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## SECTION I. VIRGINIA CORN HYBRID TRIALS IN 1998.

### Companies Participating in the 1998 Corn Hybrid Trials

Company	Brand	Address
AG-CHEM INC. - UAP SEEDS	DYNA GRO	312 WEST MAIN SALISBURY MD 21801
AGRIBIOTECH, INC.	HYTEST	120 CORPORATE PARK DR HENDERSON NV 89014
AGRIPRO SEEDS, INC.	AGRIPRO, HYPERFORMER	6075 POPLAR, SUITE 416 MEMPHIS TN 38119
AUGUSTA SEED CORPORATION	AUGUSTA	106 FAIRBURN RD MT SOLON VA 22843
BECK'S SUPERIOR HYBRIDS	BECK'S	6767 E 276 ST ATLANTA IN 46031
CHEMGRO SEED CO.	CHEMGRO SEED	PO BOX 307 DELMAR DE 19940
DEKALB PLANT GENETICS	DEKALB	3100 SYCAMORE RD DEKALB IL 60115
DOEBLER'S PA. HYBRIDS INC.	DOEBLER'S	RD 1 BOX 424 JERSEY SHORE PA 17740
EXCHANGE MILLING CO., INC.	BIO GENE	95 HALE ST ROCKY MOUNT VA 24151
GARST SEED CO.	GARST	PO BOX 500 SLATER IA 50244
HOFFMAN SEEDS, INC.	NK BRAND	PO BOX 12400 LANCASTER PA 17605-2400
MID-ATLANTIC SEEDS	MID-ATLANTIC	2083 SPRINGWOOD ROAD #163 YORK PA 17403
MYCOGEN PLANT SCIENCES	MYCOGEN	3600 N COLUMBIA PLAINVIEW TX 79072
NOVARTIS SEEDS, INC.	NK BRAND	PO BOX 959 MINNEAPOLIS MN 55440
PIONEER HI-BRED INT., INC.	PIONEER BRAND	1000 W JEFFERSON ST TIPTON IN 46072
SOUTHERN STATES COOP., INC.	SS	PO BOX 26234 RICHMOND VA 23260
TERRA INDUSTRIES INC.	TERRA	PO BOX 6000 SIOUX CITY IA 51102-6000
WILSON SEEDS, INC.	WILSON	PO BOX 391 HARLAN IA 51537

### VIRGINIA CORN HYBRID TRIALS IN 1998

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R.R. Wilmouth; D.E. Starmer; D. Dixon; D. Danner; Scott Jessee; John Huffard; J. Wooge; T. Stanley; the Bender family;

Performance trials of commercial corn hybrids were conducted at seven locations in Virginia in 1998. Test weights are reported this year for the first time. These test weights were taken with a GrainGauge calibrated over two years of testing. A list of the companies participating in the trials is shown in the table accompanying this information. All hybrids entered in the Virginia trials were those submitted by commercial companies. The locations at which particular hybrids were entered were specified by the company. Companies entering hybrids were charged a fee for each hybrid per location to support the Corn Performance Trials.

All locations except Orange were planted with a Wintersteiger PlotKing 2600. Orange was planted by hand and thinned to the desired population. All locations except Orange were harvested with a Massey-Ferguson 8XP plot combine. Orange was hand harvested and shelled to obtain grain weights. Yields have been adjusted to 15% moisture.

### Yield Differences

Experimental plots vary in yield and other measurements due to location in the field and other factors which cannot be controlled. Statistics given in the tables are intended to help the reader make valid comparisons between hybrids. The magnitude of differences which may have been due to uncontrollable variation has been computed for the data and listed at the bottom of columns as the LSD (.05) (least significant difference with 95% confidence). Differences less than the LSD are assumed not to be real differences with 95% confidence.

### Choice of Hybrids

When making hybrid selections it is important to realize that hybrids differ in their performance under different environments. Some hybrids are more adapted to a wide range of environments. Hybrid performance may vary with year and location variations in rainfall, temperature, pests and other environmental variables. In these experiments, many hybrids have essentially the same yield, and great care should be taken in interpreting the results of a single year's tests, especially at only one location. For these reasons it is important, whenever possible, to also look at a hybrid's average across locations when making hybrid selections. Multi-year averages give even greater confidence to hybrid performance decisions. The relative yield tables compare the yield of a hybrid to the average yield of all hybrids in the test. These tables are an excellent summary of yield potential compared to other hybrids.

*Appreciation is expressed to the Virginia Corn Check-Off Board  
for financial support of this research and the Virginia Extension  
corn program.*

**1998 VIRGINIA CORN HYBRID PLOT INFORMATION**  
(Rates are on a per acre basis.)

<b>Blacksburg</b>	<b>Whitethorne Farm</b>	
<b>Planted:</b>	May 22, 1998	
<b>Harvested:</b>	October 19, 1998	
<b>Pesticide:</b>	4.5 lb Partner® + 1.5 qt atrazine 4L + 1 lb Simtrol® preplant incorporated May 21, 1998	
<b>Fertilizer:</b>	30-60-60 preplant incorporated May 19, 1998 150 lb N using UAN sidedressed July 1, 1998	
<b>Plot Size:</b>	2 rows 27' x 30" 3 replications	
<b>Soil Series:</b>	Hayter	
<b>Cooperator:</b>	J. Wooge	
<b>Blackstone</b>	<b>Southern Piedmont Agricultural Research &amp; Extension Center</b>	
<b>Planted:</b>	April 28, 1998	
<b>Harvested:</b>	September 17, 1998	
<b>Pesticide:</b>	2 qt Bladex 4L + 1 qt Dual 8E/A April 29, 1998 1 pt Lannate® LV (cereal leaf beetle) June 8, 1998	
<b>Fertilizer:</b>	2 ton lime plowed under March 3, 1998 1000 lb 10-10-10 preplant incorporated April 29, 1998 235 lb ammonium nitrate broadcasted June 5, 1998	
<b>Irrigation:</b>	1.5" July 2, 8, and 15; 1" July 24	
<b>Plot Size:</b>	2 rows 27' x 30" 4 replications	
<b>Soil Series:</b>	Wedowee	
<b>Cooperators:</b>	W. B. Wilkinson and R. R. Wilmouth	
<b>Holland</b>	<b>Tidewater Agricultural Research &amp; Extension Center</b>	
<b>Planted:</b>	April 27, 1998	
<b>Harvested:</b>	September 18, 1998	
<b>Pesticide:</b>	1.5 pt Dual II® + 1.5 pt atrazine preplant incorporated April 24, 1998	
<b>Fertilizer:</b>	500 lb 5-10-30 March 31, 1998 + 100 units N April 24, 1998 + 100 units N using UAN + 25 lb 21-0-0-24 June 3, 1998	
<b>Plot Size:</b>	2 rows 27' x 30" 3 replications	
<b>Soil Series:</b>	Dragston	
<b>Cooperators:</b>	Bobby Ashburn and Gene Whitley	
<b>Mt Holly (dry)</b>	<b>Virginia Crop Improvement Association Farm</b>	
<b>Planted:</b>	April 28, 1998	
<b>Harvested:</b>	September 22, 1998	
<b>Pesticide:</b>	1.8 qt Bicep® 6L + 1 pt atrazine + 1 pt 2,4-D and 1 pt gramoxone	
<b>Fertilizer:</b>	60 lb N preplant incorporated +75 lb N sidedressed May 30, 1998	
<b>Plot Size:</b>	2 rows 27' x 30" 3 replications	
<b>Soil Series:</b>	State fine sandy loam	
<b>Cooperator:</b>	Bruce Beahm	
<b>Mt Holly (irr)</b>	<b>Virginia Crop Improvement Association Farm</b>	
<b>Planted:</b>	May 16, 1998	
<b>Harvested:</b>	September 23, 1998	
<b>Pesticide:</b>	1.8 qt Bicep 6L + 1 pt atrazine preplant incorporated	
<b>Fertilizer:</b>	100 lb N preplant incorporated + 100 lb N sidedressed June 2 +90 lb N sidedressed June 9	
<b>Irrigation:</b>	0.5" June 6                      1.0" August 1 1.0" July 1                      1.0" August 6 1.0" July 5                      1.0" August 16 1.0" July 15                     0.5" August 23 1.0" July 21	
<b>Plot Size:</b>	2 rows 27' x 30" 4 replications	
<b>Soil Series:</b>	State fine sandy loam	
<b>Cooperator:</b>	Bruce Beahm	
<b>Orange</b>	<b>Northern Piedmont Agricultural Research &amp; Extension Center</b>	
<b>Planted:</b>	May 20, 1998	
<b>Harvested:</b>	October 11, 1998	
<b>Pesticide:</b>	1 qt Dual® + 2 qt Aatrex® 4L preplant incorporated	
<b>Fertilizer:</b>	1275 lb 10-10-10 April 29, 1998 + 100 lb N sidedressed June 30, 1998	
<b>Plot Size:</b>	1 row 30' x 30" 3 replications	
<b>Soil Series:</b>	Davidson silty clay	
<b>Cooperators:</b>	D. E. Starner and D. Dixon	
<b>Wythe County</b>		
<b>Planted:</b>	May 19, 1998	
<b>Harvested:</b>	October 12, 1998	
<b>Pesticide:</b>	0.5 pt Banvel® + 1.5 pt 2,4-D May 13, 1998 2.5 pt gramoxone + 2 pt Lorsban® 4E + 2.5 qt Bicep® II applied May 18, 1998	
<b>Fertilizer:</b>	6300 gal manure with an analysis of 87-124-190-33S N level was brought to 160 lb by broadcasting urea	
<b>Plot Size:</b>	2 rows 27' x 30" 4 replications	
<b>Cooperators:</b>	David Danner, Scott Jesse, and John Huffard	

**Rockingham County**

**Planted:** May 15, 1998

**Harvested:** October 9, 1998

**Pesticide:** 2.5 qt Bicep® + 1 qt Princep® + 5 oz Asana® + 1.5 pt gramoxone + 1 pt surfactant applied May 15, 1998

**Fertilizer:** 50-40-80-20 broadcast May 15, 1998

80 lb N sidedressed

**Plot Size:** 2 rows 27' x 30" 4 replications

**Cooperators:** Tom Stanley and the Bender family

**Table 1. 1998 RELATIVE YIELD\* of hybrids entered in three or more locations.**

Very Early Maturity Brand	Hybrid	Mt Holly		Holland	Black-		Blacks- Burg	Rock- ingham	Wythe	Mean
		Dry	Irr		Stone	Orange				
AUGUSTA	A9873	104	103	-	-	132	-	-	-	112
DOEBLERS	636XY	117	99	-	-	115	109	-	-	109
DEKALB	DK595	101	96	-	-	121	-	-	-	105
GARST	8585GLS	85	101	-	-	126	-	-	-	104
DEKALB	DK591	109	99	-	-	127	106	88	104	104
SOUTHERN STATES	576	102	103	-	-	113	-	93	-	102
PIONEER BRAND	34K77	121	114	67	92	128	103	99	97	102
TERRA	TR1047	99	107	-	73	-	130	-	-	101
DEKALB	DK527	123	89	-	-	101	-	-	-	101
AUGUSTA	A885	90	95	58	-	131	-	-	-	93
AUGUSTA	A359	106	104	56	-	98	-	-	-	92
Early Maturity Brand	Hybrid	Mt Holly		Holland	Black-		Blacks- Burg	Rock- ingham	Wythe	Mean
		Dry	Irr		Stone	Orange				
PIONEER BRAND	3223	124	113	145	117	102	-	-	-	120
PIONEER BRAND	33V08(Bt)	117	109	114	110	136	-	-	-	116
NK	N79-L3	103	105	124	-	-	131	-	-	114
PIONEER BRAND	33Y09(Bt)	120	104	104	110	122	121	102	121	113
MYCOGEN	7250	114	104	112	-	-	-	-	-	110
AUGUSTA	A9864	111	97	-	-	126	-	-	-	110
PIONEER BRAND	33G26	102	106	125	101	117	124	101	95	108
PIONEER BRAND	3310	-	-	-	98	104	122	106	110	108
AUGUSTA	A6485	112	97	-	-	117	-	-	-	108
NK	N7639Bt	106	103	-	-	-	121	100	109	107
SOUTHERN STATES	EXP76322	85	101	115	-	105	112	113	107	106
AUGUSTA	A285	114	96	-	-	100	107	109	-	105
SOUTHERN STATES	726	111	100	-	-	102	-	-	-	104
WILSON	1792	93	102	119	-	-	-	-	-	104
NK	N73-N8	-	-	117	-	-	104	96	100	103
AUGUSTA	A385	122	102	-	-	89	-	102	-	103
BECK'S	5405	96	99	115	-	-	-	-	-	103
DEKALB	DK635	98	94	-	-	105	112	-	-	102
PIONEER BRAND	3394	102	105	98	93	109	-	-	-	101
SOUTHERN STATES	627	112	89	-	-	113	-	98	-	101
DEKALB	DK641	91	110	97	100	103	-	-	-	100
TERRA	TR1088	104	97	-	84	-	122	-	-	100
DEKALB	DK626	125	100	98	87	93	103	100	-	100
AUGUSTA	A552	107	104	-	102	83	106	-	93	99
MYCOGEN	2801	91	98	108	-	-	-	-	-	99
WILSON	E6018	99	94	106	-	-	102	-	-	99
DOEBLERS	642XP	106	98	-	-	-	-	96	-	99
AUGUSTA	A3364	75	101	-	-	117	-	-	-	98
DOEBLERS	636XY*	-	-	69	-	102	119	99	-	98
SOUTHERN STATES	EXP76395	107	101	-	-	95	-	92	-	98
PIONEER BRAND	32K61	109	100	64	94	104	112	108	95	98
GARST	8464	124	89	87	86	102	-	-	-	97
SOUTHERN STATES	767	106	89	-	-	97	-	-	-	96
SOUTHERN STATES	747	101	98	-	-	88	-	-	-	96

DYNAGRO	5322	85	98	-	-	103	-	-	-	96
PIONEER BRAND	3245	95	105	56	96	105	-	105	-	94
MID-ATLANTIC	MA9141	-	-	-	-	96	81	91	105	94
MYCOGEN	2772	92	100	90	-	-	-	-	-	94
DEKALB	DK642	94	101	69	85	89	116	94	-	93
SOUTHERN STATES	742A	-	-	108	-	-	72	94	95	91
SOUTHERN STATES	EXP74166	80	94	74	-	78	108	89	-	88
AUGUSTA	A3573	99	94	67	-	-	-	-	-	87

<b>Medium Maturity Brand</b>	<b>Hybrid</b>	<b>Mt Holly</b>		<b>Holland</b>	<b>Black-</b>		<b>Blacks-</b>	<b>Rock-</b>	<b>Wythe</b>	<b>Mean</b>
		<b>Dry</b>	<b>Irr</b>		<b>Stone</b>	<b>Orange</b>	<b>Burg</b>	<b>ingham</b>		
PIONEER BRAND	31B13(Bt)	81	116	135	121	111	-	-	-	114
PIONEER BRAND	3163	78	112	123	102	108	101	108	104	105
SOUTHERN STATES	797IT	127	95	-	-	89	-	109	-	105
NK	N83-N5	-	-	113	-	-	106	102	97	104
NK	N83-R7	-	-	-	-	-	101	117	92	103
AUGUSTA	A2062aa	102	100	-	-	-	106	-	-	103
DEKALB	DK679	104	101	113	102	99	-	95	-	102
CHEMGRO	7596	98	102	111	-	98	-	-	-	102
NK BRAND	N75-K6	106	110	-	-	107	-	88	-	102
NK BRAND	N70-P5	106	90	-	-	115	-	100	-	102
PIONEER BRAND	31G20	95	106	95	108	121	86	110	88	101
CHEMGRO	7796	119	107	100	-	76	-	-	-	101
MYCOGEN	2888	105	94	107	-	-	-	-	-	101
PIONEER BRAND	3153	89	104	94	104	98	110	103	98	100
DEKALB	DK687	94	102	108	-	111	85	100	-	100
AUGUSTA	A4262	98	94	109	-	-	-	-	-	100
TERRA	E1148	108	103	-	93	-	100	-	-	100
BECK'S	8280	103	99	93	-	-	-	-	-	99
DEKALB	DK668	-	-	104	104	86	-	-	-	99
TERRA	TR1157	93	101	-	107	-	91	-	-	99
MID-ATLANTIC	MA9171	-	-	-	-	89	97	103	-	97
GARST	8300GLS	103	98	72	96	110	-	-	-	96
TERRA	TR1186	94	97	-	99	-	95	-	-	96
AUGUSTA	A2062	93	101	-	-	89	92	104	93	96
AGRIPRO	AP9580	-	-	-	-	104	91	94	-	96
DOEBLERS	82XP	71	98	-	-	94	-	101	-	92
TERRA	TR1167	81	95	-	100	-	84	-	-	91
MYCOGEN	2832IMI	95	94	84	-	-	-	-	-	91
DYNAGRO	5508	73	91	-	-	-	-	99	-	89
CHEMGRO	7757	90	92	90	-	74	-	-	-	87
DOEBLERS	746XY	75	100	57	-	87	65	99	-	84
MYCOGEN	2853	82	89	76	-	-	-	-	-	83

<b>Mid-Full Maturity Brand</b>	<b>Hybrid</b>	<b>Mt Holly</b>		<b>Holland</b>	<b>Black-</b>		<b>Blacks-</b>	<b>Rock-</b>	<b>Wythe</b>	<b>Mean</b>
		<b>Dry</b>	<b>Irr</b>		<b>Stone</b>	<b>Orange</b>	<b>Burg</b>	<b>ingham</b>		
DYNAGRO	5570	100	100	112	-	-	-	-	-	103
DOEBLERS	859XY	93	100	114	-	89	114	-	-	102
PIONEER BRAND	3156	-	-	-	99	102	115	105	88	101
AGRIPRO	AP9828	-	-	101	-	82	109	105	-	100
MID-ATLANTIC	MA9200	-	-	-	-	84	100	122	91	100
AGRIPRO	AP9707	-	-	103	107	-	87	-	-	99

PIONEER BRAND	3167	-	-	112	109	63	-	-	-	96
GARST	8220	102	97	-	-	76	-	106	-	96
SOUTHERN STATES	849IT	-	-	-	-	71	110	101	98	96
SOUTHERN STATES	943	-	-	-	-	83	89	99	-	91
MID-ATLANTIC	MAX9230	-	-	-	99	84	88	86	-	90
MID-ATLANTIC	MA9201	-	-	-	96	89	80	92	-	90
PIONEER BRAND	3082	-	-	91	100	73	-	-	-	89
SOUTHERN STATES	897	-	-	-	-	63	99	92	-	86
AGRIPRO	AP9919V	-	-	76	-	78	97	-	-	84

\*Relative yield is calculated by dividing the yield of a hybrid by the average yield of all hybrids of all maturities at that location. A hybrid with a relative yield of 105 was 5% above the average of all hybrids at that location. The value of 105 is **not** a yield but a value relative to all other yield values at that location. Relative yields are listed in order of descending mean values.

**Table 2. Two Year Average RELATIVE YIELD\* (1997-1998) of hybrids entered in three or more locations each year.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
DOEBLERS	636XY	25	103
SOUTHERN STATES	576	37	100
AUGUSTA	A359	29	96
AUGUSTA	A885	29	94
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	3223	37	111
PIONEER BRAND	33VO8-Bt	29	109
PIONEER BRAND	33Y09-Bt	55	106
AUGUSTA	A385	30	105
MYCOGEN	7250	22	105
NK	N73-N8	37	105
AUGUSTA	A285	37	104
PIONEER BRAND	3310	45	104
PIONEER BRAND	32K61	55	103
SOUTHERN STATES	742A	33	103
PIONEER BRAND	3394	37	102
SOUTHERN STATES	726	22	102
AUGUSTA	A552	52	101
DEKALB	DK626	44	101
PIONEER BRAND	3245	45	100
SOUTHERN STATES	747	22	99
DEKALB	DK642	55	97
MID-ATLANTIC	MA9141	33	96
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	31B13-Bt	29	110
DEKALB	DK679	40	105

PIONEER BRAND	3163	63	105
PIONEER BRAND	3153	63	105
DEKALB	DK668	30	103
SOUTHERN STATES	797IT	26	103
BECK'S	8280	26	102
NK	N83-R7	26	102
DEKALB	DK687	47	101
TERRA	TR1157	30	101
AUGUSTA	A2062	48	100
DOEBLERS	82XP	37	98
MID-ATLANTIC	MA9171	29	96
TERRA	TR1186	26	96
TERRA	TR1167	30	94
DOEBLERS	746XY	36	92
DYNAGRO	5508	23	92

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	3156	41	100
MID-ATLANTIC	MA9200	33	99
PIONEER BRAND	3082	22	97
SOUTHERN STATES	897	33	97
SOUTHERN STATES	943	37	97

\*Relative yield is calculated by dividing the yield of a hybrid by the average yield of all hybrids of all maturities at that location. A hybrid with a relative yield of 105 was 5% above the average of all hybrids at that location. The value of 105 is **not** a yield but a value relative to all other yield values at that location. Relative yields are listed in order of descending mean values.

**Table 3. Three Year Average RELATIVE YIELD\* (1996-1998) of hybrids entered in three or more locations each year.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
DOEBLERS	636XY	37	101
SOUTHERN STATES	576	53	100
AUGUSTA	A359	37	98
AUGUSTA	A885	37	95

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	3223	61	110
AUGUSTA	A385	38	106
AUGUSTA	A552	72	105
NK	N73-N8	49	105
PIONEER BRAND	3310	69	104
AUGUSTA	A285	49	103
PIONEER BRAND	3245	73	103
PIONEER BRAND	3394	61	102
SOUTHERN STATES	726	34	102
DEKALB	DK626	60	101
DEKALB	DK642	79	101
MID-ATLANTIC	MA9141	45	101
MYCOGEN	7250	30	101
SOUTHERN STATES	742A	45	101
SOUTHERN STATES	747	34	99



<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	3153	87	106
PIONEER BRAND	3163	95	106
DEKALB	DK668	46	103
BECK'S	8280	46	102
DEKALB	DK687	59	101
MID-ATLANTIC	MA9171	49	101
TERRA	TR1157	46	101
DOEBLERS	82XP	57	99
TERRA	TR1167	50	99
DOEBLERS	746XY	52	96

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b># Observations</b>	<b>Relative Yield</b>
PIONEER BRAND	3082	34	101
PIONEER BRAND	3156	61	100
MID-ATLANTIC	MA9200	53	99
SOUTHERN STATES	943	65	99
SOUTHERN STATES	897	53	95

\*Relative yield is calculated by dividing the yield of a hybrid by the average yield of all hybrids of all maturities at that location. A hybrid with a relative yield of 105 was 5% above the average of all hybrids at that location. The value of 105 is **not** a yield but a value relative to all other yield values at that location. Relative yields are listed in order of descending mean values.

**Table 4. Yields at ROCKINGHAM, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	34K77	173	18.1	57.4
SOUTHERN STATES	576	163	17.1	57.3
DEKALB	DK591	154	18.2	55.0
Maturity Average		163	17.8	56.6
LSD		26	0.4	0.7
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
SOUTHERN STATES	EXP76322	197	21.8	54.0
AUGUSTA	A285	191	20.4	53.5
PIONEER BRAND	32K61	189	20.4	59.3
HYTEST	HT7712	185	22.4	51.4
PIONEER BRAND	3310	185	20.8	58.1
PIONEER BRAND	3245	184	21.1	58.3
PIONEER BRAND	33Y09(Bt)	179	21.6	56.7
HYTEST	HTX7727	178	20.7	53.3
AUGUSTA	A385	178	20.2	52.7
PIONEER BRAND	33G26	177	20.8	58.0
DEKALB	DK626	175	19.7	55.5
DOEBLERS	636XY*	174	19.2	54.5
NK	N7639Bt	174	21.2	55.5
SOUTHERN STATES	627	171	18.5	54.0
NK	N73-N8	168	20.6	56.1
SOUTHERN STATES	676	168	20.0	55.1
DOEBLERS	642XP	168	20.1	57.4
AGRIPRO	AP9507	168	18.4	57.3
DEKALB	DK618	168	19.3	56.3
DEKALB	DK642	165	19.8	55.3
SOUTHERN STATES	742A	165	22.6	53.4
MID-ATLANTIC	MA9141	160	19.6	53.4
GARST	8585GLS	160	19.4	56.4
SOUTHERN STATES	EXP76395	160	20.3	54.2
SOUTHERN STATES	EXP74166	156	20.4	55.9
Maturity Average		174	20.4	55.4
LSD		26	1.1	0.9
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
NK	N83-R7	205	23.5	54.1
PIONEER BRAND	31G20	193	24.2	56.1
SOUTHERN STATES	797IT	191	21.4	54.6
PIONEER BRAND	3163	189	20.7	55.8
GARST	8464	186	19.7	54.9
AUGUSTA	A2062	182	22.6	54.0
PIONEER BRAND	3153	180	22.9	57.1
MID-ATLANTIC	MA9171	180	22.9	54.3
NK	N83-N5	179	22.2	55.2
DOEBLERS	82XP	177	22.7	52.9
NK BRAND	N70-P5	175	19.9	56.5
DEKALB	DK687	174	23.4	52.8
DEKALB	DK658	174	20.7	55.6

DYNAGRO	5508	174	20.4	52.5
DOEBLERS	746XY	173	19.8	53.5
AGRIPRO	AP9597	170	19.3	57.2
DEKALB	DK679	166	22.7	54.9
AGRIPRO	AP9580	164	18.1	53.2
DOEBLERS	858XMD	162	22.6	54.5
DYNAGRO	5456	158	19.0	54.0
NK BRAND	N75-K6	155	21.7	56.4

Maturity Average		178	21.6	54.8
LSD		22	1.5	1.1

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
MID-ATLANTIC	MA9200	214	23.8	53.9
GARST	8300GLS	188	20.9	55.3
GARST	8220	185	23.9	50.9
PIONEER BRAND	3156	184	23.3	54.5
AGRIPRO	AP9828	184	24.1	53.4
SOUTHERN STATES	849IT	176	22.5	50.3
SOUTHERN STATES	943	173	22.8	51.4
SOUTHERN STATES	897	161	22.8	52.3
MID-ATLANTIC	MA9201	161	24.9	52.3
MID-ATLANTIC	MAX9230	151	23.9	50.0

Maturity Average		178	23.3	52.4
LSD		21	1.6	2.6

Location Average		175	21.2	54.8
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**Table 5. Two year average yield at ROCKINGHAM, VA in 1997 and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
SOUTHERN STATES	576	147	17.9

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	32K61	166	22.5
PIONEER BRAND	33Y09-Bt	165	22.5
PIONEER BRAND	3310	165	21.7
AUGUSTA	A385	162	21.0
AUGUSTA	A285	162	20.7
DEKALB	DK626	159	20.6
SOUTHERN STATES	742A	157	25.4
DEKALB	DK642	157	21.2
NK	N73-N8	152	21.2
PIONEER BRAND	3245	149	21.5
MID-ATLANTIC	MA9141	140	20.7

Maturity Average		158	21.7
LSD (0.05)		15	1.0

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
NK	N83-R7	170	25.3

AUGUSTA	A2062	164	24.0
SOUTHERN STATES	797IT	162	22.6
PIONEER BRAND	3153	159	23.7
DEKALB	DK679	159	24.1
PIONEER BRAND	3163	158	22.3
DOEBLERS	82XP	157	23.5
DEKALB	DK687	156	26.3
MID-ATLANTIC	MA9171	154	24.1

Maturity Average		160	24.0
LSD (0.05)		14	1.3

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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MID-ATLANTIC	MA9200	173	24.8
PIONEER BRAND	3156	167	24.8
SOUTHERN STATES	897	160	25.1
SOUTHERN STATES	943	160	25.1

Maturity Average		165	25.0
LSD (0.05)		22	1.8

Location Average		159	22.9
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**Table 6. Three year average yield at ROCKINGHAM, VA in 1996, 1997, and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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SOUTHERN STATES	576	154	17.8
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<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3310	166	21.7
AUGUSTA	A285	164	19.9
AUGUSTA	A385	164	20.1
DEKALB	DK642	161	21.5
SOUTHERN STATES	742A	157	25.5
NK	N73-N8	157	20.9
PIONEER BRAND	3245	154	21.5
DEKALB	DK626	152	19.8
MID-ATLANTIC	MA9141	149	20.2

Maturity Average		158	21.2
LSD (0.05)		11	0.8

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3153	162	23.9
PIONEER BRAND	3163	160	22.6
MID-ATLANTIC	MA9171	157	24.0
DEKALB	DK687	154	26.4

Maturity Average		158	24.2
LSD (0.05)		13	1.2

<b>Mid-Full Maturity</b>		<b>Yield</b>	<b>Moist</b>
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<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>
PIONEER BRAND	3156	166	24.8
MID-ATLANTIC	MA9200	165	24.9
SOUTHERN STATES	897	155	24.8
SOUTHERN STATES	943	155	25.1
Maturity Average		160	24.9
LSD (0.05)		16	1.4
Location Average		158	22.6

**Table 7. Yields at BLACKSBURG, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
TERRA	TR1047	205	17.5	54.1
DOEBLERS	636XY	172	20.1	52.8
DEKALB	DK591	167	19.9	52.2
PIONEER BRAND	34K77	163	19.1	54.8
Maturity Average		177	19.1	53.4
LSD		32	1.0	1.3
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
NK	N79-L3	207	24.6	55.1
PIONEER BRAND	33G26	196	22.6	55.3
PIONEER BRAND	3310	194	21.7	54.4
TERRA	TR1088	193	19.3	51.5
NK	N7639Bt	192	24.0	52.7
PIONEER BRAND	33Y09(Bt)	191	20.1	56.0
DOEBLERS	636XY	188	19.6	51.7
DEKALB	DK642	183	20.6	52.6
SOUTHERN STATES	EXP76322	178	20.3	52.6
PIONEER BRAND	32K61	177	20.6	55.6
DEKALB	DK635	176	20.6	54.3
SOUTHERN STATES	EXP74166	170	21.8	53.2
AUGUSTA	A285	168	20.8	51.8
AUGUSTA	A552	168	25.0	51.6
NK	N73-N8	165	22.1	52.3
DEKALB	DK626	163	21.5	51.7
DEKALB	DK618	162	19.6	53.1
WILSON	E6018	161	20.4	54.3
AGRIPRO	AP9507	156	19.5	54.7
BIO GENE	312	152	22.1	50.9
MID-ATLANTIC	MA9141	128	23.4	50.6
SOUTHERN STATES	742A	114	23.0	52.1
Maturity Average		172	21.5	53.1
LSD		28	1.9	1.7
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	3153	174	23.9	54.4
AUGUSTA	A2062aa	167	22.1	52.1
BIO GENE	407	167	24.5	53.0
NK	N83-N5	167	22.8	53.3
AGRIPRO	AP9597	163	20.4	53.7
DOEBLERS	859XY	160	24.0	53.3
PIONEER BRAND	3163	160	24.0	52.9
NK	N83-R7	159	26.2	52.0
TERRA	E1148	158	19.9	53.4
MID-ATLANTIC	MA9171	154	22.9	53.9
BIO GENE	500	151	21.8	50.9
TERRA	TR1186	149	26.5	52.2
BIO GENE	408	148	22.9	50.1
AUGUSTA	A2062	146	22.7	53.7
AGRIPRO	AP9580	144	18.5	50.4

TERRA	TR1157	144	22.1	50.2
PIONEER BRAND	31G20	136	25.6	54.5
DEKALB	DK687	135	27.0	52.4
TERRA	TR1167	133	22.2	52.1
DEKALB	DK658	121	19.8	52.8
MID-ATLANTIC	MAX9173	115	23.8	50.2
MID-ATLANTIC	MAX9182	103	21.7	53.3
DOEBLERS	746XY	102	22.0	51.2
BIO GENE	417	83	22.7	52.1

Maturity Average		144	23.0	52.5
LSD		36	1.7	1.2

<b>Mid-Full Maturity</b>		<b>Yield</b>	<b>Moist</b>	<b>Test Weight</b>
<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>	<b>lb/bu</b>

PIONEER BRAND	3156	182	23.7	53.4
DOEBLERS	859XY	180	23.7	53.0
SOUTHERN STATES	849IT	175	27.9	49.7
AGRIPRO	AP9828	172	22.1	53.8
HYTEST	BH4924	164	21.9	53.9
DEKALB	DK743	160	28.1	51.7
MID-ATLANTIC	MA9200	158	28.5	49.7
SOUTHERN STATES	897	157	24.3	50.2
AGRIPRO	AP9919V	154	24.4	51.3
SOUTHERN STATES	943	141	30.5	49.4
MID-ATLANTIC	MAX9230	139	25.1	50.4
AGRIPRO	AP9707	137	25.2	52.6
MID-ATLANTIC	MA9201	126	28.7	52.4

Maturity Average		157	25.7	51.6
LSD		34	3.1	0.8

Location Average		158	22.8	52.6
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**Table 8. Two year average yield at BLACKSBURG, VA in 1997 and 1998.**

<b>Early Maturity</b>		<b>Yield</b>	<b>Moist</b>
<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>

PIONEER BRAND	3310	167	21.6
PIONEER BRAND	33Y09-Bt	166	20.6
DEKALB	DK642	159	20.7
PIONEER BRAND	32K61	158	21.2
NK	N73-N8	157	21.2
AUGUSTA	A285	154	19.7
AUGUSTA	A552	152	24.2
SOUTHERN STATES	742A	141	23.6
MID-ATLANTIC	MA9141	132	21.9
Maturity Average		154	21.6
LSD (0.05)		24	1.2

<b>Medium Maturity</b>		<b>Yield</b>	<b>Moist</b>
<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>

PIONEER BRAND	3153	166	23.8
PIONEER BRAND	3163	149	22.4
TERRA	TR1157	147	22.5
AUGUSTA	A2062	142	23.6
NK	N83-R7	139	25.0

TERRA	TR1167	136	23.2
MID-ATLANTIC	MA9171	132	23.6
TERRA	TR1186	132	22.7
DEKALB	DK687	129	27.3
DOEBLERS	746XY	128	21.2

Maturity Average		140	23.5
LSD (0.05)		31	1.6

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3156	140	24.0
MID-ATLANTIC	MA9200	140	26.7
SOUTHERN STATES	897	140	24.2
SOUTHERN STATES	943	134	28.1

Maturity Average		138	25.8
LSD (0.05)		17	2.6

Location Average		145	23.2
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**Table 9. Three year average yield at BLACKSBURG, VA in 1996, 1997, and 1998.**

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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DEKALB	DK642	174	22.6
PIONEER BRAND	3310	172	22.8
NK	N73-N8	171	23.7
AUGUSTA	A552	169	26.3
MID-ATLANTIC	MA9141	168	23.1
SOUTHERN STATES	742A	145	26.5

Maturity Average		167	24.1
LSD (0.05)		22	1.4

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3153	177	25.7
PIONEER BRAND	3163	162	25.6
TERRA	TR1157	156	24.0
MID-ATLANTIC	MA9171	156	25.7
TERRA	TR1167	152	24.5
DOEBLERS	746XY	151	22.9
DEKALB	DK687	144	29.7

Maturity Average		157	25.4
LSD (0.05)		26	1.6

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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MID-ATLANTIC	MA9200	170	29.2
PIONEER BRAND	3156	155	26.6
SOUTHERN STATES	943	153	29.9
SOUTHERN STATES	897	145	27.2

Maturity Average		156	28.1
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LSD (0.05)	23	1.9
Location Average	160	25.5

**Table 10. Yields at BLACKSTONE, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	34K77	130	16.8	60.6
TERRA	TR1047	104	15.1	58.3
Maturity Average		117	15.9	59.4
LSD		53	0.6	1.1
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	3223	167	18.1	58.8
PIONEER BRAND	33Y09(Bt)	157	17.3	60.1
PIONEER BRAND	33V08(Bt)	156	17.2	61.0
AUGUSTA	A552	144	17.8	56.9
PIONEER BRAND	33G26	144	17.4	60.4
DEKALB	DK641	142	15.6	58.8
PIONEER BRAND	3310	139	17.6	59.7
PIONEER BRAND	3245	136	18.3	59.7
PIONEER BRAND	32K61	134	17.8	61.3
PIONEER BRAND	3394	131	16.7	59.9
DEKALB	DK626	123	15.2	58.9
GARST	8464	122	17.7	58.0
DEKALB	DK642	120	15.9	58.1
TERRA	TR1088	119	13.8	55.1
Maturity Average		138	16.9	59.0
LSD		22	0.8	1.4
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	31B13(Bt)	172	19.2	58.7
PIONEER BRAND	31G20	153	19.4	59.4
TERRA	TR1157	152	17.7	56.0
DEKALB	DK668	148	17.9	58.0
PIONEER BRAND	3153	147	19.1	59.6
DEKALB	DK679	145	17.6	59.3
PIONEER BRAND	3163	144	18.4	58.5
TERRA	TR1186	141	20.3	57.8
TERRA	TR1167	141	17.8	55.1
GARST	8220	137	19.4	53.1
GARST	8300GLS	136	18.0	58.5
TERRA	E1148	132	15.4	58.6
Maturity Average		146	18.3	57.7
LSD		18	0.6	2.5
<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
AGRIPRO	HS9843	162	15.8	58.5
PIONEER BRAND	3167	154	21.3	56.1
DEKALB	DK743	153	19.8	56.0
AGRIPRO	AP9707	152	16.9	58.3
PIONEER BRAND	3082	142	24.6	57.4
MID-ATLANTIC	MAX9230	141	20.1	54.8

PIONEER BRAND	3156	140	18.9	59.3
MID-ATLANTIC	MA9201	136	19.4	56.1
Maturity Average		147	19.6	57.1
LSD		17	1.8	0.9
Location Average		142	17.9	58.1

**Table 11. Two year average yield at BLACKSTONE, VA in 1997 and 1998.**

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3223	147	20.8
PIONEER BRAND	33VO8-Bt	139	19.1
AUGUSTA	A552	136	20.7
PIONEER BRAND	32K61	131	20.8
PIONEER BRAND	33Y09-Bt	130	23.8
PIONEER BRAND	3245	127	21.4
PIONEER BRAND	3310	123	21.2
PIONEER BRAND	3394	119	18.7
Maturity Average		131	20.8
LSD (0.05)		13	2.2
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	31B13-Bt	148	23.7
DEKALB	DK668	146	22.0
TERRA	TR1157	143	21.6
PIONEER BRAND	3153	142	23.7
TERRA	TR1167	133	23.1
PIONEER BRAND	3163	129	22.0
TERRA	TR1186	124	22.8
Maturity Average		138	22.7
LSD (0.05)		11	2.3
<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3156	140	25.1
PIONEER BRAND	3082	138	29.5
Maturity Average		139	27.3
LSD (0.05)		21	2.5
Location Average		135	22.4

**Table 12. Three year average yield at BLACKSTONE, VA in 1996, 1997, and 1998.**

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3223	152	21.4
PIONEER BRAND	3245	132	23.1
PIONEER BRAND	3310	132	22.1
PIONEER BRAND	3394	127	19.5

Maturity Average		136	21.6
LSD (0.05)		14	1.5

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3153	149	24.5
TERRA	TR1167	146	22.9
PIONEER BRAND	3163	143	22.8
TERRA	TR1157	143	22.1

Maturity Average		145	23.1
LSD (0.05)		10	1.3

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3082	145	30.8
PIONEER BRAND	3156	140	25.3

Maturity Average		143	28.0
LSD (0.05)		17	1.7

Location Average		141	23.5
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**Table 13. Yields at HOLLAND, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	34K77	74	16.7	51.7
AUGUSTA	A885	65	15.5	51.7
AUGUSTA	A359	62	15.7	50.2
Maturity Average		67	15.9	51.2
LSD		7	1.8	2.6
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	3223	160	18.1	55.3
HYTEST	HT7712	158	21.1	49.2
BECK'S	6580	157	17.1	55.8
HYPERFORMER	HY9646	140	16.8	53.2
PIONEER BRAND	33G26	139	16.4	54.4
NK	N79-L3	137	19.3	58.3
WILSON	1792	132	17.1	55.5
NK	N73-N8	129	17.0	52.4
SOUTHERN STATES	EXP76322	128	16.2	53.3
BECK'S	5405	128	16.3	53.8
PIONEER BRAND	33V08(Bt)	126	17.4	56.1
MYCOGEN	7250	125	16.8	55.2
SOUTHERN STATES	742A	120	16.3	53.4
MYCOGEN	2801	120	16.3	51.5
HYTEST	HTX7727	119	15.6	54.6
WILSON	E6018	118	16.1	55.8
PIONEER BRAND	33Y09(Bt)	116	17.7	54.5
HYTEST	HTX7610	111	16.0	52.2
DEKALB	DK626	109	16.2	52.8
PIONEER BRAND	3394	109	16.9	56.4
DEKALB	DK641	108	16.0	53.7
MYCOGEN	2772	100	15.2	52.7
GARST	8464	97	16.6	51.5
AGRIPRO	AP9616	94	15.3	51.2
SOUTHERN STATES	EXP74166	83	16.7	55.0
DOEBLERS	636XY	77	15.4	51.0
DEKALB	DK642	77	18.1	53.1
AUGUSTA	A3573	74	13.3	48.1
PIONEER BRAND	32K61	71	17.6	51.4
PIONEER BRAND	3245	62	19.4	55.0
Maturity Average		114	16.8	53.5
LSD		48	1.4	2.6
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	31B13(Bt)	150	18.9	54.0
HYTEST	HT7748	145	17.1	54.9
AGRIPRO	AP9909	144	19.0	55.3
PIONEER BRAND	3163	136	18.4	52.7
NK	N83-N5	126	18.2	55.7
DEKALB	DK679	126	17.3	56.1
CHEMGRO	7596	124	16.7	52.5
HYPERFORMER	HY9899V	124	20.3	52.1

DOEBLERS	859XY	121	18.4	55.0
AUGUSTA	A4262	121	17.1	53.9
GARST	8220	120	20.4	47.7
MYCOGEN	2888	119	18.3	55.8
DEKALB	DK687	119	19.6	53.8
DEKALB	DK668	115	17.0	55.3
CHEMGRO	7796	112	18.2	53.8
PIONEER BRAND	31G20	106	18.6	54.7
PIONEER BRAND	3153	104	18.9	54.7
BECK'S	8280	104	18.0	55.5
CHEMGRO	7757	100	17.3	52.7
MYCOGEN	2832IMI	94	17.2	50.6
SOUTHERN STATES	793A	93	16.5	53.9
WILSON	E3056	87	17.9	52.0
MYCOGEN	2853	85	16.5	51.1
GARST	8300GLS	80	18.7	52.8
AGRIPRO	AP9656	79	15.5	49.1
WILSON	E5307	77	20.5	56.9
DOEBLERS	746XY	64	15.6	46.2
Maturity Average		111	18.0	53.4
LSD		42	1.0	2.6

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
AGRIPRO	HS9843	128	18.0	54.9
DOEBLERS	859XY	126	17.9	57.2
PIONEER BRAND	3167	125	22.7	52.4
DYNAGRO	5570	125	17.4	52.7
AGRIPRO	AP9707	114	18.0	51.6
AGRIPRO	AP9828	112	18.1	55.8
PIONEER BRAND	3082	101	21.7	54.2
AGRIPRO	AP9919V	85	20.4	46.9
Maturity Average		114	19.3	53.2
LSD		33	1.4	1.9
Location Average		111	17.6	53.3

**Table 14. Two year average yield at HOLLAND, VA in 1996 and 1998. (Please note that data excludes the 1997 harvest.)**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
AUGUSTA	A885	125	17.8

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3223	188	20.1
NK	N73-N8	164	19.9
MYCOGEN	7250	161	20.6
DEKALB	DK626	159	18.2
PIONEER BRAND	3394	157	18.8
DEKALB	DK642	154	20.0
PIONEER BRAND	3245	147	22.2

Maturity Average		161	20.0
LSD (0.05)		20	1.1

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3163	180	20.6
BECK'S	8280	166	21.9
PIONEER BRAND	3153	161	21.6
DEKALB	DK668	158	20.5

Maturity Average		166	21.1
LSD (0.05)		26	1.1

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3082	152	27.0
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Location Average		159	20.7
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**Table 15. Three year average yield at HOLLAND, VA in 1995, 1996, and 1998. (Please note that data excludes 1997 harvest.)**

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3223	188	20.3
DEKALB	DK642	168	18.9
PIONEER BRAND	3394	166	18.2
PIONEER BRAND	3245	160	20.9

Maturity Average		170	19.5
LSD (0.05)		15	0.9

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3163	181	19.7
BECK'S	8280	168	20.8
DEKALB	DK668	161	19.7

Maturity Average		170	20.1
LSD (0.05)		16	0.6

Location Average		170	19.8
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**Table 16. Yields at MT HOLLY, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
DEKALB	DK527	161	11.6	57.6
PIONEER BRAND	34K77	159	13.8	60.5
DOEBLERS	636XY	154	13.4	58.8
SOUTHERN STATES	598IT	148	11.8	57.1
DEKALB	DK591	143	12.4	57.2
AUGUSTA	A359	139	11.7	55.5
AUGUSTA	A9873	136	11.9	57.6
SOUTHERN STATES	576	134	11.3	57.0
DEKALB	DK595	132	10.9	55.8
TERRA	TR1047	130	11.1	56.1
AUGUSTA	A885	117	12.7	58.5
GARST	8585GLS	111	12.1	58.5
Maturity Average		138	12.1	57.4
LSD		48	1.4	2.0

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
DEKALB	DK626	163	11.7	57.1
GARST	8464	162	12.7	56.3
PIONEER BRAND	3223	162	14.6	58.2
AUGUSTA	A385	160	13.1	55.8
PIONEER BRAND	33Y09(Bt)	158	14.0	59.9
PIONEER BRAND	33V08(Bt)	153	13.1	58.4
AUGUSTA	A285	150	12.3	57.7
MYCOGEN	7250	149	12.7	58.3
AUGUSTA	A6485	147	13.2	57.9
SOUTHERN STATES	627	147	11.5	54.1
AUGUSTA	A9864	145	13.6	59.4
SOUTHERN STATES	726	145	12.9	58.0
PIONEER BRAND	32K61	143	13.7	60.7
SOUTHERN STATES	EXP76007	142	12.3	55.8
SOUTHERN STATES	EXP76395	140	12.8	56.8
AUGUSTA	A552	140	13.9	58.2
NK	N7639Bt	139	14.5	60.3
SOUTHERN STATES	767	138	12.8	58.0
DOEBLERS	642XP	138	14.1	60.7
TERRA	TR1088	137	11.2	55.4
NK	N79-L3	135	15.3	62.3
PIONEER BRAND	33G26	134	13.1	58.6
PIONEER BRAND	3394	133	13.4	59.3
SOUTHERN STATES	747	132	13.7	58.3
WILSON	E6018	130	13.8	58.6
AUGUSTA	A3573	129	12.2	55.7
DEKALB	DK635	128	12.6	56.7
BECK'S	5405	125	10.8	55.5
PIONEER BRAND	3245	124	13.5	61.1
DEKALB	DK642	123	12.0	56.7
WILSON	1792	122	12.9	57.8
MYCOGEN	2801	120	12.2	57.3
MYCOGEN	2772	120	12.3	56.8
DEKALB	DK641	119	11.8	57.3
DYNAGRO	5322	112	11.0	55.3
SOUTHERN STATES	EXP76322	111	11.8	57.6



SOUTHERN STATES	EXP74166	105	13.1	57.8
AUGUSTA	A3364	98	12.6	58.3
Maturity Average		136	12.9	57.8
LSD		42	1.6	1.7

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
SOUTHERN STATES	797IT	166	13.7	59.9
CHEMGRO	7796	155	13.1	58.5
TERRA	E1148	142	12.3	57.3
NK BRAND	N75-K6	139	13.2	60.3
NK BRAND	N70-P5	139	13.8	59.3
MYCOGEN	2888	138	12.6	58.3
DEKALB	DK679	136	13.0	60.2
BECK'S	8280	136	14.9	59.9
GARST	8300GLS	135	13.1	58.6
AUGUSTA	A2062aa	134	13.1	58.0
CHEMGRO	7596	128	11.1	56.0
AUGUSTA	A4262	128	13.5	56.4
MYCOGEN	2832IMI	124	13.3	58.0
PIONEER BRAND	31G20	124	14.9	60.4
DEKALB	DK687	123	14.3	58.4
TERRA	TR1186	123	13.2	60.4
AUGUSTA	A2062	122	14.0	57.8
TERRA	TR1157	122	11.4	55.3
AUGUSTA	A3564	118	12.6	54.9
CHEMGRO	7757	117	12.7	56.4
PIONEER BRAND	3153	116	13.7	61.0
MYCOGEN	2853	107	12.6	57.2
TERRA	TR1167	107	12.6	57.4
PIONEER BRAND	31B13(Bt)	106	14.2	59.0
PIONEER BRAND	3163	102	12.0	57.8
DOEBLERS	746XY	99	12.0	55.7
DYNAGRO	5508	95	11.3	55.6
DOEBLERS	82XP	94	11.9	57.5

Maturity Average		123	13.1	58.1
LSD		42	1.6	2.0

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
GARST	8220	134	14.5	55.6
DYNAGRO	5570	131	12.6	55.6
DOEBLERS	859XY	122	15.8	59.6
Maturity Average		129	14.3	56.9
LSD		28	3.4	2.0

Location Average		131	12.9	57.8
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**Table 17. Two year average yield at MT HOLLY, VA in 1996 and 1998. (Please note that data excludes 1997 harvest.)**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
SOUTHERN STATES	576	158	15.3
DOEBLERS	636XY	156	16.7

AUGUSTA	A359	147	15.0
Maturity Average		154	15.7
LSD (0.05)		19	0.4
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3245	166	17.6
AUGUSTA	A385	166	16.1
PIONEER BRAND	3223	165	17.9
MYCOGEN	7250	164	16.6
PIONEER BRAND	3394	161	16.2
SOUTHERN STATES	726	161	17.2
AUGUSTA	A285	161	16.2
AUGUSTA	A552	154	18.3
DEKALB	DK626	154	15.5
SOUTHERN STATES	747	148	17.8
DEKALB	DK642	147	15.9
Maturity Average		159	16.9
LSD (0.05)		25	0.9
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3163	164	16.9
BECK'S	8280	160	19.2
PIONEER BRAND	3153	159	18.6
TERRA	TR1157	138	16.4
DOEBLERS	82XP	136	16.8
DOEBLERS	746XY	129	16.3
TERRA	TR1167	125	17.2
DYNAGRO	5508	118	16.4
Maturity Average		141	17.2
LSD (0.05)		22	0.8
Location Average		151	16.9

**Table 18. Three year average yield at MT HOLLY, VA in 1995, 1996, and 1998. (Please note that data excludes 1997 harvest.)**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
SOUTHERN STATES	576	155	15.7
DOEBLERS	636XY	152	16.9
Maturity Average		154	16.3
LSD (0.05)		17	0.5
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3245	171	18.3
PIONEER BRAND	3223	168	18.5
AUGUSTA	A552	162	18.8

PIONEER BRAND	3394	161	16.5
AUGUSTA	A285	155	17.0
DEKALB	DK642	147	16.4

Maturity Average		161	17.6
LSD (0.05)		17	0.7

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3163	160	17.7
BECK'S	8280	159	19.9
DOEBLERS	82XP	146	17.9
TERRA	TR1167	134	18.1

Maturity Average		150	18.4
LSD (0.05)		16	0.5

Location Average		156	17.7
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**Table 19. Yields at MT HOLLY, VA under irrigation in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>
PIONEER BRAND	34K77	257
TERRA	TR1047	242
AUGUSTA	A359	236
AUGUSTA	A9873	233
SOUTHERN STATES	576	233
GARST	8585GLS	228
DOEBLERS	636XY	225
DEKALB	DK591	224
SOUTHERN STATES	598IT	219
DEKALB	DK595	218
AUGUSTA	A885	214
DEKALB	DK527	202
Maturity Average		228
LSD		26

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>
PIONEER BRAND	3223	256
DEKALB	DK641	248
PIONEER BRAND	33V08(Bt)	246
PIONEER BRAND	33G26	239
PIONEER BRAND	3394	238
NK	N79-L3	237
PIONEER BRAND	3245	237
PIONEER BRAND	33Y09(Bt)	236
MYCOGEN	7250	235
SOUTHERN STATES	EXP76007	235
AUGUSTA	A552	234
NK	N7639Bt	232
WILSON	1792	231
AUGUSTA	A385	230
SOUTHERN STATES	EXP76322	229
AUGUSTA	A3364	229
DEKALB	DK642	228
DEKALB	DK626	227
SOUTHERN STATES	EXP76395	227
MYCOGEN	2772	226
SOUTHERN STATES	726	226
PIONEER BRAND	32K61	225
BECK'S	5405	224
SOUTHERN STATES	747	222
DYNAGRO	5322	222
MYCOGEN	2801	222
DOEBLERS	642XP	221
AUGUSTA	A6485	220
AUGUSTA	A9864	219
TERRA	TR1088	219
AUGUSTA	A285	217
AUGUSTA	A3573	213
DEKALB	DK635	213
SOUTHERN STATES	EXP74166	212
WILSON	E6018	211
SOUTHERN STATES	627	202

SOUTHERN STATES	767	201
GARST	8464	201

Maturity Average		226
LSD		23

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>
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PIONEER BRAND	31B13(Bt)	262
PIONEER BRAND	3163	254
NK BRAND	N75-K6	249
CHEMGRO	7796	241
PIONEER BRAND	31G20	240
PIONEER BRAND	3153	234
TERRA	E1148	232
DEKALB	DK687	231
CHEMGRO	7596	230
AUGUSTA	A2062	229
AUGUSTA	A2062aa	227
TERRA	TR1157	227
DEKALB	DK679	227
DOEBLERS	746XY	227
BECK'S	8280	224
DOEBLERS	82XP	221
GARST	8300GLS	220
TERRA	TR1186	219
TERRA	TR1167	215
AUGUSTA	A3564	214
SOUTHERN STATES	797IT	214
AUGUSTA	A4262	213
MYCOGEN	2832IMI	212
MYCOGEN	2888	212
CHEMGRO	7757	208
DYNAGRO	5508	205
NK BRAND	N70-P5	204
MYCOGEN	2853	202

Maturity Average		226
LSD		26

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>
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DYNAGRO	5570	225
DOEBLERS	859XY	225
GARST	8220	220
Maturity Average		224
LSD		38

Location Average		226
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**Table 20. Two year average yield at MT HOLLY, VA under irrigation in 1997 and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
AUGUSTA	A359	235	18.2
DOEBLERS	636XY	229	19.5
AUGUSTA	A885	225	18.9

SOUTHERN STATES	576	225	17.6
Maturity Average		228	18.6
LSD (0.05)		15	1.5
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3223	243	21.7
AUGUSTA	A552	239	22.3
PIONEER BRAND	3245	238	21.6
PIONEER BRAND	32K61	237	20.3
PIONEER BRAND	3394	236	19.9
DEKALB	DK642	233	20.8
PIONEER BRAND	33VO8-Bt	232	19.9
AUGUSTA	A385	231	21.0
DEKALB	DK626	230	19.5
PIONEER BRAND	33Y09-Bt	228	19.3
MYCOGEN	7250	227	20.6
AUGUSTA	A285	223	20.4
SOUTHERN STATES	747	222	22.3
SOUTHERN STATES	726	218	21.2
Maturity Average		231	20.8
LSD (0.05)		16	1.9
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	31B13-Bt	252	23.1
PIONEER BRAND	3163	244	22.7
AUGUSTA	A2062	233	23.7
TERRA	TR1186	233	21.4
PIONEER BRAND	3153	231	22.4
DOEBLERS	746XY	230	21.1
DEKALB	DK679	230	23.0
DOEBLERS	82XP	226	22.4
DEKALB	DK687	224	23.1
BECK'S	8280	222	23.4
TERRA	TR1157	222	22.2
TERRA	TR1167	219	23.4
DYNAGRO	5508	214	21.5
Maturity Average		229	22.6
LSD (0.05)		16	1.1
Location Average		230	21.2

**Table 21. Three year average yield at MT HOLLY, VA under irrigation in 1996, 1997, and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
AUGUSTA	A359	236	18.5
DOEBLERS	636XY	225	19.7
SOUTHERN STATES	576	223	17.7
Maturity Average		228	18.7
LSD (0.05)		12	1.2
<b>Early Maturity</b>		<b>Yield</b>	<b>Moist</b>

<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>
PIONEER BRAND	3245	244	21.7
PIONEER BRAND	3223	244	21.5
AUGUSTA	A552	242	22.7
DEKALB	DK642	238	20.8
PIONEER BRAND	3394	236	20.1
AUGUSTA	A385	236	21.1
DEKALB	DK626	233	19.6
SOUTHERN STATES	747	230	22.4
AUGUSTA	A285	228	20.6
SOUTHERN STATES	726	228	21.3
MYCOGEN	7250	225	20.8
Maturity Average		235	21.2
LSD (0.05)		12	1.0

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
PIONEER BRAND	3163	249	22.4
PIONEER BRAND	3153	238	22.5
DOEBLERS	746XY	230	21.1
DOEBLERS	82XP	230	22.1
BECK'S	8280	229	23.4
TERRA	TR1157	229	21.8
TERRA	TR1167	224	22.9
Maturity Average		233	22.3
LSD (0.05)		12	0.8
Location Average		233	21.2

**Table 22. Yields at WYTHE, VA in 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
DEKALB	DK591	89	22.4	52.9
PIONEER BRAND	34K77	83	23.8	52.2
Maturity Average		86	23.1	52.5
LSD		39	3.9	3.6
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
PIONEER BRAND	33Y09(Bt)	103	22.1	55.1
PIONEER BRAND	3310	94	22.5	56.1
NK	N7639Bt	93	23.1	52.0
SOUTHERN STATES	EXP76322	91	22.0	52.0
MID-ATLANTIC	MA9141	89	21.6	51.6
NK	N73-N8	85	22.5	53.1
PIONEER BRAND	33G26	81	23.9	56.1
PIONEER BRAND	32K61	81	24.1	54.8
SOUTHERN STATES	742A	80	23.6	51.4
AUGUSTA	A552	79	23.1	50.3
Maturity Average		87	22.9	53.2
LSD		21	1.3	1.5
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
SOUTHERN STATES	793A	109	22.6	52.7
PIONEER BRAND	3163	89	22.5	52.4
PIONEER BRAND	3153	83	24.2	53.3
NK	N83-N5	83	23.4	54.4
AUGUSTA	A2062	79	24.1	52.5
NK	N83-R7	78	26.7	51.4
PIONEER BRAND	31G20	74	25.5	54.0
Maturity Average		85	24.1	53.0
LSD		29	1.4	1.4
<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Weight lb/bu</b>
SOUTHERN STATES	849IT	83	24.2	49.7
MID-ATLANTIC	MA9200	77	24.6	50.0
PIONEER BRAND	3156	75	23.1	53.7
Maturity Average		78	23.9	51.1
LSD		25	2.9	2.7
Location Average		85	23.4	52.8

**Table 23. Two year average yield at WYTHE, VA in 1997 and 1998.**

<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	32K61	135	25.5
MID-ATLANTIC	MA9141	134	25.7
SOUTHERN STATES	742A	131	27.0
PIONEER BRAND	33Y09-Bt	123	24.0
PIONEER BRAND	3310	120	25.2
NK	N73-N8	118	24.9
AUGUSTA	A552	111	26.4

Maturity Average		125	25.5
LSD (0.05)		24	1.5

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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PIONEER BRAND	3153	130	26.1
PIONEER BRAND	3163	121	25.6
AUGUSTA	A2062	114	27.1
NK	N83-R7	110	28.3

Maturity Average		119	26.8
LSD (0.05)		19	1.1

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>
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MID-ATLANTIC	MA9200	112	28.3
PIONEER BRAND	3156	107	26.2

Maturity Average		110	27.3
LSD (0.05)		25	1.0

Location Average		120	26.2
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**Table 24. Yields at ORANGE, VA in 1998. (Corn was harvested early to preserve data from damage due to a strong thunderstorm 9/7/98.)**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Days To Silk</b>	<b>Ear Ht inches</b>	<b>Lodging %</b>
AUGUSTA	A9873	134	21.0	63	52	17
AUGUSTA	A885	133	21.3	62	44	2
PIONEER BRAND	34K77	131	22.2	62	47	6
DEKALB	DK591	130	24.8	63	47	4
GARST	8585GLS	129	20.4	62	44	4
DEKALB	DK595	123	20.1	62	43	8
DOEBLERS	636XY	117	24.5	64	46	10
SOUTHERN STATES	576	115	22.0	64	52	11
DEKALB	DK527	103	17.6	61	47	11
AUGUSTA	A359	100	29.9	66	51	10
Maturity Average		121	22.4	63	47	8
LSD		22	2.7	1	4	8
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Days To Silk</b>	<b>Ear Ht inches</b>	<b>Lodging %</b>
PIONEER BRAND	33V08(Bt)	139	27.7	64	52	15
AUGUSTA	A9864	128	23.9	63	52	23
PIONEER BRAND	33Y09(Bt)	124	26.9	65	55	24
AUGUSTA	A3364	120	25.4	65	52	10
PIONEER BRAND	33G26	119	22.1	64	52	21
AUGUSTA	A6485	119	22.3	63	45	15
DYNAGRO	5407	115	22.7	65	50	30
SOUTHERN STATES	627	115	22.1	64	45	17
PIONEER BRAND	3394	111	22.1	63	51	21
PIONEER BRAND	3245	108	25.2	66	48	10
DEKALB	DK635	107	24.2	64	45	15
SOUTHERN STATES	EXP76322	107	29.8	67	59	40
PIONEER BRAND	32K61	106	26.0	67	53	21
PIONEER BRAND	3310	106	25.1	66	49	22
DEKALB	DK641	105	25.6	65	54	25
DYNAGRO	5322	105	19.4	62	48	18
DOEBLERS	636XY*	104	24.1	65	49	21
PIONEER BRAND	3223	104	32.6	68	58	53
GARST	8464	104	21.9	63	43	8
SOUTHERN STATES	726	104	24.0	64	52	25
AUGUSTA	A285	102	25.3	66	51	24
DOEBLERS	746XY*	99	29.5	67	49	8
SOUTHERN STATES	767	99	26.7	65	48	13
SOUTHERN STATES	EXP76395	97	29.5	67	54	13
MID-ATLANTIC	MA9141	97	31.3	67	50	16
DEKALB	DK626	95	20.9	64	50	22
AUGUSTA	A385	91	32.8	68	51	19
DEKALB	DK642	90	23.7	66	45	32
SOUTHERN STATES	747	90	30.3	65	53	22
AUGUSTA	A552	85	37.3	70	59	32
SOUTHERN STATES	EXP74166	79	29.3	68	57	30
Maturity Average		106	26.1	65	51	22
LSD		21	3.8	2	5	14
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Days To Silk</b>	<b>Ear Ht inches</b>	<b>Lodging %</b>

PIONEER BRAND	31G20	124	30.9	65	53	28
NK BRAND	N70-P5	117	23.8	64	46	7
PIONEER BRAND	31B13(Bt)	113	37.1	67	59	27
GARST	8300GLS	113	29.0	65	45	9
DEKALB	DK687	113	33.1	66	49	17
PIONEER BRAND	3163	110	32.1	65	53	19
NK BRAND	N75-K6	109	28.3	64	47	10
AGRIPRO	AP9580	106	24.8	66	50	3
DYNAGRO	5456	106	26.6	65	47	6
DEKALB	DK679	101	30.7	65	55	30
PIONEER BRAND	3153	100	32.4	67	48	10
CHEMGRO	7596	100	34.9	67	55	32
DOEBLERS	82XP	96	33.9	66	53	24
AUGUSTA	A2062	91	33.0	66	55	29
SOUTHERN STATES	797IT	91	29.3	64	49	15
MID-ATLANTIC	MA9171	91	28.2	66	49	24
SOUTHERN STATES	828	91	32.0	66	46	16
DOEBLERS	746XY	89	29.7	67	48	10
DEKALB	DK668	88	32.7	67	52	21
CHEMGRO	7796	78	32.8	68	55	35
CHEMGRO	7757	76	36.8	70	53	15

Maturity Average		101	31.1	66	51	18
LSD		17	3.9	2	6	14

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Days To Silk</b>	<b>Ear Ht inches</b>	<b>Lodging %</b>
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PIONEER BRAND	3156	104	30.2	67	56	36
MID-ATLANTIC	MA9201	91	33.4	67	52	19
DOEBLERS	859XY	91	35.5	67	55	21
MID-ATLANTIC	MAX9230	86	34.1	67	44	14
MID-ATLANTIC	MA9200	86	31.9	66	45	9
SOUTHERN STATES	943	84	36.5	67	52	15
AGRIPRO	AP9828	84	30.2	67	56	37
AGRIPRO	AP9919V	79	33.1	67	46	13
GARST	8220	77	37.1	67	52	15
PIONEER BRAND	3082	75	34.3	69	53	27
SOUTHERN STATES	849IT	73	31.7	67	50	10
PIONEER BRAND	3167	65	40.0	71	53	43
SOUTHERN STATES	897	65	35.2	67	45	5

Maturity Average		81	34.1	67	51	20
LSD		15	4.7	1	5	17

Location Average		102	28.4	66	50	19
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**Table 25. Two year average yield at ORANGE, VA in 1997 and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
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AUGUSTA	A359	181	23.8	73	54
DOEBLERS	636XY	174	20.7	72	49
SOUTHERN STATES	576	171	19.3	71	53

Maturity Average		175	21.3	72	52
LSD (0.05)		25	1.8	1.6	4

<b>Early Maturity</b>	<b>Yield</b>	<b>Moist</b>	<b>DaysTo</b>	<b>EarHt</b>
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<b>Brand/Company</b>	<b>Hybrid</b>	<b>bu/A</b>	<b>%</b>	<b>Silk</b>	<b>Inches</b>
PIONEER BRAND	33VO8-Bt	195	22.3	72	54
AUGUSTA	A552	192	29.0	77	61
PIONEER BRAND	33Y09-Bt	185	22.4	73	57
AUGUSTA	A385	183	26.1	75	53
PIONEER BRAND	3394	183	20.1	71	53
PIONEER BRAND	3223	183	26.2	76	57
PIONEER BRAND	32K61	182	22.1	75	54
PIONEER BRAND	3310	182	22.7	73	53
PIONEER BRAND	3245	181	22.9	75	51
SOUTHERN STATES	726	181	21.7	72	53
SOUTHERN STATES	747	179	25.2	75	53
AUGUSTA	A285	179	22.1	73	50
DEKALB	DK626	177	19.5	72	53
DEKALB	DK642	176	22.1	74	47
MID-ATLANTIC	MA9141	172	25.7	74	51
Maturity Average		182	23.3	74	53
LSD (0.05)		13	1.9	1	3

<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
PIONEER BRAND	31B13-Bt	193	27.6	75	64
PIONEER BRAND	3163	187	26.0	74	56
PIONEER BRAND	3153	184	26.2	75	55
AUGUSTA	A2062	182	25.9	74	59
MID-ATLANTIC	MA9171	182	25.2	75	55
SOUTHERN STATES	797IT	179	24.4	71	52
DEKALB	DK687	178	26.7	74	53
DOEBLERS	746XY	173	23.8	75	53
DEKALB	DK668	171	25.4	74	57
Maturity Average		181	25.7	74	56
LSD (0.05)		12	2.0	2	4

<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
SOUTHERN STATES	943	188	31.0	74	54
PIONEER BRAND	3156	181	26.3	75	57
MID-ATLANTIC	MA9200	181	28.1	74	50

SOUTHERN STATES	897	165	27.7	75	49
PIONEER BRAND	3082	165	28.7	78	55
Maturity Average		176	28.4	75	53
LSD (0.05)		14	2.3	2	3
Location Average		180	24.6	74	54

**Table 26. Three year average yield at ORANGE, VA in 1996, 1997, and 1998.**

<b>Very Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
DOEBLERS	636XY	175	20.1	68	47
SOUTHERN STATES	576	170	19.3	68	52
Maturity Average		173	19.7	68	50
LSD (0.05)		15	1.4	1	3
<b>Early Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
AUGUSTA	A552	201	26.7	74	58
PIONEER BRAND	3223	192	24.3	73	56
PIONEER BRAND	3245	190	21.9	71	48
PIONEER BRAND	3310	186	22.5	70	52
SOUTHERN STATES	726	182	20.8	69	51
DEKALB	DK642	180	21.5	71	45
DEKALB	DK626	178	19.2	69	52
MID-ATLANTIC	MA9141	177	24.3	71	49
SOUTHERN STATES	747	177	23.7	72	50
Maturity Average		185	22.8	71	51
LSD (0.05)		11	1.1	1	2
<b>Medium Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
PIONEER BRAND	3153	190	24.1	72	52
MID-ATLANTIC	MA9171	188	24.3	71	54
PIONEER BRAND	3163	187	24.5	71	53
DEKALB	DK687	180	25.3	71	51
DOEBLERS	746XY	180	22.6	71	51
DEKALB	DK668	178	23.3	71	54
Maturity Average		184	24.0	71	52
LSD (0.05)		9	1.4	1	3
<b>Mid-Full Maturity Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>DaysTo Silk</b>	<b>EarHt Inches</b>
SOUTHERN STATES	943	183	28.6	72	52
PIONEER BRAND	3156	181	25.0	72	56
PIONEER BRAND	3082	177	27.5	75	54
MID-ATLANTIC	MA9200	172	27.4	72	49
SOUTHERN STATES	897	162	26.6	72	48
Maturity Average		175	27.0	72	52
LSD (0.05)		12	1.5	1	2

Location Average

181

23.8

71

51

**SECTION II. EVALUATION OF DOUBLECROP CORN UNDER IRRIGATION IN EASTERN VIRGINIA.**

**Table 27. Doublecrop Corn Hybrid Study under irrigation at Corbin Hall, VA in 1998.**

<b>Brand/Company</b>	<b>Hybrid</b>	<b>Yield bu/A</b>	<b>Moist %</b>	<b>Test Wt lb/bu</b>
SOUTHERN STATES	EXP78004	101	15.9	55.0
NOVARTIS	N4640Bt	99	16.1	55.0
PIONEER	33V08Bt	97	15.8	55.2
NOVARTIS	N7639Bt	96	16.5	55.8
PIONEER	36K27Bt	96	14.7	52.9
PIONEER	33Y09Bt	87	15.6	55.3
NOVARTIS	N79-L3	87	16.5	56.2
SOUTHERN STATES	EXP18516	86	13.9	54.5
NOVARTIS	N4242Bt	78	13.7	54.5
DEKALB	DK591	76	16.3	51.4
NOVARTIS	N4640	76	12.4	51.5
MYCOGEN	7059	75	14.5	54.8
NOVARTIS	N6800Bt	75	14.1	53.3
MYCOGEN	7559	68	15.1	53.0
NOVARTIS	N6800	67	13.9	54.7
MYCOGEN	2362	66	12.6	51.7
MYCOGEN	2598	61	13.5	51.6
DEKALB	DK446	59	12.3	50.5
MYCOGEN	2382	57	12.8	54.8
DEKALB	DK546	53	12.2	51.0
SOUTHERN STATES	EXP74166	50	13.6	50.7
AUGUSTA	885	40	12.6	49.9
PIONEER	3905	35	12.6	52.9
PIONEER	3984	30	12.8	53.8
Location Average		71	14.2	53.4
LSD (0.05)		20	1.3	2.2

Corn was planted June 4, 1998 and harvested October 2, 1998. Nitrogen at 130 lb was used as a carrier for Guardsman® at 3 pt and Roundup® at 2 qt applied preemergently.

### SECTION III. EVALUATION OF CORN ROW WIDTH AND POPULATION IN EASTERN VIRGINIA .

**Table 28. Corn Row Width/Population Study at TOANO, VA in 1998.**

<b>PIONEER BRAND 35N05</b>					
<b>#</b>	<b>Row width</b>	<b>Seeded</b>	<b>Yield</b>	<b>Moist</b>	<b>Test Wt</b>
<b>Rows</b>	<b>inches</b>	<b>Pop'n</b>	<b>bu/acre</b>	<b>%</b>	<b>lb/bu</b>
		<b>1000s</b>			
8	15	19	67	16.6	52.9
4	30	19	69	16.3	54.8
8	15	22	81	17.5	54.2
4	30	22	68	16.4	54.8
8	15	25	82	17.1	55.7
4	30	25	65	16.6	53.1
8	15	28	91	16.3	55.1
4	30	28	70	16.0	54.0
Hybrid Average		74	16.6	54.3	
LSD (0.05)			14	1.2	2.3

<b>DEKALB 591</b>					
<b>#</b>	<b>Row width</b>	<b>Seeded</b>	<b>Yield</b>	<b>Moist</b>	<b>Test Wt</b>
<b>Rows</b>	<b>inches</b>	<b>Pop'n</b>	<b>bu/acre</b>	<b>%</b>	<b>lb/bu</b>
		<b>1000s</b>			
8	15	19	69	17.3	50.8
4	30	19	72	18.0	51.1
8	15	22	78	17.1	52.0
4	30	22	70	16.5	50.8
8	15	25	76	17.0	51.5
4	30	25	71	17.3	50.1
8	15	28	66	17.4	51.6
4	30	28	68	17.8	48.6
Hybrid Average		71	17.3	50.8	
LSD (0.05)			22	2.0	2.6

This corn was planted June 2, 1998 no-till doublecrop following barley harvest. Nitrogen at 130 lb was used as a carrier for Guardsman® at 3 pt and Roundup® at 2 qt applied preemergently. Harvest occurred October 3, 1998.

## SECTION IV. EVALUATION OF BT HYBRIDS IN EASTERN VIRGINIA.

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Seven Bt corn hybrids and a non-Bt corn standard were planted April 1998 at the Eastern Virginia Agricultural Research and Extension Center in Holland, and May at the Virginia Crop Improvement Farm in Mt. Holly. The Bt hybrids evaluated at both locations included: Dekalb DK591, Mycogen 7059, Mycogen 7559, Novartis N6800-Bt, Novartis N7639-Bt, Pioneer 33V08, and Pioneer 35N05. Pioneer 3394, which consistently ranks in the top group for its maturity, was used as the non-Bt standard in our study. Corn was planted on 30-inch rows in four-row plots at both locations and grown under dryland conditions at Holland and under irrigation at Mt. Holly. All corn hybrids were replicated four times in a randomized complete block design.

### Evaluating European Corn Borer Damage

Second generation damage was determined in all plots at both locations in August, 1998. The sampling procedure consisted of thoroughly inspecting 20 cornstalks per plot for evidence of feeding and tunneling activity. A plant was destructively sampled only when feeding or tunneling damage was detected. Detailed records were made on the location and extent of the damage. For more information on this sampling procedure, contact the author.

### European Corn Borer Pest Pressure

Second generation corn borer pressure was very low at both locations in 1998. Of the 640 cornstalks sampled at Holland, only 7 (1.1%) corn borer tunnels were found (Table 29). Likewise, only 1 (0.2%) tunnel was found out of 640 cornstalks sampled at the Mt. Holly site (Table 30). This lack of pest pressure prevented us from evaluating the ability of the different Bt hybrids to withstand late-season European corn borer damage. However, significant differences in yields, percent moisture, and test weights were detected among hybrids at both locations. At Holland, corn yields grown under dryland conditions ranged from 104.0 to 126.3 bu/A (Table 31). Top yielding varieties at Holland included: Pioneer 33V08 (126.3 bu/A), Pioneer 35N05 (122.8 bu/A), Novartis N6800 (118.0 bu/A), Pioneer 3394 (117.3 bu/A), Mycogen 7059 (116.0 bu/A) and Novartis N7639 (112.0 bu/A). Somewhat lower yielding varieties at Holland included: Dekalb DK591 (109.0 bu/A) and Mycogen 7559 (104.0 bu/A).

**Table 29. ECB feeding damage, 1998 corn Bt hybrid study, Holland, Va.**

Variety	ECB damaged leaves per stalk	Stalk tunnels per stalk	Broken tassels per stalk	ECB egg masses per stalk	ECB larvae per stalk	ECB pupae per stalk
Pioneer 3394	0.33 a	0.05 a	0.04 a	0.03 a	0.03 a	0.0 3 a
Dekalb DK591	0.05 b	0.00 b	0.00 b	0.00 a	0.00 b	0.0 0 b
Mycogen 7059	0.15 ab	0.03 ab	0.00 b	0.01 a	0.00 b	0.0 1 ab
Mycogen 7559	0.14 ab	0.01 ab	0.00 b	0.01 a	0.00 b	0.0 1 ab
Novartis N6800Bt	0.08 b	0.00 b	0.00 b	0.00 a	0.00 b	0.0 0 b
Novartis N7639Bt	0.08 b	0.00 b	0.00 b	0.01 a	0.00 b	0.0 0 b
Pioneer 33V08	0.14 ab	0.00 b	0.00 b	0.00 a	0.00 b	0.0 0 b
Pioneer 35N05	0.19 ab	0.00 b	0.00 b	0.01 a	0.00 b	0.0 0 b



Means within a column followed by different letters are significantly different (LSD,  $P \leq 0.05$ )  
Statistical analyses performed on  $(x + 0.5)^{1/2}$  transformed data, but actual means are shown.

**Table 30. ECB feeding damage, 1998 corn Bt hybrid study, Mt. Holly, Va.**

Variety	ECB damaged leaves per stalk	Stalk tunnels per stalk	Broken tassels per stalk	ECB egg masses per stalk	ECB larvae per stalk	ECB pupae per stalk
Pioneer 3394	0.01	0.01	0	0	0.01	0
Dekalb DK591	0.04	0.00	0	0	0.00	0
Mycogen 7059	0.03	0.00	0	0	0.00	0
Mycogen 7559	0.00	0.00	0	0	0.00	0
Novartis N6800Bt	0.03	0.00	0	0	0.00	0
Novartis N7639Bt	0.01	0.00	0	0	0.00	0
Pioneer 33V08	0.04	0.00	0	0	0.00	0
Pioneer 35N05	0.04	0.00	0	0	0.00	0

Means within a column followed by different letters are significantly different (LSD,  $P \leq 0.05$ )

Note: No significant differences detected for any factor at Mt. Holly.

Statistical analyses performed on  $(x + 0.5)^{1/2}$  transformed data, but actual means are shown.

Under irrigation at Mt. Holly, corn yields ranged from 193.0 to 233.8 bu/A (Table 32). Top yielding varieties at Mt. Holly included: Pioneer 33V08 (233.8 bu/A), Pioneer 3394 (230.0 bu/A), Novartis N7639 (224.3 bu/A), Pioneer 35N05 (222.8 bu/A), and DK591 (221.5 bu/A). Somewhat lower yielding varieties at Mt. Holly included: Novartis N6800 (219.5 bu/A), Mycogen 7559 (206.3 bu/A), and Mycogen 7059 (193.0 bu/A). Under the conditions of these experiments, our results indicate that several Bt corn hybrids are competitive with the non-Bt hybrid, Pioneer 3394, for eastern Virginia.

**Table 31. Bt corn hybrids under dryland conditions; Holland, Virginia, 1998.**

Brand/Company	Hybrid	Yield bu/ac	Percent moisture	Test Wt lb/bu
Pioneer	33V08	126.3 a	17.4 c	59.2 bcd
Pioneer	35N05	122.8 ab	17.0 c	59.6 bc
Novartis	N6800	118.0 abc	19.5 a	60.9 a
Pioneer	3394	117.3 abc	17.6 bc	58.8 cde
Mycogen	7059	116.0 abc	17.5 bc	57.7 ef
Novartis	N7639	112.0 abc	18.7 ab	60.2 ab
Dekalb	DK591	109.0 bc	17.1 c	57.6 f
Mycogen	7559	104.0 c	17.4 c	58.1 def
Location Average		115.8	17.8	59.0
LSD		14.4	1.2	1.1

**Table 32. Bt corn hybrids under irrigation; Mt. Holly, Virginia, 1998.**

Brand/Company	Hybrid	Yield bu/ac	Percent moisture	Test Wt lb/bu
Pioneer	33V08	233.8 a	17.6 cd	58.5 c
Pioneer	3394	230.0 ab	17.4 d	58.5 c
Novartis	N7639	224.3 ab	18.3 ab	59.4 ab
Pioneer	35N05	222.8 ab	17.0 e	59.5 a
Dekalb	DK591	221.5 ab	17.4 d	56.6 e
Novartis	N6800	219.5 bc	18.6 a	58.9 bc
Mycogen	7559	206.3 cd	17.9 c	58.9 bc
Mycogen	7059	193.0 d	18.0 bc	57.9 d
Location Average		222.8	17.0	59.5
LSD		13.5	0.4	0.6

## SECTION V. 1998 EUROPEAN CORN BORER SURVEY IN EASTERN VIRGINIA

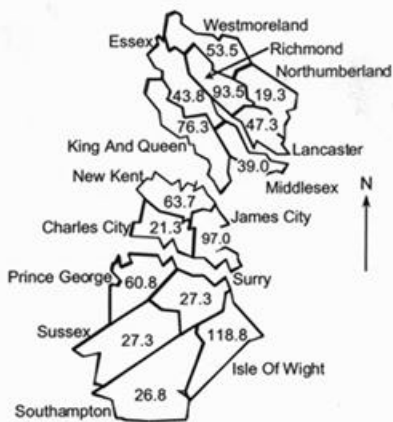
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We surveyed second generation European corn borer damage in 58 non-Bt cornfields across 15 eastern Virginia counties in August, 1998 (Fig. 1). The counties included four in the northern neck: Lancaster, Northumberland, Richmond, and Westmoreland; three in the middle peninsula: Essex, King and Queen, and Middlesex; three in the lower peninsula: Charles City, James City, and New Kent; and five counties south of the James River: Isle of

Wight, Prince George, Southampton, Surry, and Sussex. In each field, 100 stalks were sampled for corn borer damage making up a total sample size of 5,800 plants.

Unlike our 1997 survey which indicated a relatively low level of European corn borer damage for eastern Virginia, our 1998 survey indicated moderate to severe levels of European corn borer pressure in all 15 counties. The percentage of cornstalks with corn borer tunnels ranged from a low of 19.3% for Northumberland Co. to a high of 118.8% for Isle of Wight Co. Note that it is possible to generate percentage values greater than 100%, because under heavy corn borer infestations individual cornstalks can have several tunnels each. When averaged across all 58 cornfields, 54.7% of the stalks in eastern Virginia had corn borer tunnels. Given that most of the cornfields in our 1998 survey exhibited above-threshold infestation levels of European corn borer, most corn growers who planted Bt hybrids in eastern Virginia would have benefited from higher grain yields and grain quality in 1998.

**Figure 1.** 1998 survey of European corn borer damage in 58 non-Bt cornfields in eastern Virginia. Numbers in counties represent average percentage of stalks with ECB tunnels.



## SECTION VI.

### RESISTANCE AND AGRONOMIC CHARACTERS OF MAIZE HYBRIDS UNDER NATURAL GRAY LEAF SPOT DISEASE PRESSURE, MONTGOMERY CO., VA, 1998

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Gray leaf spot disease ratings, grain harvest moisture, bushel weights, and grain yields were obtained for 48 corn hybrids and on known high yielding susceptible check hybrid, Pioneer Brand 3394 (highlighted in gray in the table below), grown under heavy gray leaf spot disease pressure on VPI&SU's Whitethorne-Kentland Experimental Farm, Montgomery Co., VA. Prior to planting on a Hayter silt loam, pH 6.7, a fertilizer containing 200 lb N, 45 lb P and 25 lb K per acre was broadcast. The experimental design was a randomized complete block replicated four times with plots consisting of four 25-ft rows spaced 30 in. apart and seeded at a rate of 25,000 seeds/A. The plots were no-tillage planted on 13 May into a field continuously cropped to corn since 1986 and abundantly covered with corn debris naturally infested with *Cercospora zeae-maydis*, the causal agent of gray leaf spot. Leaf blighting or gray leaf spot (GLS) reaction was assessed four times and is reported as a GLS Severity Index (0-5) read in 0.1 units. Hybrids were also rated for percentage stalks lodged just prior to harvest, grain moisture at harvest, bushel weight, and grain yield adjusted to 15.5% moisture. Grain was mechanically harvested on 12 Oct with a Massey Ferguson 8XP plots combine.

Moisture in the soil profile at planting and weather conditions for thirty days after planting provided condition favorable for vigorous stand establishment. GLS lesions were first observed on the lower leaves of susceptible hybrids by late June. In July weather conditions turned extremely dry and warm and remained so until the end of August. These conditions were less than favorable for severe disease development. Despite this, GLS lesions had moved to the ear leaf and above on the more susceptible hybrids by 3 Aug and to the top plants by 20 Aug. Significant differences in GLS ratings among hybrids were apparent at all rating periods. At harvest, statistical differences among hybrids occurred in grain yield, grain moisture at harvest, and bushel weights. Generally those hybrids that blighted least had the higher yields. The susceptible check hybrid, Pioneer Brand 3394, although the most heavily blighted, yielded 46<sup>th</sup> out of the 49 hybrids evaluated.

Hybrid <sup>1</sup>	<u>GLS Severity Index (0-5)<sup>2</sup></u>				Grain <sup>3</sup>	Bu wt <sup>4</sup>	Yield <sup>5</sup>
	8/3	8/20	9/1	9/17	H <sub>2</sub> O 10/12	in lbs 10/12	Bu/A 10/12
SOUTHERNSTATES 943	1.5k	1.8s	2.2s	4.2i-l	20.6a-c	48.8st	182.7a <sup>6</sup>
FFR EXP 76348	1.5k	2.0rs	2.3rs	4.00lm	20.5a-d	49.5s	162.0ab
SOUTHERNSTATES 897	1.7jk	2.1p-r	2.7m-r	4.2j-l	19.8b-g	50.7r	158.9a-c
PIONEER 33Y18	2.0b-h	2.3i-p	3.2h-m	4.5e-j	17.3k-o	58.1a	158.3a-c
AUGUSTA 385	1.7I-k	2.3j-q	3.0k-p	4.5f-j	17.6j-o	51.7p-r	157.5a-c
BECK'S 8280	1.9f-j	2.2k-q	3.1i-n	4.6c-I	19.2d-I	55.2c-h	156.9a-d
BECK'S 5405	1.5k	2.2m-r	3.2g-m	4.7a-g	15.5q-t	51.5p-r	156.2b-d
DEKALB DK658	2.1b-g	2.4g-n	3.4f-k	4.6b-h	17.3k-o	53.6j-n	155.6b-d
DEKALB DK679	1.8h-j	2.3i-p	3.2g-m	4.8a-g	18.9e-j	55.2c-h	154.7b-e
ASGROW RX773	2.1b-g	2.4g-o	3.4f-k	4.6e-I	18.2h-m	54.1g-m	154.0b-e
NOVARTIS NX6527	2.1b-h	2.4f-l	3.6c-I	4.7a-g	16.6o-r	54.4f-k	153.5b-e
AUGUSTA 2062AA	1.90e-j	2.2k-q	2.8l-q	4.1kl	19.8b-f	53.9i-m	153.4b-e
BECK'S 6580	1.8g-j	2.2l-q	2.8l-q	4.7a-g	17.2l-o	53.0m-o	152.8b-f

AUGUSTA 285 . . .	1.5k	2.1o-r	3.1i-n	4.6d-i	17.0m-p	52.6n-p	151.8b-f
NOVARTIS N63-G7 .	2.0b-h	2.5d-j	3.7b-h	4.9a-f	14.0u	53.8i-m	151.3b-f
NOVARTIS NX6506 .	2.2b-e	2.4f-l	3.5e-k	4.5g-j	16.7n-q	54.1g-m	150.4b-g
NOVARTIS NX7196 .	2.1b-h	2.4g-o	3.4f-k	4.a-h	15.4q-t	53.3k-o	149.8b-g
BECK'S 6205 . . .	1.7I-k	2.2m-r	3.2h-n	4.6c-i	17.1l-o	50.5r	149.6b-g
DEKALB DK683 . . .	1.5k	2.0q-s	2.4q-s	3.8m	20.3a-d	51.3qr	149.1b-g
FFR EXP 76359 . .	1.7jk	2.0rs	2.6o-s	4.3i-l	19.8b-f	48.4t	147.9b-h
PIONEER 3153 . . .	2.2b-e	2.4f-l	3.3f-k	4.7a-g	19.9b-e	55.4c-f	147.8b-h
NOVARTIS N7639BT .	2.1b-h	2.4g-n	3.5d-j	4.6e-i	18.2h-m	55.5c-f	145.5b-i
AUGUSTA 2062 . . .	1.9d-j	2.2l-q	3.0j-o	4.6c-h	18.6e-k	55.3c-g	145.0b-i
ASGROW RX826 . . .	2.0c-h	2.3h-p	3.3f-k	4.7a-h	17.1l-o	53.1l-o	144.7b-i
NOVARTIS N83-R7 .	1.7I-k	2.1q-s	2.5p-s	4.1kl	21.3a	52.6n-p	144.0b-i
DEKALB DK642 . . .	2.1b-h	2.3h-p	3.2h-n	4.5f-j	18.3h-m	52.3o-q	142.4b-j
NOVARTIS X5867 . .	2.2b-f	2.5e-k	4.0b-e	4.9a-c	14.8tu	54.8d-i	141.5b-j
NOVARTIS N73-Q3 .	2.0c-h	2.4g-n	3.6c-i	4.8a-g	16.6o-r	54.8e-j	140.4b-j
NOVARTIS N75-T2 .	2.1b-h	2.3i-p	3.2g-m	4.6e-i	19.4c-i	55.9b-e	139.3b-j
ASGROW RX810 . . .	1.9c-i	2.2n-r	2.7n-s	4.3h-k	18.0i-n	51.6p-r	137.7b-j
NOVARTIS N83-N5 .	1.9e-j	2.3i-p	3.2g-m	4.5f-j	18.9e-j	54.8e-j	137.0b-j
ASGROW XP8618 . .	2.1b-h	2.4g-o	3.7b-g	4.5e-j	18.8e-j	54.3f-l	136.6b-j
DEKALB DK687 . . .	2.0c-h	2.2m-r	2.6o-s	4.0lm	20.9ab	51.6p-r	134.7b-j
PIONEER 3156 . . .	2.1b-h	2.4g-n	3.2h-m	4.6d-i	17.7j-o	54.3f-l	134.4b-j
NOVARTIS N4640BT .	2.1b-h	2.4f-m	4.0bc	5.0a	12.6v	53.4k-o	133.0c-j
PIONEER 3310 . . .	2.2b-d	2.6b-g	4.0b-d	4.9a-f	15.8p-t	56.0b-d	131.9c-k
NOVARTIS N6800BT .	2.1b-g	2.5d-j	3.3g-l	4.7a-h	18.4g-l	56.1bc	131.8c-k
PIONEER 33G26 . .	2.1b-h	2.6b-h	3.7b-g	4.9a-f	16.3o-s	56.2bc	131.3c-k
NOVARTIS N69-R1 .	2.2bc	2.5c-i	3.8b-f	4.9a-e	15.2s-u	53.8i-m	128.7d-k
PIONEER 31G20 . .	2.1b-g	2.5c-i	3.6b-h	4.8a-g	19.4c-h	55.4c-f	128.5d-k
NOVARTIS NX7257 .	2.1b-g	2.6b-f	4.1b	4.9a-d	15.0tu	54.0h-m	128.2d-k
PIONEER 33Y09 . .	2.3b	2.7b-e	3.7b-g	4.9a-d	15.3r-t	56.1bc	126.8e-k
PIONEER 3172 . . .	2.1b-h	2.3i-p	3.2h-n	4.6d-i	19.1d-i	51.0r	124.8f-k
NOVARTIS N79-P4 .	2.2bc	2.7bc	4.0b-d	4.9ab	17.6j-o	56.7b	122.7g-k
PIONEER 32K61 . .	2.2b-d	2.5b-i	3.8b-f	4.8a-g	17.3k-o	57.9a	120.9h-k
NOVARTIS N79-L3 .	2.2b-d	2.7b	4.1bc	5.0ab	17.6j-o	56.7b	119.6I-k

NEER 3394 . . .	2.7a	3.8a	4.7a	5.0a	11.4w	53.0m-o	115.1jk
BECK'S 5727 . . .	2.1b-h	2.7b-d	3.9b-e	4.9a-d	14.0u	53.8i-m	114.3jk
NOVARTIS NX7617 .	2.1b-h	2.4f-l	3.7b-g	4.9a-f	18.5f-l	55.5c-f	104.7k

LSD (P<0.05) =	0.23	0.19	0.42	0.29	1.1	1.0	22.7
Standard Dev. =	0.16	0.13	0.30	0.20	0.82	0.73	16.24
CV =	8.15	5.66	9.09	4.44	4.67	1.35	11.47

<sup>1</sup>Hybrid entry planted in four twenty-foot rows spaced 2.5 feet apart and replicated four times.

<sup>2</sup>GLS Disease Severity Index: 0 = no gray leaf spot lesions; 1 = trace of lesions below ear, none above; 2 = many lesions below ear, trace above; 3 = severe lesion development below ear, all leaves above with lesions; 4 = all leaves with severe lesion development, but green tissue still visible; 5 = all leaves dry and dead. Disease ratings were made on 3 August, 20 August, 1 September, and 17 September 1998.

<sup>3</sup>Grain moisture at harvest expressed in percentage.

<sup>4</sup>Bushel weight in pounds at a standard 15.5% grain moisture.

<sup>5</sup>Yield in bushels per acre at a standard 15.5% grain moisture.

<sup>6</sup>Means with letters in common do not differ statistically (P<0.05) by Duncan's Multiple Range Test.