.8	49.2	77.2	22.0		
LSD 0.05		13.9	3.0	ns	2.5	4.2	1.6	1.1	1.00	16.3
CV%		11.0	4.9		117.2	8.4	0.8	5.4	0.13	

Table 37. Continued.

Entry	No.	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)	b ₁ (bu/a/I)	Std. devn. (bu/a)
Location means: Champaign, IL		157.2	93.2	1.1	4.1	.	77.4	20.9		
Galesburg, IL		165.9	101.5	4.1	2.3	.	.	29.4		
Wanatah, IN		169.1	94.7	0.0	0.8	45.2	.	18.4		
Harlan, IA		183.0	95.2	3.8	2.7	.	.	21.0		
Marion, IA		206.4	93.9	.	.	53.0	70.9	23.2		
Ogden, IA		146.1	87.7	2.0	8.0	.	.	18.0		
St. Joseph, MO		158.9	100.0	68.5	0.6	.	.	18.8		
Clay Center, NE [†]		177.8	105.0	.	.	.	.	26.2		
Gothenburg, NE [†]		207.4	93.7	8.3	1.0	.	.	16.1		
Hoytville, OH		141.6	93.2	0.0	5.1	.	.	24.7		
Beresford, SD		181.0	99.7	0.0	1.8	54.8	.	22.3		
Ridgetown, Ontario		203.4	99.3	0.0	1.8	43.8	83.3	25.4		

[†] Irrigated location.

Table 38. Yield data (bu/a) from 12 locations of the 1998 Early White Food Corn Performance Test. New entries for 1998 are shown in italics.

Entry	No.	Cham- paign, IL	Gales- burg, IL	Wan- atah, IN	Har- lan, IA	Mar- ion, IA	Og- den, IA	St. Jo- seph, MO	Clay Center, NE†	Gothen- burg, NE†	Hoyt- ville, OH	Beres- ford, SD	Ridge- town, ONT	Com- bined
<i>AgriGold A6530W</i>	1	194.4	181.4	181.8	204.9	206.0	154.5	139.6	198.7	226.7	139.4	182.4	195.5	183.8
<i>AgriGold A6680W</i>	2	175.5	179.9	157.4	200.7	231.5	143.3	160.0	173.1	202.4	150.0	183.4	216.1	181.1
<i>Asgrow RX776W</i>	3	113.3	135.1	153.3	183.4	219.5	151.6	162.5	172.0	210.1	141.0	189.6	198.2	169.1
<i>Asgrow XP7308W</i>	4	108.5	163.8	151.4	157.5	208.3	140.6	138.3	153.4	182.3	127.4	160.0	187.9	156.6
<i>Asgrow XP8118W</i>	5	115.7	160.8	173.3	165.6	209.5	151.4	148.9	173.3	230.2	137.9	171.2	197.5	169.6
DEKALB DK665W	6	134.5	112.1	166.5	174.2	204.9	124.0	188.5	156.6	168.7	140.5	172.6	205.2	162.4
<i>DEKALB EXP868W</i>	7	167.5	99.3	179.1	167.1	200.0	133.1	145.7	147.5	203.6	148.6	167.6	184.7	162.0
Diener DB 114W	8	171.7	192.2	153.3	185.7	199.0	142.4	120.4	183.7	217.3	141.0	185.4	206.0	174.8
Garst 8419W	9	123.9	125.3	158.2	180.2	205.6	152.3	150.6	149.3	177.3	143.1	172.5	183.5	160.1
Garst 8490W	10	166.4	182.4	173.1	189.3	217.7	144.1	108.8	193.7	201.7	136.0	201.8	219.9	177.9
Garst 8527W	11	102.1	105.8	154.8	155.7	191.9	103.0	123.4	145.8	147.4	132.6	165.6	170.5	141.5
IFSI 90-1	12	157.1	186.6	163.6	176.8	212.5	150.7	165.4	173.2	217.3	156.0	188.4	211.1	179.9
IFSI 95-2	13	185.4	190.3	179.8	182.1	214.0	148.8	82.1	184.2	226.6	142.1	189.4	220.2	178.8
<i>IFSI 98-2</i>	14	141.3	165.1	164.6	171.5	255.7	122.6	166.7	161.5	216.8	140.8	176.3	223.0	175.5
LG Seeds LG2558W	15	124.9	154.7	164.1	128.4	203.4	114.0	168.8	157.3	179.1	130.8	162.7	190.1	156.5
LG Seeds LG2596W	16	170.5	128.2	172.4	167.0	186.9	133.2	180.0	181.5	200.6	121.8	177.4	180.3	166.6
LG Seeds NB749W	17	187.2	145.0	167.9	193.2	217.8	150.5	166.8	167.9	203.2	140.9	186.0	217.4	178.6
NC+ 5633W	18	184.0	191.4	175.6	198.4	202.4	160.8	157.6	188.5	212.0	148.0	182.3	198.7	183.3
NC+ <i>RE372W</i>	19	102.4	142.0	147.6	144.6	187.3	120.8	105.7	151.7	146.4	99.2	145.4	138.1	135.9
<i>Novartis N71-T7</i>	20	146.7	160.5	177.4	194.3	187.5	136.2	184.1	199.9	223.9	133.8	182.3	224.4	179.2
Pioneer Brand 3463W	21	167.8	160.0	148.8	160.8	189.2	130.4	168.7	156.9	169.4	128.6	162.4	204.9	162.3
Pioneer Brand 32H39	22	161.0	190.1	179.0	202.8	227.0	166.7	167.7	182.6	203.0	142.5	179.9	193.2	183.0
<i>Pioneer Brand 34P93</i>	23	173.2	203.5	154.7	187.9	177.5	157.8	168.0	204.8	225.1	126.8	176.7	199.8	179.7
<i>Pioneer Brand X1127DW</i>	24	184.6	216.9	188.4	216.2	191.4	160.9	154.6	187.2	216.9	146.7	180.7	219.8	188.7
<i>Pioneer Brand X1127FW</i>	25	187.4	226.1	191.4	214.7	217.6	160.3	225.9	213.4	250.0	151.9	189.0	228.0	204.6
Vineyard V424W	26	158.0	191.7	151.8	176.7	188.5	167.7	177.2	180.0	230.9	155.3	188.9	204.9	181.0
Vineyard V438W	27	183.6	190.7	162.9	186.1	197.9	146.8	168.7	166.9	197.0	131.3	182.4	192.4	175.6
<i>Vineyard Vx4337</i>	28	98.7	153.7	183.3	179.7	225.5	159.4	181.9	195.0	218.1	168.8	192.1	223.3	181.6
Whisnand 50AW	29	168.4	169.8	179.2	205.4	212.6	148.3	182.1	186.6	232.4	150.2	193.8	215.9	187.1
Whisnand 51AW	30	165.9	161.0	162.8	191.1	216.8	136.9	165.3	161.7	178.1	145.8	179.4	214.8	173.3

Table 38. Continued.

Entry	No.	Cham- paign, IL	Gales- burg, IL	Wan- atah, IN	Har- lan, IA	Mar- ion, IA	Og- den, IA	St. Jo- seph, MO	Clay Center, NE [†]	Gothen- burg, NE [†]	Hoyt- ville, OH	Beres- ford, SD	Ridge- town, ONT	Com- bined
Wilson 1780W	31	183.8	177.6	173.7	174.8	212.1	164.1	185.8	179.9	203.2	138.3	205.2	219.1	184.8
Wilson 1790W	32	192.5	196.2	182.1	183.8	210.7	162.2	134.8	199.9	239.1	151.2	190.8	201.9	187.1
<i>Wilson E8051</i>	33	163.1	156.5	164.1	216.6	211.6	166.9	211.9	203.9	249.7	143.3	199.3	221.3	192.3
Yellow check B73×Mo17	34	199.7	180.3	192.8	188.2	209.2	147.6	137.2	191.2	233.7	158.2	193.9	195.3	185.6
Yellow check Pioneer Brand 3394	35	141.4	129.9	188.9	200.4	175.2	159.7	166.8	201.2	219.3	164.9	176.8	215.0	178.3
Mean		157.2	165.9	169.1	183.0	206.4	146.1	158.9	177.8	207.4	141.6	181.0	203.4	174.8
LSD 0.05		45.7	33.3	16.8	24.1	28.5	27.2	60.1	25.5	29.4	11.7	17.3	26.9	13.9
CV%		17.8	12.3	6.1	8.1	8.5	11.4	23.2	8.8	8.7	5.1	5.8	8.1	11.0

[†] Irrigated location.

Table 39. European corn borer whorl-leaf feeding and stalk tunneling data from Columbia and Novelty, MO, for the 1998 Early White Food Corn Performance Test. New entries for 1998 are shown in italics.

Entry	No.	Columbia			Novelty			Combined		
		Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length (in)	Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length (in)	Leaf feeding (1-9)	No. of tunnels (no)	Tunnel length (in)
<i>AgriGold A6530W</i>	1	3.0	1.1	1.3	3.0	0.5	0.6	3.0	0.8	0.9
<i>AgriGold A6680W</i>	2	3.0	1.7	1.9	2.7	0.9	0.9	2.8	1.3	1.4
<i>Asgrow RX776W</i>	3	3.0	0.7	0.9	2.3	0.7	0.9	2.7	0.7	0.9
<i>Asgrow XP7308W</i>	4	2.7	1.3	1.9	2.3	1.0	1.1	2.5	1.2	1.5
<i>Asgrow XP8118W</i>	5	3.3	1.1	1.2	2.3	0.5	0.8	2.8	0.8	1.0
DEKALB DK665W	6	3.3	1.5	1.8	3.7	0.8	0.9	3.5	1.1	1.3
<i>DEKALB EXP868W</i>	7	3.7	2.0	2.5	3.0	0.7	0.8	3.3	1.3	1.6
Diener DB 114W	8	4.0	2.1	2.7	3.0	0.8	0.8	3.5	1.4	1.7
Garst 8419W	9	3.7	1.1	1.4	3.3	1.1	1.2	3.5	1.1	1.3
Garst 8490W	10	4.3	2.1	2.4	2.7	0.7	0.7	3.5	1.4	1.6
Garst 8527W	11	4.0	2.7	3.3	3.3	1.1	1.1	3.7	1.9	2.2
IFSI 90-1	12	3.3	1.8	2.6	2.7	0.9	1.1	3.0	1.3	1.8
IFSI 95-2	13	3.7	1.5	2.1	2.7	0.8	0.9	3.2	1.2	1.5
<i>IFSI 98-2</i>	14	3.3	1.8	2.1	3.7	0.7	0.7	3.5	1.2	1.4
LG Seeds LG2558W	15	2.7	1.1	1.2	2.7	0.9	0.9	2.7	1.0	1.1
LG Seeds LG2596W	16	3.7	2.0	2.0	2.0	0.5	0.5	2.8	1.3	1.3
LG Seeds NB749W	17	3.3	2.4	2.4	2.3	1.0	1.0	2.8	1.7	1.7
NC+ 5633W	18	3.3	1.4	1.5	3.7	0.6	0.7	3.5	1.0	1.1
<i>NC+ RE372W</i>	19	2.7	2.6	2.6	2.3	1.0	1.2	2.5	1.8	1.9
<i>Novartis N71-T7[†]</i>	20	1.0	0.1	0.1	1.7	0.1	0.1	1.3	0.1	0.1
Pioneer Brand 3463W	21	2.7	1.1	1.4	3.0	0.3	0.3	2.8	0.7	0.9
Pioneer Brand 32H39	22	3.7	1.5	1.7	2.3	0.4	0.4	3.0	0.9	1.0
<i>Pioneer Brand 34P93</i>	23	3.3	1.1	1.7	3.0	0.6	0.6	3.2	0.9	1.2
<i>Pioneer Brand X1127DW</i>	24	3.3	2.1	3.0	2.3	1.0	1.0	2.8	1.5	2.0
<i>Pioneer Brand X1127FW</i>	25	2.7	1.3	1.5	2.0	0.7	0.8	2.3	1.0	1.2
Vineyard V424W	26	3.7	1.3	1.5	3.0	1.1	1.1	3.3	1.2	1.3
Vineyard V438W	27	3.0	1.9	2.1	3.0	1.1	1.4	3.0	1.5	1.8
<i>Vineyard Vx4337</i>	28	2.7	1.0	1.3	2.7	0.5	0.5	2.7	0.8	0.9
Whisnand 50AW	29	3.3	2.2	2.6	2.7	0.2	0.3	3.0	1.2	1.4
Whisnand 51AW	30	3.7	3.1	3.3	3.3	1.0	1.0	3.5	2.0	2.1
Wilson 1780W	31	4.7	2.0	2.3	3.7	0.3	0.5	4.2	1.2	1.4
Wilson 1790W	32	4.0	1.5	1.6	3.0	0.9	1.1	3.5	1.2	1.3
<i>Wilson E8051</i>	33	2.7	1.6	1.6	1.7	0.5	0.5	2.2	1.0	1.1
Yellow check B73 × Mo17	34	3.3	3.0	3.5	2.7	0.9	0.9	3.0	1.9	2.2
Yellow check Pioneer Brand 3394	35	3.7	2.1	2.3	3.3	1.3	1.5	3.5	1.7	1.9
Susceptible check (Ki3)		4.0	1.5	1.7	4.0	0.5	0.7	4.0	1.0	1.0
Susceptible check (Wf9 × W182E)		5.0	4.6	6.0	4.0	0.8	1.1	4.5	2.7	3.6
Resistant check (Mycogen 7250)		3.0	1.5	2.1	3.0	1.0	1.1	3.0	1.3	1.6
Resistant check (Pioneer Brand 3184)		3.0	0.6	0.6	2.0	0.3	0.3	2.5	0.5	0.5
Mean		3.3	1.7	2.0	2.8	0.7	0.8	3.0	1.2	1.4
LSD 0.05		1.0	1.1	1.4	1.0	ns	ns	0.8	0.8	ns
CV%		17.8	41.2	42.5	22.7			20.1	48.1	

[†] Contains the BT11 event (NK Brand YieldGard) for resistance to European Corn borer.

Table 40. Combined grain quality data from the 1998 Early White Food Corn Performance Test grown at Champaign, IL; Marion, IA; Columbia, MO; Knoxville, TN; and Beresford, SD.

Entry	No.	Test weight (lb/bu)	100-kernel weight (g)	Kernel size (cc)	Thins [†] (%)	Kernel density (g/cc)	Horny endosp. (%)
<i>AgriGold A6530W</i>	1	61.7	27.5	0.21	45.4	1.31	84
<i>AgriGold A6680W</i>	2	62.2	32.0	0.24	36.8	1.32	85
<i>Asgrow RX776W</i>	3	61.7	30.1	0.22	51.6	1.33	89
<i>Asgrow XP7308W</i>	4	61.4	29.7	0.22	33.1	1.34	94
<i>Asgrow XP8118W</i>	5	62.8	30.3	0.23	42.1	1.34	89
DEKALB DK665W	6	63.0	37.8	0.29	16.3	1.33	91
<i>DEKALB EXP868W</i>	7	60.1	36.4	0.28	11.1	1.30	84
Diener DB 114W	8	60.5	30.9	0.24	20.5	1.30	86
Garst 8419W	9	63.7	33.5	0.25	31.8	1.34	92
Garst 8490W	10	61.3	34.3	0.26	31.1	1.31	88
Garst 8527W	11	60.7	33.3	0.25	19.3	1.32	89
IFSI 90-1	12	63.1	34.1	0.26	25.9	1.33	89
IFSI 95-2	13	62.8	33.5	0.25	29.7	1.33	90
<i>IFSI 98-2</i>	14	63.0	36.8	0.28	14.5	1.33	91
LG Seeds LG2558W	15	61.4	33.9	0.27	15.5	1.27	88
LG Seeds LG2596W	16	63.2	33.4	0.25	15.5	1.33	94
LG Seeds NB749W	17	62.6	33.2	0.25	37.6	1.32	85
NC+ 5633W	18	61.7	28.4	0.22	49.2	1.31	83
<i>NC+ RE372W</i>	19	62.8	30.0	0.22	26.6	1.32	88
<i>Novartis N71-T7</i>	20	61.5	30.5	0.23	42.6	1.31	84
Pioneer Brand 3463W	21	60.3	30.4	0.23	26.6	1.30	88
Pioneer Brand 32H39	22	61.9	32.6	0.24	39.4	1.33	90
<i>Pioneer Brand 34P93</i>	23	62.7	32.4	0.25	37.1	1.33	95
<i>Pioneer Brand X1127DW</i>	24	63.0	31.7	0.24	49.7	1.34	95
<i>Pioneer Brand X1127FW</i>	25	62.0	33.8	0.25	29.6	1.33	93
Vineyard V424W	26	62.5	32.2	0.24	27.9	1.33	89
Vineyard V438W	27	62.9	31.9	0.24	34.9	1.33	92
<i>Vineyard Vx4337</i>	28	61.4	33.3	0.26	62.4	1.31	89
Whisnand 50AW	29	62.6	32.1	0.24	35.2	1.33	87
Whisnand 51AW	30	63.5	33.2	0.25	34.2	1.34	89
Wilson 1780W	31	60.6	30.9	0.23	18.7	1.31	87
Wilson 1790W	32	61.2	30.7	0.23	23.2	1.31	88
<i>Wilson E8051</i>	33	61.6	39.2	0.29	6.3	1.34	88
Yellow check B73×Mo17	34	57.8	31.0	0.25	30.1	1.26	78
Yellow check Pioneer Brand 3394 [‡]	35	60.0	34.7	0.27	22.5	1.29	85
Mean		61.9	32.6	0.25	30.7	1.32	88
LSD 0.05		1.0	2.3	0.02	11.2	0.02	3.4
CV%		1.3	5.7	5.5	28.9	1.0	3.0

[†] Percent of a 250-kernel sample passing through a 20/64" round-hole sieve.

[‡] Data missing from one location.

Table 41. Yield and agronomic data from common entries in the 1997-1998 Early White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
Asgrow RX776W	2	161.4	96.4	3.1	4.4	40.6	80.9	22.6
DEKALB DK665W	2	143.7	97.9	4.1	6.8	48.4	80.6	22.4
Diener DB 114W	2	160.9	94.2	8.8	7.2	49.1	82.0	23.8
Garst 8419W	2	145.9	97.7	6.1	9.4	46.2	79.4	22.1
Garst 8490W	2	159.2	94.0	7.9	9.0	50.1	81.1	22.1
Garst 8527W	2	131.4	85.1	0.6	6.6	39.7	77.8	18.6
IFSI 90-1	2	158.2	93.9	5.5	8.8	54.4	82.1	22.7
IFSI 95-2	2	162.6	97.4	9.0	11.8	60.2	82.3	21.8
LG Seeds LG2558W	2	147.7	93.6	1.7	8.2	41.2	79.2	20.6
LG Seeds LG2596W	2	147.6	90.1	4.7	6.3	40.7	78.9	21.2
LG Seeds NB749W	2	161.5	98.0	8.1	11.3	55.1	82.7	24.1
NC+ 5633W	2	160.0	97.7	5.6	11.7	53.9	80.8	22.1
Pioneer Brand 32H39	2	171.3	97.5	10.2	5.3	48.0	80.2	22.3
Pioneer Brand 3463W	2	148.4	97.2	2.8	6.5	47.1	78.4	18.9
Vineyard V424W	2	158.8	96.9	8.5	8.8	53.8	81.5	24.1
Vineyard V438W	2	153.3	96.6	3.5	5.9	48.0	81.1	23.2
Whisnand 50AW	2	163.2	97.0	10.7	12.9	58.7	82.8	22.1
Whisnand 51AW	2	153.3	96.8	8.9	11.0	54.2	82.6	22.8
Wilson 1780W	2	165.3	96.3	9.4	7.1	48.5	81.9	24.7
Wilson 1790W	2	162.7	94.1	7.5	6.5	48.9	81.0	23.7
Yellow check B73×Mo17	2	156.1	97.2	6.3	9.3	51.5	80.2	21.5
Yellow check Pioneer Brand 3394	2	169.5	98.7	4.2	6.4	48.4	80.4	19.1
Mean		156.4	95.6	6.2	8.2	49.4	80.8	22.1

Table 42. Yield and agronomic data from common entries in the 1996-1998 Early White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
Garst 8527W	3	133.8	88.4	0.5	12.1	39.0	78.9	18.6
IFSI 90-1	3	156.6	93.2	4.1	15.1	53.3	83.7	22.2
IFSI 95-2	3	159.8	97.0	6.5	18.4	57.8	83.5	21.5
LG Seeds NB749W	3	155.6	97.0	5.7	17.7	52.8	84.0	23.4
NC+ 5633W	3	154.1	98.1	4.9	19.0	52.0	82.8	22.1
Pioneer Brand 32H39	3	166.7	98.0	7.3	12.5	47.1	81.5	21.7
Pioneer Brand 3463W	3	143.9	98.1	2.1	12.4	45.1	79.8	18.8
Vineyard V424W	3	155.5	96.9	6.5	14.1	52.0	82.8	23.7
Vineyard V438W	3	146.4	97.7	2.6	12.2	47.1	82.7	22.8
Whisnand 50AW	3	160.8	97.2	8.2	18.9	56.8	83.9	21.6
Whisnand 51AW	3	153.7	97.4	7.3	18.2	52.9	84.1	22.2
Wilson 1780W	3	161.9	97.6	6.4	13.3	47.2	83.6	24.7
Wilson 1790W	3	160.7	94.9	5.8	12.4	47.4	82.9	23.9
Yellow check B73 × Mo17	3	153.8	96.4	4.9	16.0	50.0	81.8	21.3
Yellow check Pioneer Brand 3394	3	164.8	97.5	2.9	13.2	46.4	81.9	19.1
Mean		155.2	96.4	5.1	15.0	49.8	82.5	21.8

Table 43. Yield and agronomic data from common entries in the 1995-1998 Early White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
IFSI 90-1	4	151.7	93.2	3.5	12.9	52.4	80.8	21.4
IFSI 95-2	4	153.7	95.0	5.5	15.9	56.7	80.5	20.7
LG Seeds NB749W	4	152.0	96.9	4.7	14.4	51.9	81.1	22.8
Pioneer Brand 3463W	4	140.1	97.1	1.6	10.0	44.7	76.8	18.2
Vineyard V424W	4	150.4	95.9	5.9	11.4	50.7	79.9	22.7
Vineyard V438W	4	143.0	96.8	2.2	9.8	46.0	80.0	21.9
Whisnand 51AW	4	148.8	96.2	5.7	15.0	52.1	81.1	21.5
Wilson 1780W	4	157.0	96.2	5.4	12.3	46.4	80.7	24.2
Wilson 1790W	4	154.0	94.3	4.7	10.2	46.7	80.2	23.3
Yellow check B73 × Mo17	4	150.7	94.8	4.0	13.1	49.3	78.9	20.8
Yellow check Pioneer Brand 3394	4	160.6	96.6	2.6	11.3	45.3	79.1	18.6
Mean		151.1	95.7	4.2	12.4	49.3	79.9	21.5

Table 44. Yield and agronomic data from common entries in the 1994-1998 Early White Food Corn Performance Tests.

Entry	Years (no)	Yield (bu/a)	Stand (%)	Root lodged (%)	Stalk lodged (%)	Ear height (in)	Days to flower (no)	Moist. (%)
IFSI 90-1	5	160.4	93.8	5.2	11.7	52.6	81.4	21.6
Pioneer Brand 3463W	5	145.6	96.9	3.4	9.6	45.2	77.3	18.5
Vineyard V424W	5	157.4	95.7	7.0	10.3	50.6	80.3	22.9
Vineyard V438W	5	148.6	96.1	2.8	9.3	46.0	80.7	22.1
Whisnand 51AW	5	155.7	95.6	6.9	13.1	52.4	81.5	21.7
Wilson 1780W	5	162.6	96.1	6.3	11.2	46.7	81.0	24.1
Wilson 1790W	5	160.1	94.2	5.7	9.5	46.7	80.7	23.3
Yellow check B73 × Mo17	5	156.6	94.5	4.2	12.2	49.4	79.7	21.1
Mean		155.9	95.4	5.2	10.9	48.7	80.3	21.9

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