

Measured crop performance

Part I Corn Hybrids
Part II Grain Sorghum
Part III Soybeans

1975

JOHN C. RICE, Professor

In Charge of Variety Testing

E. L. JONES, Agricultural Research Supervisor

G. C. OLIVER, Agricultural Research Technician

A. R. ADAMS, Agricultural Research Technician

Department of Crop Science
North Carolina State University
Raleigh

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PERFORMANCE OF CORN HYBRIDS,
GRAIN SORGHUM AND SOYBEANS IN NORTH CAROLINA^{1/}

John C. Rice, E. L. Jones, G. C. Oliver and A. R. Adams

Field crops in North Carolina occupy a major position for the economic and agri-business health of the state. This publication presents data on corn, grain sorghum and soybeans. These crops are produced in many areas of the state and test locations are established in those areas producing the specific crop.

Part I is concerned with corn hybrids in all production areas of the state. Part II deals with grain sorghums, primarily in the Piedmont. Data from these tests would be applicable to most areas of production in North Carolina. Part III covers data on soybeans. This crop has been increasing in acreage and value each year.

Each part is complete in that it contains information on experimental procedure, locations of the tests, a discussion of the data and the data for 1975^{2/}, as well as summary table 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.

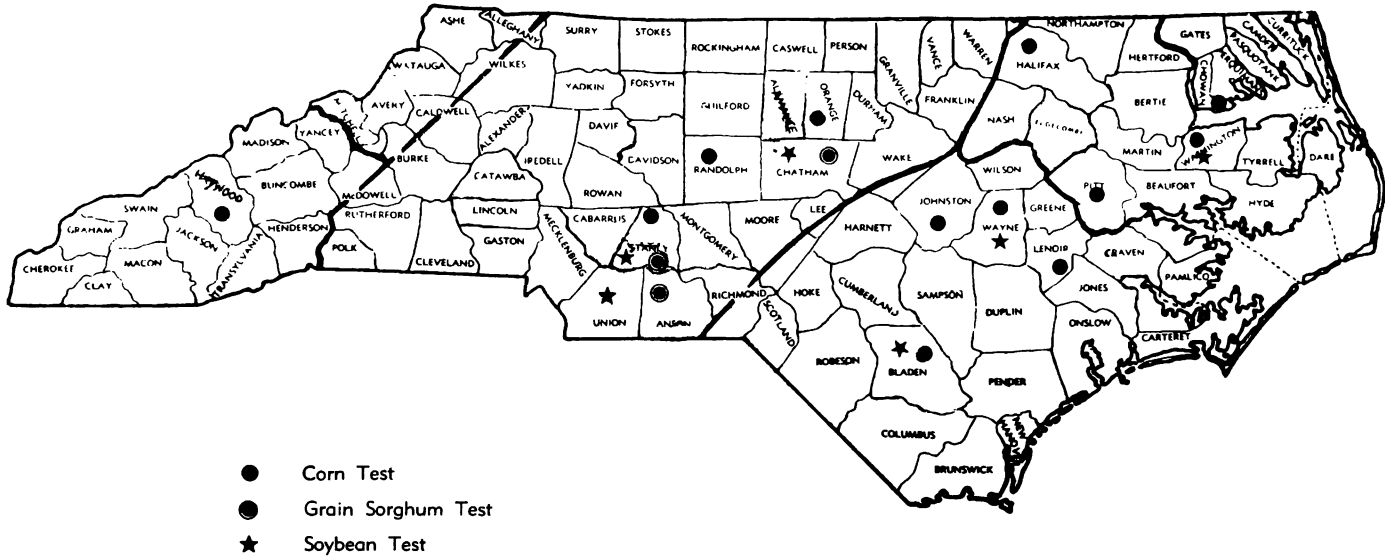
The agricultural workers in their respective areas contribute much to the success of these tests by aiding in the location of test sites, by holding field meetings and also by their utilization of the information obtained.

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

It is hoped that the organization of this bulletin will provide data to those interested in the various crops in a complete form which is readily available. The large number of hybrids and varieties available for planting within this state makes it mandatory that information be available to seedsmen, growers and agricultural workers so that easy and objective comparisons can be made. Entries from both public and private breeding programs are included and replicated experiments with the entries are located within production areas of the state.

1975

FIGURE 1 — LOCATION OF OFFICIAL VARIETY TEST



COOPERATORS 1975

CornArea II - Southern Mountains

Haywood County, Mountain Research Station, J. R. Edwards, Superintendent, Waynesville, N. C., County Extension Chairman, H. E. McCall and assistants cooperating.

Area III- Piedmont

Orange County, Marvin Phelps, Route 1, Box 356, Hillsborough, N. C., County Extension Chairman, Ebert L. Pierce and Agricultural Extension Agent, C. A. Green cooperating.

Randolph County, Charles Elliott, Route 2, Denton, N. C., County Extension Chairman, B. P. Jenkins, Jr. and Agricultural Extension Agent, Douglas Young cooperating.

Stanly County, D. G. Harwood, Route 1, New London, N. C., County Extension Chairman, Frank Simpson and Agricultural Extension Agent, Ray Kiser cooperating.

Area IV - Southern Coastal Plain

Lenoir County, Sandy Barnes, Route 1, Kinston, N. C., County Extension Chairman, W. S. Lamm and assistants cooperating.

Johnston County, Shelton Lee, Route 1, Four Oaks, N. C., County Extension Chairman, C. W. Tarlton and Agricultural Extension Agent, H. F. Palmer cooperating.

Bladen County, Wright Pharr, Route 1, Tar Heel, N. C., County Extension Chairman, L. R. Sasser and Agricultural Extension Agent, Harvey Morris cooperating.

Area V - Northern Coastal Plain

Halifax County, Jimmy Fleming, Route 3, Enfield, N. C., County Extension Chairman, C. D. Peedin and Agricultural Extension Agent, R. D. Phillips cooperating.

Pitt County, R. M. Dilda, Route 1, Fountain, N. C., County Extension Chairman, Edwin L. Yancey and Agricultural Extension Agent, Henry Riddick cooperating.

Area VI - Eastern Coastal Plain - Short Season

Chowan County, Robert L. Bunch, Route 2, Edenton, N. C., County Extension Chairman, R. M. Thompson and assistants cooperating.

Wayne County, George Gardner, Route 1, Pikeville, N. C., County Extension Chairman, T. S. Godwin and Agricultural Extension Agent, Frank Baker cooperating.

Washington County, John Smith, Superintendent, Tidewater Research Station, Plymouth, N. C., County Extension Chairman, Guy M. Whitford and assistants cooperating.

Grain SorghumAnson County

Bennett Martin, Route 2, Polkton, N. C., County Extension Chairman,
John R. Potter, Jr. and assistants cooperating.

Stanly County

Vernon Almond, Route 4, Albemarle, N. C., County Extension Chairman,
Frank Simpson and assistants cooperating.

Chatham County

Donnie Thomas, Route 2, Pittsboro, N. C., County Extension Chairman,
John Cooper and County Extension Agent, Carl Outz cooperating.

SoybeansChatham County

Donnie Thomas, Route 2, Pittsboro, N. C., County Extension Chairman,
John Cooper and assistants cooperating.

Stanly County

D. G. Harwood, Route 1, New London, N. C., County Extension Chairman,
Frank Simpson and Agricultural Extension Agent, Ray Kiser cooperating.

Union County

Melvin Outen, Route 9, Box 608, Monroe, N. C., County Extension Chairman,
J. E. Stacy and assistants cooperating.

Bladen County

E. G. Melvin, Route 1, Tar Heel, N. C., County Extension Chairman,
L. R. Sasser and Agricultural Extension Agent, Harvey Morris cooperating.

Washington County

J. W. Smith, Superintendent, Tidewater Research Station, Plymouth, N. C.,
County Extension Chairman, G. M. Whitford and assistants cooperating.

Wayne County

Randy Pate, Box 251A. Goldsboro, N. C., County Extension Chairman,
T. S. Godwin and Agricultural Extension Agent, W. T. Townsend cooperating.

Late Test After Small GrainWayne County

Wayland Price, Route 4, Mount Olive, N. C., County Extension Chairman,
T. S. Godwin and Agricultural Extension Agent, W. T. Townsend cooperating.

CORN HYBRIDS

The performance of different corn hybrids in different areas of the state depends on their adaptation to the environmental conditions within the area in which they are to be grown. The performance of varieties in five different areas of North Carolina is reported in this bulletin.

The data provide information on the performance of commercial and experimental hybrids grown in various geographic areas of the state. Information of this nature serves as a guide to corn breeders in the development of hybrids and also provides a guide to agricultural workers and growers in choosing hybrids to plant that will perform well in their respective area.

A top performing hybrid is one that will consistently give high returns to the grower. It must have a good yield and standability as well as other desirable characteristics including adaptation to mechanical harvesting. In order to properly evaluate a hybrid for a particular area, data from several locations over a period of years is desirable. However, it is only after a hybrid has been planted under farm conditions that it really receives its most thorough evaluation.

Results of the North Carolina Official Corn Trials for the 1975 season are presented in this report. Two-year summaries are also presented.

EXPERIMENTAL PROCEDURE

Commercial and experimental hybrids developed by public and private agencies are included in this program. One requirement for inclusion is quantitative data from experiments in which the proposed entry is compared with recognized hybrids. These data must reveal meritorious performance in order for a hybrid to qualify for the test.

ENTERING HYBRIDS

Any individual or firm may make application for having hybrids tested. A fee is charged on an entry per area 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.

In 1975 agencies or individuals entering hybrids in the Official Variety Tests were requested to designate the area of adaptation of the entry. Some entries were placed in more than one area.

Agencies sponsoring entries in the 1975 tests are shown in Table 1.

Table 1. Name and address of sponsoring agencies in the 1975 North Carolina Corn Performance Trials along with designation used to identify the hybrids in the trials.

Name	Address	Hybrid Designation
Asgrow Seed Company	Des Moines, Iowa	Asgrow
Coker's Pedigreed Seed Co.	Hartsville, S. C.	Coker
Columbiana Seed Company	Eldred, Illinois	Golden Harvest
DeKalb AgResearch, Inc.	Mt. Olive, N. C.	DeKalb
Edward J. Funk & Sons, Inc.	Kentland, Indiana	Super Crost
Excel Hybrid Seeds, Inc.	Plainview, Texas	Excel
F.C.X., Inc.	Raleigh, N. C.	FFR
Fred Gutwein & Sons	Francesville, Indiana	Gutwein
Funk's Seed International	Bloomington, Illinois	Funk's
Greenwood Seed Company	Thomasville, Georgia	Greenwood
McCurdy Seed Co., Inc.	Fremont, Iowa	McCurdy

Table 1. Continued.

Name	Address	Hybrid Designation
McNair Seed Co., Inc.	Laurinburg, N. C.	McNair
Muncy Chief Hybrids	Muncy, Pennsylvania	Muncy Chief
National Starch & Chem. Corp.	Watseka, Illinois	National Starch
N. C. Agric. Expt. Sta.	Raleigh, N. C.	N. C.
Northrup, King and Company	Richardson, Texas	Northrup King
P-A-G Seeds	Minneapolis, Minnesota	P-A-G
Pioneer Hi-Bred, Inc.	Tipton, Indiana	Pioneer Brand
Speight Seed Farms	Winterville, N. C.	Speight
Taylor Evans Seed Company	Tulia, Texas	T-E
Todd Hybrid Sales, Inc.	Burlington, Indiana	Todd
Wagwood Farms, Inc.	Gibsonville, N. C.	Wagwood
Watson Seed Farms	Rocky Mount, N. C.	Watson

Field-Plot Technique

The state is divided into five geographical areas according to soil type, maturity zone and climatic conditions. The various areas and cooperators are shown in Figure 1. Where feasible, three or more locations with four replications were used in each area. In the Mountain Area, Area II, where the acreage of corn is less, one location with six replications was used. Three locations, with four replications each, were used in Areas III, IV and VI. Area V had two locations with four replications.

The practice in the Northern Coastal Plain Area, where short season corns are grown on many farms, is toward planting high populations and fertilizing heavy. The 1975 tests were planted 7 inches in the drill.

Soil tests were made and fertilization was applied in accordance with recommendations. At topdressing time 220 pounds of nitrogen was applied as nitrogen solution on all of the short season tests in Area VI.

In field design a randomized complete block was used. In all areas the tests were planted according to recommended planting dates. Data were analyzed by location and combined over locations within an area.

A cone hopper was mounted on a John Deere Planter and the tests were mechanically planted. In 1975 all tests were planted to one and one-half times the recommended populations. Thinning was to: 18,200 (Coastal Plain and Mountain Areas), 23,500 (Short Season) and 16,500 for the Piedmont Area. Row width of the various tests was 38 inches. The plots were two rows wide and 15 feet long with recommended number of kernels planted per row. The alley width was 6 feet which was required for mechanical planting and harvesting.

The fertilizer was broadcast before planting by the cooperators and the plots were topdressed with adequate nitrogen to give a medium to high fertility level. AAtrex was the herbicide used on most tests at planting. At layby, 2, 4-D and Lorox or AAtrex were applied to control late grass and broadleaf weeds using nitrogen solution^{1/} as the carrier. Excellent weed control was obtained in most tests. Cultural practices for each of the tests are shown in Table 2. Planting, collecting and harvesting data were directly supervised by personnel of the North Carolina Agricultural Experiment Station.

A two-row picker-sheller was slightly modified for harvesting individual plots. Grain from individual plots was caught as it came from the elevator

^{1/}Special acknowledgment is due Kaiser Agricultural Chemicals for furnishing the nitrogen for these tests.

and weighed. The combine was stopped at the end of each plot for a short interval of time in order for the machine to clean out between plots prior to weighing the corn from the plot. The machine appeared to give very satisfactory results. A sample of corn was taken from each plot for moisture determination. A picker-sheller was used to more nearly simulate the conditions under which these corns would be harvested on farms. The only corn harvested was that which came through the picker-sheller. If the machine failed to pick up a stalk due to lodging, this corn was not harvested. In 1975 the test in Area II was harvested by combine.

Seasonal Conditions

Based on conditions in North Carolina as of October 1, 1975, the corn production total for this state is expected to be 103,000,000 bushels. This estimate would be 11 percent below last year's record production of 116 million bushels. A dry June, a wet July, and a dry August was the rainfall pattern for the 1975 growing season. Some isolated areas received more normal rainfall but extreme dry weather reduced the total yield in the state. An average yield of 67 bushels per acre is indicated. This would be seven bushels per acre less than last year's yield and fifteen bushels below the record high yield made in 1973.

The 1975 corn crop is expected to be harvested from 1,540,000 acres. This is two percent fewer acres than in 1974.

The nation's production of corn is forecast at a record 5,734 million bushels, which is 23 percent above 1974 production and two percent above 1973, the previous record.

The national average yield per acre is forecast at 86.2 bushels per acre as of October 1. This estimate will be 14.9 bushels above last year.

The majority of the entries in the 1975 corn test were from seed developed with normal cytoplasm. The cytoplasm of the corn plant appears to play a major role in determining its reaction to the disease (Helminthosporium maydis). Corn producers throughout the corn producing area and especially the Southeast are to be commended for developing a rapid replacement for the Texas source of male sterile cytoplasm. Many growers have returned to manually removing tassels from production fields.

Data

Data were collected on each plot location on yield, stand, moisture, lodging, ear height and quality. Statistical analyses were made on each of the above listed characters for individual locations and combined over locations within an area. The C.V. and L.S.D.'s are listed at the bottom of the various columns of the 1975 tables. Variety x locations mean squares were used to compute the L.S.D.'s. Comparisons of hybrids should be made only within areas and not between areas since soil and climatic conditions differ so greatly.

The percentage data presented in this report were not transformed and the L.S.D. and C. V. values listed are for the untransformed data. This year C.V.'s are not listed for percent lodging and quality.

Yield

Weight of shelled corn was obtained by harvesting and weighing each plot and each entry at each location. All plot yields were adjusted to 15.5 percent moisture.

Stand

All plots were thinned to recommended stands for area of production.

Moisture at Harvest

Moisture content of grain at harvest is an index of maturity. Moisture percentage was determined from samples obtained from each plot at each location. Samples were obtained by taking a sample from each plot immediately after the grain was weighed. The samples were placed in waterproof plastic coated paper bags and analyzed shortly thereafter on an official moisture meter.

Lodging

Lodging is a term used to describe stalks that are broken, leaning or fallen to the ground. All plants broken below the ear or leaning more than 45 degrees are considered lodged. Data were taken on each plot and a lodging percent calculated.

Ear Height

Ear height was determined by measuring the distance from the ground to the node where the ear is attached to the stalk.

Quality

Quality readings are based primarily on ear rot damage. The following scale was used to determine rating:

Rating	% Damage per Plot		
1	0	-	10
2	11	-	20
3	21	-	30
4	31	-	40
5	41	-	50

Diseases

The reaction of hybrids to the major corn diseases (including the common leaf blights) is evaluated yearly. It is difficult to make adequate comparisons of hybrids over a period of successive years due to the fact that all hybrids are severely damaged during years of severe disease development. Preliminary observations indicate little difference in reaction of hybrids to the fact that all hybrids are severely damaged during years of severe disease development. Preliminary observations indicate little difference in reaction of hybrids to the common leaf blight present in the Coastal Plain Area.

All locations were available for identification of corn diseases. Plant Pathology personnel used the tests for early warning if any specific disease were present in a certain area.

RESULTS

Data are presented by areas for three-year, two-year and one-year performance. Hybrids are divided into four groups in the tables, commercial yellow and white and experimental yellow and white hybrids.

There are numerous corn hybrids available to farmers for planting. These hybrids differ in yield, maturity, lodging, disease and insect resistance, grain quality and other factors. Hybrids that are outstanding in one or more characteristics may be inferior in others and should therefore be selected on the basis of overall performance.

Hybrids tested more than one year have a more accurate estimate of their general performance since they have been tested under more diverse environments. Growers should select a top performing hybrid for planting. A top performer is not necessarily the highest yielder, but it should have a high yield, mature within the desired time, stand upright at harvest, and also be reasonably good

in other agronomic characteristics. All hybrids yielding above the mean of the test would be considered reasonably good performers, and others may have specific agronomic characteristics which should be considered.

Growing conditions in all corn producing areas of the state were average for moisture. Acceptable yields were obtained in the Mountain Test and the mean of the three Piedmont Tests was 136 bushels per acre compared with 122 bushels per acre in 1974. Yields in the Coastal Plain were up to 153 bushels per acre in the Short Season Test in Area VI. The mean for all three areas in the Coastal Plain was 115 bushels per acre compared with 146 in 1974.

Short season corn is early maturing and is usually sufficiently dry to be harvested and marketed in late August and early September. This type supplies an early (August and September) market demand, and the production of it has been limited primarily to the northeastern counties. One short season location was planted in Wayne County and excellent weather conditions were experienced. The short season corn is primarily grown for early market. The keeping quality of some of the short season hybrids can be inferior to full season entries but in 1975 the moisture of the Area VI Tests was 15.89 as an average.

For general farm storing and feeding, full season corn is more likely to preserve its quality and usually is damaged less by insects. Full season corn requires from two to three weeks longer than short season hybrids to reach maturity and to become sufficiently dry to harvest and store. Usually, full season corn is dry enough to be harvested and stored in late September. Some short season hybrids have equal moisture characteristics as compared with full season entries.

Table 2. Cultural practices used on the corn test - 1975.

Area and Cooperator	Fertilizer lbs/A and Grade	Herbicide ^{1/} Preemergence	Topdressing lbs/A of N and Source	Spacing Inches	Date of Planting	Date of Harvest
<u>Area II</u>						
<u>Haywood County</u> Lower Mt. Res. Station J. R. Edwards Superintendent	400 5-10-10 Broadcast 200 Murate of Potash	AAtrex + Sutan	175 Ammonium Nitrate	38"	May 22	November 20
<u>Area III</u>						
<u>D. G. Harwood</u> <u>Stanly County</u>	400 10-10-10 Broadcast	AAtrex	175 Nitrogen Solution	38"	April 7	October 13
<u>Marvin Phelps</u> <u>Orange County</u>	450 10-20-20 Broadcast	AAtrex	175 Nitrogen Solution	38"	April 17	October 14
<u>Charles Elliott</u> <u>Randolph County</u>	300 10-20-20 Broadcast 300 0-20-20	AAtrex	100 Nitrogen Solution	38"	April 22	October 14
<u>Area IV</u>						
<u>Sandy Barnes</u> Superintendent Lower Coastal Pl. Res. Sta. <u>Lenoir County</u>	300 5-15-30 Broadcast	AAtrex + Sutane	175 Nitrogen Solution	38"	April 8	October 1
<u>Shelton Lee</u> <u>Johnston County</u>	500 3-9-18 Broadcast	AAtrex	175 Nitrogen Solution	38"	April 2	September 25
<u>Wright Pharr</u> <u>Bladen County</u>	325 4-12-24 Broadcast	AAtrex	100 Nitrogen Solution	38"	April 2	Discarded

Table 2. (Continued)

Area and Cooperator	Fertilizer lbs/A and Grade	Herbicide ^{1/} Preemergence	Topdressing lbs/A of N and Source	Spacing Inches	Date of Planting	Date of Harvest
<u>Area V</u>						
R. M. Dilda <u>Pitt County</u>	500 3-9-18 Broadcast	AAtrex	175 Nitrogen Solution	38"	April 8	October 8
Jimmy Fleming Halifax County	400 3-9-18 Broadcast	AAtrex	175 Nitrogen Solution	38"	April 14	Discarded
<u>Area VI</u>						
John Smith Superintendent Tidewater Research Station <u>Washington County</u>	400 10-20-20 Broadcast	AAtrex + Lasso	150 Anhydrous Ammonia	38"	April 23	October 7
Robert L. Bunch <u>Chowan County</u>	500 5-15-30 Broadcast	AAtrex + Princep	220 Nitrogen Solution	38"	April 9	Discarded
George Gardner <u>Wayne County</u>	700 5-10-10 Broadcast	AAtrex	220 Nitrogen Solution	38"	April 8	October 6

^{1/}When needed, recommended amounts of Weedone 638, Lorox or AAtrex were used to control grass and weeds at layby. Herbicides were used in accord with crop and problems.

Table 3. Comparison of hybrids for certain characteristics

Southern Mountains - Area II

Three Year Average - 1973, 1974, 1975

Average of 3 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Coker 16	164	20.00	8	46	2.7
Pioneer Brand 3147	163	25.20	19	54	3.7
McCurdy MSX88	160	17.10	14	48	2.7
McCurdy 67-14	159	26.99	20	49	2.9
Watson 417	157	23.30	12	46	2.8
Pioneer Brand 3369A	155	18.34	9	46	2.3
Pioneer Brand 3161	153	21.27	16	47	2.6
Muncy Chief SX662	152	19.25	9	44	3.0
<u>Mean of Test</u>	<u>152</u>	<u>20.98</u>	<u>16</u>	<u>48</u>	<u>2.8</u>
Funk's G-4646	149	18.54	8	44	2.4
Watson 4376	149	23.14	12	49	2.7
Funk's G-4737	144	20.45	23	43	3.0
Funk's G-4628	141	21.10	15	48	2.9

Table 4. Comparison of hybrids for certain characteristics

Piedmont - Area III

Three Year Average - 1973, 1974, 1975

Average of 8 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3147	151	16.86	3	46	3.0
P-A-G SX605	141	17.18	1	53	2.2
McCurdy 67-14	134	18.37	3	43	2.3
Pioneer Brand 3161	130	15.97	2	42	1.8
Coker 56	129	16.71	3	45	2.2
Watson 4376	129	17.30	5	42	2.6
Watson 417	128	17.37	3	39	2.3
P-A-G 751	128	16.32	8	55	2.0
Pioneer Brand 3369A	127	15.79	1	40	2.6
Watson 431	126	17.67	5	42	2.7
Funk's G-4762	124	17.02	2	41	1.9
<u>Mean of Test</u>	<u>124</u>	<u>16.74</u>	<u>4</u>	<u>44</u>	<u>2.5</u>
Funk's G-4864	123	16.91	1	51	2.1
DeKalb XL80	122	16.80	3	41	2.0
Coker 16	120	15.57	1	38	2.7
Muncy Chief SX777	111	15.68	7	39	2.8
White Entries					
Pioneer Brand 511A	143	16.82	8	48	2.4

Table 5. Comparison of hybrids for certain characteristics

Southern Coastal Plain - Area IV

Three Year Average - 1973, 1974, 1975

Average of 8 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
P-A-G 751	158	20.03	19	53	2.0
Pioneer Brand 3147	156	18.41	13	43	2.8
Pioneer Brand 3030	147	20.74	4	47	2.4
McCurdy 72-22	145	19.30	9	55	1.7
Coker 56	142	19.59	11	43	1.9
Coker 54	142	19.41	6	45	1.8
McNair X300	141	19.10	6	40	2.7
McCurdy 67-14	141	20.43	6	42	2.4
Watson 417	139	19.04	6	38	2.4
Speight D-31	137	18.39	4	38	2.1
Watson 431	137	19.06	6	40	2.4
<u>Mean of Test</u>	<u>137</u>	<u>19.04</u>	<u>8</u>	<u>43</u>	<u>2.4</u>
McNair S338	136	18.42	14	40	2.5
DeKalb XL80	130	17.91	5	39	2.5
Funk's G-4864	130	18.30	3	45	2.0
Funk's G-4757	130	17.98	6	39	2.6
Speight D-14	128	19.24	12	45	2.2
Funk's G-5757	121	18.31	6	39	2.4
White Entries					
Pioneer Brand 511A	151	18.40	16	45	2.5
Experimental Hybrids Yellow Entries					
McNair 73011	179	20.92	6	55	1.7
McNair 73009	165	21.83	9	54	1.9

Table 6. Comparison of hybrids for certain characteristics

Northern Coastal Plain - Area V

Three Year Average - 1973, 1974, 1975

Average of 5 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3147	136	18.49	9	41	2.6
Watson 417	127	18.32	4	36	2.2
Pioneer Brand 3369A	127	16.30	3	35	2.6
Watson 4376	126	18.49	5	36	2.5
McNair X300	124	18.67	2	38	2.9
DeKalb XL80	123	17.20	6	37	2.1
Pioneer Brand 3161	120	16.93	5	38	1.8
Watson 431	119	18.65	8	37	2.3
Funk's G-5757	119	17.88	6	36	2.3
<u>Mean of Test</u>	<u>119</u>	<u>18.04</u>	<u>7</u>	<u>39</u>	<u>2.4</u>
Todd M90	117	16.81	9	37	2.0
McNair S338	116	17.85	14	37	2.4
Funk's G-4757	112	17.55	7	38	2.7
White Entries					
Pioneer Brand 511A	120	18.13	14	43	2.4

Table 7. Comparison of hybrids for certain characteristics
 Eastern Coastal Plain - Area VI
 Three Year Average - 1973, 1974, 1975
 Average of 7 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3369A	163	16.28	3	40	2.1
McNair X210	156	17.49	6	39	2.1
Watson 417	156	18.12	4	40	2.2
Pioneer Brand 3368	156	16.29	3	38	2.4
Coker 16	155	16.50	3	39	2.3
Watson 416H	155	17.28	6	39	2.3
Funk's G-4646	151	16.47	5	37	2.4
<u>Mean of Test</u>	<u>148</u>	<u>16.90</u>	<u>6</u>	<u>40</u>	<u>2.3</u>
Muncy Chief SX878	143	16.56	8	38	2.0
Muncy Chief SX777	141	16.81	9	39	2.3
Muncy Chief SX662	141	16.54	5	35	2.5
Funk's G-4445	134	15.55	7	34	2.0

Table 8. Comparison of hybrids for certain characteristics

Southern Mountains - Area II

Two Year Average - 1974, 1975

Average of 2 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
McCurdy MSX87	174	19.88	8	46	3.0
T-E 6968	166	19.16	10	48	2.6
Coker 16	160	21.08	8	48	2.6
Funk's G-4507	160	17.04	10	54	2.2
Pioneer Brand 3369A	157	19.14	11	47	2.5
Pioneer Brand 3147	154	27.10	19	53	3.8
McCurdy MSX88	152	17.48	18	48	3.1
Muncy Chief SX662	152	19.92	10	46	3.6
McCurdy 67-14	152	27.96	20	49	3.2
Pioneer Brand 3161	151	21.89	15	46	2.8
Watson 417	151	24.74	12	48	3.1
Funk's G-4810	150	24.84	16	53	3.2
Funk's G-4646	149	19.34	7	46	2.6
<u>Mean of Test</u>	<u>148</u>	<u>22.17</u>	<u>16</u>	<u>50</u>	<u>3.1</u>
Watson 431	147	26.84	18	49	3.7
Watson 421	147	25.67	20	47	2.4
Watson 4376	147	25.48	15	50	3.1
McCurdy 73-8	142	19.46	18	47	2.6
T-E 6980	141	20.38	9	43	3.1
Funk's G-4737	141	21.71	29	44	3.1
Funk's G-4628	140	22.51	18	49	3.2
T-E 6969	137	24.07	29	52	3.2
Pioneer Brand 3535	133	17.82	4	50	2.2

Table 9. Comparison of hybrids for certain characteristics

Piedmont - Area III

Two Year Average - 1974, 1975

Average of 5 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3147	158	16.16	4	45	3.4
Watson 453	148	17.18	6	41	2.6
P-A-G SX605	146	16.52	0	51	2.4
Wagwood 804	141	18.68	6	50	2.4
McCurdy 67-14	140	17.89	2	42	2.6
Coker 56	139	16.01	4	44	2.4
Pioneer Brand 3145	138	16.70	1	46	3.2
Pioneer Brand 3369A	137	15.14	1	40	2.8
Watson 4376	136	16.50	4	40	2.9
Funk's G-4810	136	16.32	2	44	2.4
P-A-G 751	134	16.76	10	54	2.1
Watson 421	133	17.34	2	39	2.8
Watson 417	132	16.78	3	39	2.5
Pioneer Brand 3161	132	15.55	3	41	1.9
Watson 431	130	16.92	6	41	2.9
Funk's G-4762	130	16.32	2	40	2.0
<u>Mean of Test</u>	<u>129</u>	<u>16.00</u>	<u>5</u>	<u>42</u>	<u>2.8</u>
Golden Harvest H2750	128	16.50	8	44	3.2
Golden Harvest H2775	128	16.31	5	41	2.7
Funk's G-4864	126	16.27	1	48	2.4
DeKalb XL80	123	16.02	4	40	2.0
Coker 16	122	14.93	2	38	3.0
Golden Harvest H2740	118	15.48	3	44	3.1
Golden Harvest H2820	112	17.25	3	40	3.0
Muncy Chief SX777	112	14.84	10	39	2.9
White Entries					
Pioneer Brand 511A	144	16.30	10	46	2.6

Table 10. Comparison of hybrids for certain characteristics

Southern Coastal Plain - Area IV

Two Year Average - 1974, 1975

Average of 5 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Coker 77	168	19.53	4	48	2.3
P-A-G 751	158	18.75	20	50	2.0
Pioneer Brand 3147	154	17.85	14	42	2.9
Pioneer Brand 3030	146	19.82	4	46	2.6
McCurdy 72-22	145	18.12	10	52	1.8
Coker 56	144	18.56	12	42	2.0
McCurdy 67-14	143	19.59	6	41	2.6
Watson 453	142	18.52	6	36	2.5
McNair X300	140	18.43	6	40	2.9
Golden Harvest H2775	140	17.94	4	40	3.0
P-A-G SX605	138	18.49	3	48	2.6
Coker 54	138	18.71	6	44	1.9
Watson 417	136	18.51	6	38	2.5
Speight D-31	135	17.86	5	38	2.2
Pioneer Brand 3145	134	18.48	3	40	3.0
Watson 421	134	18.98	9	36	2.7
Watson 431	134	18.53	6	38	2.4
Funk's G-4810	132	18.66	3	42	2.8
<u>Mean of Test</u>	<u>132</u>	<u>18.05</u>	<u>8</u>	<u>40</u>	<u>2.6</u>
Gutwein 99	130	19.88	6	38	2.6
McNair S338	130	17.89	15	39	2.5
Golden Harvest H2750	128	17.73	14	41	2.5
Funk's G-4864	128	17.52	4	44	2.0
Funk's G-4757	127	17.48	6	38	2.6
DeKalb XL80	124	17.36	6	38	2.6
Muncy Chief SX878	122	16.92	10	37	2.2
NK PX76	121	16.96	2	34	3.2
Super Crost 7772	120	16.57	6	34	2.6
Funk's G-5757	120	17.88	8	40	2.6
Speight D-14	118	18.39	11	44	2.4
Golden Harvest H2820	116	18.90	4	39	3.0
Muncy Chief SX777	112	16.80	7	36	2.9
Muncy Chief SX662	110	16.94	6	36	3.5
White Entries					
Pioneer Brand 511A	144	17.72	16	44	2.6
Experimental Hybrids Yellow Entries					
McNair 73011	176	19.82	6	52	1.6
McNair 73009	170	20.54	8	50	2.0

Table 11. Comparison of hybrids for certain characteristics

Northern Coastal Plain - Area V

Two Year Average - 1974, 1975

Average of 3 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3147	134	17.51	12	40	2.9
Pioneer Brand 3369A	125	15.74	2	37	2.9
Watson 453	124	18.02	13	38	2.8
Funk's G-4810	124	17.25	3	41	2.9
McNair X300	122	17.52	2	38	3.3
McCurdy 73-74	122	18.26	11	40	2.4
Watson 417	122	17.92	6	36	2.4
Watson 4376	122	17.56	6	36	2.6
Golden Harvest H2775	120	17.59	6	37	3.0
Pioneer Brand 3161	119	16.03	7	37	2.0
Funk's G-5757	116	17.34	8	38	2.4
Pioneer Brand 3145	116	17.61	4	42	2.9
<u>Mean of Test</u>	<u>116</u>	<u>17.09</u>	<u>8</u>	<u>38</u>	<u>2.6</u>
Watson 431	115	17.80	12	37	2.6
Watson 421	115	18.48	8	36	3.0
Todd M90	114	16.32	12	37	2.0
Todd M98	114	17.77	2	38	3.0
Speight D-31	114	17.46	6	37	2.3
DeKalb XL80	112	16.75	8	36	2.2
McNair S338	112	16.99	20	36	2.6
Gutwein 890	110	16.77	8	36	3.4
McCurdy 72-44	110	16.54	13	40	2.5
Asgrow RX114	109	16.45	11	36	2.6
Speight D-14	108	17.98	8	38	2.4
Funk's G-4757	106	16.80	9	39	3.0
Todd M88	106	15.64	11	35	2.4
Golden Harvest H2750	104	17.10	14	38	2.8
White Entries					
Golden Harvest H2660	116	16.66	8	42	2.9
Pioneer Brand 511A	114	17.28	18	39	2.4

Table 12. Comparison of hybrids for certain characteristics

Eastern Coastal Plain - Area VI

Two Year Average - 1974, 1975

Average of 4 Locations

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3369A	156	16.54	2	39	2.4
T-E 6968	156	16.76	3	37	2.6
Funk's G-4507	155	16.13	4	42	3.0
Gutwein 890	154	17.40	12	40	2.8
McNair X170	153	16.66	2	38	2.1
Golden Harvest H2500	152	16.10	2	42	2.7
McNair X210	152	17.31	6	38	2.4
Watson 417	152	18.20	4	40	2.3
DeKalb XL78	150	17.26	3	39	2.2
Pioneer Brand 3368	150	16.56	4	38	2.7
Funk's G-4646	147	16.82	6	38	2.4
Coker 16	146	16.74	4	39	2.5
DeKalb XL72B	146	16.53	2	36	2.0
McNair X194	146	16.02	6	42	3.0
Watson 416H	146	17.56	7	39	2.4
Gutwein 92	144	17.09	8	42	2.6
<u>Mean of Test</u>	<u>144</u>	<u>16.86</u>	<u>6</u>	<u>40</u>	<u>2.4</u>
Asgrow RX114	143	17.06	8	42	2.1
Todd M88	142	16.53	5	34	2.2
P-A-G SX520	142	15.91	8	42	2.4
N-K PX76	141	16.68	4	40	2.4
Golden Harvest H2655	140	16.57	2	36	2.6
Muncy Chief SX878	140	16.88	12	38	2.1
Funk's G-4737	139	17.12	18	34	2.2
Muncy Chief SX662	138	16.94	6	35	2.6
P-A-G SX98	137	16.90	20	34	2.8
T-E 6980	134	17.06	18	40	2.7
Pioneer Brand 3535	132	15.92	3	40	2.2
Funk's G-4445	132	15.94	9	34	2.2
T-E 6969	130	17.46	8	38	2.4
Muncy Chief SX777	130	16.68	10	40	2.5
Experimental Hybrids Yellow Entries					
FFR 2063	120	17.38	7	32	2.4

Table 13. Comparison of hybrids for certain characteristics

Southern Mountains - Area II

Haywood County - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3147	193	24.27	11	53	2.7
McCurdy MSX87	182	21.62	7	43	2.2
Pioneer Brand 3369A	182	20.95	8	47	2.3
DeKalb XL394	182	26.91	18	59	2.5
Watson 4376	181	23.22	16	46	2.5
Funk's G-4810	180	23.91	10	51	2.5
McCurdy 73-98	179	24.20	16	48	2.5
Coker 16	177	21.93	6	47	2.0
McCurdy MSX68	177	20.70	7	47	2.2
Watson 421	175	24.47	13	49	2.7
Funk's G-4507	175	18.98	8	52	2.0
Pioneer Brand 3145	173	23.77	11	50	2.8
Pioneer Brand 3161	173	22.38	15	46	2.0
Asgrow RX90	172	18.94	8	51	2.3
Watson 431	170	23.96	16	45	2.7
Watson 417	170	23.73	12	41	2.5
Pioneer Brand 3368A	168	22.43	7	45	2.7
<u>Mean of Test</u>	<u>168</u>	<u>22.23</u>	<u>11</u>	<u>48</u>	<u>2.4</u>
T-E 6968	167	21.60	11	44	2.0
McCurdy 67-14	167	25.93	17	48	2.3
McCurdy MSX88	167	19.88	16	48	2.5
Funk's G-4646	166	21.10	5	43	2.2
Excel RA121	166	21.05	5	46	2.7
Funk's G-4611	165	20.40	13	52	3.0

Table 13. Continued. Comparison of hybrids for certain characteristics

Southern Mountains - Area II

Haywood County - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Excel RA116	163	20.13	4	53	2.5
Funk's G-4628	161	23.23	14	47	2.5
McCurdy 73-8	157	20.58	16	51	2.5
McCurdy MSP736	155	20.51	8	51	2.7
T-E 6980	155	22.30	5	41	2.5
Muncy Chief SX662	154	21.89	7	45	2.8
Asgrow RX87	152	20.92	5	42	2.2
Pioneer Brand 3535	152	19.34	3	48	2.0
McCurdy MSX70	152	21.55	15	47	2.3
Funk's G-4737	145	23.35	10	40	2.2
T-E 6969	143	23.37	19	48	2.8
T-E 6965	136	22.72	7	45	2.5
Pioneer Brand 3177	135	21.63	17	49	2.8
Experimental Hybrids Yellow Entries					
Coker 4034	190	21.77	14	48	2.0
Coker 4018	183	22.50	7	53	2.0
Coker 5038	182	23.40	9	49	2.2
Funk's 27466	178	24.91	13	45	3.0
Coker 4022	176	20.96	16	49	2.7
NC 5016	170	22.32	12	51	2.3
L.S.D. (.05)	30	1.62	8	6	N.S.
(.01)	23	2.14	11	8	.9
C.V. (%)	12	6		7	

Table 14. Comparison of hybrids for certain characteristics
 Piedmont - Area III
 Stanly, Randolph and Orange Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Commercial Hybrids Yellow Entries					
DeKalb XL394	171	16.73	0	48	2.6
Pioneer Brand 3147	169	16.52	1	44	3.3
Coker 56	157	16.02	2	45	2.2
DeKalb XL94	156	16.43	0	42	2.1
P-A-G 751	152	17.19	11	53	2.1
Watson 453	152	17.33	1	40	2.4
P-A-G SX605	148	16.63	0	47	1.8
McCurdy 67-14	143	18.16	1	39	2.5
Watson 4376	142	16.73	1	38	2.7
Watson 421	142	17.49	1	38	2.9
Speight D-31	141	16.56	0	39	2.3
Pioneer Brand 3368A	139	15.67	1	40	2.8
Wagwood 804	138	18.26	6	48	2.3
Asgrow RX114	138	16.10	3	41	2.3
Pioneer Brand 3369A	137	15.88	0	39	2.8
Excel RX125	136	15.55	0	39	2.3
<u>Mean of Test</u>	<u>136</u>	<u>16.37</u>	<u>2</u>	<u>41</u>	<u>2.6</u>
Pioneer Brand 3161	135	15.68	0	40	1.9
Golden Harvest H2775	134	16.50	1	41	2.8
Funk's G-4762	134	16.48	0	37	1.9
Pioneer Brand 3145	133	16.91	1	42	3.0
Watson 417	133	17.16	1	38	2.9
Golden Harvest H2750	131	16.75	1	40	2.9
Coker 16	131	15.77	0	36	3.0
Watson 431	130	17.28	2	39	2.5
DeKalb XL80	126	16.98	1	39	2.0
Funk's G-4810	126	16.83	1	41	2.5
Asgrow RX90	124	14.57	3	42	2.8

Table 14. (Continued) Comparison of hybrids for certain characteristics
 Piedmont - Area III
 Stanly, Randolph and Orange Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
DeKalb XL78	124	15.27	1	37	2.8
Funk's G-4611	121	14.83	3	40	3.5
Golden Harvest H2740	119	16.06	1	42	2.8
Funk's G-4646	119	15.69	1	38	3.3
DeKalb XL72B	118	15.50	0	35	2.6
Pioneer Brand 3150	115	16.08	0	35	2.1
Funk's G-4864	114	16.59	1	45	2.4
Funk's G-4628	114	15.17	3	37	3.3
Golden Harvest H2820	109	17.37	2	39	2.5
Muncy Chief SX777	108	15.50	3	37	2.7
Pioneer Brand 3177	103	15.84	5	38	3.0
Experimental Hybrids					
Yellow Entries					
McNair 73009	208	17.27	4	51	2.1
NC 3752	172	17.97	2	49	2.3
Coker 4034	160	16.03	1	40	2.1
NC 3790	160	17.61	4	49	2.3
Coker 5038	152	16.59	3	41	2.3
Funk's 27466	146	17.27	2	40	3.8
Coker 4022	145	15.89	0	40	2.3
Coker 4018	133	15.92	2	42	2.3
FFR 2283	128	15.66	1	37	2.9
FFR 2256	113	15.33	1	38	2.3
FFR 2354	106	15.24	1	37	2.8
FFR 2724	104	15.71	2	40	2.8
White Entries					
McNair X233	153	16.20	1	47	2.7
Pioneer Brand 511A	151	16.26	8	43	2.6
L.S.D. (.05)	15	.57	3	4	.5
(.01)	20	.76	4	5	.6
C.V. (%)	11	4		8	

Table 15. Comparison of hybrids for certain characteristics
 Southern Coastal Plain - Area IV
 Lenoir and Johnston Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Commercial Hybrids Yellow Entries					
Pioneer Brand 3147	142	19.28	11	35	2.9
Coker 77	138	20.82	6	38	2.4
P-A-G 751	136	20.21	14	43	1.9
McCurdy 72-22	132	19.23	13	44	1.9
NK PX 95	130	19.55	3	40	2.6
Coker 56	128	19.97	8	37	1.9
Pioneer Brand 3030	126	21.76	5	40	2.8
McNair X300	126	19.64	3	36	3.0
DeKalb XL394	125	20.51	2	38	2.0
Greenwood 747	125	20.21	3	38	2.1
P-A-G SX605	124	20.10	3	42	2.5
Watson 453	123	19.75	3	31	2.5
McCurdy 73-74	122	19.75	8	38	2.3
Golden Harvest H2775	122	18.88	2	35	3.3
McCurdy 67-14	122	20.78	5	36	2.4
McCurdy 73-49	120	18.86	13	40	1.5
Watson 417	118	19.94	5	35	2.8
Coker 54	118	19.77	6	36	2.0
Watson 421	117	20.25	7	32	2.5
DeKalb XL80A	117	20.29	2	35	3.5
Speight D-31	116	19.22	3	32	2.4
McCurdy 73-51	115	20.35	22	43	2.3
Greenwood 801	115	19.28	10	36	2.1
<u>Mean of Test</u>	<u>115</u>	<u>19.40</u>	<u>6</u>	<u>35</u>	<u>2.6</u>
Golden Harvest H2750	114	18.67	11	35	2.5
Funk's G-4810	112	20.02	3	39	2.8
Watson 431	112	19.55	5	31	2.5
DeKalb XL80	111	18.56	5	34	2.8
Funk's G-4757	111	18.58	3	34	2.5
Gutwein 99	110	20.64	4	31	2.6
Pioneer Brand 3369A	110	17.69	4	34	3.5
McNair S338	109	19.07	11	34	2.1
Pioneer Brand 3145	109	19.81	4	35	3.1
Funk's G-4864	108	18.82	4	36	2.3
DeKalb XL78	108	18.90	3	34	2.9

Table 15. (Continued) Comparison of hybrids for certain characteristics
 Southern Coastal Plain - Area IV
 Lenoir and Johnston Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Pioneer Brand 3150	107	19.75	3	32	2.0
NK PX 91	107	17.94	1	35	2.5
Funk's G-4611	105	17.61	2	35	3.3
Funk's G-5757	105	19.18	6	34	2.5
NK PX 76	104	18.23	2	34	3.1
Muncy Chief SX878	101	18.02	6	33	2.1
Super Crost 7772	101	17.63	3	33	2.9
FFR 808C	101	18.69	1	33	3.3
NK PX 79	98	17.43	3	35	3.4
Gutwein 89A	96	19.71	3	31	2.8
Speight D-14	95	19.81	6	34	2.6
Super Crost S67	94	18.48	1	32	3.5
Muncy Chief SX777	93	18.00	6	35	3.0
Golden Harvest H2820	87	19.67	2	32	2.8
Muncy Chief SX662	87	18.31	4	32	3.3
Experimental Hybrids					
Yellow Entries					
McNair 73011	161	22.35	6	43	2.0
McNair 73009	142	22.34	7	41	2.1
P-A-G 22633	133	19.76	2	37	2.8
P-A-G 19994	124	20.39	16	40	2.1
Funk's 27466	123	19.89	11	34	3.1
P-A-G 425003	122	22.06	8	38	2.1
Gutwein 072	112	17.33	6	33	2.6
FFR 2256	104	17.28	2	34	2.8
FFR 2354	101	17.59	1	31	2.8
Golden Harvest XC4777	93	18.89	6	36	2.9
White Entries					
Pioneer Brand 511A	137	19.15	13	39	2.8
L.S.D. (.05)	17	2.64	9	5	N.S.
(.01)	23	N.S.	N.S.	7	N.S.
C.V. (%)	12	5		10	

Table 16. Comparison of hybrids for certain characteristics
 Northern Coastal Plain - Area V
 Pitt County - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Commercial Hybrids Yellow Entries					
Pioneer Brand 3147	126	16.04	23	36	3.3
DeKalb XL394	121	15.87	11	36	3.0
McNair X300	119	16.00	4	36	3.8
Watson 4376	119	15.83	9	36	3.0
Funk's G-4810	115	15.89	4	36	3.8
Greenwood 64	113	16.12	22	35	2.3
Pioneer Brand 3368A	112	15.19	3	33	3.3
Pioneer Brand 3369A	111	14.76	3	32	3.8
DeKalb XL75	110	14.22	6	31	2.0
Pioneer Brand 3161	108	14.90	13	34	1.8
Speight D-33	108	16.47	8	33	2.0
Golden Harvest H2775	108	16.05	11	33	3.0
McCurdy 73-55	108	15.24	20	33	2.3
Watson 421	107	17.16	11	33	3.5
DeKalb XL80A	105	16.79	14	30	3.3
McCurdy 73-74	104	16.44	21	35	2.8
Watson 417	104	16.69	10	32	2.8
Todd M90	103	15.07	17	31	2.0
Watson 453	103	16.83	23	33	3.5
McCurdy 73-56	103	15.63	17	33	2.8
Funk's G-5757	103	15.89	13	34	3.0
<u>Mean of Test</u>	<u>103</u>	<u>15.72</u>	<u>14</u>	<u>33</u>	<u>3.0</u>
DeKalb XL80	102	14.91	13	32	2.5
Pioneer Brand 3368	101	15.17	1	32	4.3
Speight D-31	101	15.92	9	30	2.5
Pioneer Brand 3145	101	16.33	6	33	3.5
Asgrow RX90	101	14.74	11	34	4.3
McCurdy 73-98	100	18.11	21	32	3.0

Table 16. (Continued) Comparison of hybrids for certain characteristics
Northern Coastal Plain - Area V
Pitt County - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Asgrow RX132	99	15.50	29	35	2.3
Todd M98	98	16.64	4	34	3.5
Gutwein 64	97	15.16	3	34	2.8
Funk's G-4611	97	14.79	6	33	4.5
McNair S338	96	15.81	30	32	2.8
Golden Harvest H2750	95	15.68	26	32	3.3
DeKalb XL78	95	15.10	6	30	2.5
Pioneer Brand 3150	94	16.01	0	33	2.5
Funk's G-4757	94	15.51	14	38	3.5
Asgrow RX114	93	15.34	21	30	3.0
Funk's G-4646	92	15.14	10	33	3.5
Watson 431	92	16.37	23	32	2.8
McCurdy 72-44	91	15.15	23	33	3.0
Speight D-14	90	15.89	14	32	2.8
Gutwein 890	89	15.43	13	33	4.5
Gutwein 74	89	15.20	9	34	3.3
P-A-G SX98	82	14.81	18	32	3.3
Todd M88	73	14.75	20	32	3.0
Experimental Hybrids					
Yellow Entries					
McNair 73009	138	16.87	29	36	2.0
Funk's 27466	120	16.92	13	33	3.3
(B73 X PA91)X(Va.36 X Va.60)	117	15.42	11	34	3.0
(B73 X Pa.91)XVa. 58	108	16.11	11	32	3.0
Gutwein 072	104	14.38	3	34	3.3
White Entries					
Golden Harvest H2660	107	15.50	13	37	3.3
Pioneer Brand 511A	99	15.80	30	32	2.8
L.S.D. (.05)	19	.68	10	N.S.	1.0
(.01)	25	.90	14	N.S.	1.3
C.V. (%)	13	3		6	

Table 17. Comparison of hybrids for certain characteristics
 Eastern Coastal Plain - Area VI
 Wayne and Washington Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Commercial Hybrids Yellow Entries					
Speight D-33	153	16.58	5	44	2.4
Excel RA125	148	15.65	3	41	2.5
McNair X210	147	16.11	7	41	2.4
NK PX 95	146	16.57	3	50	2.8
Funk's G-4507	146	15.42	6	43	3.9
P-A-G SX17A	143	15.41	16	41	2.0
Pioneer Brand 3368A	141	16.01	2	41	1.9
T-E 6968	140	16.06	3	40	2.6
Pioneer Brand 3369A	140	15.57	2	38	2.8
Greenwood 44	139	17.68	15	41	2.5
NK PX 79	139	15.42	7	43	2.9
Excel RA116	138	15.16	5	44	3.3
Pioneer Brand 3368	138	15.44	3	40	3.0
Watson 417	136	17.02	6	42	2.5
DeKalb XL78	135	15.99	2	41	2.5
Funk's G-4646	135	16.24	4	39	2.6
Golden Harvest H2666	135	15.63	9	41	2.6
DeKalb XL75	135	14.78	2	40	2.1
Watson 415	133	16.96	5	40	2.4
McCurdy 72-44A	132	15.72	7	44	2.1
Gutwein 890	132	16.65	16	40	2.9
Nat. Starch 569B	131	15.71	12	39	2.8
Excel RA118WX	131	15.85	10	43	2.3
Coker 16	130	15.83	6	39	2.9
P-A-G SX520	130	15.28	10	43	2.6
McNair X170	129	15.76	3	38	2.4
Asgrow RX114	129	16.26	10	41	2.1
Watson 416-H	129	16.64	8	41	2.5
DeKalb XL72B	128	15.31	1	37	2.0
NK PX 91	128	15.61	3	40	2.6
Funk's G-4611	127	15.48	12	41	3.1
McCurdy MSP888	127	15.79	25	38	2.6
DeKalb XL64A	127	15.58	5	36	2.4
<u>Mean of Test</u>	<u>127</u>	<u>15.89</u>	<u>8</u>	<u>40</u>	<u>2.7</u>
Asgrow RX90	126	15.42	7	43	3.6
McCurdy MSX70	126	15.57	13	43	3.0
FFR 808C	126	15.66	2	38	2.5
McCurdy MSX68	125	15.54	8	38	2.6
Gutwein 92	125	15.78	6	40	2.8

Table 17. (Continued) Comparison of hybrids for certain characteristics
 Eastern Coastal Plain - Area VI
 Wayne and Washington Counties - 1975

Hybrid Designation	Yield Bus/A	Moisture %	Lodging %	Ear Height Inches	Quality
Todd M90	124	15.84	15	41	2.3
Funk's G-4737	123	16.33	23	34	2.3
Golden Harvest H2500	123	15.32	4	42	3.1
Gutwein 64	120	15.80	6	40	2.5
P-A-G SX494	120	15.59	4	37	2.8
P-A-G SX98	120	15.87	33	36	2.9
Funk's G-4449	120	15.45	5	38	3.4
NK PX 76	120	15.82	4	38	2.6
Funk's G-4445	120	15.33	9	35	2.3
Golden Harvest H2655	119	16.06	1	36	2.8
McNair X194	118	15.52	11	40	3.3
Nat. Starch 646	118	15.79	6	38	2.8
T-E 6980	117	15.83	27	38	3.3
Gutwein 74	117	15.56	4	39	2.4
Muncy Chief SX662	117	15.69	7	34	2.9
Muncy Chief SX878	114	15.78	14	39	2.6
T-E 6969	112	16.38	8	38	2.4
Muncy Chief SX777	111	15.81	13	39	2.5
Todd M76	111	15.92	3	36	3.0
Todd M88	110	15.47	7	33	2.5
Pioneer Brand 3535	108	15.44	4	41	2.6
T-E 6965	106	16.63	15	39	3.4
Excel RA121	106	15.64	1	37	3.3
Experimental Hybrids					
Yellow Entries					
Coker 4034	149	16.69	4	42	2.6
Coker 5038	141	16.73	5	42	2.1
Coker 4022	140	16.29	4	44	2.8
Nat. Starch 3000	136	15.64	5	40	2.6
Coker 4018	134	16.24	3	42	2.3
Gutwein 072	132	15.19	4	41	2.6
FFR 2354	123	15.24	4	42	2.0
McNair 3015	123	16.82	5	42	2.6
McNair 3011	122	16.51	8	45	3.3
FFR 2256	116	15.34	2	37	2.4
McNair 3021	113	16.22	3	42	2.6
FFR 2063	95	16.22	9	34	2.1
White Entries					
McNair X233	144	16.63	24	50	3.6
McNair S237	125	16.34	22	44	3.4
Golden Harvest H2605	114	15.43	14	49	3.4
L.S.D. (.05)	20	.68	N.S.	5	.8
(.01)	27	.90	N.S.	6	1.0
C.V. (%)	13	4		6	

GRAIN SORGHUM

Most of the grain sorghum in North Carolina is grown in the Piedmont where it is used primarily for feed purposes. In the Piedmont Area it is generally produced as a single crop for the season, while in the Coastal Plain Area it is frequently grown as a second crop following small grain. In 1975 all tests were conducted in the Piedmont Area. The 1975 acreage for North Carolina was estimated to be 70,000 acres, which would be 4,000 acres less than in 1973. The 1974 acreage was 70,000 acres. The all time high acreage of 1971 (120,000 acres) resulted from the corn blight problem in 1970. The average yield per acre for 1975 is estimated to be 55 bushels or two bushels more than in 1974.

The data presented in this report provide information on the performance of commercial varieties, hybrids and experimental lines grown in various geographical areas of the state and under different cropping systems. Information of this nature serves as a guide to sorghum breeders in their development of varieties and to growers in choosing a variety to plant.

This report presents the results of the North Carolina Official Sorghum Variety Trials for the 1975 season and summarizes the results of tests conducted during the past two and three years.

EXPERIMENTAL PROCEDURE

In this program are included experimental lines, hybrids and varieties developed by public and private agencies. Any individual or firm may make applications for having entries included. Quantitative data from experiments in which the proposed entry is compared with recognized hybrids and varieties must show merit for the entry and must accompany the application. A fee is charged on an entry basis. Personnel of the testing program may include entries about which further information is desired.

<u>Agencies Sponsoring Entries</u>		<u>Designation</u>
Acco Seed Company	Plainview, Texas	Acco
DeKalb Agric. Research, Inc.	Lubbock, Texas	DeKalb
Excel Hybrid Seeds, Inc.	Plainview, Texas	Excel
George Warner Seed Company	Hereford, Texas	Warner
Growers Seed Association	Lubbock, Texas	Growers
Northrup King and Company	Richardson, Texas	NK Savanna
Pioneer Hi-Bred, Inc.	Tipton, Indiana	Pioneer Brand
Taylor-Evans Seed Company	Tulia, Texas	T-E

Test Locations

Three locations were used in 1975 in the Piedmont as shown in Figure 1. All tests were located on private farms and were considered to be good grain sorghum tests for the 1975 season.

The 1975 growing season was generally good for the production of grain sorghum although plot yields were not as high as in 1974. Good stands were obtained at all locations, and yields were generally in line with previous years

The average yield of grain sorghum production in North Carolina for 1975 was two bushels more per acre than for 1974. The yield per acre is estimated at 55 bushels per acre.

The total production of grain sorghum in 1975 for North Carolina was estimated to be 3,850,000 bushels.

Cultural Practices

Cultural practices, such as soil preparation, date of planting, fertilization and topdressing were in accord with good management and were the same for all entries at a location, Table 18. Planting and harvesting were directly supervised by personnel of the North Carolina Agricultural Experiment Station.

Experiments were harvested with a modified combine. The grain was caught as it came from the elevator of the combine and was weighed at the end of each plot on scales mounted on the combine. Moisture samples were taken in waterproof plastic paper bags and the percent moisture determined by an official moisture meter.

Data

A randomized block design was used with four replications at each location. Plot size was two rows 29 feet long. The row width was 38 inches in each test. Yield. The plots were harvested individually and the average grain yield was calculated in pounds per acre.

Moisture. A moisture percentage was taken and yields were adjusted to 14 percent moisture.

Plant Height. The average height of plants in each plot was taken and an average for each entry was calculated.

Head Exsertion. The distance in inches from the top leaf to the base of the head was measured and referred to as head exsertion. This distance gives an indication of the ease with which grain sorghum may be harvested without leaves and plant material hindering the operation.

Head Compactness. A description of head type was determined according to the following scale:

1. Compact type head
2. Average between compact and loose type
3. Loose type head

Results

The data presented in Tables 19 and 20 are summaries for various years and locations and indicate how varieties have been performing in different

environments. A three-year average performance for the Piedmont is shown in Table 19. Entries ranged in yield from 6140 for DeKalb BR-54 to 4996 pounds per acre for Warner 839.

The performance of entries during the last two years in the Piedmont is shown in Table 20. Yields ranged from a high of 6212 pounds per acre for DeKalb BR 54 to 4530 for NK Savanna 4.

A summary of the 1975 results for the Piedmont is shown in Table 21. Yields ranged from 5286 pounds per acre for Pioneer Brand B-815 to 3567 for NK Savanna 4. Twelve of the twenty-four entries yielded above the mean of the test which is indicative of their good performance. All data from these tests are probably representative of the performance of these hybrids since the tests were generally good and the season was generally favorable for the production of grain sorghum. However, data for more than one year should be utilized in determining the performance of hybrids.

For conversion of information in tables the official weight per bushel for grain sorghum is 56 pounds per bushel.

Table 18. Cultural practices on grain sorghum performance trials. Piedmont. 1975

Area and Cooperator	Fertilizer lbs/A and Grade	Herbicide Preemergence	Toppdressing lbs/A of N and Source	Spacing Inches	Date of Planting	Date of Harvest
<u>Anson County</u> J. B. Martin	500 10-10-10 Broadcast	AAtrex + Princep	175 Nitrogen Solution	38"	May 12	September 15
<u>Chatham County</u> Donnie Thomas	500 5-10-10 Broadcast	AAtrex + Princep	175 Nitrogen Solution	38"	May 5	September 29
<u>Stanly County</u> Vernon Almond	600 5-10-10 Broadcast	AAtrex + Princep	175 Nitrogen Solution	38"	May 12	September 12

Table 19. Performance of grain sorghum - Piedmont. Three-year average 1973, 1974, 1975. Average of 8 locations.

Entry	Yield Lbs/A	Moisture %	Head Com- pactness	Head Exertion Inches	Plant Height Inches
DeKalb BR-54	6140	14.58	2.5	8	60
T-E Total	5759	14.40	2.2	8	53
T-E Y101	5299	13.79	2.3	6	44
DeKalb E-59	5182	14.06	2.3	6	46
<u>Mean of Test</u>	<u>5141</u>	<u>13.96</u>	<u>2.3</u>	<u>6</u>	<u>48</u>
Acco R1090	5034	13.75	2.7	7	46
Warner 839	4996	14.07	2.4	5	43

Table 20. Performance of grain sorghum - Piedmont. Two-year average 1974, 1975. Average of 5 locations.

Entry	Yield Lbs/A	Moisture %	Head Com- pactness	Head Exertion Inches	Plant Height Inches
DeKalb BR-54	6212	14.16	2.6	8	57
T-E Total	5610	14.19	2.2	6	49
Acco X9418	5589	13.77	2.6	6	47
Pioneer Brand B815	5574	14.01	1.9	6	50
Pioneer Brand 8417	5526	13.87	2.8	6	43
Excel 808	5356	13.96	2.2	6	44
Warner 839	5203	13.76	2.4	5	42
<u>Mean of Test</u>	<u>5084</u>	<u>13.58</u>	<u>2.3</u>	<u>6</u>	<u>46</u>
T-E Y101	5062	13.50	2.4	4	40
DeKalb E-59	4938	13.78	2.4	6	42
Acco R1090	4867	13.40	2.8	6	43
NK Savanna 4	4530	12.81	1.8	6	42

Table 21. Performance of grain sorghum for certain characteristics. Piedmont, Anson, Stanly and Chatham Counties - 1975.

Entries	Yield Lbs/A	Moisture %	Head Com- pactness	Head Exertion Inches	Plant Height Inches
+ Pioneer Brand B815	5286	13.00	2.3	7	50
Pioneer Brand 8417	4928	13.25	2.8	7	40
T-E Total	4912	13.29	2.5	9	48
+*Acco X9418	4863	13.33	2.8	8	46
+*NK X3101A	4796	13.46	1.0	10	56
Warner 866	4784	13.40	2.3	7	47
+ DeKalb BR-54	4781	13.45	2.7	10	55
+ T-E Bird-A-Boo II	4678	13.21	3.0	7	44
Growers ML-136	4635	13.37	2.8	8	48
Warner 839	4592	13.05	2.8	6	41
Excel 808	4555	13.06	2.3	7	43
Pioneer Brand 8311	4531	12.99	2.7	6	40
<u>Mean of Test</u>	<u>4467</u>	<u>13.20</u>	<u>2.5</u>	<u>8</u>	<u>44</u>
Growers ML-135	4402	13.06	3.0	7	40
Acco R1029-A	4356	13.27	2.8	8	42
+ Excel RA Bird-Go 68	4325	13.27	3.0	7	42
Excel 811-A	4311	13.20	2.7	9	48
*Growers 74149	4278	12.96	2.3	7	44
Warner 832	4250	13.14	1.2	8	45
DeKalb E-59	4142	13.27	2.5	8	42
Acco R1090	4109	13.35	2.8	8	41
T-E Y101	4104	13.15	2.8	7	39
T-E 88A	4101	13.21	2.7	8	41
*Growers 75013	3921	13.14	2.2	9	41
+ NK Savanna 4	3567	12.96	2.5	7	41
L.S.D. (.05)	768				3
(.01)	1026				4
C.V. (%)	21				5

*Experimentals.

+Bird Resistant.

SOYBEAN VARIETIES

Based on field samples and objective reports from growers throughout the Tar Heel State, the North Carolina Soybean production estimate as of November 1 is for 31,900,000 bushels. This potential crop would be the same as was produced in 1974.

Yields are expected to average twenty-two bushels per acre--about the same as last year. The indicated acreage for 1975 for beans is 1,450,000 compared with 1,420,000 acres harvested in 1974. The 1975 season's yield is estimated at twenty-two bushels per acre. The conditions of the state soybean crop is estimated to be good. Fields are maturing at an ever increasing rate as the fall weather advances. In the Official Variety Testing Program the mean yield of the early maturing varieties was 41.0 bushels per acre compared to 38.2 bushels per acre for the late maturing entries. The figures usually are greater in range with the late maturing entries yielding more.

Five different maturity groups are grown in North Carolina--Groups IV, V, VI, VII and VIII, with maturity dates ranging from September 1 to November 10, depending upon the group in which the variety is classified. Group IV is the earliest and Group VIII the latest maturing.

There are several high yielding varieties available to the producer from which he may choose according to desired maturity date, lodging, resistance, etc. Information on the performance of commercial varieties and experimental lines grown in different locations in the state is provided in this report. This information serves as a guide to growers and agricultural workers in choosing a variety and to soybean breeders in their development of varieties.

EXPERIMENTAL PROCEDURES

Experimental lines and commercial varieties developed by both public

and private agencies are included in this program. In order to qualify for acceptance, the proposed entry must reveal meritorious performance when compared with recognized varieties.

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.

In 1974 samples of seed were obtained for each entry in the late test from locations in Franklin, Washington, Bladen, and Wayne Counties. The four replications were combined prior to chemical analysis. The percent oil, percent protein and percent moisture were determined by entry and location. This data is shown in Table 30.

Agencies Sponsoring Entries

Coker's Pedigreed Seed Company, Hartsville, S. C.

Farmers Forage Research Coop., Lafayette, Indiana

N. C. Agricultural Experiment Station and USDA, Raleigh, N. C.

McNair Seed Company, Laurinburg, N. C.

North American Plant Breeders, Hutchinson, Kansas

Soybean Research Foundation, Inc., Mason City, Illinois

Virginia Agricultural Experiment Station, Blacksburg, Virginia

Test Locations

Six regular tests were conducted in 1975 with three in the Coastal Plain Area and three in the Piedmont Area, as shown in Figure 1. All were located on private farms except in the Washington County Test, which was conducted on an experiment station. One test of late maturing entries was planted after harvest of small grain. Data on this test is shown in a separate table, Table 29.

The good growing conditions, after a dry August, resulted in fair to good yields at most locations. At all locations with the exception of Chatham County, the mean of each test was over 43 bushels per acre for late entries.

Seasonal Conditions

The growing season was generally favorable for the production of good yields of soybeans in the Coastal Plain and Piedmont Areas of North Carolina for 1975. Favorable weather with frequent showers existed during most of the growing season. Dry and open weather during the harvest of the early variety tests resulted in good seed quality. Insect damage and leaf diseases were at a minimum. Most of the early maturing entries made excellent yields.

Cultural Practices

Seed bed preparation, date of planting, fertilization and other cultural practices were in accord with good farming practices and are listed in Table 22. Planting, harvesting and yield measurements were directly supervised by personnel of the North Carolina Agricultural Experiment Station. Lasso was used as a herbicide at all locations.

Table 22. Cultural practices for soybean performance trials - 1975.

Area and Cooperator	Fertilizer lbs/A	Row Spacing Inches	Date of Planting	Date of Harvest
<u>Coastal Plain</u>				
<u>Washington County</u> J. W. Smith Superintendent Tidewater Res. Station	350 0-20-20 Broadcast	38"	May 14	November 19 (early) November 19 (late)
<u>Wayne County</u> Randy Pate	300 6-12-18 Broadcast	38"	May 13	October 16 (early) November 17 (late)
<u>Bladen County</u> E. G. Melvin	350 3-9-18 Broadcast	38"	May 21	October 16 (early) November 18 (late)
<u>Wayne County</u> Wayland Price (Planted after small grain)		38"	June 30	November 26 (late)
<u>Piedmont</u>				
<u>Stanly County</u> D. G. Harwood	300 5-10-10 Broadcast	38"	May 7	October 15 (early) November 3 (late)
<u>Chatham County</u> Donnie Thomas	350 5-10-10 Broadcast	38"	May 6	October 15 (Disc.) November 5 (late)
<u>Union County</u> Melvin Outen	500 3-9-18 Broadcast	38"	June 3	October 30 (early) October 30 (late)

Criteria for Evaluating Soybean Varieties

Yield bu/acre. Each plot was harvested and weighed and converted to bushels per acre. All yields were adjusted to 14% moisture.

Moisture. A sample was taken from each plot immediately after the beans were weighed. The samples were placed in waterproof, plastic-coated paper bags and the moisture percent was determined on an official moisture meter.

Plant Height. Plant height was determined for measuring from the ground to top of the plant in inches.

Lodging. Lodging was rated according to the following scale.

1. All erect
2. 5-25% down
3. 26-50% down
4. 51-75% down
5. 76-100% down

Maturity Group. Maturity groups ranged from Group IV through Group VIII.

The dates of maturity are as follows:

Group IV	September 1-15
Group V	September 16-30
Group VI	October 1-16
Group VII	October 17-31
Group VIII	November 1-10

RESULTS

Performance data over a two and three year period are shown in Tables 23 and 24. Varietal performance varied between locations, depending upon the seasonal conditions. Tables 25 and 26 show data on yield from each location as well as the mean for all locations. It would depend on maturity desired, plant characteristics and other factors as to what variety would be most suitable for a specific location.

The maturity group in which each entry belongs is listed in Table 25 and 26. The approximate date of maturity for these groups has been presented earlier. Information on lodging, plant height and moisture is shown in Tables 27 and 28.

The data should be considered not only for yield but for maturity group and other characters which might influence the selection of a variety. All

available data should be studied to aid in selecting a variety that best fits the management practices of the producer.

Entries SRF 450 and 425 appear to be more adapted to the Piedmont Area than other parts of North Carolina. The Union County Test was not the typical Piedmont soil type.

The Washington County data was omitted for the average because of excessive yellow foliage during the growing season. On examination of the entries, it appeared that there was a failure of the Rhizobium bacteria to survive under poor drainage conditions.

Table 30 lists the oil, protein, and moisture content for late entries in four counties and the average of the test. The samples were obtained from the 1974 entries.

Table 23. Performance of Soybeans. Three year average - 1973-74-75.
Average of 14 locations.

Entries	Yield Bu/A	Lodging	Plant Height Inches	% Moisture
EARLY MATURING ENTRIES				
Essex	47.1	1.7	28	15.03
Coker 136	46.9	1.8	37	15.01
Forrest	46.5	2.1	35	14.51
<u>Mean of Test</u>	<u>44.2</u>	<u>1.9</u>	<u>34</u>	<u>16.00</u>
York	43.2	1.7	32	15.01
Dare	41.4	1.8	34	15.07
LATE MATURING ENTRIES				
Ransom	45.7	1.8	39	12.59
*N70-2173	45.2	1.9	39	12.47
FFR 666	44.8	2.0	34	12.70
McNair 600	44.3	2.6	37	12.64
Bragg	44.1	2.3	42	12.33
Davis	43.9	2.7	39	12.61
Hutton	43.6	2.6	40	12.52
Lee 68	43.6	2.6	34	12.59
Pickett 71	43.3	2.5	34	12.55
McNair 800	43.3	2.6	38	12.64
Coker 338	43.2	2.3	41	12.66
Tracy	43.0	2.4	36	12.37
<u>Mean of Test</u>	<u>42.9</u>	<u>2.3</u>	<u>39</u>	<u>12.53</u>
FFR 777	40.0	2.2	41	12.57

*Experimentals.

Table 24. Performance of Soybeans. Two year average - 1974-75. Average of 9 locations.

Entries	Yield Bu/A	Lodging	Plant Height Inches	% Moisture
EARLY MATURING ENTRIES				
Coker 136	46.5	1.8	38	16.00
Forrest	46.0	2.2	35	15.40
Essex	46.0	1.8	28	15.92
*McNair 3-120	44.5	1.8	34	15.92
<u>Mean of Test</u>	<u>43.4</u>	<u>1.9</u>	<u>34</u>	<u>16.12</u>
Shore	42.6	1.4	28	14.18
York	42.0	1.8	32	15.89
Dare	41.0	1.7	34	15.91
FFR 555	40.6	1.8	35	16.06
SRF 450	35.0	2.1	32	17.07
SRF 425	28.5	2.6	34	17.82
LATE MATURING ENTRIES				
Ransom	44.4	1.8	38	13.00
*N70-2173	43.7	2.0	38	12.76
Bragg	42.9	2.2	41	12.68
McNair 600	42.7	2.5	37	12.98
FFR 666	42.6	2.0	32	13.14
Pickett 71	41.9	2.4	34	12.92
Coker 338	41.8	2.2	40	13.22
Davis	41.6	2.8	38	12.96
Lee 68	41.2	2.5	34	12.98
Hutton	41.1	2.6	39	13.00
<u>Mean of Test</u>	<u>41.1</u>	<u>2.2</u>	<u>38</u>	<u>12.96</u>
Lee 74	41.0	2.6	35	12.99
McNair 800	41.0	2.6	37	13.07
Tracy	40.6	2.4	36	12.82
*FFR 41034	40.2	2.4	36	12.90
FFR 777	38.0	2.2	39	13.03

*Experimentals.

EARLY MATURING ENTRIES

Table 25. Performance of Soybeans by locations and combined (Bu/A) 1975.

Entries	Stanly	Union	Wayne	Bladen	Chatham	Average	Maturity Group
Commercial Varieties							
Coker 136	61.5	46.0	39.2	47.7	Disc.	48.6	V
Forrest	64.7	46.9	33.2	46.2		47.8	V
Essex	65.8	41.7	31.5	51.1		47.5	V
York	58.4	47.6	31.6	43.3		45.2	V
Dare			37.9	48.2			V
FFR 555	53.0	39.1	29.5	42.1		40.9	V
SRF 450	38.1	32.2					IV
SRF 425	27.5	25.8					IV
Experimentals							
McNair 3-120	58.7	41.5	34.5	46.0		45.2	V
N70-1549	57.6	38.5	33.5	50.4		45.0	V
N73-57			36.7	49.8			V
<u>Mean of Test</u>	<u>53.9</u>	<u>39.9</u>	<u>34.2</u>	<u>47.2</u>		<u>45.7</u>	
L.S.D. (.05)	8.0	4.0	4.6	4.4		4.5	
(.01)	10.9	5.4	6.2	6.0		N.S.	
C.V. (%)	10	7	9	6		6	

LATE MATURING ENTRIES

Table 26. Performance of Soybeans by locations and combined (Bu/A) 1975.

Entries	Stanly	Union	Wayne	Bladen	Chatham	Average	Maturity Group
Commercial Varieties							
Ransom	65.5	51.2	51.3	50.5	27.2	49.2	VII
Hutton	58.8	45.4	48.8	47.7	33.1	46.8	VIII
Bragg	61.1	43.3	47.9	49.4	31.8	46.7	VII
Coker 338	59.1	53.6	46.7	43.2	25.7	45.7	VIII
McNair 600	60.1	37.3	44.5	45.9	32.1	44.0	VI
McNair 800	58.8	40.4	44.3	46.2	28.3	43.6	VII
Lee 68	54.6	46.9	42.1	47.6	26.5	43.5	VI
Pickett 71	58.3	44.4	38.7	45.5	29.5	43.3	VI
N.A.P.B. 603	60.6	45.2	40.8	42.5	25.8	43.0	VI
Tracy	56.6	48.0	42.8	43.1	24.2	43.0	VI
Davis	57.5	33.0	46.2	48.4	30.1	43.0	VI
FFR 666	54.4	38.0	44.7	47.6	25.4	42.1	VI
Lee 74	51.8	45.5	39.3	46.9	26.1	41.9	VI
FFR 777	49.3	32.7	43.4	43.7	21.6	38.1	VII
Shore	47.4	43.1	25.6	34.1	24.0	34.8	V
Experimentals							
McNair 3044	64.2	46.2	51.2	48.7	32.7	48.6	VII
Coker 72-260	57.9	50.0	47.8	48.0	31.7	47.1	VI
Coker 73-473	59.5	50.2	45.8	47.1	29.1	46.4	VII
N70-2173	65.4	37.3	48.1	47.2	29.9	45.6	VII
McNair 3045	60.6	39.6	47.5	47.0	29.3	44.8	VII
N70-1816	59.4	41.4	48.1	47.8	27.2	44.8	VII
Coker 73-375	56.8	46.9	44.3	45.6	25.9	43.9	VII
Coker 74-478	55.4	45.4	45.0	44.1	29.2	43.8	VIII
FFR 41034	56.0	36.5	40.0	47.4	28.3	41.6	VI
<u>Mean of Test</u>	<u>57.9</u>	<u>43.4</u>	<u>44.4</u>	<u>46.0</u>	<u>28.1</u>	<u>44.0</u>	
L.S.D. (.05)	5.2	5.6	4.4	3.6	5.6	5.1	
(.01)	6.9	7.5	5.8	4.7	7.4	6.8	
C.V. (%)	6	9	7	5	14	8	

EARLY MATURING ENTRIES

Table 27. Lodging, plant height and moisture of soybean varieties combined for Stanly, Union, Wayne and Bladen Counties 1975.

Entries	Lodging	Plant Height Inches	Moisture %
Commercial Varieties			
Coker 136	2.1	36	17.34
Forrest	2.4	35	16.91
Essex	2.2	28	17.43
York	2.1	32	17.55
Dare	1.5	34	17.80
FFR 555	2.2	34	17.65
SRF 450	2.3	32	18.05
SRF 425	3.0	35	18.77
Experimentals			
McNair 3-120	2.4	33	17.20
N70-1549	2.7	32	17.16
N73-57	1.2	32	18.17
<u>Mean of Test</u>	<u>2.2</u>	<u>33</u>	<u>17.64</u>

LATE MATURING ENTRIES

Table 28. Lodging, plant height and moisture of soybean varieties combined for Stanly, Union, Wayne, Chatham and Bladen Counties - 1975.

Entries	Lodging	Plant Height Inches	Moisture %
Commercial Varieties			
Ransom	2.1	37	13.86
Hutton	2.8	38	13.82
Bragg	2.4	40	13.23
Coker 338	2.7	49	14.50
McNair 600	2.6	35	13.57
McNair 800	2.8	36	13.83
Lee 68	2.7	32	13.58
Pickett 71	2.5	33	13.59
N.A.P.B. 603	2.2	36	13.69
Tracy	2.8	34	13.44
Davis	3.1	36	13.50
FFR 666	1.9	30	14.07
Lee 74	2.8	33	13.59
FFR 777	2.5	37	13.79
Shore	1.7	26	13.37
Experimentals			
McNair 3044	2.1	38	13.41
Coker 72-260	2.8	33	13.82
Coker 73-473	2.8	37	13.95
N70-2173	2.0	36	13.21
McNair 3045	2.4	44	13.38
N70-1816	3.0	34	14.16
Coker 73-375	2.3	38	13.67
Coker 74-478	2.5	39	14.16
FFR 41034	2.5	34	1.350
<u>Mean of Test</u>	<u>2.5</u>	<u>36</u>	<u>13.66</u>
L.S.D. (.05)	7	3	N.S.
(.01)	N.S.	4	N.S.
C.V. (%)	22	6	8

Table 29. Performance of Soybeans - Wayne County - 1975
Late test planted after small grain.

Entries	Yield Bus/A	Lodging	Plant Height Inches	Moisture %
Coker 338	45.3	2.0	31	14.91
Davis	40.2	1.5	30	15.64
Ransom	38.9	1.5	30	15.28
Bragg	37.6	2.0	30	15.28
McNair 800	36.7	1.0	22	15.92
Hutton	36.4	1.0	25	15.37
Pickett 71	28.1	2.0	24	15.85
Lee 68	26.4	2.0	25	15.59
<u>Mean of Test</u>	<u>36.2</u>	<u>1.6</u>	<u>27</u>	<u>15.48</u>
L.S.D. (.05)	4.1		N.S.	N.S.
(.01)	5.6		7	N.S.
C.V. (%)	8		8	3

OFFICIAL VARIETY TEST - SOYBEANS - 1975

Table 30. Individual and combined data on oil, protein and moisture. Franklin, Washington, Bladen and Wayne Counties - 1974 Entries.

Variety or Line	Franklin County			Washington County			Bladen County			Wayne County			Average		
	Oil %	Protein %	Moisture %	Oil %	Protein %	Moisture %	Oil %	Protein %	Moisture %	Oil %	Protein %	Moisture %	Oil %	Protein %	Moisture %
Bragg	19.0	39.9	7.4	18.9	42.5	7.9	20.3	41.8	8.0	19.0	41.7	7.4	19.3	41.5	7.7
Davis	21.0	39.2	7.5	20.1	42.2	7.5	22.0	41.0	7.8	21.0	40.4	7.5	21.0	40.7	7.6
Hutton	18.3	41.1	7.6	17.9	43.1	7.9	19.3	42.8	7.6	18.5	42.8	7.4	18.5	42.4	7.6
Lee 68	21.2	40.3	7.9	20.0	43.6	8.0	21.7	42.8	8.1	20.0	43.2	7.4	20.7	42.5	7.8
Pickett 71	20.4	39.6	7.8	19.8	42.9	8.0	21.0	41.3	7.8	19.8	42.2	7.3	20.2	41.5	7.7
Ransom	22.6	38.6	7.6	21.4	42.0	7.7	23.4	40.6	7.7	21.7	41.7	7.3	22.3	40.7	7.6
Lee 74	20.6	41.0	7.6	20.2	43.5	7.9	21.1	42.4	7.9	20.0	42.1	7.3	20.5	42.2	7.7
Cobb	20.2	36.8	7.3	18.8	41.6	7.5	20.0	40.0	7.8	18.6	40.2	7.2	19.4	39.6	7.4
FFR 666	20.3	41.5	7.6	19.5	43.6	7.8	20.9	43.3	7.8	19.8	43.9	7.5	20.1	43.1	7.7
FFR 777	20.2	39.2	7.5	19.4	41.5	7.7	20.8	40.9	7.8	19.5	42.0	7.5	20.0	40.9	7.6
McNair 600	20.7	38.7	7.8	20.5	40.8	7.7	21.5	40.2	7.6	19.9	39.8	7.1	20.6	39.9	7.6
McNair 800	19.5	38.8	7.3	18.8	42.2	7.5	19.7	42.0	7.6	19.2	41.7	7.2	19.3	41.2	7.4
Tracy	18.3	39.0	6.7	17.8	42.4	7.4	19.6	43.0	7.8	18.4	42.1	7.1	18.5	41.6	7.2
Coker-Hampton 266A	20.3	37.9	7.4	18.5	41.9	7.6	20.7	39.5	7.4	19.4	41.2	7.3	19.7	40.1	7.4
Coker 338	20.1	38.7	7.2	19.5	41.9	7.5	20.9	40.9	7.6	20.1	40.6	7.1	20.2	40.5	7.4
*Coker 71-222	20.3	38.8	7.2	19.4	42.7	7.8	21.8	41.5	7.8	20.1	40.8	7.1	20.4	41.0	7.5
*Coker 71-221	20.8	38.1	7.2	19.5	41.0	7.6	20.6	40.5	7.7	20.2	40.4	7.3	20.3	40.0	7.4
*Coker 69-119	20.2	37.7	7.0	19.2	40.0	7.5	21.1	39.4	7.4	20.0	39.3	7.2	20.1	39.1	7.3
*Coker 71-211	19.7	37.9	6.7	18.3	41.4	7.4	20.3	40.0	7.4	19.5	39.7	7.2	19.4	39.8	7.2
*FFR 41034	20.5	39.8	7.3	19.2	43.9	7.8	21.0	42.0	7.8	20.0	42.8	7.6	20.5	42.1	7.6
*McNair 3-508	20.5	38.7	7.0	20.1	42.5	7.7	21.2	40.5	7.8	20.1	41.5	7.4	20.5	40.8	7.5
*N72-3219	20.8	39.2	7.1	20.0	41.5	7.5	21.9	40.9	8.1	20.0	41.1	7.2	20.7	40.7	7.5
*N70-2151	22.3	39.0	6.9	20.9	42.5	7.6	23.5	40.8	7.7	21.5	41.7	7.3	22.0	41.0	7.4
*N70-2173	21.4	38.2	7.0	19.8	40.9	7.7	21.8	40.0	7.6	20.4	40.7	7.3	20.8	40.0	7.4

*Experimentals.