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**Research Report No. 106
December, 1986**

**Part I Corn Hybrids
Part II Corn Silage
Part III Grain Sorghum
Part IV Soybeans**

1986

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PERFORMANCE OF CORN HYBRIDS, CORN SILAGE,
GRAIN SORGHUM AND SOYBEANS IN NORTH CAROLINA
INTRODUCTION

With the large number of commercially available and prospective hybrids and varieties of corn, grain sorghum, and soybeans, it becomes difficult for growers to select a superior variety suited for their particular area of the state and their individual farming operations. To make this decision, the growers need up-to-date, unbiased, reliable information. The Official Variety Testing Program, through this report, seeks to provide that type of information.^{1/}

The first section of this report is concerned with corn hybrids in all production areas of the state. The second section deals with corn silage. The third section includes data on grain sorghum. The fourth section covers data on soybeans. Each part is complete in that it contains information on experimental procedure, locations of the tests, a discussion of the data for 1986,^{2/} as well as summary tables for the past two and three years.

^{1/}The Official Variety Testing Program recognizes the cooperative spirit and civic-minded service rendered by the farmers who have furnished, prepared, and cultivated the land for these trials. Research technicians, Ray Adams, Dwight Parrish, G. C. Oliver, and Atwell Cook assisted in conducting these tests. Carey Parsons prepared the text for this bulletin.

^{2/}Statistical analyses were made in the Statistical Laboratory and Computing Center under the supervision of Dr. John O. Rawlings by Mrs. Sandra Donaghy.

It is hoped that the organization of this bulletin will provide data in a complete form to those interested in the various crops.

Growers are cautioned against making varietal selection decisions based on an individual location in any one year. True varietal performance may have been masked by the unusual weather conditions experienced at any one location or any one growing season.

Comparing Hybrids and Varieties

Performance of a hybrid or variety cannot be tested with absolute precision. Even though the tests are conducted in a uniform manner, as much as possible, uncontrollable variability exists among experimental plots due to soil type, fertility, moisture, insects, diseases, and other sources of variation. Because this variability exists, statistics are used as a tool to determine differences among hybrids and varieties. The size of difference among hybrids or varieties which may have been due to chance variation is listed in each table as the L.S.D. (least significant difference) and those hybrids or varieties which do not differ by more than the L.S.D. are statistically not different. Those hybrids or varieties that do differ by more than the L.S.D. are statistically different. The Bayes L.S.D. at the K-ratio of 50 (approximately .10 level of probability) was used.

The coefficient of variability (C.V.) is listed as a general indicator of population variability; it does not, however, always indicate level of precision. The standard error of the mean (s.e.) is listed as a general indicator of precision since it reveals how

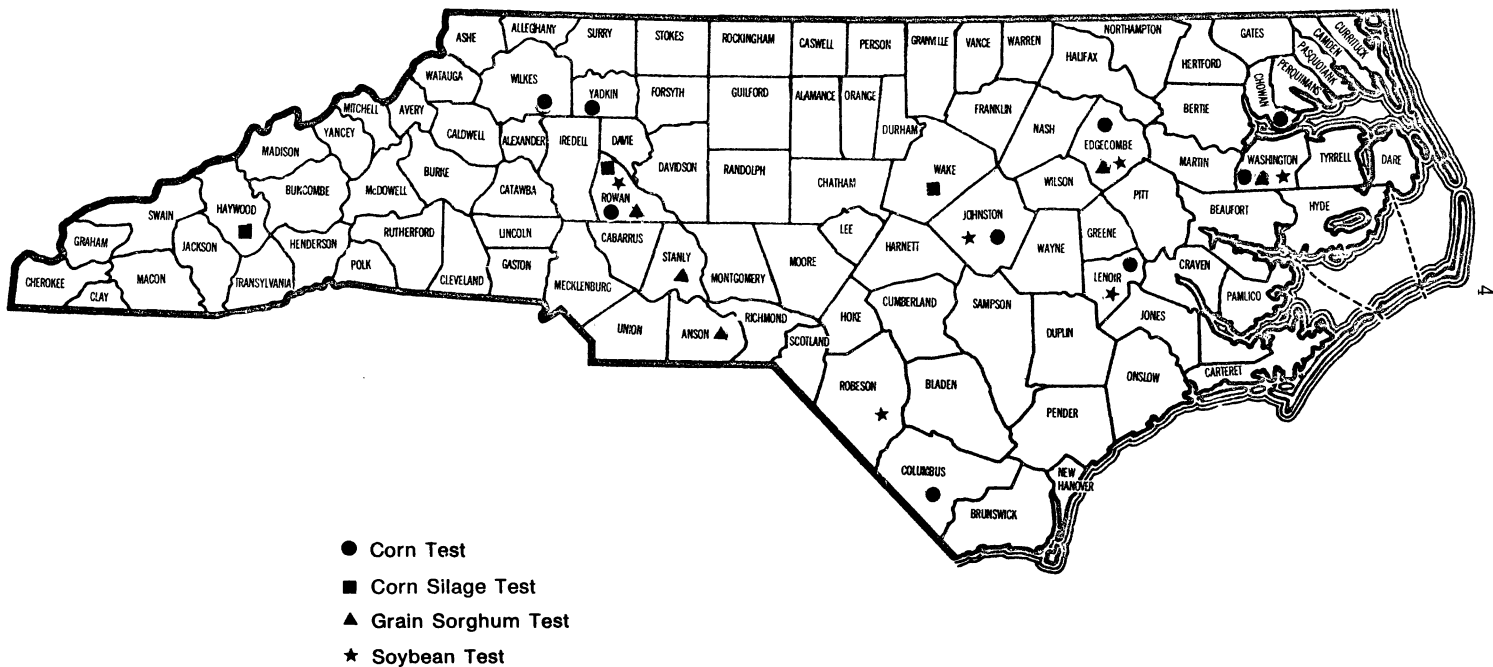
well the true mean was estimated. The formula for the s.e. is the square root of the error variance divided by the square root of the number of replications. The error degrees of freedom (Error d.f.) used to test varieties or hybrids are listed along with the mean of the test.

Hybrid or varietal performance may appear inconsistent among locations within an area or among years in a particular area, thus it is important for the reader to examine results from more than one location or more than one year at a particular location to obtain a more accurate picture of relative hybrid or varietal performance. An effort has been made to facilitate comparisons among locations and across years in this report.

The hybrids or varieties which do not yield significantly less than the highest yielder are denoted by an asterisk (*) next to their yields; the highest yielder is denoted by a double asterisk (**) next to their yield. The relative performance of a hybrid or variety across locations within an area can be easily evaluated by going across the table; those hybrids or varieties which are most frequently marked by an asterisk would be highly desirable. Other agronomic characteristics may be as equally important as yield.

It is suggested that the grower plant a small number of acres in a new variety when first determining if it is adapted to his farm.

1986
FIGURE 1. LOCATION OF OFFICIAL VARIETY TEST
NORTH CAROLINA AGRICULTURAL
RESEARCH SERVICE



COOPERATORS 1986

Corn

- Chowan County, Robert L. Bunch, Route 2, Edenton, NC,
County Extension Chairman, J. Michael Williams,
cooperating.
- Columbus County, Eugene McKiethan, Route 1, Nakina, NC,
Agricultural Extension Agent, Robert Shaw, cooperating.
- Edgecombe County, Raymond Coltrain, Superintendent, Upper
Coastal Plain Research Station, Rocky Mount, NC,
Agricultural Extension Agent, Ralph Blalock, cooperating.
- Johnston County, San Wood Farms, Route 2, Four Oaks, NC.
Agricultural Extension Agent, Eric Spaulding,
cooperating.
- Lenoir County, Sandy Barnes, Superintendent, Lower Coastal
Plain Tobaccos Research Station, Kinston, NC, County
Extension Chairman, Johnnie Jones, cooperating
- Rowan County, Piedmont Research Station, Salisbury, NC,
Billy Ayscue, Superintendent, and Agricultural
Extension Agent, Kevin Fisher, cooperating.
- Washington County, John Smith, Superintendent, Tidewater
Research Station, Plymouth, NC, Agricultural Extension
Agent, Mike Webb, cooperating.
- Wilkes County, J. T. Hoots & Son, Route 1, Box 96, Roaring
River, NC, Agricultural Extension Agent, Matt Miller,
cooperating.
- Yadkin County, James Smith, Route 1, Box 194, Yadkinville,
NC, Agricultural Extension Chairman, Jack Loudermilk,
cooperating.

Corn Silage

- Haywood County, Mountain Research Station, J. R. Edwards,
Superintendent, Waynesville, NC, County Extension
Chairman, H. E. McCall, cooperating.
- Rowan County, Billy Ayscue, Superintendent, Piedmont
Research Station, Salisbury, NC and Agricultural
Extension Agent, Kevin Fisher, cooperating.
- Wake County, K. M. Snyder, Superintendent, University Research
Unit 2, 3720 Lake Wheeler Road, Raleigh, NC, Agricultural
Extension Agent, Wayne Batten, cooperating.

Grain Sorghum

- Anson County, Lavon Tyson, Route 1, Box 145A, Wadesboro, NC,
Agricultural Extension Agent, David Dycus, cooperating.
- Edgecombe County, Raymond D. Coltrain, Superintendent, Upper
Coastal Plain Research Station, Rocky Mount, NC,
Agricultural Extension Agent, Ralph Blalock, cooperating.
- Rowan County, Billy Ayscue, Superintendent, Piedmont
Research Station, Salisbury, NC and Agricultural
Extension Agent, Kevin Fisher, cooperating.

Stanly County, Nevin Honeycutt, Oakboro, NC, Agricultural Extension Agent, Nelson McCaskill, cooperating.
Washington County, John Smith, Superintendent, Tidewater Research Station, Plymouth, NC, Agricultural Extension Agent, Mike Webb, cooperating.

Soybeans

Edgecombe County, Raymond Coltrain, Superintendent, Upper Coastal Plain Research Station, Rocky Mount, NC, Agricultural Extension Agent, Curtis Fountain, cooperating.
Lenoir County, Sandy Barnes, Superintendent, Lower Coastal Plain Tobacco Research Station, Kinston, NC, Agricultural Extension Chairman, Johnnie Jones, cooperating.
Robeson County, Roger Oxendine, Route 2, Box 289-C, Rowland, NC, County Extension Chairman, Everett Davis, cooperating.
Rowan County, Edwin Hammill, Route 1, Gold Hill, NC, Agricultural Extension Agent, Kevin Fisher, cooperating.
Washington County, J. W. Smith, Superintendent, Tidewater Research Station, Plymouth, NC, Agricultural Extension Agent, Mike Webb, cooperating.

Late Tests After Small Grain

Edgecombe County, Bert Pitt, Route 1, Box 180, Macclesfield, NC, County Extension Agent, Curtis D. Fountain, cooperating.
Johnston County, Ben Youngblood, Route 3, Box 105B, Smithfield, NC, Agricultural Extension Agent, Eric Spaulding, cooperating.
Rowan County, Billy Ayscue, Superintendent, Piedmont Research Station, Salisbury, NC, and Agricultural Extension Agent, Kevin Fisher, cooperating.
Washington County, John Smith, Superintendent, Tidewater Research Station, Plymouth, NC Agricultural Extension Agent, Mike Webb, cooperating.

CORN HYBRIDS

The performance of various corn hybrids in different areas of the state depends on their adaptation to the environmental conditions within the area. The performance of hybrids across the state of North Carolina is reported in this bulletin.

Entries: Any individual or firm may make application for having hybrids tested. A fee is charged on an entry basis. Personnel of the testing program may also include entries about which further information is desired.

Early in January each year, rules governing the tests for the ensuing year are distributed to all previous participants and to those who make inquiry.

Agencies or individuals entering hybrids in the Official Variety Tests were requested to designate the population and maturity range desired. Because of this, some hybrids may not appear to be in the correct maturity group.

Agencies sponsoring entries in the 1986 tests are shown in Table 1.

Table 1. Name, contact person, and address of sponsoring agencies in the 1986 North Carolina Corn Performance Trials along with designation used to identify the hybrids.

Name and Contact Person	Address	Hybrid Designation
AgraTech Seeds, Inc. Bob Jones	P. O. Box 644 Ashburn, GA 31714	AgraTech GK
Asgrow Seed Company Neil Zimmer	7000 Portage Road Kalamazoo, MI 49001	Asgrow, O's G

Table 1. (Continued)

Name and Contact Person	Address	Hybrid Designation
Cargill Seeds Jack Carlson	P. O. Box 5645 Minneapolis, MN	Cargill
Champaign County Seed Co. Robert J. Okraj	Route 2, Box 2 St. Joseph, IL	Sun Prairie
Coker's Pedigreed Seed Company Richard Gettys	P. O. Box 340 Hartsville, SC 29550	Coker, CX
DeKalb-Pfizer Genetics Karen Strain	3100 Sycamore Road DeKalb, IL 60115	DEKALB
Delta & Pine Land Co. Tom Wofford	1200 Herring Avenue Box 1118 Wilson, NC 27893	Deltapine
Funk's Seed International Ron Walberg	719 - 26 Street Lubbock, TX 79404	Funk's, RA
Gurley's Raymond Gurley, II	P. O. Box 398 Selma, NC 27576	Gold Medal
Jacques Seed Company Joe Waldo	720 St. Croix Prescott, WI 54021	Jacques
McCurdy Seed Company Leroy McCurdy	East Main Street Fremont, Iowa 52561	McCurdy
Northrup King Company Myron Fountain	2114 Cowper Drive Raleigh, NC 27608	NK, NK's McNair
PAG Seeds J. Stuart Carney	P. O. Box 9480 Dept. 16 Minneapolis, MN 55440	P-A-G
Paymaster Seeds Michael J. Cordonnier	P. O. Box 9493 Minneapolis, MN 55440	Paymaster
Pioneer Hi-Bred International, Inc. Paul Rodgers	1000 W. Jefferson St. Tipton, IN 46072	Pioneer
Premier Hybrids, Inc. Philip E. Hutchinson	RR 15, Box 223X Indianapolis, IN 46259	Premier

Table 1. (Continued)

Name and Contact Person	Address	Hybrid Designation
Rohm and Haas Seeds, Inc. Al Hoggard	P. O. Box 2629 406 Woods West Memphis, AR 72301	Coker
SeedTec Int., Inc. John E. Naber	Eldred, IL 62027	SeedTec
Southern States Coop. G. W. Barber	P. O. Box 26234 Richmond, VA 23260	Southern States
Stauffer Seeds Joseph L. Schafer	Box 377 Lone Tree, IA 52755	Stauffer
Watson Seed Farms, Inc. George Watson	Box 1099 Rocky Mount, NC 27801	Watson

Field Plot Technique: Eight tests were located across the state. The various locations are shown in Figure 1. Early-maturing corn hybrids (less than 110 days to maturity) are included in six tests in the Coastal Plain and Tidewater areas of the state. The medium-maturing (approximately 110 to 120 days to maturity) and the late-maturing (over 120 days to maturity) hybrids are included in all eight locations. It is important to remember that these are loose groupings, i.e. some hybrids may easily fit into either of two maturity groups due to it being on the borderline. Table 2 lists the cultural practices used and Table 3 lists the soil tests results.

In field design a lattice was used on early and medium groups and randomized block on the late group. Each plot consisted of four rows 23 feet long with a 40, 38, or 36" row width. The center two rows were harvested for yield. Alley width was five feet.

In 1986, all tests were planted to a stand at 110% of the desired plant population.

Seasonal Conditions: A relatively warm, dry spring allowed corn planting to proceed without delay. It remained dry up through July for most of the state. The Piedmont area of the state suffered severe drought stress up until August. Certain areas of the Coastal Plain region also suffered drought stress as evidenced by rainfall data at Chowan, Edgecombe and Johnston counties. The Edgecombe County test was irrigated once during pollination period.

Rainfall data at six locations reveal the type of season experienced in 1986.

Rainfall (Inches)

<u>Location by County</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>
Chowan	1.25	0.80	3.08	6.19	9.08
Columbus	0.30	6.50	7.60	4.10	8.20
Edgecombe	1.17	3.14	2.45	3.36	13.19
Johnston	0.75	3.95	1.95	2.25	7.10
Lenoir	1.54	2.09	8.95	3.57	6.18
Washington	2.04	1.82	3.76	8.51	7.90

Corn borer damage was extensive in 1986. The Wilkes County test site was specifically chosen for its past history of gray leaf spot and the disease was evident by late-June; conditions became excellent as rains fell in August for rating corn hybrids for their resistance to this disease. The Yadkin County test was discarded due to a heavy infestation of Johnsongrass. The Rowan County test was discarded due to poor stands as a result of extremely dry soil conditions.

Data: Data were collected on yield, moisture, lodging, ear height, stands, mid-silk, maturity and resistance to gray leaf

spot. All plot yields were adjusted to 15.5% moisture. Since moisture content of grain at harvest is a relative index of maturity, moisture percentage was determined for each individual plot. Lodging percentage was determined by observing all plants broken below the ear or leaning more than 45 degrees. Ear height was determined by measuring the distance from the ground to the node where the ear is attached to the stalk. Gray leaf spot ratings were on a scale of 1-9 with 1 being 0-9 and 9 being 80-89% of leaves covered with the disease. Stand counts were reported in plants/acre. As a general indicator of seedling vigor, all corn hybrids were planted March 13 at one location and percent stand was later calculated.

Results: Seedling vigor ratings are listed in Tables 4, 5, and 6 along with their germination data. Germination was determined at the NCDA Seed Laboratory under supervision of Mr. George Spain. Yield and performance data for the early maturing hybrids are shown in Tables 7, 8, and 9. Funk's G-4522 leads the three and two year average in yield (Table 7). All entries were tested at the same number of locations; three year averages include 17 locations and two year averages include 12 locations. The low average yields for Johnston and Chowan Counties are a result of the dry summer in 1986 (Table 9).

For the medium maturing group, three hybrids lead the group for yield after three years (Table 10). AgraTech GK900 and GK 925 were inadvertently placed in the late-maturity group in 1985 but in the medium group all other years; they were tested in the same

locations as all other medium hybrids. Tables 11 and 12 reveal 1986 data.

Pioneer 3165 leads the late-maturing hybrids after three years (Table 13) and also has the highest two year averages. Asg./O's Gold 5509 and Pioneer 3055 yielded 142 bushels per acre in 1986 across all locations (Table 14 and 15).

Gray leaf spot ratings of 60 commercial and experimental hybrids are shown in Table 16; the lower the ratings the more resistant the hybrid is to gray leaf spot. However, it should be realized that certain hybrids may yield better under gray leaf spot infestation than those hybrids with higher levels of resistance. This test was conducted on J. T. Hoots' Farm in Wilkes County; Matt Miller, Agricultural Extension Agent, cooperated in this research.

Viral disease ratings were made on selected hybrids at Winfield, Alabama. These hybrids were rated for their resistance/susceptibility to maize chlorotic dwarf virus (MCDV) and maize dwarf mosaic virus (MDMV). These data are listed in Table 17. Appreciation goes to Dr. Robert Gudauskas and Dr. Wiley Johnson, Auburn University, for making these data available.

Tables 18, 19, and 20 list maturity data on the early, medium and late-maturing hybrids, respectively. These data were collected at the Johnston County test which was planted April 2. Mid-silk is when 50% of the plants had exposed silks. Date mature is the date when the grain dried down to 25% moisture. The data reveal wide variability for both traits within each maturity group.

Table 2. Cultural practices used at each corn test location - 1986.

Location by County	Fertilizer Lbs and Grade	Topdressing Lbs N/A	Date of Planting	Date of Harvest	Soil Type
<u>Chowan</u>	400 5-10-30	140	April 7	September 10	Altavista fine sandy loam
<u>Columbus</u>	400 5-10-30	140	April 1	September 4	
<u>Edgecombe</u>	400 4-12-12	135	April 9	September 12	
<u>Johnston</u>	200 0-0-60	150	April 2	August 26	Norfolk sandy loam
<u>Lenoir</u>	480 10-10-20	140	April 3	September 8	Lynchburg sandy loam
<u>Rowan</u>	400 10-20-20		April 14	Discarded	
<u>Washington</u>	350 10-10-30	120	April 10	September 9	Portsmouth fine sandy loam
<u>Yadkin</u>	500 9-24-30	165	April 16	Discarded	

Table 3. Soil test results, corn - 1986.

Location by County	HM %	W-V	CEC	BS %	Ac	pH	P-I	K-I	Ca %	Mg %	Mn-I	Zn-I	Cu-I
Chowan	.6	1.31	4.1	90	.4	6.5	87	84	56.7	23.2	210	63	212
Columbus	1.8	1.10	6.7	82	1.2	5.8	44	74	69.0	7.5	38	66	32
Edgecombe	.3	1.09	4.3	91	.4	6.3	39	48	69.8	15.3	48	69	112
Johnston	.6	1.31	2.9	72	.8	6.0	137	64	45.5	15.4	46	91	40
Lenoir	.8	1.28	3.7	89	.4	6.1	166	78	54.2	24.4	20	66	42
Washington	7.5	1.95	9.8	76	2.4	5.4	56	72	48.9	23.0	10	66	50

Table 4. Percent stand for early-maturing corn hybrids planted March 13, 1986 at Clinton, NC

Hybrid or Brand-Hybrid	% Stand		% Germination (1986)
	1986	Two Year Average	
Sun Prairie 230	98		98
Paymaster X212599	95		98
NK PX9540	95		98
Funk's G-4635	94		96
Funk's G-4626	94		99
SeedTec ST-7625	93		98
Asg./O's G. 6882	93	85	99
AgraTech GK750	93	93	98
Coker 8601	92	92	100

Cargill 918	91		99
DEKALB DK656	91	89	99
Pioneer 3389	91	86	97
Premier 637	91		95
Funk's G-4522	90	88	94
Coker 8575	90	87	98
NK PX9527	89	86	99
Jacques 7900	89	87	98
AgraTech GK850	88	89	98

Pioneer 3378	88	87	98
Premier 632	88		92
Premier 639-A	87		98
DEKALB DK636	87	86	95
RA 1502	86	83	95
Pioneer 3352	82		99
P-A-G SX269	82		95
AgraTech GK695	81	83	98
Gold Medal 580	78		96

Table 5. Percent stand for medium-maturing corn hybrids planted March 13, 1986 at Clinton, NC

Hybrid or Brand-Hybrid	% Stand		% Germination (1986)
	1986	Two Year Average	
Gold Medal 954	100		97
AgraTech GK900	97	88	98
Sun Prairie 2750	96		98
DeK.-Pfizer DK689	95	94	100
Gold Medal 3357	95		96
DEKALB DK789	94	87	
Paymaster 7990	93		98

Asg./O's G. RX892	93		98
Southern States 728	92		98
Sun Prairie 3150	91		98
Deltapine X2814	91	75	96
Coker CX5067	91		99
DEKALB DK711	90		93

Coker 19A	90	81	92
Deltapine X8262	90		94
Pioneer 3110	90		
Southern States 811	89	74	95
Stauffer 7751	89		99
Gold Medal 842	88		100
P-A-G SX352	88	90	97

Jacques 8400	87	85	91
Watson 418	87	80	99
Coker 8680	86	75	92
Premier 636	86		97
Asg./O's G. RX798	86		98
NK PX79	85		98

Table 5. (Continued) Percent stand for medium-maturing corn hybrids planted March 13, 1986 at Clinton, NC

Hybrid or Brand-Hybrid	% Stand		% Germination (1986)
	1986	Two Year Average	
Stauffer 7759	85		97
Jacques 8350	85		93
Deltapine 5750	85		97
McCurdy 8172	85	88	98
Pioneer 3320	85	88	100
Watson 414	85	82	97
Coker 21	84	83	96

Southern States 835	84	83	98
Cargill 971	84		98
Coker 8625	84	93	97
Asg./O's G. RX860	84		99
SeedTec H-2686A	83		98
Pioneer 3144W	83		
Coker CX5071	83		99

McCurdy 7676	83	82	99
SeedTec ST.7750	83		96
Southern States X16076	82		99
Funk's G-4614	82	87	99
AgraTech GK925	82		91
Asg./O's G. 2570	81	84	98
Asg./O's G. RX777	81		96

NK PX9584	81		97
McCurdy 7372	80	84	100
McCurdy 7384	79	84	96
Funk's G-4733	79	81	95
McCurdy 7800	79	82	95
NK PX9581	78	83	93
Coker 3020	78		92
Watson 412	78		95

Table 6. Percent stand for late-maturing corn hybrids planted March 13, 1986 at Clinton, NC

Hybrid or Brand-Hybrid	% Stand		% Germination (1986)
	1986	Two Year Average	
Gold Medal 984	95		100
Gold Medal 1070	95		96
Deltapine X9686	95		97
P-A-G SX383	95	87	96
NK PX9685	92		99
Cargill 980	91		100
Southern States 901	88		97
Sun Prairie 5850	87		95
Paymaster 9427	87		100
Pioneer 3165	87	86	98
Coker CX6801	86		98
Pioneer 3192	84		98
NK PX9646	83		99
Southern States 915	82	82	96
Coker 8905	82	83	98
Watson 420	81	80	97
Funk's G-4868	81		96
Pioneer 3055	81	85	98
Stauffer 8645	80		98
Asg./O's G. 5509	79	78	100
Paymaster 8990	79	76	98
Watson 421	78	76	99
NK PX95	77	81	94

Table 7. Data combined over locations for early maturing hybrids.
Three year average - 1984, 1985, 1986.

Hybrid or Brand-Hybrid	Yield bu/A	Moisture	Lodging %	Ear Height Inches	Plant Population
Funk's G-4522	132	.155	3	43	26686
AgraTech 850	127	.160	3	43	25873
AgraTech 695	122	.146	3	38	25991
DeKalb DK656	122	.151	3	45	26495
Pioneer 3389	122	.158	2	40	25497
AgraTech 750	122	.151	2	44	25631
Coker 8575	120	.153	2	40	25904
Two Year Average - 1985, 1986					
Funk's G-4522	137	.165	3	44	27741
Coker 8601	134	.159	2	36	27840
RA 1502	130	.171	3	47	27608
AgraTech 850	129	.169	3	45	26453
Coker 8575	128	.158	2	41	27251
AgraTech 695	127	.157	3	39	26586
NK PX9527	127	.158	2	41	29227
Pioneer 3389	126	.169	2	42	25963
AgraTech 750	125	.161	2	44	26270
DeKalb DK656	125	.159	3	47	26902
DeKalb DK636	124	.162	2	43	27583

TABLE 8. DATA COMBINED OVER LOCATIONS
FOR EARLY MATURING HYBRIDS-1986.

HYBRID OR BRAND-HYBRID	YIELD BUS/A	MOISTURE	LODGING %	EAR HT IN	PLANT POPULATION
FUNK'S G-4522	143	.175	3	46	28089
COKER 8601	143	.170	3	36	27940
RA 1502	142	.185	3	49	28156
ASG-/O'S GOLD 6882	142	.174	2	41	28106
AGRATECH 850	140	.178	2	46	26561
AGRATECH 695	139	.170	2	39	26212
COKER 8575	138	.168	2	42	27807
FUNK'S G-4626	138	.175	1	44	27309
PIONEER 3378	137	.169	2	41	25913
JACQUES 7900	136	.169	4	50	27176
NK PX9527	136	.171	2	42	27840
SUN PRAIRIE 230	136	.169	2	41	29518
DEKALB DK656	136	.170	1	48	28056
PREMIER 639-A	135	.181	1	44	27458
PREMIER 632	133	.171	2	41	26960
CARGILL 918	133	.165	2	54	26378
+PAYMASTER X212599	133	.167	4	39	27840
AGRATECH 750	133	.174	2	45	26279
FUNK'S G-4635	133	.178	3	51	28488
PIONEER 3389	132	.183	2	43	25481
DEKALB DK636	132	.174	1	44	27890
PREMIER 637	131	.171	1	41	26960
P-A-G SX269	131	.166	2	39	25847
NK PX9540	130	.173	2	43	26295
SEEDTEC ST-7625	124	.180	2	45	27043
PIONEER 3352	122	.171	2	42	25349
GOLD MEDAL 580	116	.167	1	41	25498

+EXPERIMENTALS. SEED OF THESE HYBRIDS MAY OR MAY NOT BE
AVAILABLE IN 1987 AND MAY ALSO HAVE A DIFFERENT DESIGNATION

Table 9. Individual location data for early-maturing hybrids ~ 1986.

<u>Hybrid or Brand-Hybrid</u>	<u>Wash- ington</u>	<u>Edge- combe</u>	<u>Johnston</u>	<u>Lenoir</u>	<u>Chowan</u>	<u>Columbus</u>	<u>Mean</u>
Funk's G~4522	198*	153*	51*	137*	116*	206*	143**
Coker 8601	202*	144*	42	148*	121**	203*	143**
RA 1502	202*	148*	46	160*	99	197*	142*
Asg./O's Gold 6882	204**	154**	43	143*	102*	205**	142*
AsgrTech 850	198*	135*	47	171**	96	191*	140*
AgraTech 695	197*	148*	53*	150*	102*	185*	139*
Coker 8575	187	133*	44	169*	98	198*	138*
Funk's G~4626	192*	150*	46	153*	95	189*	138*
Pioneer 3378	176	139*	56*	157*	101	193*	137*
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Jacques 7900	182	135*	54*	148*	100	198*	136*
NK PX9527	198*	133*	47	152*	95	192*	136*
Sun Prairie 230	200*	140*	41	157*	86	193*	136*
Dek.-Pfi. DK656	182	138*	54*	147*	87	206*	136*
Premier 639-A	201*	140*	41	151*	84	194*	135*
Premier 632	204**	133*	48	136	101	179	133*
Cargill 918	186	137*	44	148*	100	185*	133*
Paymaster X212599	163	147*	52*	152*	109*	178	133*
AgraTech 750	187	137*	38	146*	104*	187*	133*
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Funk's G~4635	182	132*	55*	121	100	209**	133*
Pioneer 3389	185	136*	52*	144*	100	176	132*
Dek.-Pfi. DK636	189	134*	42	145*	93	186*	132*
Premier 637	185	145*	41	139*	97	178	131*
P-A-G SX269	155	135*	66**	157*	101	170	131**
NK PX9540	183	140*	44	142*	91	181*	130
SeedTec ST~7625	147	124*	56*	143*	96	179	124
Pioneer 3352	167	122	56*	140*	91	159	122
Gold Medal 580	137	123	62*	135	85	156	116
<u>Mean</u>	<u>184</u>	<u>138</u>	<u>49</u>	<u>147</u>	<u>98</u>	<u>187</u>	<u>134</u>
C.V. (%)	5.5	11.7	18.5	10.9	10.3	8.4	8.0
BLSD (K~50)	14	30	17	34	19	28	12
s.e. (x)	5.8	9.3	5.3	9.3	5.9	9.1	4.4
Error d.f.	43	43	43	43	43	43	145

**Highest yielder.

*Not significantly different from highest yielder.

Table 10. Data combined over locations for medium maturing hybrids
Three year average - 1984, 1985, 1986.

Hybrid or Brand-Hybrid	Yield bu/A	Moisture	Lodging %	Ear Height Inches	Plant Population
*AgraTech GK900	133	.175	6	44	23904
DeKalb DK689	133	.173	3	44	27374
Pioneer 3320	133	.167	4	42	26321
McCurdy 7676	131	.161	5	49	23231
McCurdy 8172	131	.179	4	47	22708
Jacques 8400	131	.174	4	45	24154
McCurdy 7800	131	.173	4	46	23632
*AgraTech GK925	130	.176	3	44	22971
NK PX9581	130	.167	5	46	25903
Asg./O's Gold 2570	128	.161	4	48	22421
Funk's G-4733	127	.181	2	44	22882
P-A-G SX352	125	.160	4	47	25667
Asg./O's Gold RX777	124	.164	2	43	24048
Coker 21	121	.178	3	43	23745
Paymaster 7990	121	.163	3	42	25725
Coker 19A	115	.165	4	46	24620
NK PX79	115	.161	4	44	24904

Two Year Average - 1985, 1986

*AgraTech GK900	135	.178	3	46	24449
Pioneer 3320	135	.169	3	44	26496
Jacques 8400	133	.175	4	47	24940
McCurdy 8172	132	.180	4	49	23061
*AgraTech GK925	132	.179	2	46	23016
DeKalb DK689	131	.172	3	47	28175
McCurdy 7676	130	.165	4	50	22808
McCurdy 7800	129	.174	2	47	23169
Deltapine 5750	129	.170	2	45	24104
NK PX9581	129	.169	5	47	25729
Deltapine X2814	128	.171	1	43	25591
Asg./O's Gold 2570	128	.164	4	49	22555
Coker 8625	128	.162	2	45	26611
P-A-G SX352	127	.162	5	48	25384
Asg./O's Gold RX777	127	.167	2	45	24495
McCurdy 7372	127	.161	3	45	23069
Funk's G-4614	126	.174	3	45	25315
Watson 418	125	.167	2	44	25085
SeedTec H-2686A	124	.174	4	48	22939
Watson 414	123	.162	4	45	23506
Asg./O's Gold RX892	123	.170	2	48	24480
Paymaster 7990	123	.166	3	43	26274
Funk's G-4733	123	.184	2	46	22847
McCurdy 7384	122	.159	3	48	22448
Southern States 835	120	.173	1	40	23905
Coker 21	119	.181	3	45	24687
NK PX79	118	.165	3	46	25269
Coker 19A	116	.167	4	47	26051
Coker 8680	114	.176	1	41	24679

*These hybrids were inadvertently placed in late maturity in 1985.

TABLE 11. DATA COMBINED OVER LOCATIONS
FOR MEDIUM MATURING HYBRIDS-1986.

HYBRID OR BRAND-HYBRID	YIELD BUS/A	MOISTURE	LODGING %	EAR HT IN	PLANT POPULATION
AGRATECH GK925	154	.191	3	48	23771
DEKALB DK 711	154	.193	2	48	26212
JACQUES 8400	154	.193	3	48	26578
+COKER CX5067	151	.187	3	44	26262
AGRATECH GK900	151	.193	3	48	27209
PIONEER 3320	150	.185	3	44	27242
SEEDTEC ST.7750	149	.186	1	44	24983
DEKALB DK 789	148	.204	2	46	27890
+DELTAPINE X2814	147	.187	1	44	27442
DEKALB DK 689	146	.185	4	49	28388
DELTAPINE 5750	146	.185	2	45	24668
NK PX9581	146	.184	3	49	24717
GOLD MEDAL 842	144	.183	2	45	28355
P-A-G SX352	144	.180	3	50	26179
STAUFFER 7759	144	.180	1	50	26976
MCCURDY 8172	144	.198	4	50	24651
NK PX9584	143	.182	1	45	24967
ASG./O'S GOLD RX860	143	.183	2	40	25648
MCCURDY 7800	142	.192	1	48	24153
MCCURDY 7372	142	.177	1	46	23588
PIONEER 3110	141	.199	2	47	26445
ASG./O'S GOLD RX777	141	.185	4	47	24701
SOUTHERN STATES 728	141	.180	1	47	27541
CARGILL 971	140	.180	2	46	26644
FUNK'S G-4614	140	.189	3	46	25681
MCCURDY 7676	140	.179	3	52	23953
+DELTAPINE X8262	140	.184	3	51	25747
ASG./O'S GOLD 2570	140	.179	2	50	23289
WATSON 414	139	.178	1	46	24153
ASG./O'S GOLD RX892	138	.185	2	51	26212
PAYMASTER 7990	138	.181	2	45	27159
COKER 8625	138	.177	1	47	26046
GOLD MEDAL 954	138	.183	1	44	29020
ASG./O'S GOLD RX798	138	.181	2	47	25066
COKER 3020	138	.188	2	46	24568
PREMIER 636	137	.187	2	49	26927
JACQUES 8350	137	.185	2	48	25116
SUN PRAIRIE 2750	137	.178	1	45	28272
STAUFFER 7751	137	.182	1	46	26345
FUNK'S G-4733	136	.196	2	48	23056
SUN PRAIRIE 3150	136	.182	2	45	27375
PIONEER 3144W	135	.190	3	50	25913
SOUTHERN STATES 811	135	.178	3	46	25066
+COKER CX5071	135	.187	3	43	26246
+SOUTHERN STATES X16076	134	.185	2	47	26096
SEEDTEC H-2686A	134	.192	4	49	24701
COKER 21	134	.198	3	45	24950
WATSON 418	133	.181	1	44	24601
NK PX79	133	.177	3	47	24967
COKER 19A	131	.182	3	49	26279
COKER 8680	129	.194	1	42	26711
MCCURDY 7384	129	.174	2	50	23289
GOLD MEDAL 3357	128	.176	3	49	29003
SOUTHERN STATES 835	128	.186	1	41	25033
WATSON 412	119	.171	2	42	21844

+EXPERIMENTALS. SEED OF THESE HYBRIDS MAY OR MAY NOT BE
AVAILABLE IN 1987 AND MAY ALSO HAVE A DIFFERENT DESIGNATION

Table 12. Individual location data for medium-maturing hybrids - 1986.

Hybrid or Brand-Hybrid	Washing- ton	Edge- combe	Johnston	Lenoir	Chowan	Columbus	Mean
AgraTech GK925	189	227**	45	137	97*	231**	154**
DEKALB DK711	201	181	44	161*	123**	215*	154**
Jacques 8400	209*	192	54	137	111*	219*	154**
+Coker CX5067	227**	137	46	171**	101*	226*	151*
AgraTech GK900	217*	171	67**	138	88	225*	151*
Pioneer 3320	196	190	52	157*	104*	199	150*
SeedTec St.7750	206*	173	58*	158*	93	207	149*
DEKALB DK789	192	196	41	159*	91	209	148*
+Deltapine X2814	203	173	43	169*	89	202	147*
DEKALB DK689	187	139	48	165*	109*	230*	146*
Deltapine 5750	196	151	52	158*	108*	210	146*

NK PX9581	191	169	53	150*	107*	203	146*
Gold Medal 842	184	167	59*	156*	92	206	144*
P-A-G SX352	209*	176	40	153*	90	194	144*
Stauffer 7759	197	156	52	152*	101*	205	144*
McCurdy 8172	191	159	36	146*	107*	223*	144*
NK PX9584	182	166	57*	155*	87	209	143*
Asg./O's Gold RX860	194	190	47	142	76	206	143*
McCurdy 7800	202	166	62*	135	84	205	142*
McCurdy 7372	198	156	58*	155*	96*	190	142*
Pioneer 3110	190	151	55*	144*	93	216*	141
Asg./O's Gold RX777	192	176	41	152*	85	202	141

Southern States 728	190	167	40	155*	85	210	141
Cargill 971	203	167	36	158*	74	205	140
Funk's G-4614	195	161	57*	137	89	203	140
McCurdy 7676	189	167	38	141	105*	201	140
+Deltapine X8262	186	156	49	151*	85	211	140
Asg./O's Gold 2570	195	152	41	154*	82	213	140
Watson 414	178	168	45	143*	106*	195	139
Asg./O's Gold RX892	193	166	31	161*	63	216*	138
Paymaster 7990	192	159	36	148*	87	207	138
Coker 8625	189	159	42	153*	92	193	138
Gold Medal 954	201	150	39	159*	79	199	138

Asg./O's Gold RX798	182	164	39	131	97*	214	138
Coker 3020	195	151	54	140	78	208	138
Premier 636	181	174	42	147*	83	197	137
Jacques 8350	188	159	50	148*	84	196	137
Sun Prairie 2750	192	160	33	157*	87	195	137
Stauffer 7751	181	160	41	165*	78	197	137
Funk's G-4733	198	161	42	147*	82	189	136
Sun Prairie 3150	191	149	40	137	91	208	136
Pioneer 3144W	195	157	40	132	81	206	135
Southern States 811	166	166	58*	159*	82	179	135

+Coker CX5071	195	146	49	127	85	208	135
+Southern States X16076	177	150	33	146*	87	211	134
SeedTec H-2686A	203	147	46	122	71	215*	134
Coker 21	189	158	38	141	68	207	134
Watson 418	185	141	60*	140	88	186	133
NK PX79	179	146	52	142	89	189	133
Coker 19A	174	163	26	131	94	201	131
Coker 8680	191	164	20	148*	67	186	129
McCurdy 7334	171	154	27	154*	76	191	129
Gold Medal 3357	171	121	43	152*	80	198	128
Southern States 835	169	136	60*	139	78	183	128
Watson 412	155	132	49	126	77	177	119

Mean	189	160	46	147	89	202	139
C.V (%)	7.9	12.3	26.8	10.4	17.1	5.7	8.6
BLSD (K-50)	22	29	22	28	28	16	12
s.e. (x)	8.7	11.4	7.1	8.9	8.7	6.7	4.9
Error d.f.	105	105	105	105	105	105	315

+Experimental. Seed of these hybrids may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

Table 13. Data combined over locations for late maturing hybrids.
Three year average - 1984, 1985, 1986

Hybrid or Brand-Hybrid	Yield bu/A	Moisture	Lodging %	Ear Height Inches	Plant Population
Pioneer 3165	138	.188	2	42	25844
Pioneer 3055	131	.196	3	48	23860
NK PX95	126	.190	3	47	22953
Pioneer 3192	124	.185	2	42	25343
Two Year Average - 1985, 1986					
Pioneer 3165	136	.191	1	45	25760
Pioneer 3055	132	.199	2	48	23774
Watson 421	128	.182	2	44	23682
NK PX95	125	.194	3	49	22770
Pioneer 3192	123	.189	2	42	25614
Southern States 915	122	.186	4	48	24825
Coker 8905	119	.222	2	50	24848
Paymaster 8990	119	.180	3	48	23276

Table 14. Data combined over locations for late maturing hybrids.
1986.

Hybrid or Brand-Hybrid	Yield bu/A	Moisture	Lodging %	Ear Height Inches	Plant Population
Asg./O's Gold 5509	142	.205	5	49	22259
Pioneer 3055	142	.217	3	49	23189
Gold Medal 984	141	.195	4	44	27674
+Deltapine X9686	140	.194	5	52	27259
Paymaster 9427	140	.203	5	52	27060
Gold Medal 1070	140	.199	2	45	28388
Pioneer 3165	140	.212	2	45	26079
Sun Prairie 5850	139	.199	4	49	26528
Cargill 980	138	.198	4	51	26329
Watson 421	136	.204	3	45	23206
Stauffer 8645	135	.195	2	44	23222
+Coker CX6801	135	.219	6	49	24717
Paymaster 8990	135	.199	3	49	22491
Pioneer 3192	134	.207	4	44	26246
P-A-G SX383	134	.200	5	45	26744
NK PX9646	132	.209	4	50	25864
NK PX95	131	.208	5	51	21927
Southern States 915	130	.206	5	50	24900
Funk's G-4868	130	.215	3	48	22641
Southern States 901	129	.205	4	41	26711
Watson 420	129	.202	4	42	24219
NK PX9685	129	.203	4	50	25133
Coker 8905	129	.238	2	51	25731

+Experimental. Seed of these hybrids may or may not be available in 1987 and may also have a different designation.

Table 15. Individual location data for late-maturing hybrids ~ 1986.

Hybrid or Brand-Hybrid	Wash- ington	Edge- combe	Johnston	Lenoir	Chowan	Columbus	Mean
Asg./O's Gold 5509	192*	170*	53**	149*	83	207	142**
Pioneer 3055	163	163*	51*	165*	109**	204	142**
Gold Medal 984	179	163*	38*	176**	98*	193	141*
+Deltapine X9686	188*	154	43*	152*	84	219*	140*
Paymaster 9427	177	175*	33*	166*	93*	196	140*
Gold Medal 1070	167	177**	31*	161*	90*	214*	140*
Pioneer 3165	172	150	39*	159*	101*	218*	140*
Sun Prairie 5850	208**	163*	28*	136*	97*	204	139*
Cargill 980	173	171*	26*	165*	79	212*	138*
Watson 421	179	154	40*	149*	102*	190	136*
Stauffer 8645	172	159*	42*	142*	102*	194	135*
+Coker CX6801	176	145	31*	139*	98*	221*	135*
Paymaster 8990	161	149	41*	169*	83	205	135*
Pioneer 3192	173	158*	46*	141*	82	204	134*
P-A-G SX383	201*	162*	30*	125	65	218*	134*
NK PX9646	179	129	44*	157*	81	202	132*
NK PX95	159	149	36*	154*	88*	197	131*
Southern States 915	176	138	42*	142*	81	202	130*
Funk's G-4868	152	143	32*	148*	94*	210	130*
Southern States 901	172	174*	29*	112	90*	199	129
Watson 420	159	155*	24*	122	90*	226**	129
NK PX9685	155	157*	37*	146*	73	208	129
Coker 8905	143	149	25*	149*	92*	214*	129
<u>Mean</u>	<u>172</u>	<u>156</u>	<u>37</u>	<u>148</u>	<u>89</u>	<u>205</u>	<u>134</u>
C.V. (%)	9.6	8.9	30.9	14.6	13.5	4.9	9.4
B LSD (K-50)	26	22	NS	43	21	14	12
s.e. (x)	9.5	8.0	6.5	12.5	6.9	5.8	5.2
Error d.f.	46	46	46	46	46	46	145

+Experimental. Seed of these hybrids may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

Table 16. Gray leaf spot ratings for some commercial and experimental hybrids.

Entry	Rating	Entry	Rating
5990853	2.88	Pioneer 519	5.50
NK X6776	3.25	Watson 575	5.50
5990851	3.25	5990867	5.50
Pioneer 3233	3.38	5990868	5.63
5990852	3.38	Deltapine 5750	5.75
5990856	3.50	Stauffer 8645	5.75
5990895	3.63	SeedTech H-2686A	6.00
DEKALB DK689	3.75	SeedTech ST-7750	6.00
DEKALB DK789	3.75	Watson 574	6.13
5990893	3.75	Deltapine X2814	6.38
5990854	4.00	AgraTech GK750	6.50

5990892	4.13	4N10235	6.75
5990899	4.13	AgraTech GK850	6.88
5994149	4.13	AgraTech GK925A	6.88
Pioneer 3110	4.13	Deltapine X9686	6.88
NK PX95	4.25	Stauffer 7751	6.88
Pioneer 3328	4.25	4N10237	6.88
5990855	4.25	5990872	6.88
5990858	4.25	AgraTech GK925	7.00
5990901	4.25	Premier 369-A	7.00
AgraTech GK875	4.38	Coker CX5071	7.25
5994144	4.50	5990004	7.25

Pioneer 3352	4.63	Deltapine X8262	7.38
5994152	4.63	Stauffer 7759	7.38
Watson 572	4.75	4N10242	7.38
4N10231	4.75	Coker CX5067	7.63
Coker CX6801	4.88	Jacques 8350	7.63
Pioneer 3192	4.88	AgraTech GK900	7.75
NC 262 X 3387-2	5.00	Jacques 7900	7.75
5990891	5.25	5990047	7.75
5990896	5.25	SeedTech ST-7625	8.00
NK PX79	5.38	AgraTech GK695	8.13
NK X6766	5.50	Jacques 8400	8.13

L.S.D. (.05)	1.02		
s.e. (\bar{x})	0.36		

Rating Scale: 1 = 0-9%, 2 = 10-19%, 3 = 20-29%, 4 = 30-39%, 5 = 40-49%
6 = 50-59%, 7 = 60-69%, 8 = 70-79%, 9 = 80-89%.

Table 17. Incidence of viral diseases on selected corn hybrids at Winfield, Alabama.

Hybrid or Brand-Hybrid	Maize ^{1/} chlorotic dwarf (%)	Maize ^{1/} dwarf mosaic (%)
AgraTech GK 850	0	40.9
AgraTech GK 900	13.0	21.5
AgraTech GK 925	6.7	34.6
Asgrow/O's Gold 2570	0	42.6
Asgrow/O's Gold 5509	0	42.6
Coker 19A	0	5.2
Coker 21	19.5	32.3
Coker 8905	0	20.3
DEKALB DK 689	0	24.6
DEKALB DK 748	0	42.6
DEKALB DK 789	5.8	9.5

Funk's G-4522	0	26.8
Funk's G-4733	5.4	26.1
Funk's G-4734	0	21.2
Funk's G-4868	3.3	16.5
Jacques 8400	18.7	28.8
Jacques 8700	10.9	43.5
Jacques JX 247	14.3	39.7
McCurdy 8150	9.5	21.0
McCurdy 8172	6.9	33.0
McCurdy 84AA	0	22.3

Northrup King PX95	0	7.5
Northrup King PX9581	0	35.2
Paymaster 7990	1.8	3.2
Paymaster 8990	2.1	32.6
Paymaster 9990	5.7	35.0
Pioneer 3055	1.8	14.3
Pioneer 3147	0	12.6
Pioneer 3165	0	6.6
Pioneer 3187	0	12.5
Pioneer 3320	6.8	29.4
Ring Around 1502	0	32.7
Stauffer 7759	9.1	24.9

^{1/} Values indicate percent of plants infected.

Table 18. Mid-silk and physiological maturity (25% moisture) dates for early corn hybrids planted April 2, 1986 in Johnston County.

Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature	Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature
AgraTech 695	6-17	8-8	Jacques 7900	6-16	8-2
AgraTech 750	6-16	8-9	NK PX9527	6-17	8-8
AgraTech 850	6-16	8-6	NK PX9540	6-16	8-11
Asg./0's G. 6882	6-22	7-30	P-A-G SX269	6-15	8-4
Cargill 918	6-19	8-1	Paymaster X212599	6-14	8-8
Coker 8575	6-16	8-7	Pioneer 3352	6-15	8-6
Coker 8601	6-16	8-7	Pioneer 3378	6-15	8-6

DEKALB DK636	6-16	8-11	Pioneer 3389	6-16	8-11
DEKALB DK656	6-17	8-5	Premier 632	6-27	7-31
Funk's G-4522	6-21	8-7	Premier 637	6-16	8-5
Funk's G-4626	6-18	8-7	Premier 639-A	6-28	8-5
Funk's G-4635	6-28	8-7	RA 1502	6-23	8-4
Gold Medal 580	6-17	8-9	Sun Prairie 230	6-28	8-7
			Seed Tech ST-7625	6-16	8-4

Table 19. Mid-silk and physiological maturity (25% moisture) dates for medium corn hybrids planted April 2, 1986 in Johnston County.

Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature	Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature
AgraTech GK900	6-28	8-8	McCurdy 7372	6-16	8-12
AgraTech GK925	6-27	8-18	McCurdy 7384	6-24	8-10
Asg./O's G RX 777	6-15	8-3	McCurdy 7676	6-24	7-30
Asg./O's G RX 798	6-22	8-13	McCurdy 7800	6-23	8-6
Asg./O's G RX 860	6-27	8-9	McCurdy 8172	7-1	8-10
Asg./O's G RX 892	6-30	8-5	NK PX79	6-24	8-14

Asg./O's G 2570	6-18	8-11	NK PX9581	6-22	8-5
Cargill 971	6-28	8-8	NK PX9584	6-22	8-11
Coker 19A	6-29	8-11	P-A-G SX352	6-21	8-4
Coker 21	6-30	8-7	Paymaster 7990	6-30	8-16
Coker 3020	6-24	8-10	Pioneer 3110	6-24	8-8
Coker 8625	6-17	8-18	Pioneer 3144W	7-2	8-10
Coker 8680	6-27	8-19	Pioneer 3320	6-23	8-10

*Coker CX5067	6-29	8-18	Premier 636	7-1	8-5
*Coker CX5071	6-28	8-8	SeedTech-2686A	6-29	8-19
DEKALB DK689	6-23	7-31	SeedTech ST. 7750	6-22	8-11
DEKALB DK711	6-27	8-11	Stauffer 7751	6-22	8-13
DEKALB DK789	7-2	8-19	Stauffer 7759	6-21	8-8
Deltapine 5750	6-23	8-12	Sun Prairie 2750	6-21	8-8
*Deltapine X2814	6-21	8-5	Sun Prairie 3150	6-27	8-2

*Deltapine X8262	6-29	8-12	Southern States 728	6-22	8-10
Funk's G-4614	6-23	8-7	Southern States 811	6-18	8-18
Funk's G-4733	6-28	8-4	Southern States 835	6-24	8-9
Gold Medal 842	6-25	8-9	*Southern States X16076	6-26	8-6
Gold Medal 954	6-18	8-19	Watson 412	6-16	8-18
Gold Medal 3357	6-27	8-11	Watson 414	6-21	8-10
			Watson 418	6-17	8-14

*Experimental.

Table 20. Mid-silk and physiological maturity (25% moisture) dates for late corn hybrids planted April 2, 1986 in Johnston County.

Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature	Hybrid or Brand-Hybrid	Mid-Silk Date	Date Mature
Asg./O's G. 5509	6-22	8-8	Paymaster 9427	6-29	8-21
Cargill 980	6-28	8-15	Paymaster 8990	6-23	8-20
Coker 8905	7-3	8-15	Pioneer 3055	6-27	8-12
*Coker CX6801	6-30	8-20	Pioneer 3165	6-27	8-12

*Deltapine X9686	6-24	8-7	Pioneer 3192	6-17	8-15
Funk's G-4868	7-1	8-13	Southern States 901	6-23	8-13
Gold Medal 984	6-21	8-15	Southern States 915	6-24	8-8
Gold Medal 1070	6-27	8-9	Sun Prairie 5850	6-29	8-15

NK PX95	6-20	8-7	Stauffer 8645	6-22	8-8
NK PX9685	6-27	8-21	Watson 420	6-23	8-20
NK PX9646	6-26	8-13	Watson 421	6-22	8-11
P-A-G SX383	6-25	8-10			

*Experimental.

CORN SILAGE

Silage is an important part of the beef and dairy cattle industry in North Carolina, particularly in the Piedmont and Mountain regions.

This report presents the results of the North Carolina Official Corn Silage trials for the 1986 season.

Entries: Any individual or firm may make application for having hybrids tested. Personnel of the testing program may also include entries about which further information is desired.

Early in January each year, rules governing the tests for the ensuing year are distributed to all previous participants and to those who make inquiry.

Agencies sponsoring entries in the 1986 tests are shown in Table 21.

Table 21. Name, contact person, and address of sponsoring agencies in the 1986 North Carolina Corn Silage Performance Trials along with designation used to identify the hybrids in the trials.

Name, Contact Person, Address	Hybrid Designation
DeKalb-Pfizer Genetics Karen Strain 3100 Sycamore Road, DeKalb, IL 60115	DEKALB
Funk Seeds International John P. Thomas 719 - 26th Street, Lubbock, TX 279404	Funk's
Jacques Seed Company Joe Waldo 720 St. Croix, Prescott, WI 54021	Jacques
Northrup King Company Myron Fountain 2114 Cowper Drive, Raleigh, NC 27608	NK

Table 18. (Continued)

Name, Contact Person, Address	Hybrid Designation
Paymaster Seeds Michael Cordonnier P. O. Box 9493, Minneapolis, MN 55440	Paymaster
Pioneer Hi-Bred, Inc. Paul Rodgers 1000 W. Jefferson St., Tipton, IN 46072	Pioneer
Rohm and Haas Seeds, Inc. Al Hoggard P. O. Box 2529, 406 Woods, West Memphis, AR 72301	Coker
Southern States Cooperative, Inc. G. W. Barber P. O. Box 26234, Richmond, VA 23260	Southern States

Field Plot Technique: One test was located in Haywood County on a creek bottom, one in Rowan County on an upland soil, and one in Wake County.

Plots consisted of four rows with the center two rows harvested. Four replications were planted in a randomized, complete block design. Plots were 23 feet long with five foot alleys.

All plots were overplanted and later thinned to the desired stand.

Table 22 lists the cultural practices used; Table 23 lists soil test results.

Table 22. Cultural practices used on the corn silage tests - 1986.

Location by County	Fertilizer lbs/A and Grade	Top- dressing lbs N/A	Date of Planting	Date of Harvest
Haywood	400 10-20-20	500 33.5%	June 4 May 6	October 2 & 3
Rowan	400 10-20-20	168	April 14	Discarded
Wake	250 6-12-36	166	March 27	Discarded

Table 23. Soil test results, corn silage - 1986.

Location by County	HM %	W-V	CEC	BS	% Ac	pH	P-I
Haywood	1.0	.87	8.3	86	1.2	6.6	36

Location by County	K-I	Ca %	Mg %	Mn-I	Zn-I	Cu-I
Haywood	70	63.8	17.6	625	49	136

Seasonal Conditions: A relatively warm, dry spring allowed planting to proceed on time for the most part. Haywood County Corn Silage was planted late because of the need to wait for adequate soil moisture. Rainfall was below normal for the entire growing season at all locations. The Rowan County test did not emerge because of lack of moisture. The Wake County test was not harvested in time. Rainfall data for Haywood County is listed on the following page.

Rainfall (Inches)

<u>Location by County</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sep- tember</u>
Haywood	1.71	3.05	5.08	2.09

Data: Data were collected on percent dry matter at harvest, dry matter yield, silage yield, grain yield, and plant population.

Results: Table 24 reveals the two and three year averages. Table 25 lists the 1986 data for Haywood County. These data suggest that there may not necessarily be a strong correlation between grain yield and dry matter yield; the highest yielding grain hybrids were not always the highest yielding silage hybrids. The multiple-year averages provide a more accurate picture of true performance than any single year or location can provide.

Table 24. Data combined over locations for corn silage hybrids.
Two and three year averages.

Hybrid or Brand-Hybrid	Dry Matter Tons/Acre	Silage Yield Tons/Acre	% Dry Matter At Harvest	Grain Yield Bu/A	Pop- ulation Plants Acre
<u>Three Year Averages - 1984, 1985, 1986</u>					
Jacques 8400	4.8	13.6	37	---	27,500
NK PX79	4.6	12.2	42	---	26,274
Funk's G-4858	4.3	12.5	36	---	21,536
NK PX95	4.3	13.1	34	---	26,274
<hr style="border-top: 1px dashed black;"/>					
DeKalb DK 689	4.3	11.9	37	---	27,320
Pioneer 3147	4.1	12.8	33	---	26,732
DeKalb DK 789	3.9	11.5	35	---	25,670
Funk's G-4734	3.8	10.9	36	---	25,630
<u>Two Year Averages - 1985, 1986</u>					
Jacques 8400	4.9	13.9	38	166	27,500
NK PX79	4.8	13.8	43	172	26,682
Funk's G-4858	4.4	12.5	37	152	21,942
NK PX95	4.3	12.4	36	148	26,682
Coker 8905	4.3	12.3	33	130	26,650
<hr style="border-top: 1px dashed black;"/>					
DeKalb DK689	4.2	12.1	37	156	27,000
Pioneer 3147	4.2	11.9	35	156	26,833
Paymaster 9990	3.9	11.1	33	103	24,500
Funk's G-4734	3.7	10.7	36	145	25,500
DeKalb DK789	3.6	10.4	35	152	27,000

Table 25. Average performance of corn silage hybrids at Haywood County - 1986.

Hybrid or Brand-Hybrid	Dry Matter Tons/A	Silage Yield Tons/A	% Dry Matter at Harvest	Grain Yield Bus/A	Population Plants/Acre
Jacques 8400	4.9**	14.0	33	181*	27,500
Funk's G-4858	4.6*	13.1	34	137	25,500
NK PX95	4.4*	12.7	34	135	27,500
Pioneer 3233	4.4*	12.6	33	147	27,500
Pioneer 3192	4.4*	12.6	37	138	27,500
Pioneer 3147	4.3*	12.3	28	136	26,500
DeKalb DK711	4.3*	12.2	31	194**	27,000
Pioneer 3328	4.3*	12.2	36	149	27,500
Southern States 915	4.2*	12.1	30	150	25,500

Pioneer 3179	4.2*	12.1	33	124	26,500
Pioneer 3110	4.2*	12.1	32	131	27,500
Pioneer 519	4.2*	11.9	30	118	27,500
Southern States 901	4.1*	11.8	29	137	27,500
Coker 8905	4.1*	11.8	28	125	26,500
Funk's G-4868	4.1*	11.6	28	137	25,500
NK's McNair 508	3.9*	11.2	28	104	24,500
Coker 3020	3.9*	11.1	30	167	28,500

Paymaster 9990	3.8*	10.9	28	80	24,500
Southern States 950W	3.8*	10.9	26	124	25,500
NK PX79	3.8*	10.8	35	166	27,500
Funk's G-4734	3.7	10.5	31	110	25,500
DeKalb DK 689	3.6	10.2	30	142	27,000
Southern States 815	3.5	9.9	33	149	26,500
DeKalb DK 789	3.4	9.7	30	128	27,000
Pioneer 3352	3.3	9.5	33	151	27,500
<u>Mean</u>	<u>4.1</u>			<u>138</u>	
C.V. %	15.3			8.7	
B.L.S.D. (K-50)	1.1			14	
s.e. (x)	0.31			6.0	
Error d.f.	72			72	

**Highest yielder.

*Not significantly different from highest yielder.

GRAIN SORGHUM

The majority of the grain sorghum in North Carolina is grown in the Piedmont with increasing acreage being grown in the Coastal Plain. In the Piedmont it is generally grown as a full-season crop while it is often double-cropped behind small grain or potatoes in the Coastal Plain.

Entries: Any individual or firm may make application for having entries tested. A fee is charged on an entry basis. Personnel of the testing program may also include entries about which further information is desired.

<u>Agencies and Contact Person</u>	<u>Address</u>	<u>Designation</u>
Asgrow Seed Company Darel Zook	7000 Portage Road Kalamazoo, MI 49001	Asgrow
DeKalb-Pfizer Genetics Roy Ussery	Route 2 Lubbock, TX 79415	DEKALB
Funk Seeds International John P. Thomas	1301 E. 50th St. Lubbock, TX 79404	Funk's
Hyperformer Seed Co. Bill Washburn	5100 Poplar, Suite 3200 Memphis, TN 38137	Hyperformer
Northrup King Company Myron Fountain	2114 Cowper Drive Raleigh, NC 27608	NK Savanna 5
P-A-G Seeds J. Stuart Carney	P. O. Box 9480 Minneapolis, MN 55440	P-A-G
Paymaster Seeds Michael Cordonnier	P. O. Box 9493 Minneapolis, MN 55440	Paymaster
Pennington Enterprises, Inc. Ronnie Stapp	P. O. Box 290 Madison, GA 30650	Penngrain
Pioneer Hi-Bred Int., Inc. Paul Rodgers	1000 W. Jefferson St. Tipton, IN 46072	Pioneer

Rohm and Haas Seeds, Inc. Al Hoggard	P. O. Box 2629 West Memphis, AR 72301	Coker
Southern States Cooperative, Inc.	P. O. Box 26234 Richmond, VA 23260	Southern States FFR

Test Locations: Three full-season tests were located in the Piedmont and two in the Coastal Plain with one double-crop test located in the Coastal Plain (Figure 1).

Field Plot Technique: A randomized, complete block design was used with four replications at each full-season test. The late-planted test had six replications in a randomized complete block design. Plots were two rows 23 feet long on a 38" or 30" row width. Plots were overseeded and thinned to 5-6 plants per foot if necessary. Cultural practices are shown in Table 26. Table 27 lists soil test results.

Seasonal Conditions: Soil moisture was adequate at all locations except Rowan during planting. The Rowan test was irrigated and subsequently experienced herbicide damage and the test was discarded. The Edgecombe County test and the late-planted test at Washington County were discarded due to extensive bird damage. Below normal rainfall was experienced at Anson and Stanly Counties for much of the growing season; moreso at Stanly than at Anson. Rainfall data for three locations are reported below:

Rainfall (inches)

<u>Location by County</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sep- tember</u>	<u>October</u>
Anson	2.30	0.20	2.00	6.70	1.20	2.40
Stanly	1.00	0.00	2.00	1.00	0.00	
Washington	1.82	3.76	8.51	4.63		

Data: Data were collected on yield, moisture at harvest, head compactness, head exertion, and plant height. All plot yields were adjusted to 14% moisture and reported in pounds per acre. A description of head type was determined and indicated with "1" denoting a compact head and "3" denoting a loose head. Head exertion was measured as the distance from the top leaf to the base of the head; this distance gives an indication of the ease with which grain sorghum may be harvested without leaves and plant material hindering the operation. Date 50% flowered was collected at two test sites. Percent bird damage was collected at the full-season test sites.

Results: Table 28 shows the three year and two year averages. Table 29 shows the 1986 data combined over locations, while Table 30 shows the individual location yield data. The average yield of 1934 and 2062 pounds per acre at Stanly and Anson Counties, respectively, is a reflection of the severity of the summer drought. Table 31 shows the date 50% headed and bird damage ratings of the hybrids in alphabetical order. The data on date 50% headed should indicate relative maturity among the hybrids. There were essentially three crops at Anson and Stanly Counties. The first crop consisted of those plants resulting from seed germinating at planting time. The second crop consisted of those plants resulting from seed germinating several weeks after planting and after a light shower. The third crop resulted from the first crop tillering in August.

Table 26. Cultural practices on grain sorghum performance trials, 1986.

Location by County	Fertilizer Lbs/A and Grade	Topdressing Lbs N/A	Date of Planting	Date of Harvest
<u>EARLY PLANTED TESTS</u>				
Anson	400 19-19-19	150	May 19	October 30
Edgecombe	200 4-12-12	150	June 2	Discarded
Rowan	400 10-20-20	100	June 9	Discarded
Stanly	360 22-12-20	100	April 29	October 6
Washington	350 10-30-30	100	April 28	August 26
<u>LATE PLANTED TEST</u>				
Washington	None	100	June 18	Discarded

Table 27. Soil test results, grain sorghum - 1986.

Location by County	HM %	W-V	CEC	BS	% Ac	pH	P-I	K-I	Ca %	MG %	Mn-I	Zn-I	Cu-I
Anson	.7	.85	6.2	61	2.4	5.1	39	78	35.7	19.1	625	32	46
Stanly	.5	.97	7.5	95	.4	6.6	39	28	62.5	30.3	226	94	56
Washington	7.5	.95	9.8	76	2.4	5.4	56	72	48.9	23.0	10	66	50

TABLE 28. DATA COMBINED OVER LOCATIONS FOR GRAIN SORGHUM.
EARLY PLANTED

HYBRID OR BRAND-HYBRID	YIELD LBS/A	MOISTURE	HEAD COM- PACTNESS	EXSERTION INCHES	PLANT HEIGHT INCHES
THREE-YEAR AVERAGE - 1984, 1985, 1986					
SAVANNA 5	4348	.169	1.1	9	59
HYPERFORMER 1330DR	3511	.171	1.4	5	52
FUNK'S G1711	3457	.173	1.1	4	46
HYPERFORMER 1225DR	3413	.162	1.4	6	44
PIONEER 8222	3412	.171	2.0	4	43
DEKALB DK-61	3365	.171	1.9	5	49
NK 2660	3339	.158	1.6	5	45
DEKALB M-565	3301	.163	1.3	5	44
ASGROW TOPAZ	3288	.168	1.1	5	44
PIONEER 8333	3261	.171	2.1	6	44
COKER 7675	3233	.165	1.4	4	43
PIONEER 8515	3030	.168	1.9	7	45
TWO-YEAR AVERAGE - 1985, 1986					
SAVANNA 5	4670	.156	1.2	8	55
FUNK'S G1711	3350	.160	1.2	3	43
PIONEER 8222	3290	.148	2.0	3	40
HYPERFORMER 1225DR	3267	.143	1.2	5	41
HYPERFORMER 1330DR	3235	.152	1.6	5	49
PAYMASTER DR1125	3213	.146	1.3	4	41
NK 2660	3152	.142	1.7	5	41
DEKALB M-565	3131	.145	1.4	4	41
COKER 7675	3118	.147	1.4	4	40
PAG 4462	3088	.150	2.1	6	43
ASGROW TOPAZ	3077	.147	1.2	5	41
PIONEER 8333	3068	.152	2.0	5	42
DEKALB DK-61	3014	.152	1.7	5	45
PIONEER 8515	2958	.151	1.9	7	43
PAG 5572	2889	.148	1.6	3	39
HYPERFORMER HONCHO	2865	.143	1.7	3	36
NK 2779	2759	.137	1.9	6	41

TABLE 29. GRAIN SORGHUM -1986- EARLY PLANTED
DATA COMBINED OVER LOCATIONS

HYBRID OR BRAND-HYBRID	YIELD LBS/A	MOISTURE	HEAD COM- PACTNESS	EXSERTION INCHES	PLANT HEIGHT INCHES
-SAVANNA 5	5144	.180	1.3	8	51
-PIONEER B815	4196	.169	2.0	7	44
PIONEER 8226	4000	.166	1.7	5	42
COKER 7737	3934	.165	1.7	5	38
PIONEER 8222	3769	.161	2.0	3	38
PAG 6670	3618	.168	1.7	4	42
HYPERFORMER 1330DR	3586	.167	2.0	5	43
FUNK'S G1711	3554	.179	1.3	3	39
PAG 4462	3545	.163	2.0	6	39
HYPERFORMER 1225DR	3540	.151	1.3	5	39
DEKALB DK-61	3527	.160	2.0	7	44
-PAYMASTER DR1125	3446	.157	1.3	4	37
+SOUTHERN STATES-1313	3403	.152	1.3	4	38
NK 2660	3383	.154	2.0	5	37
FFR 321	3370	.156	1.7	5	40
PAYMASTER 1090	3343	.155	2.0	7	41
-PENNGRAIN 85	3340	.162	2.0	7	45
PAYMASTER 1096Y	3304	.156	1.7	5	42
COKER 7675	3255	.160	1.7	5	36
NK 2656	3223	.153	2.0	6	39
PIONEER 8515	3213	.162	2.0	5	38
PIONEER 8333	3191	.170	2.0	3	38
DEKALB M-565	3176	.158	1.3	5	37
ASGROW TOPAZ	3110	.164	1.3	5	38
HYPERFORMER HONCHO	3081	.153	2.0	2	33
PAG 5572	3035	.152	1.7	4	35
NK 2779	2949	.145	2.0	4	37
+SOUTHERN STATES-1212	2767	.151	2.0	5	37
SOUTHERN STATES-160	2680	.164	2.0	7	39

+EXPERIMENTALS. SEED OF THIS ENTRY MAY OR MAY NOT BE AVAILABLE
IN 1987 AND MAY ALSO HAVE A DIFFERENT DESIGNATION.
-BIRD RESISTANT

TABLE 30. INDIVIDUAL LOCATION YIELD DATA FOR GRAIN SORGHUM - 1986
EARLY PLANTED

HYBRID OR BRAND-HYBRID	STANLY	ANSON	WASHINGTON	MEAN
-SAVANNA 5	2918**	4476**	8036**	5144**
-PIONEER B815	2461	3048	7079	4196
PIONEER 8226	2845*	2811	6344	4000
COKER 7737	2491	2543	6768	3934
PIONEER 8222	2324	2510	6474	3769
PAG 6670	1792	2439	6624	3618
HYPERFORMER 1330DR	1972	2542	6244	3586
FUNK'S G1711	1994	2162	6504	3554
PAG 4462	2703*	1580	6351	3545
HYPERFORMER 1225DR	1586	2051	6982	3540
DEKALB DK-61	2100	2281	6200	3527
-PAYMASTER DR1125	1378	1996	6963	3446
+SOUTHERN STATES-1313	1722	2037	6450	3403
NK 2660	1662	2074	6413	3383
FFR 321	1489	1945	6676	3370
PAYMASTER 1090	1800	2029	6201	3343
-PENNGRAIN 85	2268	1927	5825	3340
PAYMASTER 1096Y	1434	1830	6647	3304
COKER 7675	1464	2056	6244	3255
NK 2656	2031	1709	5929	3223
PIONEER 8515	1912	1858	5870	3213
PIONEER 8333	1857	1449	6268	3191
DEKALB M-565	1416	1745	6368	3176
ASGROW TOPAZ	1402	1664	6264	3110
HYPERFORMER HONCHO	1993	1110	6140	3081
PAG 5572	1417	1650	6038	3035
NK 2779	1528	1486	5832	2949
+SOUTHERN STATES-1212	1591	1301	5410	2767
SOUTHERN STATES-160	1911	1381	4747	2680
MEAN	1934	2062	6356	3451
C.V. (%)	17.4	25.9	8.9	14.1
B.L.S.D.	387	629	696	614
S.E.	168	267	282	217
D.F. OF ERROR	87	87	87	58

+EXPERIMENTALS. SEED OF THIS ENTRY MAY OR MAY NOT BE AVAILABLE
IN 1987 AND MAY ALSO HAVE A DIFFERENT DESIGNATION.

-BIRD RESISTANT.

**HIGHEST YIELDER IN TEST.

*NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDER.

Table 31. Date 50% headed and bird damage ratings for grain sorghum hybrids - 1986.

Hybrid or Brand Hybrid	Date 50% Headed	% Bird Damage Rating	Hybrid or Brand Hybrid	Date 50% Headed	% Bird Damage Rating
Asgrow Topaz	7-23	21	P-A-G 5572	7-28	23
Coker 7675	7-25	21	P-A-G 6670	8-1	23
Coker 7737	8-1	15	Paymaster 1090	7-19	20
DEKALB DK61	7-31	29	Paymaster 1096Y	7-30	15
DEKALB M565	7-24	20	+Paymaster DR1125	7-24	16
-----	-----	-----	-----	-----	-----
FFR 321	7-23	15	+Penngrain 85	7-31	30
Funk's G-1711	7-31	20	+Pioneer B815	8-3	14
Hyperformer Brand Honcho	7-20	15	Pioneer 8222	7-30	18
Hyperformer Brand 1225DR	7-23	20	Pioneer 8226	7-31	36
Hyperformer Brand 1330DR	7-30	30	Pioneer 8333	7-26	15
-----	-----	-----	-----	-----	-----
NK 2656	7-22	21	Pioneer 8515	7-19	26
NK 2660	7-25	14	+Savanna 5	8-1	4
NK 2779	7-21	20	SS-160	7-21	35
P-A-G 4462	7-25	28	SS-1212	7-21	20
			SS-1313	7-25	18

+Bird Resistant.

SOYBEANS

There are several high-yielding soybean varieties available to the producer from which he may choose according to desired maturity date, lodging, pest resistance, etc. Information on the performance of commercial varieties and experimental lines grown in different locations in the state is provided in this report.

Entries: Experimental lines and commercial varieties developed by both public and private agencies are included in this program. Any individual or firm may make application for having entries included. A fee is charged on an entry basis. Personnel of the testing program may include entries about which further information is desired. Agencies sponsoring entries in the tests and their contact person, address, and entry designation are listed below.

<u>Agency and Contact Person</u>	<u>Address</u>	<u>Designation</u>
Asgrow Seed Company William Dimond	7000 Portage Road Kalamazoo, MI 49001	Asgrow
C. R. Seeds Josh Stanton	P. O. Box 1867 Hartsville, SC 29550	Coker
Delta & Pine Land Co. Tom Wofford	1200 Herring Avenue Wilson, NC 27893	Deltapine
Funk Seeds Int. Jimmy L. Barber	Route 1, Box 540A Greenville, MS 38701	Funk's
Hyperformer Seed Co. Bill Washburn	5100 Poplar, Suite 3200 Memphis, TN 38137	Shenandoah Sanalona Wilstar Sampson Shiloh Starr Spartan

<u>Agency and Contact Person</u>	<u>Address</u>	<u>Designation</u>
Jacob Hartz Seed Co. Curtis Williams	P. O. Box 946 Stuttgart, AR 72160	Hartz
Northrup King Co. Myron Fountain	2114 Cowper Drive Raleigh, NC 27608	NK NK's McNair
N. C. Agric. Res. Ser. and USDA Joe Burton	Raleigh, NC	N
Pioneer Hi-Bred Int., Inc. Paul Rodgers	1000 W. Jefferson St. Tipton, IN 46072	Pioneer
Rohm and Haas Seed, Inc. Al Hoggard	P. O. Box 2629 West Memphis, AR 72301	Coker, RA
Southern States Cooperative, Inc. Howard J. Tabor	P. O. Box 26234 Richmond, VA 23260	FFR

Test Locations: One full-season test was located in the Piedmont and four in the Coastal Plain, three late-planted tests were located also in the Coastal Plain and one in the Piedmont.

Data: Data were collected on yield, moisture, lodging, plant height, date of pod maturity, seed size, and oil percent. Yields were calculated on plot weight and adjusted to 14% moisture. Lodging was scored on a scale of 1-5 with "1" being no lodging and "5" being completely lodged. Plant height was determined by measuring from the ground to the top of the plant prior to harvest. Date of pod maturity was observed when 95% of the pods turned brown. Oil percent was determined at the USDA Soybean Laboratory; appreciation goes to Dr. Rich Wilson for running these analyses.

Seasonal Conditions: Planting of soybeans was delayed some due to a need to wait for soil moisture to improve. The full-season tests at Edgcombe, Robeson and Rowan were discarded due to herbicide damage. Late-planted tests were planted on schedule; the late-planted test at Washington County was discarded due to poor stands. The late-planted test at Rowan was irrigated at planting to promote seedling emergence because of extremely dry soil conditions. Below-normal rainfall was recorded for the first half of the summer at most locations. A relatively warm fall was experienced with the first frost appearing later than normal. Rainfall data from several test sites are shown:

Rainfall (Inches)

<u>Location</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sep- tember</u>
Lenoir	2.09	8.95	3.57	6.18	0.32
Washington	1.82	3.76	8.51	7.90	1.29
Edgcombe	3.14	2.45	3.36	13.19	0.53
Rowan	0.82	1.46	2.30	7.23	0.93

Levels of worm populations, various species, were sufficient to require insecticide applications at most locations. Cultural practices followed are listed in Table 32 while soil test results are shown in Table 33.

Harvest conditions were poor with many days in November being overcast and humid. Consequently, soybeans were harvested later than normal. Some deterioration of seed quality was noticed, however not to the extent evidenced in 1985.

Results:Early-Planted Soybeans

Data for the early-maturing soybeans are found in Tables 34 and 35. Yields were respectable at both Lenoir and Washington in 1986 (Table 35).

The medium-maturing soybeans did not yield as well at Lenoir as the early soybeans in 1986 (Table 37); however, yields at Washington were again respectable. Two and three year averages are shown in Table 36.

Late-maturing soybeans produced even less yield at Lenoir than the medium or early soybeans (Table 39); this may be a reflection of the rainfall in September at that location (0.32 in.) where the later soybeans suffered more during pod fill. Two and three-year averages are shown in Table 38.

Late-Planted Soybeans

Yields for the early-maturing soybeans were good at Johnston and Edgecombe and respectable at Rowan (Table 41). Two and three-year averages for this group are found in Table 40.

Yields for the medium-maturing soybeans were good again at Johnston and Edgecombe (Table 43). Two and three-year averages for this group are found in Table 42.

Data for the late-maturing varieties are shown in Tables 44 and 45. Yields at all locations were slightly less for this group than for either the early or medium soybeans.

Two and three-year averages and 1986 data for date 95% pods brown are shown in Tables 46 and 47 for the early-planted tests and in Tables 48 and 49 for the late-planted tests. The two and three-year averages reflect a more accurate picture of the average date of physiological maturity than any one year. It should be noted that the soybeans should be ready to harvest 10 days after the date 95% pods brown given optimum harvest conditions. Table 50 lists the oil percentage and seed size for entries in the full-season tests.

Table 32. Cultural practices for soybean performance trials - 1986.

Location by County	Row Width (inches)	Fertilizer Lbs/A	Tillage	Soil Type	Date of Planting	Date of Harvest
<u>Early Planted Tests</u>						
Lenoir	38	300 0-9-27	Conventional	Goldsboro Loamy Sand	May 16	December 8
Robeson	36	100 0-0-60	Conventional		June 3	Discarded
Edgecombe	36	430 0-10-20	Conventional		May 30	Discarded
Washington	38	40 Manganese	Conventional	Portsmouth Sandy Loam	May 28	December 5
Rowan	30	400 0-30-15	Conventional		May 8	Discarded
<u>Late Planted Tests</u>						
Johnston	30		Minimum		June 17	December 10
Edgecombe	36		Minimum		June 10	December 10
Rowan	30		No-Till	Hiwassee Clay	June 25	December 17
Washington	30		No-Till	Portsmouth Sandy Loam	June 19	Discarded

Table 33. Soil test results, soybeans - 1986.

Location by County	HM %	W-V	CEC	BS	% Ac	pH	P-I	K-I	Ca %	Mg %	Mn-I	Zn-I	Cu-I
<u>Early Planted</u>													
Lenoir	.7	1.18	4.0	80	.8	5.8	100	76	54.7	15.9	34	28	28
Washington	5.0	1.14	10.4	85	1.6	6.1	97	98	55.8	24.1	23	36	68
<u>Late Planted</u>													
Johnston	.5	1.39	3.1	74	.8	5.9	166	60	48.7	15.6	59	67	50
Edgecombe	1.3	1.21	3.3	51	1.6	5.1	50	92	27.6	9.2	46	64	32
Rowan	.2	1.14	5.9	80	1.2	6.0	18	58	52.8	21.8	625	54	206

TABLE 34. PERFORMANCE OF EARLY PLANTED EARLY MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
Deltapine 105	43	1.7	36	.142
Bay	41	1.2	37	.147
Pioneer 5482	41	1.2	36	.144
Coker 485	41	1.2	34	.143
Asgrow A5474	41	1.1	37	.149
Pioneer 9571	40	1.7	38	.145
Hartz 5252	40	1.4	38	.147
Asgrow A5980	39	1.7	36	.151
Hartz 5171	39	2.2	40	.151
FFR 562	39	1.6	41	.148
Forrest	38	1.5	35	.146
Hartz 5370	38	1.5	40	.148
Bedford	37	2.2	41	.146
Wilstar 550	32	1.1	37	.146
TWO-YEAR AVERAGE - 1985, 1986.				
Deltapine 105	35	1.4	36	.140
Asgrow A5474	34	1.1	39	.143
Essex	33	1.3	29	.139
Hartz 5171	33	2.1	42	.145
Forrest	33	1.5	37	.141
Coker 485	33	1.1	34	.142
Bay	33	1.2	39	.145
Hartz 5252	33	1.3	39	.141
Asgrow A5980	33	1.8	37	.146
Pioneer 5482	32	1.3	38	.141
FFR 562	32	1.5	42	.143
Pioneer 9571	31	1.7	40	.142
Hartz 5370	30	1.4	41	.145
Coker 425	29	1.0	27	.137
Bedford	29	2.3	42	.141
Shiloh	29	1.2	39	.140
Asgrow A5149	24	1.2	32	.137
Wilstar 550	22	1.1	40	.140

Table 35. Performance of early-planted early-maturing soybeans - 1986.

Brand-Variety or Variety	Lenoir	Washington	Average			
	Yield Bu/A	Yield Bu/A	Yield Bu/A	Moisture	Lodging	Plant Height Inches
Deltapine 105	52*	58**	55**	.151	1.2	41
Pioneer 9581	54*	52*	53*	.152	1.3	40
Asgrow A5474	49*	58**	53*	.152	1.0	45
Hartz 5252	53*	54*	53*	.150	1.0	45
Forrest	56**	50*	53*	.153	1.7	42
FFR 561	50*	54*	52*	.150	1.3	34
TN 5-85	50*	52*	51*	.151	1.5	41
Essex	54*	47*	51*	.146	1.5	31
Hartz 5171	48*	53*	50*	.155	2.3	47
FFR 562	45	55*	50*	.155	1.5	48
Bay	44	55*	50*	.154	1.0	45
Pioneer 9571	44	52*	48*	.150	1.5	47
Shenandoah	46*	50*	48*	.151	1.2	42
Toano	44	50*	47*	.149	1.3	37
Asgrow A5980	46*	48*	47*	.158	1.8	38
+V78-184	47*	47*	47*	.151	1.7	33
+V81-1325	37	53*	45	.150	1.0	32
Hartz 5370	46*	43	44	.157	1.5	44
+V74-315	46*	43	44	.152	1.3	31
Pioneer 5482	43	45	44	.151	1.0	43
Coker 485	41	46	44	.151	1.0	37
Deltapine 675	42	43	43	.155	1.3	46
Coker 425	43	40	42	.143	1.0	32
Shiloh	33	48*	41	.149	1.3	43
Bedford	37	44	40	.149	3.0	47
Wilstar 550	38	42	40	.155	1.0	45
NK S59-19	42	31	36	.155	2.2	40
Asgrow A5149	28	35	31	.151	1.3	35
Mean of Test	45	48	47			
B.L.S.D. (K-50)	10	11	8			
C.V.	13.9	14.3	9.4			
s.e.	3.6	3.9	1.8			
Error d.f.	54	54	27			

+Experimental. Seed of these may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

TABLE 36. PERFORMANCE OF EARLY PLANTED MEDIUM MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
Hartz 6383R	43	2.1	41	.150
RA 606	42	2.2	40	.147
Young	42	1.9	42	.150
NK S69-54	39	1.6	38	.148
Deltapine 566	39	1.2	38	.149
RA 680	38	1.3	41	.152
Deltapine 506	38	1.6	41	.152
Davis	37	1.9	41	.150
NK S69-96	37	2.4	38	.154
Coker 156	37	1.9	40	.147
FFR 666	37	1.4	33	.150
Centennial	36	1.2	40	.150
FFR 668	35	1.4	41	.151
TWO-YEAR AVERAGE - 1985, 1986.				
Hartz 6383R	37	2.2	43	.146
Sampson	36	1.6	39	.143
RA 606	35	2.3	39	.140
Young	35	1.7	44	.140
Deltapine 566	35	1.2	38	.141
NK S69-54	33	1.7	39	.144
Coker 686	33	1.5	42	.145
RA 680	32	1.3	43	.145
NK S69-96	32	2.5	39	.147
Deltapine 506	30	1.4	41	.149
FFR 666	29	1.4	33	.143
Coker 156	29	1.9	40	.141
Davis	29	1.9	42	.141
Centennial	28	1.1	41	.142
FFR 668	28	1.2	42	.144
Hartz 6130	26	1.4	42	.137

Table 37. Performance of early-planted medium-maturing soybeans - 1986.

Brand-Variety or Variety	Lenoir Yield Bu/A	Washington Yield Bu/A	Average			
			Yield Bu/A	Moisture	Lodging	Plant Height Inches
Hartz 6383R	51**	52*	51**	.151	2.3	48
Asgrow A6785	42*	57**	49*	.147	1.8	43
RA 606	45*	52*	49*	.146	2.5	41
+N82-1198	40	57**	48*	.145	1.2	38
Pioneer 9691	43*	53*	48*	.148	2.0	44
Young	38	55*	47*	.147	1.7	49
Sanalona	38	53*	46*	.151	2.3	44
NK S69-96	40	48	44*	.156	3.5	39
FFR 666	39	49	44*	.152	1.3	36
Coker 156	35	52*	43*	.145	2.3	47
RA 680	40	46	43*	.150	1.5	48
Coker 686	36	49	43*	.151	1.5	47
Deltapine 566	38	47	42*	.144	1.2	43
Sampson	34	50*	42*	.145	2.0	42
NK S69-54	31	52*	41	.152	1.8	44
Davis	31	51*	41	.150	1.8	46
+GA 79-402	42*	37	40	.142	1.0	41
Hartz 6130	33	44	39	.144	1.3	46
Spartan	29	47	38	.155	3.2	46
+N81-1121	30	46	38	.147	1.2	39
Leflore	29	45	37	.148	1.2	46
Deltapine 506	28	46	37	.153	1.3	43
+Funk's Exp. 3305	30	43	36	.143	1.0	44
Centennial	30	39	35	.149	1.0	45
FFR 668	25	43	34	.151	1.3	45
Mean of Test	36	49	42			
B.L.S.D. (K-50)	9	7	9			
C.V.	17.2	9.5	10.2			
s.e.	3.4	2.5	1.8			
Error d.f.	36	36	24			

+Experimental. Seed of these may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

TABLE 38. PERFORMANCE OF EARLY PLANTED LATE MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
GaSoy 17	42	2.3	42	.150
Kirby	42	1.5	41	.144
NK's McNair 700	41	1.6	40	.142
Coker 368	41	1.9	46	.153
Braxton	41	1.4	44	.147
Hartz 7126	40	1.7	44	.148
Deltapine 417	40	1.5	43	.147
RA 702	40	1.9	40	.145
Wilstar 790	39	1.7	42	.146
Foster	39	3.0	38	.152
Coker 237	38	1.5	43	.147
Johnston	38	1.8	37	.150
Bragg	38	1.7	43	.149
NK S72-60	38	2.8	41	.148
Deltapine 497	37	1.6	46	.146
Gordon	37	1.8	42	.153
Ransom	36	1.4	40	.148
TWO-YEAR AVERAGE - 1985, 1986.				
Coker 368	36	1.9	45	.149
GaSoy 17	36	2.4	42	.144
Coker 6727	36	1.5	41	.139
Coker 738	36	1.3	43	.141
Kirby	35	1.4	41	.139
Starr	34	1.6	39	.140
Braxton	34	1.2	44	.143
Johnston	33	1.7	38	.145
Deltapine 417	33	1.4	41	.142
Coker 627	33	1.2	43	.141
RA 702	33	1.9	42	.140
NK's McNair 700	33	1.5	40	.137
Hartz 7126	33	1.6	45	.142
Foster	33	3.2	36	.144
Wilstar 790	32	1.6	43	.141
Hartz 8112	32	1.1	45	.141
Deltapine 497	32	1.6	46	.139
NK S72-60	31	2.9	43	.143
Bragg	31	1.6	43	.143
Gordon	30	1.8	43	.145
Ransom	29	1.4	43	.143
Coker 237	29	1.4	45	.137

Table 39. Performance of early-planted late-maturing soybeans - 1986.

Brand-Variety or Variety	Lenoir Yield Bu/A	Washington Yield Bu/A	Average			
			Yield Bu/A	Moisture	Lodging	Plant Height Inches
+Coker 82-606	46**	46	46**	.143	2.3	41
Pioneer 9791	32	56**	44*	.136	1.5	43
NK's McNair 700	36*	49*	42*	.133	1.7	43
GaSoy 17	34	50*	42*	.141	2.8	50
Coker 6727	33	51*	42*	.134	1.5	45
Hartz 7126	30	53*	41*	.138	2.0	49
Coker 6738	35	46	41*	.136	1.3	47
Coker 368	33	47	40*	.145	2.3	50
Starr	29	50*	39*	.134	1.3	40
Hartz 7110	31	47	39*	.138	1.7	46
+N82-1933	31	47	39*	.133	2.2	50
Gordon	37*	40	39*	.145	2.0	48
RA 702	31	46	38*	.137	2.3	43
Braxton	29	48	38*	.143	1.2	48
Johnston	28	48	38*	.143	2.0	38
Kirby	34	42	38*	.135	1.5	43
Coker 627	34	42	38*	.139	1.2	46
Coker 237	27	47	37*	.135	1.5	48
Deltapine 417	28	45	36*	.139	1.3	44
Deltapine 497	32	40	36*	.139	1.3	50
Hartz 8112	28	44	36*	.137	1.2	49
Asgrow A7986	26	45	35*	.138	1.0	48
+Funk's Exp. 1409	31	39	35*	.138	1.0	44
Ransom	25	44	34*	.141	1.3	46
NK S72-60	34	33	33*	.140	3.7	46
Bragg	22	44	33*	.140	1.8	46
Wilstar 790	23	44	33*	.137	1.7	45
+Deltapine X676	23	44	33*	.141	1.8	38
FFR 771	20	46	33*	.142	1.7	50
Foster	26	38	32*	.140	4.0	38
Mean of Test	30	45	38			
B.L.S.D. (K-50)	10	7	NS			
C.V.	19.6	10.0	12.7			
s.e.	3.4	2.6	2.0			
Error d.f.	43	43	29			

+Experimental. Seed of these may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

TABLE 40. PERFORMANCE OF LATE PLANTED EARLY MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
Deltapine 105	38	1.7	36	.144
Asgrow A5980	35	1.3	38	.148
Pioneer 5482	34	1.1	34	.142
Coker 485	34	1.2	33	.145
Pioneer 9571	34	1.5	35	.139
Forrest	34	1.5	36	.146
Asgrow A5474	32	1.1	34	.143
TWO-YEAR AVERAGE - 1985, 1986.				
Deltapine 105	40	1.8	35	.153
Asgrow A5980	37	1.3	37	.157
Coker 485	37	1.2	34	.153
Pioneer 5482	35	1.1	36	.153
Pioneer 9571	35	1.5	36	.153
Asgrow A5474	35	1.2	34	.155
Forrest	35	1.6	36	.154

Table 41. Performance of late-planted early-maturing soybeans - 1986.

Brand-Variety or Variety	Johnston	Rowan	Edgecombe	Average			Pl. Ht. Inches
	Yield Bu/A	Yield Bu/A	Yield Bu/A	Yield Bu/A	Moisture	Lodging	
Deltapine 105	54*	40*	57**	51**	.158	1.8	33
Coker 485	53*	40*	54*	49*	.158	1.4	32
Asgrow A5980	51*	41*	53*	49*	.165	1.6	37
FFR 562	51*	39*	55*	48*	.159	2.0	40
Hartz 5252	55**	36*	53*	48*	.160	1.8	33
FFR 561	48*	43**	50	47*	.161	1.2	28
Pioneer 9581	55**	36*	49	47*	.157	1.6	32
Asgrow A5474	48*	40*	51*	46*	.159	1.3	33
Pioneer 5482	48*	43**	48	46*	.157	1.2	33
TN 5-85	49*	38*	50	46*	.162	1.2	33
Forrest	52*	32*	53*	46*	.158	2.0	34
Toano	45*	43**	45	44*	.160	1.2	28
Hartz 5171	49*	33*	49	44*	.160	2.0	36
Pioneer 9571	47*	36*	47	44*	.159	1.8	33
Hartz 5370	47*	31*	49	42	.170	1.6	34
Deltapine 675	48*	34*	44	42	.160	1.4	35
+V78-184	41	37*	47	42	.160	1.2	30
+V81-1325	38	41*	39	39	.157	1.0	22
Mean of Test	49	38	50	46			
B.L.S.D. (K-50)	11	NS	6	7			
C.V.	11.9	16.0	8.1	8.2			
s.e.	3.4	3.5	2.3	1.2			
Error d.f.	34	34	34	34			

+Experimental. Seed of these may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

TABLE 42. PERFORMANCE OF LATE PLANTED MEDIUM MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
RA 606	38	1.6	38	.136
Deltapine 566	38	1.1	38	.136
Young	37	1.4	37	.138
NK S69-96	36	1.4	36	.140
Davis	35	1.6	37	.137
Deltapine 506	35	1.7	37	.140
NK S69-54	35	1.5	33	.143
Centennial	32	1.4	39	.140
TWO-YEAR AVERAGE - 1985, 1986.				
Young	39	1.4	38	.145
Deltapine 566	39	1.1	39	.143
RA 606	38	1.7	40	.144
Davis	36	1.6	39	.145
Sampson	36	1.7	37	.142
NK S69-54	36	1.5	38	.150
Coker 686	36	1.8	39	.147
NK S69-96	35	1.3	36	.148
Deltapine 506	34	1.9	37	.148
Centennial	33	1.5	40	.147

Table 43. Performance of late-planted medium maturing soybeans - 1986.

Brand-Variety or Variety	Johnston Yield Bu/A	Rowan Yield Bu/A	Edgecombe Yield Bu/A	Average			Pl. Ht. Inches
				Yield Bu/A	Moisture	Lodging	
Young	57**	42*	56**	52**	.155	1.6	37
Pioneer 9691	48	43*	52*	48*	.157	2.0	37
Davis	53*	35	53*	47*	.153	2.0	38
Deltapine 566	47	44**	48	47*	.150	1.2	36
RA 606	54*	38*	47	46*	.149	2.1	38
NK S69-54	49	38*	53*	46*	.155	1.7	39
+N81-1121	53*	34	49*	46*	.150	1.0	34
Deltapine 506	51*	34	51*	45	.157	2.3	38
Coker 686	47	40*	48	45	.155	1.6	36
NK S69-96	52*	37*	46	45	.158	1.3	36
+GA 79-402	49	37*	47	45	.154	1.4	42
Sampson	48	34	50*	44	.150	1.6	34
Sanalona	45	32	53*	43	.157	2.4	38
FFR 668	43	41*	46	43	.157	1.7	36
FFR 666	47	31	51*	43	.153	1.7	35
Asgrow A6785	52*	33	44	43	.150	1.8	34
Hartz 6383R	46	31	49*	42	.158	2.0	39
Spartan	43	38*	45	42	.163	2.1	40
Centennial	44	34	45	41	.154	1.7	40
Coker 680	45	35	41	40	.157	1.4	40
Hartz 6130	42	31	42	38	.149	1.6	36
Mean of Test	48	36	48	44			
B.L.S.D. (K-50)	7	7	7	6			
C.V.	9.1	12.0	8.9	7.5			
s.e.	1.2	2.5	2.5	1.1			
Error d.f.	40	40	40	40			

+Experimental. Seed of these may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

TABLE 44. PERFORMANCE OF LATE PLANTED LATE MATURING SOYBEANS
 COMBINED OVER LOCATIONS.
 THREE-YEAR AVERAGE 1984, 1985, AND 1986.

BRAND-VARIETY OR VARIETY	YIELD BUS/A	LODGING	PLANT HEIGHT INCHES	MOISTURE
Deltapine 417	42	1.6	41	.139
RA 702	41	1.9	36	.140
Braxton	40	1.5	36	.141
Ranson	39	1.5	37	.141
Foster	39	2.6	38	.143
Coker 368	39	1.6	41	.142
Coker 237	38	1.2	38	.140
NK's McNair 700	38	1.4	37	.142
Wilstar 790	38	1.5	39	.143
Deltapine 497	38	1.5	40	.138
GaSoy 17	37	2.1	38	.141
Johnston	36	1.8	40	.142
Kirby	36	1.6	38	.139
Bragg	34	2.0	39	.139
NK S72-60	32	2.1	37	.142
TWO-YEAR AVERAGE - 1985, 1986.				
Coker 738	44	1.3	41	.151
RA 702	43	2.1	38	.149
Coker 627	41	1.9	39	.152
Braxton	41	1.6	39	.150
Deltapine 417	40	1.6	44	.148
NK's McNair 700	39	1.4	39	.151
Ranson	39	1.6	38	.149
Coker 368	39	1.6	43	.153
Deltapine 497	39	1.3	41	.147
Coker 6727	39	1.7	38	.149
Starr	38	1.4	36	.147
Coker 237	38	1.2	39	.147
Wilstar 790	38	1.6	39	.153
Johnston	37	2.0	40	.152
GaSoy 17	37	2.4	38	.150
Foster	37	2.9	38	.152
Kirby	36	1.6	39	.148
Gordon	36	1.9	39	.155
Bragg	35	2.2	40	.147
NK S72-60	31	2.3	37	.151

Table 45. Performance of late-planted late-maturing soybeans - 1986.

Brand-Variety or Variety	Johnston	Rowan	Edgecombe	Average			Pl. Ht. Inches
	Yield Bu/A	Yield Bu/A	Yield Bu/A	Yield Bu/A	Moisture	Lodging	
RA 702	52*	44*	49*	49**	.149	1.9	37
Braxton	50*	45**	45*	47*	.150	1.4	38
+Coker 82-606	53**	37	49*	46*	.151	1.4	35
Coker 6727	52*	38	47*	46*	.147	1.7	37
Coker 738	49*	43*	43*	45*	.151	1.2	39
Hartz 7126	49*	33	54**	45*	.150	2.7	40
Pioneer 9791	49*	39*	46*	45*	.145	1.7	35
NK's McNair 700	51*	37	46*	45*	.148	1.4	36
Coker 627	52*	42*	39	44*	.146	1.9	36
Ransom	46*	35	50*	44*	.150	1.6	36
Deltapine 417	48*	37	46*	44*	.150	1.7	42
Deltapine 497	48*	36	46*	43*	.146	1.3	38
Starr	49*	34	46*	43*	.147	1.3	34
Asgrow A7986	48*	41*	40	43*	.148	1.1	37
Gordon	44	35	47*	42*	.154	2.0	38
Coker 237	43	36	47*	42*	.146	1.3	36
FFR 771	45	37	43*	41	.147	1.8	39
Bragg	40	32	48*	40	.147	2.3	38
GaSoy 17	41	28	50*	40	.150	2.4	38
Hartz 8112	47*	32	39	39	.150	2.0	40
Johnston	44	27	46*	39	.152	2.1	38
Wilstar 790	44	31	42*	39	.152	1.7	38
Hartz 7110	43	28	43*	38	.151	1.6	38
Foster	38	26	50*	38	.153	2.8	38
Deltapine X676	43	31	37	37	.154	1.8	40
Kirby	40	30	40	37	.145	1.7	38
Coker 368	39	34	36	36	.152	1.6	40
NK S72-60	44	18	40	34	.146	2.3	37
Mean of Test	46	35	45	42			
B.L.S.D. (K-50)	7	6	13	7			
C.V.	9.2	13.4	13.8	10.0			
s.e.	2.4	2.7	3.6	1.4			
Error d.f.	54	54	54	54			

+Experimental. Seed of this variety may or may not be available in 1987 and may have a different designation.

**Highest yielder.

*Not significantly different from highest yielder.

Table 46. Date 95% pods brown for early-planted test.

GROUP VIThree Year Average - 1984, 1985, 1986

Centennial	10-21	Hartz 6383R	10-22
Coker 156	10-21	NK S69-54	10-23
Davis	10-20	NK S69-96	10-28
Deltapine 506	10-21	RA 606	10-21
Deltapine 566	10-24	RA 680	10-23
FFR 666	10-19	Young	10-22
FFR 668	10-22		

Two Year Average - 1985, 1986

Centennial	10-18	Hartz 6130	10-16
Coker 156	10-17	Hartz 6383R	10-19
Coker 686	10-19	NK S69-54	10-20
Davis	10-17	NK S69-96	10-22
Deltapine 506	10-19	RA 606	10-17
Deltapine 566	10-21	RA 680	10-20
FFR 666	10-16	Sampson	10-22
FFR 668	10-20	Young	10-19

GROUPS VII & VIIIThree Year Average - 1984, 1985, 1986

Bragg	10-27	Hartz 7126	10-29
Braxton	10-29	Johnston	10-30
Coker 237	10-27	Kirby	10-30
Coker 368	10-31	NK's McNair 700	10-24
Deltapine 417	10-30	NK S72-60	10-26
Deltapine 497	10-29	RA 702	10-26
Foster	10-29	Ransom	10-25
GaSoy 17	10-29	Wilstar 790	10-28
Gordon	10-26		

Two Year Average - 1985, 1986

Bragg	10-25	Gordon	10-24
Braxton	10-26	Hartz 7126	10-26
Coker 237	10-25	Hartz 8112	10-26
Coker 368	10-28	Johnston	10-26
Coker 627	10-24	Kirby	10-28
Coker 6738	10-25	NK's McNair 700	10-22
Coker 6727	10-25	NK S72-60	10-25
Deltapine 417	10-28	RA 702	10-25
Deltapine 497	10-26	Ransom	10-23
Foster	10-27	Starr	10-25
GaSoy 17	10-29	Wilstar 790	10-26

Table 47. Date 95% pods brown for the early-planted soybean test.

<u>Group VI</u>			
Asgrow A6785	10-14	Leflore	10-15
Centennial	10-15	N81-1121	10-15
Coker 156	10-13	N82-1198	10-13
Coker 686	10-16	NK S69-54	10-17
Davis	10-10	NK S69-96	10-18
Deltapine 506	10-15	Pioneer 9691	10-15
Deltapine 566	10-18	RA 606	10-11
FFR 666	10-8	RA 680	10-16
FFR 668	10-15	Sampson	10-18
Funk's Exp. 3305	10-8	Sanalona	10-13
GA 79-402	10-8	Spartan	10-18
Hartz 6130	10-10	Young	10-13
Hartz 6383R	10-13		

<u>Groups VII & VIII</u>			
Asgrow R7986	10-23	GaSoy 17	10-22
Bragg	10-19	Gordon	10-19
Braxton	10-20	Hartz 7110	10-15
Coker 237	10-20	Hartz 7126	10-20
Coker 368	10-22	Hartz 8112	10-19
Coker 627	10-19	Johnston	10-19
Coker 6727	10-20	Kirby	10-22
Coker 6738	10-20	N82-1933	10-19
Coker 82-606	10-20	NK McNair 700	10-15
Deltapine 417	10-23	NK S72-60	10-20
Deltapine 497	10-21	Pioneer 9791	10-21
Deltapine X676	10-23	RA 702	10-19
FFR 771	10-21	Ransom	10-19
Foster	10-22	Starr	10-20
Funk's Exp. 1409	10-14	Wilstar 790	10-19

Table 48. Date 95% pods brown for the late-planted soybean test.

Two Year Average - 1985, 1986Group V

Asgrow 5474	10-11	Forrest	10-12
Asgrow 5980	10-13	Pioneer 5482	10-15
Coker 485	10-13	Pioneer 9571	10-12
Deltapine 105	10-18		

Group VI

Centennial	10-21	NK S69-54	10-24
Coker 686	10-19	NK S69-96	10-26
Davis	10-24	RA 606	10-24
Deltapine 506	10-22	Sampson	10-24
Deltapine 566	10-22	Young	10-24

Groups VII & VIII

Bragg	10-28	GaSoy 17	10-29
Braxton	10-28	Gordon	10-28
Coker 627	10-27	Johnston	10-29
Coker 237	10-23	Kirby	11-2
Coker 368	11-3	NK S72-60	10-27
Coker 6738	10-29	NK's McNair 700	10-22
Coker 6727	10-28	RA 702	10-29
Deltapine 417	11-1	Ransom	10-27
Deltapine 497	10-29	Starr	10-29
Foster	11-2	Wilstar 790	10-29

Table 49. Date 95% pods brown for the late-planted soybean test.

<u>Group V</u>			
Asgrow A5474	10-14	Hartz 5252	10-15
Asgrow A5980	10-15	Hartz 5370	10-15
Coker 485	10-16	Pioneer 5482	10-18
Deltapine 105	10-20	Pioneer 9571	10-15
Deltapine 675	10-15	Pioneer 9581	10-16
FFR 561	10-20	TN5-85	10-18
FFR 562	10-25	Toano	10-18
Forrest	10-15	V78-184	10-20
Hartz 5171	10-16	V81-1325	10-18

<u>Group VI</u>			
Asgrow A6785	10-26	Hartz 6383R	10-26
Centennial	10-20	N81-1121	10-20
Coker 680	10-21	NK S69-54	10-24
Coker 686	10-20	NK S69-96	10-30
Davis	10-24	Pioneer 9691	10-22
Deltapine 506	10-22	RA 606	10-24
Deltapine 566	10-22	Sampson	10-25
FFR 666	10-19	Sanalona	10-21
FFR 668	10-26	Spartan	10-26
GA 79-402	10-16	Young	10-25
Hartz 6130	10-16		

<u>Groups VII & VIII</u>			
Asgrow A7986	10-27	GaSoy 17	10-26
Bragg	10-25	Gordon	10-25
Braxton	10-25	Hartz 7110	10-23
Coker 237	10-25	Hartz 7126	10-25
Coker 368	10-27	Hartz 8112	10-27
Coker 627	10-22	Johnston	10-26
Coker 6727	10-24	Kirby	10-26
Coker 6738	10-26	NK McNair 700	10-23
Coker 82-606	10-23	NK S72-60	10-25
Deltapine 417	10-28	Pioneer 9791	10-27
Deltapine 497	10-25	RA 702	10-25
Deltapine X676	10-26	Ransom	10-25
FFR 771	10-25	Starr	10-25
Foster	10-27	Wilstar 790	10-25

Table 50. Oil percentage and seed size.

Variety or Line	Oil %	Seed Size Grams/100	Variety or Line	Oil %	Seed Size Grams/100
<u>Group V</u>					
Asgrow 5149	23.2	17.8	Hartz 5252	22.7	14.8
Asgrow 5474	22.5	15.5	Hartz 5370	22.6	14.7
Asgrow 5980	21.6	15.9	NK S59-19	22.9	14.0
Bay	23.2	16.6	Pioneer 5482	22.9	15.0
Bedford	22.6	14.0	Pioneer 9581	22.2	15.4
Coker 425	23.4	14.2	Pioneer 9571	22.4	16.3
Coker 485	22.2	15.7	Shenandoah	22.1	15.0
Deltapine 105	23.4	16.3	Shiloh	22.3	14.3
Deltapine 675	21.8	15.3	Toano	22.9	17.1
Essex	22.8	14.6	TN 5-85	23.0	15.1
FFR 561	21.6	16.9	*V78-184	24.0	14.7
FFR 562	22.2	12.8	*V81-1325	22.1	
Forrest	22.8	14.6	*V74-315	22.5	13.3
Hartz 5171	22.9	12.3	Wilstar 550	22.0	13.6
<u>Group VI</u>					
Asgrow 6785	21.4	12.6	Leflore	21.1	12.1
Centennial	21.7	12.5	NK S69-54	22.3	12.6
Coker 156	21.6	12.3	*N81-1121	22.4	12.9
Coker 686	22.7	13.2	*N82-1198	21.2	11.5
Davis	22.5	15.6	NK S69-96	21.9	11.8
Deltapine 506	21.0	11.3	Pioneer 9691	21.4	11.6
Deltapine 566	21.3	15.3	RA 606	21.5	11.6
FFR 666	22.1	14.0	RA 680	21.4	11.6
FFR 668	20.4	11.1	Sampson	22.7	12.5
*Funk's 3305	21.4	12.4	Sanalona	22.0	13.4
*GA 79-402	22.4	12.3	Spartan	21.5	11.9
Hartz 6383R	21.5	12.8	Young	21.6	13.3
Hartz 6130	22.3	12.6			
<u>Group VII</u>					
Asgrow 7986	21.1	12.2	GaSoy 17	21.2	13.1
Bragg	21.0	13.6	Gordon	21.4	11.1
Braxton	21.5	13.5	Hartz 7110	20.7	10.3
Coker 237	21.7	13.9	Hartz 7126	21.3	11.5
Coker 368	21.4	10.2	Hartz 8112	21.4	11.2
Coker 627	21.3	12.6	Johnston	21.0	11.9
Coker 6727	20.9	13.1	Kirby	21.8	12.7
Coker 6738	21.2	12.1	NK S72-60	22.3	11.5
*Coker 82-606	21.8	13.2	NK's McNair 700	22.3	13.4
Deltapine 417	20.7	12.3	*N82-1933	21.3	12.3
Deltapine 497	21.8	12.6	Pioneer 9791	21.0	12.3
*Deltapine X676	20.7	12.0	RA 702	20.9	12.1
FFR 771	21.9	12.9	Ransom	22.8	14.1
Foster	21.0	11.7	Starr	21.8	13.4
*Funk's 1409	21.1	13.0	Wilstar 790	20.0	11.6

*Experimental.