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Measured Crop Performance

TOBACCO

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PERFORMANCE OF TOBACCO VARIETIES IN NORTH CAROLINA

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The year 1970 represents the seventh season in testing new tobacco varieties under the Regional Minimum Standards Program initiated in 1963-64. Early in the program, the 1969 season was designated as a year for seed increase of any new varieties released during 1968. The breeding lines which met the minimum standards in the 1969 test as outlined by the Quality Evaluation Committee of the Tobacco Workers' Conference were included in the 1969 Official Variety Test, and they will be available for farmer planting in the 1971 growing season. For new entries in the 1970 test, seed will be increased during 1971 for any new variety approved for release by the originating agency or by certified seed growers.

Under the Minimum Standards Program, four varieties were made available to farmers in 1964; Coker 298, NC 2326, Speight G-36 and Va. 115. In 1965, two varieties, NC 2512 and Speight G-7, met the minimum standards established by the Regional Committee. Coker 258 and PD 5 met the standards in 1966, followed by Bell 93, Coker 254, McNair 14 and Speight G-13 in 1967. In 1968 four varieties met the minimum standards program: Coker 213, Coker 411, McNair 133 and Speight G-28. All except Coker 411 were increased during 1969 for seed sales in the 1969-70 growing season. Coker 411 was

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increased for seed supply in 1970 and made available for farm plantings in 1971. In 1969, four varieties met the Minimum Standards Program: Coker 347, Georgia 1469 (tested as Georgia 1096), McNair 135 and Speight G-41.

The minimum standards serve as a guide to breeders in developing new varieties that will be acceptable to the trade. It is a voluntary program that has been enthusiastically endorsed by all segments of the tobacco industry. The program adopts the principle of testing new varieties against standard varieties. New varieties should be genetically stable and should not differ from the standards, NC 2326 and NC 95, by more than plus or minus specified percent for measurable chemical traits. For 1970, the variety, NC 2326, replaced Hicks Broad-leaf as one of the standard varieties. The acceptable range for nicotine is plus 15 percent and minus 20 percent of the mean of NC 2326 and NC 95. New varieties should not contain more than 8 percent of the total alkaloids as nornicotine. Variety candidates should compare favorable with the standard varieties for color, body, texture, moisture equilibrium, filling value, flavor and aroma. A minimum of two years evaluation throughout the flue-cured region of the United States on both experiment stations and farmer plots is required.

Such a program should mean much to our domestic and export trade and to our growers because it assures the manufacturers that new varieties will have been thoroughly tested and evaluated for agronomic, pathologic, physical, chemical and smoke characteristics. Quality is the one factor the American farmer has to sell and this program should help to assure that quality is continuously improved. Varieties play a determining role in quality and should be carefully selected by the grower.

The Tobacco Variety Evaluation Program in North Carolina is a part of the Regional Test. Data are presented from the 1970 Official Variety Tests in North Carolina and the 1970 Regional Farm Tests. In addition a summary table of variety performance over different years and locations is presented. Similar reports which record previous years' data have been issued. Testing over a period of years and under farm conditions is needed to fully evaluate the performance of any variety. Information of this nature serves as a guide to tobacco breeders in the development of varieties and to growers in choosing a variety.

EXPERIMENTAL PROCEDURE

The Tobacco Variety Evaluation Program in North Carolina is divided into three phases. The first phase, the Official Variety Test, consists of testing varieties and breeding lines in small replicated plots located on five research stations. In 1970 a total of 50 entries were included. The second phase of the program involves a more extensive study of fewer varieties and advanced breeding lines grown under farm conditions in approximately one-fourth acre plots and is referred to as the Regional Farm Test. Twelve entries including the two check or standard varieties were tested in 1970. The third phase is the Regional Small Plot Test, conducted in five states, and this data is presented in a separate bulletin.

Official Variety Test

Disease resistant and non-resistant experimental lines and varieties developed by public and private agencies are included. One requirement for acceptance is quantitative data from experiments in which the proposed entry is compared with recognized varieties. Entries of seeds of lots

offered for sale within the state or from seed lots furnished by testing agencies from other states may also be included. Performance data are collected on yield, value, agronomic characteristics, disease resistance^{2/} chemical characteristics^{3/} and physical quality traits. Tobacco company leaf and research personnel cooperate in the physical and chemical evaluation of this material.

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

Agencies Sponsoring Entries in 1970

Bell's Seed Farm, Rocky Mount, N. C.

McNair Seed Company, Inc., Laurinburg, N. C.

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

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

Georgia Agricultural Experiment Station, Tifton, Georgia

S. C. Agricultural Experiment Station and USDA, Florence, S. C.

Speight Seed Farms, Winterville, N. C.

Virginia Agricultural Experiment Station, Chatham, Virginia

Test Locations

Five locations were used to represent the different soil and climate conditions of the state. The experiment numbers and locations were as follows:

^{2/} N. T. Powell and Furney Todd of the Plant Pathology Department and G. R. Gwynn of the Department of Crop Science and USDA - CRS cooperated on the tests for disease reaction. Dr. C. E. Main and Mr. John Sledge obtained brown spot ratings on cured leaf samples from all entries. Their assistance is gratefully acknowledged.

^{3/} Chemical analyses were made under the supervision of J. A. Weybrew and John L. Hall of the Department of Crop Science. Their assistance is gratefully acknowledged.

- TV 202 Border Belt Tobacco Research Station, Wallace Dickens, Superintendent, Whiteville, N. C., representing the Border Belt.
- TV 203 Upper Coastal Plain Research Station, Warren Bailey, Superintendent, Rocky Mount, N. C., representing the Eastern Belt.
- TV 204 Lower Coastal Plain Tobacco Research Station, Sandy Barnes, Superintendent, Kinston, N. C., representing the Eastern Belt.
- TV 205 Oxford Tobacco Research Station, Billy Ayscue, Superintendent, Oxford, N. C., representing the Middle Belt.
- TV 206 Upper Piedmont Tobacco Research Station, Howell Gentry, Superintendent, Reidsville, N. C., representing the Old Belt.

The map in Figure 1 shows the locations of these stations and also the Regional Farm Tests.

Methods

The Official Variety Tests were conducted on disease-free soil, insofar as possible. All entries were coded in the plant bed and in the field and were included at each location.

Three replications of a randomized block design were used at each location.^{4/} There were eighteen varieties and thirty-two breeding lines included in the tests for a total of 50 entries. The plants were banded approximately two weeks prior to transplanting and individually selected at transplanting for maximum uniformity within plots at all locations.

^{4/} Statistical analyses were made in the Computing Center under the supervision of Dr. John Rawlings and Sandra L. Biggs. Their assistance is gratefully acknowledged.

Each one-row plot consisted of 20 competitive plants. The rows were 3.75 feet apart at all locations, and hills were spaced 22 inches apart.

Cultural practices are shown in Table 16.

All entries were topped and hand suckered. Individual plots were harvested according to degree of maturity, tagged and kept separate throughout curing, sorting and grading. Data on agronomic characteristics were taken in the field, and chemical determinations were made on the cured leaf of the whole plant. Disease reactions were noted in separate tests under severe disease conditions.

The methods of recording data were the same as those used in previous years, except as noted, and may be found in Crop Science Research Reports Number 12 (1964), Number 16 (1965), Number 20 (1966), Number 24 (1967), Number 28 (1968) and Number 32 (1969).

Value per Acre: After the tobacco was sorted into lots, a Federal Tobacco Inspector graded the tobacco from each plot into appropriate government grades. The value per acre was calculated by multiplying the pounds of each grade by the average auction price paid for the grade during the 1969 and 1970 seasons through September 3, 1970.

Quality Index: Each grade was evaluated for physical traits by rating the leaf for color, body and texture on a scale of 10 to 50. The categories were: 10 = very good, 20 = good, 30 = fair, 40 = poor and 50 = very poor. A quality index was then calculated for each plot. This rating was made by experiment station personnel at the time the individual plots were graded.

Seasonal Conditions: The transplanting of tobacco at all five locations of the 1970 Official Variety Test was conducted under favorable moisture

conditions. Early growing conditions were, in general, favorable with good stands reported at all locations.

Based on reports from producers and warehousemen as of October 19, 1970, production of flue-cured tobacco in North Carolina was forecast at 760,900,000 pounds and was 9.4 percent above the 695,665,000 pounds produced last year. Yield per acre in the Eastern Belt (Type 12) was 2100 pounds per acre and the Border Belt yield was 2050 pounds per acre. This excellent yield was due to ample rainfall during the latter part of the growing season. The Middle and Old Belts yields were 1825 pounds per acre. The 9.4 percent increase in production was the largest crop produced in North Carolina since 1967.

The Whiteville Test, TV 202, was transplanted on May 1 under fair moisture conditions. Rainfall during the growing season was as follows: May - 2.39, June - 1.79, July - 7.54. The new fertilizer grade 6-12-18 was used in amount of 600 pounds per acre. The tobacco in this test tended to be fair in color and had medium body and fair texture. Brown Spot caused some damage in the more susceptible entries and a pathological reading on the degree of Brown Spot was made at this location. The tobacco in this test was of fair to good quality.

The Rocky Mount Test, TV 203, was planted on May 18 under fair moisture conditions. Dry conditions prevailed during May and early June. One and one-fourth inches of irrigation H₂O were applied on June 14. Primings from this locations were poor with the remaining tobacco being of rather good quality and texture. Fertilization consisted of 1000 pounds of 4-8-12 plus 160 pounds of 15-0-14.

The Kinston Test, TV 204, was planted on April 28 under good moisture conditions. The early growing season here was cool with adequate rainfall. The mid and late growing season was favored by warm temperatures and heavier rainfall. The tobacco produced in this test was an improvement over that produced at this location in 1968 and 1969. The leaf was of fair color, medium body and good texture.

The Oxford Test, TV 205, was transplanted on May 22 under normal Conditions. Early cutworm damage was eliminated by recommended practices. Rainfall for the balance of the season is given in Table 20. This test was irrigated on June 17 with .70 inches of water. The quality was good with moderate yield.

The Reidsville Test, TV 206, was transplanted May 29 under fair moisture conditions. After an early June drought, the season was favorable for good growth and development of this crop. The crop was irrigated once in June and twice in July giving adequate moisture. Overall, the quality of the entries was good in this test.

Regional Farm Tests

The number of entries in this test is necessarily limited since the plots are rather large and there are many locations. In this program are included advanced breeding lines that have met the minimum standards in the Regional Small Plot Test. It is desirable to gain information on these breeding lines and varieties under farm conditions. Also, this provides an opportunity for the tobacco companies to study the breeding lines and new varieties for their manufacturing characteristics.

This part of the evaluation program is a cooperative effort of the experiment station, extension service, USDA, tobacco companies and growers. The participating companies were: The American Tobacco Company, Brown and Williamson Tobacco Corporation, Imperial Tobacco Company, Liggett and Myers Tobacco Company, Philip Morris, Inc., P. Lorillard Company, R. J. Reynolds Tobacco Company and Export Leaf Tobacco Company.

Twelve locations were utilized -- two in South Carolina, two each in Georgia and Virginia and six in North Carolina. This is a cooperative program and permission was granted for the inclusion of all locations in this report.

Fertilization and other cultural practices, as shown in Table 15 were those generally used by the growers and were considered moderate. A nematode assay was made on all fields and those with a nematode problem were fumigated. Only information on the North Carolina Tests are shown here

Representatives from both domestic and foreign buyers visited these plots in the field. The cured tobacco was displayed on a warehouse floor for the participating companies to examine and sample for laboratory

analyses. Each company graded the tobacco according to the types they normally use in their manufacturing. In addition, they also rated each lot of tobacco for its physical quality characteristics according to the previously described quality index. Displays were scheduled in 1970 at Kinston and Durham.

Most of the locations were plagued with dry conditions early in the season delaying the maturity of the tobacco somewhat. Rains in late June and July were adequate to supply adequate if not excessive moisture. Overall the adverse weather conditions caused production of low quality tobacco at most farms.

Edmund transplanted under a period of drought which continued until early July. Little replanting was necessary but the crop grew slow due to drought. The rains did occur causing the tobacco to become rank and therefore lowered the quality somewhat. The quality of the crop was fair to good.

Johnson transplanted on April 21 and 22 under good soil moisture. All entries transplanted and grew off well. Rain was light early in the season but adequate for good crop growth. The crop cured rather clear and was of good quality.

Harrell had adequate moisture when transplanting on April 29 and May 1. A good stand was obtained. Dry conditions followed with the crop being irrigated twice in June. The crop was heavy bodied and of fair to good quality.

King got a poor stand of plants on the plant bed which delayed transplanting of part of the crop. Tobacco grew off slowly due to cool, dry weather -- this was later followed by heavy rainfall resulting in lower quality tobacco. This crop suffered 10% hail damage.

Busick transplanted May 16 and dry conditions followed. Rain in late June was adequate to produce a fair to good crop of medium bodied tobacco. All entries transplanted and grew off reasonably well. Drought in August may have led to lower quality.

Crews transplanted on May 19 and 20 under dry conditions. All entries transplanted reasonably well but grew slow due to dry conditions early in the season. The crop was thin and poorly filled out resulting in poor quality.

All six cooperators used T-148 contact sucker control material with fair to good results in controlling suckers.

RESULTS AND DISCUSSION

The data are discussed under the headings (1) Official Variety Tests and (2) Regional Farm Tests. Individual location data are presented but are discussed only to emphasize specific points.

Official Variety Test

The data presented in Tables 1 and 2 are summary data for various years and locations and indicate how several varieties have been performing over a period of years at various locations.

In Table 1, the data are percentage comparisons with the average performance of NC 2326 for the period 1963 to 1970. The varieties with the higher number of comparisons have been included in the tests from two to ten years and give a more accurate estimate of their general performance, while the varieties with nine comparisons have been in the test only two years. Most varieties in Table 1 maintain their same relative position for value per acre as they do for yield.

In Table 2, varieties that were common in the 1968, 1969 and 1970 tests are compared for a large number of characteristics. The same general trend was shown in these varieties during all years. Speight G-7, Coker 254 and Speight G-13 had the highest acre value. Speight G-7, NC 2326 and McNair 14 averaged above \$73.00 per one hundred pounds. NC 2326 was the earliest to flower. All varieties had about average percent nicotine, ranging from 2.95 for Speight G-28 to 3.61 for McNair 30. All varieties were in an average range for other chemical and agronomic traits.

The average performance of varieties and lines compared at five locations in 1970 is shown in Table 3. There was some variety x location interaction for the characters studied, however, it probably was not sufficient to affect the choosing of a variety to plant. Varieties tended to perform the same relative to each other, that is, they did not make major shifts. The variety x location mean squares were used for computation of L.S.D. values. The entries shown at the top of Table 3 are commercially available varieties, whereas, those in the lower portion are breeding lines.

Commercially Available Varieties

Fourteen of the seventeen commercially available varieties tested in 1970 yielded equal to or greater than NC 2326. There was a fairly wide spread for dollars per hundred weight, ranging from a low of \$75.05 for Speight G-28 to a high of \$77.85 for Speight G-7. The highest value per acre was McNair 135 at \$2111 per acre. The quality rating followed the

same general pattern as did the dollars per hundred weight. Due to the range used in assigning the quality index (10 to 50, with 10 being best), varieties seemed to be quite similar, however, small differences are important in this index and are significant. Considering all entries in the test, there has been a high correlation between the value per hundred weight and the quality index, indicating that the two are giving a somewhat similar picture. If the tobaccos are normal in physical appearance that would be expected.

Most varieties were intermediate in their flowering habit, ranging from 1 to 8 days later than NC 2326. All varieties had more leaves per plant than NC 2326 although the maximum difference was only 3.6 leaves. Data were collected on internode length on the basal, middle and upper part of the plant. Information of this nature would be useful to the engineer in developing mechanical harvesting equipment. The range was small in the lower two stalk positions, but wide in the upper position. Coker 213 and Coker 254 had a high ground sucker count. Speight G-13 and Speight G-41 had the lowest axillary sucker count per plant. Measurements on leaf size indicated that most varieties were quite similar. Most are of the old line type with medium width leaves. This has been the direction of selection by breeders in recent years and has produced varieties that tend to more nearly resemble those of the old line type.

Quality is divided into visual or physical appearance, chemical characteristics and smoking characteristics. The visual characteristics can be readily seen by the eye, whereas the chemical and smoke characteristics must be determined in the laboratory. Data on several chemical

constituents that are associated with quality are presented in Table 3. Most of the varieties appear to have satisfactory chemical compositions with Speight G-28 being the lowest in nicotine content as compared with the other varieties. The nicotine content in 1970 ranged from 2.65 to 3.79 although most test locations received adequate rainfall. Weather conditions during the growing season caused all entries to be about average in nicotine. Within limits, it is generally assumed that the higher the ratio of nitrogen-to-nicotine, the less desirable the tobacco since it does not age satisfactorily. This ratio is also used as an indication of chemical balance within the plant. All of the varieties had a ratio below 1.00 this season, with no exceptions. The total nitrogen content was similar to past years.

McNair 14 and Speight G-7 had a higher proportion of their alkaloid in the form of nornicotine than the other varieties. Several varieties showed some cherry red in the cured leaf. All of the varieties were in a range of twelve to fourteen percent sugar and the sugars were consistently higher than in 1969.

The ratio (reducing sugar/nicotine) was calculated as a measure of the relationship of the carbohydrates to the alkaloid fraction. To be of value, the constituents included in the ratio must be within the acceptable range. A higher ratio tends to indicate mildness and smoothness while a very low ratio may be indicative of a harsh irritating smoke. If the ratio is too high, it might indicate that the tobacco is too mild to be acceptable to the smoker. There was a range from 3.47 for Coker 411 to 5.20 for Speight G-28.

Information on disease resistance is presented in Table 4. Data were collected on Black Shank, Granville Wilt, Fusarium Wilt, Root Knot and Brown Spot. A relative rating of the level of resistance to each disease is given for each variety based on this and other disease tests. The disease tests were fairly critical at all locations. Much progress appears to have been made in developing disease resistant varieties released in the last few years. There are several varieties carrying a high level of resistance to Black Shank, Granville Wilt, Fusarium Wilt and Root Knot. Several other varieties carry a moderate to high level of resistance to Granville Wilt and Fusarium Wilt. The choice of varieties carrying Granville Wilt resistance is somewhat higher than in recent years. Brown Spot readings were obtained at five locations (Kinston, Whiteville, Reidsville, Rocky Mount and Oxford) on the cured leaf. The varieties were rated as tolerant, moderate tolerant, sensitive and very sensitive for Brown Spot.

Advanced Breeding Lines

Data on advanced breeding lines are also shown in Table 3, however, since these lines are in early stages of testing, the data will not be discussed in detail at this time.

Since most of the breeding lines have only been in the Official Variety Test for one year, regional testing was not available. The lines are rated as resistant without any index or level of resistance shown.

The same type of rating is given for the Granville Wilt and Fusarium Wilt levels. There has been an increase in breeding lines for Granville Wilt resistance in recent years. It has been difficult to obtain varieties

or breeding lines with multiple resistance to all diseases, good physical and chemical characteristics and acceptable smoke ratings. Under the Acreage-Poundage Program, some pressure has been eliminated for the plant breeder to continue to develop each year higher and higher yielding lines. This situation has enabled the plant breeder to direct more attention to the selection criteria for disease resistance.

Many of the entries carry resistance to Root Knot nematode species Meloidogyne incognita, which is the most prevalent species of nematode in North Carolina soils. There are other species of Root Knot nematodes as well as meadow and stunt nematodes to which these lines may be susceptible.

Regional Farm Tests

A summary of the results from the Regional Farm Tests is presented in Table 10. Yields ranged from 2069 to 2648 pounds per acre for Va. 770 and NC TG-11 respectively. Value per acre followed the same trend as yield. NC 2326 had the highest dollars per hundred pounds of the entries in this test with a value of \$74.00.

The tobacco from each of the locations was displayed on a warehouse floor at Kinston and Durham and appraised for the physical quality factors; color, body and texture by leaf and research personnel of each of the eight participating tobacco companies. The results of this quality appraisal are shown in Table 11. The ratings varied from company to company but tended to follow the same general pattern.

Table 13 shows percent tobacco usable by at least one company for individual North Carolina farms and a means for all farms and varieties. The high numbers indicate that the majority of the new lines could be used by at least one buying company.

In Table 14, an index of the amount graded is shown by grower for each variety. If all eight companies could grade all of a variety into their grades, then it received an index of 8. However, since companies have different requirements, all would not tend to grade each lot of new line tobacco. In the overall average for all companies, the varieties, NC 2326, NC 95, NC 6772, Speight G-34, PD 113 and Speight G-33 received the highest ratings.

The farmers were asked to rate the varieties for grower desirability with their highest preference shown as number one. The data are shown in Table 14. The rating indicated that the growers preferred NC 6772 over all other varieties and Speight G-34 was rated second.

Both physical and chemical information should be considered along with yield and value data relative to a variety or line. Also the handling characteristics are important. A thorough evaluation of breeding material is important if quality is to be maintained and improved.

These various indices are not conclusive but show trends in preferences which are indicative of the acceptability and desirability of these tobaccos by manufacturers and growers. All information should be studied relative to varietal performance for all characteristics and not just a selected one or two.

Table 12 presents data from the ten breeding lines in the Regional Small Plot Tests that were common in the Regional Farm Test. It shows the percent cured leaf usable by tobacco companies across six locations and the rating for variety potential. A low number indicates a higher rating for variety potential.

Table 1. Percentage comparison with the mean of NC 2326 of certain flue-cured tobacco varieties in the Official Tobacco Variety Test. 1963-1970.

Standard NC 2326	Acre Yield 2256 lbs.		Acre Value \$1555		Value per 100 lbs. ^{1/} \$77.58	
No. Comparisons*						
18	Speight G-13	(109)	Speight G-13	(112)	Speight G-7	(100)
22	Coker 258	(108)	Coker 254	(112)	<u>NC 2326</u>	(100)
13	Coker 254	(107)	McNair 135	(111)	Va. 115	(100)
27	Speight G-7	(106)	Speight G-41	(110)	Coker 254	(100)
50	NC 95	(105)	Coker 258	(110)	McNair 14	(99)
9	McNair 135	(104)	Speight G-7	(109)	Coker 319	(99)
41	Coker 319	(103)	Coker 411	(106)	McNair 133	(99)
9	Speight G-41	(102)	Ga. 1469	(106)	Speight G-13	(99)
36	McNair 30	(101)	McNair 133	(104)	Coker 411	(99)
37	<u>NC 2326</u>	(100)	Speight G-28	(102)	Speight G-41	(99)
9	Ga. 1469	(100)	Coker 213	(101)	Coker 213	(98)
41	Va. 115	(100)	McNair 14	(101)	McNair 135	(98)
9	Coker 411	(99)	<u>NC 2326</u>	(100)	Coker 258	(98)
13	McNair 133	(99)	Coker 319	(99)	Ga. 1469	(98)
13	Speight G-28	(99)	NC 95	(99)	NC 95	(97)
13	Coker 213	(98)	McNair 30	(95)	McNair 30	(97)
18	McNair 14	(97)	Va. 115	(95)	Speight G-28	(97)

^{1/}Based on 1970 data.

*Number of comparisons. Relate acre value and cwt. to variety.

THREE YEAR AVERAGE 1968, 1969, 1970

Table 2. Comparison of certain varieties and lines in Official Tobacco Variety Test.

Varieties or Lines	Yield Lbs/A	Value Index		Days to Flower	Leaves per Plant	Height of Plant
		Dol/A	Dol/Cwt.			
NC 2326	2330	1715	73.42	50	18.3	46
NC 95	2380	1703	71.41	54	20.2	45
Coker 213	2363	1680	70.95	56	21.6	50
Coker 254	2465	1786	72.28	58	21.9	51
Coker 258	2458	1755	71.30	58	21.7	47
Coker 319	2310	1675	72.31	55	21.2	47
McNair 14	2256	1654	73.10	52	19.5	45
McNair 30	2325	1653	71.00	51	18.5	47
Speight G-7	2487	1835	73.68	53	20.9	48
Speight G-13	2531	1823	71.79	57	20.1	51
Speight G-28	2374	1682	70.75	54	20.6	42
*Va. 115	2522	1839	72.56	52	19.2	43

Varieties or Lines	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
NC 2326	0.6	23.5	9.5	12.0	14.0	22.3	25.1	24.0
NC 95	1.7	21.6	9.5	11.7	13.7	19.8	23.2	23.3
Coker 213	3.9	24.6	9.6	12.4	14.8	19.8	24.0	24.5
Coker 254	3.5	23.7	10.0	12.4	14.2	20.3	24.2	24.3
Coker 258	1.6	20.3	8.8	11.2	13.3	19.3	23.4	24.0
Coker 319	1.7	25.3	8.7	11.2	13.6	21.2	24.4	25.1
McNair 14	1.2	23.7	10.5	12.4	13.8	21.3	24.1	23.6
McNair 30	1.6	23.9	9.7	12.2	14.2	22.3	25.1	24.5
Speight G-7	2.7	23.3	9.8	12.2	14.3	19.9	23.4	23.8
Speight G-13	1.4	18.5	9.6	12.2	14.2	20.0	23.8	24.3
Speight G-28	0.6	19.9	8.8	10.9	13.2	19.6	22.9	23.7
Va. 115	0.9	22.4	8.6	10.9	13.4	20.8	23.6	24.0

Varieties or Lines	Nic. %	Nor. Nic. %	Red. Sug. %	Tot. N. %	T.N. Nic.	Sug. Nic.
NC 2326	3.48	.13	14.85	2.31	.66	4.60
NC 95	3.48	.12	13.56	2.36	.69	4.06
Coker 213	3.56	.13	13.39	2.29	.65	3.93
Coker 254	3.46	.10	12.33	2.25	.66	3.91
Coker 258	3.60	.13	12.36	2.34	.66	3.97
Coker 319	3.21	.08	12.69	2.41	.76	4.30
McNair 14	3.48	.21	13.74	2.55	.74	4.19
McNair 30	3.61	.12	12.68	2.41	.67	3.80
Speight G-7	3.54	.16	14.83	2.28	.65	4.54
Speight G-13	3.36	.16	14.31	2.35	.70	4.50
Speight G-28	2.95	.12	12.78	2.26	.77	4.62
Va. 115	3.27	.21	17.28	2.20	.67	5.65

WHITEVILLE, OXFORD, KINSTON, ROCKY MOUNT and REIDSVILLE

Table 3. Comparison of varieties in 1970 for certain characteristics, for five locations.

Varieties or Lines	Yield ^{1/} Lbs/A	Value Index		Q.I.	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					0-10"	10-20"	20"-top
Commercially Available Varieties										
NC 2326	2483	1926	77.58	29.5	52	18.9	44	1.8	2.2	2.8
NC 95	2575	1946	75.57	33.2	57	20.3	44	1.8	2.2	2.4
Coker 213	2498	1902	76.11	34.3	59	21.7	49	1.8	2.3	2.5
Coker 254	2651	2048	77.22	30.1	60	21.8	49	1.8	2.2	2.5
Coker 258	2573	1952	75.91	32.4	59	22.5	46	1.7	2.1	2.2
Coker 319	2509	1934	77.08	28.8	57	21.5	46	1.8	2.1	2.4
Coker 411	2611	2003	76.74	32.5	55	21.5	45	1.7	2.1	2.3
Ga. 1469	2598	1969	75.76	33.7	58	21.6	47	1.8	2.1	2.5
McNair 14	2449	1890	77.13	30.7	55	19.9	44	1.9	2.2	2.5
McNair 30	2442	1844	75.52	33.5	53	19.3	46	1.9	2.3	2.8
McNair 133	2567	1973	76.88	31.4	58	20.8	47	1.9	2.2	2.6
McNair 135	2774	2111	76.04	33.1	57	21.9	47	1.8	2.1	2.4
Speight G-7	2627	2045	77.85	29.2	55	21.3	46	1.9	2.1	2.4
Speight G-13	2676	2051	76.60	33.0	60	19.8	50	2.0	2.4	2.9
Speight G-28	2552	1915	75.05	32.4	56	21.9	41	1.7	1.9	2.1
Speight G-41	2662	2039	76.55	31.8	59	20.9	45	1.7	2.1	2.5
Va. 115	2678	2074	77.39	31.5	54	20.3	43	1.8	2.1	2.4
Advanced Breeding Lines										
Bell 110	2471	1856	75.18	34.0	57	21.0	46	1.8	2.2	2.5
Coker 347	2646	2023	76.48	32.1	60	21.6	46	1.8	2.1	2.4
Coker 68-354-1M	2448	1847	75.48	33.4	59	22.7	47	1.8	2.1	2.3
Ga. 1498	2381	1788	75.11	3.49	55	19.3	45	1.8	2.2	2.8
McNair 9132	2904	2269	78.11	29.5	56	20.5	44	1.7	2.0	2.6
McNair 9138	2825	2212	78.29	29.1	57	20.8	44	1.7	2.1	2.4
McNair 9140	2969	2320	78.09	28.4	56	20.4	44	1.7	2.1	2.5
McNair 9171	2809	2125	75.67	34.1	58	20.7	47	1.8	2.2	2.7
McNair 9233	2730	2150	78.77	25.7	57	21.3	47	1.9	2.2	2.4
NC 6772	2563	1999	77.98	29.1	53	19.7	44	1.8	2.1	2.6
NC 68-W-22	2287	1728	75.57	33.8	53	20.9	46	1.8	2.1	2.6
NC 7818-2-2C	2704	2101	77.75	29.4	54	20.4	46	1.8	2.2	2.7
NC 8839	2875	2216	77.12	32.3	57	19.7	47	1.8	2.2	2.8
NC 8908	2882	2177	75.47	33.3	57	19.9	46	1.8	2.2	2.7
NC 8931-3	2426	1886	77.76	29.0	55	20.5	46	1.8	2.2	2.7
NC 9003	2958	2300	77.75	28.9	60	21.7	49	1.8	2.1	2.6
NC 9005	2759	2160	78.28	27.5	54	20.0	48	1.9	2.3	2.8
NC 9040	2450	1840	75.09	35.7	50	18.1	43	1.9	2.2	2.8
NC 9069	2371	1829	77.07	32.1	50	18.9	44	1.8	2.3	2.8
NC 9085	2159	1652	76.44	34.4	50	18.5	46	1.9	2.3	3.0
NC 9800	2639	2036	77.14	30.0	56	20.4	47	1.8	2.2	2.8
NC TG-11	2828	2136	75.56	33.4	57	21.9	47	1.7	2.0	2.5
PD 113	2600	1920	73.82	35.4	58	22.1	46	1.7	2.1	2.4
PD 175	2608	1949	74.75	34.4	56	20.9	46	1.8	2.3	2.5
Speight G-14	2732	2111	77.26	31.3	58	21.4	47	1.8	2.2	2.5
Speight G-33	2471	1872	75.71	34.3	59	20.5	47	1.8	2.2	2.6
Speight G-34	2731	2100	76.88	30.9	58	23.6	46	1.7	1.9	2.2
Speight G-38	2608	2012	77.18	31.1	57	20.8	46	1.8	2.2	2.5
Speight G-53	2465	1849	74.97	33.4	58	20.8	45	1.8	2.2	2.4
Speight G-70	2417	1854	76.74	31.4	57	20.4	48	1.8	2.3	2.7
Speight G-144	2494	1939	77.73	29.0	57	22.3	48	1.8	2.1	2.4
Speight G-24-H	2654	2058	77.47	29.2	59	22.7	49	1.7	2.1	2.4
Va. 770	2335	1793	76.74	32.8	55	19.9	45	1.8	2.2	2.6
L.S.D. (.05)	115	94	.99	2.9	2	1.0	2	.1	.1	.2
(.01)	151	122	1.31	3.8	2	1.2	2	.1	.2	.3
C.V. (%)	6	6	2	13	4	6	6	9	8	11

WHITEVILLE, OXFORD, KINSTON, ROCKY MOUNT and REIDSVILLE

Table 3. Continued. Comparison of varieties in 1970 for certain characteristics, for five locations.

Varieties	Suckers per plant			Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf	Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties									
NC 2326	0.2	25.8		8.8	11.0	13.6	21.0	24.1	23.6
NC 95	0.8	22.9		9.5	11.0	13.4	19.3	22.1	22.9
Coker 213	3.2	24.0		9.5	11.2	14.0	19.9	22.8	23.8
Coker 254	3.5	25.1		9.8	11.3	13.4	20.3	23.3	24.1
Coker 258	0.9	20.9		8.8	10.3	12.9	19.1	22.2	23.3
Coker 319	1.0	26.8		8.4	10.2	12.8	20.8	23.4	24.2
Coker 411	0.5	21.9		8.5	10.4	13.1	21.5	24.2	24.6
Ga. 1469	0.7	24.7		8.6	10.3	12.8	19.7	22.6	23.2
McNair 14	0.5	25.2		10.0	11.4	13.3	20.8	23.2	23.4
McNair 30	0.8	25.1		9.0	11.1	13.7	21.6	24.0	24.2
McNair 133	1.5	22.6		10.3	11.5	13.5	20.3	22.6	23.4
McNair 135	0.6	23.8		8.3	9.7	13.0	21.1	23.5	24.0
Speight G-7	1.6	23.7		9.3	11.1	13.8	19.6	22.4	23.1
Speight G-13	0.4	18.4		9.5	11.5	13.8	19.9	23.4	24.1
Speight G-28	0.3	20.6		8.4	9.8	12.1	18.7	21.4	22.5
Speight G-41	0.6	19.3		8.9	11.0	13.0	19.5	22.4	23.3
Va. 115	0.4	22.2		8.3	10.3	13.0	20.1	22.6	23.7
Advanced Breeding Lines									
Bell 110	0.6	21.8		8.7	10.7	13.6	20.5	23.3	23.8
Coker 347	0.8	21.5		8.5	10.3	12.7	20.1	23.3	24.4
Coker 68-354-1M	1.0	25.6		7.9	9.7	12.5	19.9	22.8	24.2
Ga. 1498	1.7	26.0		9.1	11.7	14.4	21.7	25.0	25.5
McNair 9132	0.2	21.5		9.1	11.1	13.6	20.9	23.9	24.3
McNair 9138	0.2	22.5		8.5	10.5	12.9	19.7	22.8	23.2
McNair 9140	0.3	22.0		9.1	10.8	13.5	21.0	23.5	24.3
McNair 9171	0.6	19.5		9.9	11.9	14.1	21.0	23.7	24.3
McNair 9233	1.8	26.4		8.5	10.5	12.7	20.3	23.3	23.8
NC 6772	1.8	31.3		8.0	10.1	12.7	21.0	23.4	23.6
NC 68-W-22	0.2	28.0		7.6	9.9	12.8	20.2	22.8	23.0
NC 7818-2-2C	0.1	24.8		8.7	10.8	13.3	20.8	23.8	24.5
NC 8839	0.3	18.0		9.1	11.1	13.7	20.5	24.0	24.7
NC 8908	0.3	22.5		9.0	11.1	14.0	21.0	24.2	24.7
NC 8931-3	0.4	27.4		8.0	10.5	13.0	21.9	24.1	24.0
NC 9003	2.1	23.7		9.4	11.2	13.9	19.5	22.4	23.6
NC 9005	1.7	27.8		9.7	12.1	14.4	21.5	24.2	24.4
NC 9040	0.9	28.4		10.4	12.5	14.5	21.2	24.3	24.4
NC 9069	0.5	26.8		9.3	11.6	13.4	22.5	24.7	23.9
NC 9085	0.6	24.9		9.4	11.7	13.9	21.0	23.4	23.4
NC 9800	0.9	23.9		8.2	10.6	13.9	20.3	23.2	23.9
NC TG-11	0.9	21.4		7.7	9.5	12.1	21.0	23.6	24.5
PD 113	0.5	20.4		7.8	9.9	12.4	18.8	22.1	23.1
PD 175	0.8	24.6		9.4	11.7	14.4	19.0	22.7	23.2
Speight G-14	1.1	21.5		9.6	11.3	13.9	19.5	22.7	23.6
Speight G-33	0.6	22.0		8.4	10.1	12.5	20.0	22.9	23.9
Speight G-34	0.6	21.7		8.3	9.7	12.8	19.2	21.8	23.1
Speight G-38	0.6	19.2		9.3	10.9	13.4	19.5	22.3	23.1
Speight G-53	1.9	25.2		9.5	11.5	13.7	19.4	22.5	23.3
Speight G-70	1.2	23.7		9.7	11.3	14.0	19.7	22.5	22.5
Speight G-144	1.8	24.4		8.2	10.2	13.1	19.9	23.1	24.1
Speight G-25-H	1.3	22.3		9.2	10.8	13.3	20.2	22.7	23.5
Va. 770	3.9	29.0		8.9	11.0	13.8	19.7	22.8	24.1
L.S.D. (.05)	.8	3.0		.6	.7	.8	.8	.9	.8
(.01)	1.1	3.9		.7	.9	1.0	1.1	1.2	1.0
C.V. (%)	117	18		9	9	8	6	5	4

WHITEVILLE, OXFORD, KINSTON, ROCKY MOUNT and REIDSVILLE

Table 3. Continued. Comparison of varieties in 1970 for certain characteristics, for five locations.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	Nor.Nic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	3.50	14.60	2.29	.21	.65	4.47
NC 95	3.48	12.37	2.35	.17	.68	3.71
Coker 213	3.45	13.10	2.27	.20	.66	3.99
Coker 254	2.97	12.13	2.21	.16	.74	4.33
Coker 258	3.34	13.72	2.20	.18	.66	4.31
Coker 319	3.05	13.34	2.30	.11	.75	4.66
Coker 411	3.79	12.55	2.28	.18	.69	3.47
Ga. 1469	3.28	12.41	2.37	.11	.63	3.94
McNair 14	3.34	13.58	2.26	.29	.69	4.30
McNair 30	3.42	12.33	2.47	.19	.74	3.84
McNair 133	3.49	13.22	2.29	.23	.67	4.29
McNair 135	3.45	13.35	2.26	.19	.65	4.10
Speight G-7	3.46	14.86	2.26	.25	.66	4.56
Speight G-13	3.31	13.24	2.20	.20	.64	4.09
Speight G-28	2.65	12.87	2.29	.16	.69	5.20
Speight G-41	3.46	13.86	2.17	.18	.82	4.22
Va. 115	3.18	14.73	2.17	.20	.63	4.95
Advanced Breeding Lines						
Bell 110	3.33	13.17	2.20	.23	.69	4.29
Coker 347	3.31	13.19	2.24	.18	.67	4.15
Coker 68-354-1M	3.72	12.72	2.46	.19	.66	3.63
Ga. 1498	3.87	12.21	2.35	.25	.61	3.47
McNair 9132	2.96	17.50	2.07	.17	.70	6.39
McNair 9138	2.94	17.97	2.04	.18	.69	6.51
McNair 9140	2.97	17.49	2.04	.18	.69	6.46
McNair 9171	3.47	13.23	2.24	.14	.65	4.11
McNair 9233	2.59	14.55	2.05	.13	.79	6.00
NC 6772	3.25	15.00	2.15	.30	.66	4.89
NC 68-W-22	3.47	14.11	2.24	.18	.65	4.43
NC 7818-2-2C	3.15	15.24	2.23	.17	.71	5.26
NC 8839	2.63	14.68	2.08	.27	.79	6.20
NC 8908	2.80	14.70	2.12	.18	.76	5.44
NC 8931-3	3.26	13.33	2.26	.17	.69	4.36
NC 9003	3.32	14.73	2.13	.18	.64	4.74
NC 9005	2.81	15.59	2.19	.12	.78	5.91
NC 9040	3.52	13.37	2.31	.31	.66	4.01
NC 9069	3.68	14.03	2.28	.24	.62	3.97
NC 9085	3.45	12.02	2.54	.29	.74	3.70
NC 9800	3.06	14.98	2.12	.13	.69	5.23
NC TG-11	3.28	13.71	2.06	.14	.63	4.48
PD 113	3.40	14.28	2.25	.19	.66	4.46
PD 175	3.55	13.84	2.29	.18	.64	4.34
Speight G-14	3.59	14.05	2.16	.19	.60	4.11
Speight G-33	3.17	14.13	2.28	.20	.72	4.67
Speight G-34	3.14	15.05	2.12	.17	.68	5.12
Speight G-38	3.56	14.35	2.18	.21	.61	4.18
Speight G-53	2.59	13.25	2.28	.13	.88	5.54
Speight G-70	3.75	13.96	2.35	.22	.63	4.02
Speight G-144	3.78	13.57	2.39	.20	.63	3.92
Speight G-25-H	2.78	12.34	2.12	.22	.76	4.75
Va. 770	3.05	14.50	2.28	.23	.75	5.15
L.S.D. (.05)	.28	1.76	.11	.08	.05	.94
(.01)	.37	2.31	.15	.11	.06	1.24
C.V. (%)	8	6	7	5	10	4

Table 4. Summary information on disease resistance.

Varieties or Lines	Level of Resistance					
	Black Shank	Granville Wilt	Fusarium Wilt	Root ² / Knot ²	Black Root Rot	Mosaic
NC 2326	Mod.	Low	Low			
NC 95	High	High	High	Res.		
Coker 213	High	Mod.	High			
Coker 254	High	High	Mod.	Res.		
Coker 258	High	High	High	Res.		
Coker 319	Low	Low	Mod.			
Coker 411	High	Low	Low			
Ga. 1469	Mod.	Mod.	High	Res.		
McNair 14	Mod.	High	Susc.			
McNair 30	Mod.	Susc.	Low			
McNair 133	High	High	Low			
McNair 135	Mod.	Susc.	High			
Speight G-7	High	Low	Susc.			
Speight G-13	High	Mod.	Low			
Speight G-28	High	High	Low	Res.		
Speight G-41	Mod.	High	High	Res.		
Va. 115	Mod.	Low	Susc.			
Advanced Breeding Lines ^{1/}						
Bell 110	Res.	Mod.	High	Res.	Susc.	
Coker 347	Res.	High	High	Res.		
Coker 68-354-1M	Res.	Mod.	High	Seg.	Susc.	
Ga. 1498	Res.	Susc.	Mod.	Susc.	Seg.	
McNair 9132	Res.	Susc.	Res.			
McNair 9138	Res.	Susc.	Res.			
McNair 9140	Res.	Susc.	Res.			
McNair 9171	Res.	Susc.	Susc.			
McNair 9233	Res.	Res.	Res.			
NC 6772	Res.	Mod.	Low		Res.	
NC 68-W-22	Susc.	Susc.	Res.			Res.
NC 6818-2-2C	Res.	Res.	Res.			
NC 8839	Res.	Res.	Res.			
NC 8908	Res.	Res.	Res.			
NC 8931-3	Res.	Susc.	Res.			
NC 9003	Res.	Res.	Susc.			
NC 9005	Res.	Res.	Res.			
NC 9040	Res.	Res.	Susc.			
NC 9069	Res.	Susc.	Res.			
NC 9085	Res.	Susc.	Res.			
NC 9800	Res.	Susc.	Res.			
NC TG-11	Res.	Low	Low	Susc.	Seg.	
PD 113	Res.	High	Low	Susc.	Susc.	Res.
PD 175	Res.	Mod.	High	Susc.	Susc.	Res.
Speight G-14	Res.	Res.	Res.			
Speight G-33	Res.	Mod.	Mod.	Res.	Susc.	
Speight G-34	Res.	Mod.	Mod.	Res.	Susc.	
Speight G-38	Res.	Res.	Res.			
Speight G-53	Res.	Res.	Res.			
Speight G-70	Res.	Res.	Res.			
Speight G-144	Res.	Res.	Res.			
Speight G-25-H	Res.	Res.	Res.			
Va. 770	Res.	Mod.	High	Res.	Res.	Res.

Table 4. (Continued) 1970 Brown Spot Evaluation^{1/}

Decreasing tolerance	Entry No.	Entry	1970 D.I.	Duncan's Analysis
1	5	NC TG-11	.125	
2	27	Speight G-41	.125	
3	11	NC 6772	.133	
4	18	Coker 347	.133	
5	41	NC 9003	.133	
6	17	Coker 319	.142	
7	12	Speight G-34	.142	
8	25	Speight G-13	.142	
9	26	Speight G-28	.150	
10	49	NC 8839	.150	
11	39	McNair 9233	.158	
12	30	Speight G-38	.167	
13	34	Speight G-25H	.175	
14	48	NC 8931-3	.175	
15	29	Speight G-14	.175	
16	24	Speight G-7	.183	
17	7	Bell 110	.183	
18	2	NC 95	.183	
19	16	Coker 258	.183	
20	44	NC 9069	.192	
21	28	Ga. 1469	.200	
22	15	Coker 254	.200	
23	36	McNair 9138	.208	
24	47	NC 8908	.208	
25	13	Speight G-13	.217	
26	1	NC 2326	.217	
27	9	Speight G-33	.233	
28	37	McNair 9140	.233	
29	46	NC 7818-2-2C	.242	
30	42	NC 9005	.250	
31	35	McNair 9132	.250	
32	10	PD 175	.250	
33	32	Speight G-70	.267	
34	50	NC 9800	.275	
35	31	Speight G-53	.275	
36	23	McNair 135	.283	
37	43	NC 9040	.283	
38	4	Coker 68-354-1M	.292	
39	21	McNair 30	.292	
40	6	Va. 770	.300	
41	22	McNair 133	.308	
42	40	NC 68-W-22	.308	
43	38	McNair 9171	.308	
44	20	McNair 14	.308	
45	14	Coker 213	.317	
46	33	Speight G-144	.325	
47	19	Coker 411	.342	
48	8	Ga. 1498	.358	
49	45	NC 9085	.375	
50	3	PD 113	.383	

^{1/} Combined data for Whiteville, Kinston, Rocky Mount, Oxford and Reidsville.
Ratings made by Dr. C. E. Main and Mr. John Sledge.

TV 202 WHITEVILLE 1970

Table 5. Comparison of varieties for certain characteristics.

Varieties or Lines	Yield Lbs/A	Value Index		Days to Flower	Leaves per Plant	Height of Plant	Internode Length			
		Dol/a	Dol/Cwt.				Q.I.	0-10"	10-20"	20"-top
Commercially Available Varieties										
NC 2326	2686	2088	77.79	28.3	53	18.1	46	2.0	2.3	3.0
NC 95	2546	1960	76.95	28.1	55	20.3	43	1.8	2.4	2.2
Coker 213	2694	2069	76.82	31.5	57	22.5	51	1.8	2.3	2.4
Coker 254	2850	2250	78.95	29.8	60	22.3	51	1.9	2.4	2.4
Coker 258	2734	2096	76.67	29.3	58	23.3	47	1.6	2.2	2.1
Coker 319	2706	2120	78.35	26.5	57	22.1	48	1.9	2.0	2.4
Coker 411	2760	2131	77.25	31.2	55	22.9	44	1.6	2.2	2.0
Ga. 1469	2780	2137	76.85	32.0	55	20.9	47	1.9	2.3	2.4
McNair 14	2688	2108	78.47	26.2	55	19.2	43	2.0	2.4	2.4
McNair 30	2658	2014	75.79	33.0	52	18.7	45	1.9	2.4	2.7
McNair 133	2682	2083	77.66	28.8	57	21.0	48	2.1	2.4	2.4
McNair 135	3016	2291	75.91	32.2	56	21.5	47	1.9	2.2	2.3
Speight G-7	2830	2237	79.02	26.1	54	20.7	47	2.1	2.2	2.4
Speight G-13	2870	2218	77.25	32.4	59	20.1	50	2.0	2.6	2.7
Speight G-28	2584	2000	77.38	27.6	55	22.0	38	1.6	1.9	1.7
Speight G-41	2778	2147	77.25	30.0	56	22.8	45	1.6	2.2	2.1
Va. 115	2832	2219	78.33	31.5	54	19.8	42	1.8	2.3	2.2
Advanced Breeding Lines										
Bell 110	2660	2018	75.95	32.3	57	21.1	44	1.8	2.1	2.2
Coker 347	2940	2281	77.59	32.9	59	23.5	48	1.8	2.0	2.2
Coker 68-354-1M	2630	1993	75.82	31.6	58	23.0	48	2.0	2.3	2.1
Ga. 1498	2652	1956	73.67	35.8	55	18.9	44	2.0	2.2	2.5
McNair 9132	3154	2510	79.57	27.8	55	20.1	43	1.7	2.2	2.4
McNair 9138	2926	2308	78.84	29.1	56	20.5	43	1.7	2.1	2.3
McNair 9140	3090	2440	78.93	25.9	54	19.6	43	1.7	2.2	2.4
McNair 9171	2940	2206	75.05	35.2	55	21.1	45	1.7	2.3	2.3
McNair 9233	3004	2395	79.76	22.0	57	22.1	48	1.9	2.3	2.2
NC 6772	2716	2120	78.05	27.1	52	19.0	44	1.8	2.3	2.6
NC 68-W-22	2452	1880	76.69	31.7	53	21.1	48	1.7	2.3	2.6
NC 7818-2-2C	2714	2140	78.84	28.3	54	20.6	46	1.8	2.1	2.6
NC 8839	3228	2449	75.89	35.4	56	19.7	46	1.8	2.2	2.7
NC 8908	3154	2410	76.39	33.9	56	19.2	47	2.0	2.5	2.7
NC 8931-3	2560	2010	78.50	26.4	53	20.7	46	1.8	2.4	2.5
NC 9003	3244	2526	77.89	30.8	58	21.7	49	1.9	2.3	2.4
NC 9005	3014	2364	78.44	28.2	57	18.7	50	2.0	2.3	3.2
NC 9040	2734	2081	76.17	34.5	49	18.1	46	2.0	2.4	2.9
NC 9069	2590	2032	78.44	25.9	50	18.7	47	1.9	2.3	3.1
NC 9085	2530	1961	77.50	32.3	51	18.4	50	2.1	2.3	3.3
NC 9800	2772	2160	77.90	30.3	55	20.7	46	1.7	2.3	2.5
NC TG-11	3056	2292	74.99	33.1	56	22.1	49	1.8	2.1	2.5
PD 113	2786	2105	75.48	32.4	57	23.0	45	1.7	2.2	2.0
PD 175	2690	2036	75.71	32.8	56	20.2	46	1.9	2.4	2.4
Speight G-14	2846	2189	76.94	32.3	57	21.8	48	1.8	2.3	2.4
Speight G-33	2704	2113	78.15	32.3	58	20.3	47	1.8	2.4	2.5
Speight G-34	2954	2309	78.16	29.3	58	23.9	46	1.7	2.1	2.0
Speight G-38	2724	2110	77.45	29.8	56	21.4	46	1.8	2.3	2.2
Speight G-53	2660	2048	77.00	31.3	57	20.9	46	2.0	2.3	2.3
Speight G-70	2564	2000	78.01	29.7	56	21.1	48	2.0	2.3	2.4
Speight G-144	2740	2135	77.93	29.3	56	22.1	49	1.8	2.2	2.4
Speight G-25-H	2876	2255	78.39	28.2	57	24.5	50	1.6	2.3	2.2
Va. 770	2602	2008	77.18	31.4	56	20.1	43	2.0	2.2	2.3
L.S.D (.05)	187	155	2.15	3.9	2	1.6	3	.3	.3	.3
(.01)	245	203	2.82	5.2	3	2.1	4	.4	.4	.4
C.V. (%)	4	4	2	8	2	5	4	11	8	7

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Table 5. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties								
NC 2326	0.5	36.1	8.2	10.7	14.5	21.5	24.1	23.4
NC 95	2.6	31.0	8.2	9.7	13.5	18.2	20.1	20.5
Coker 213	3.2	34.3	8.5	10.1	13.7	19.6	21.9	22.9
Coker 254	5.0	32.7	10.1	10.8	13.1	20.4	23.0	23.1
Coker 258	2.0	33.7	8.3	9.3	13.3	18.0	20.9	22.1
Coker 319	2.5	38.4	7.8	9.9	12.9	20.6	22.6	22.9
Coker 411	2.3	34.6	7.2	9.5	12.9	20.7	23.2	23.9
Ga. 1469	1.8	36.1	7.6	9.5	12.9	19.9	21.5	22.6
McNair 14	1.4	34.0	9.5	10.9	13.6	20.5	22.5	22.3
McNair 30	2.5	38.4	8.4	11.5	14.5	21.9	24.7	24.1
McNair 133	3.0	30.1	9.5	11.0	14.0	19.5	22.1	22.7
McNair 135	2.0	35.7	8.1	9.5	13.6	21.5	23.9	23.5
Speight G-7	4.2	30.6	8.9	10.7	14.2	18.8	21.4	22.3
Speight G-13	1.2	29.2	8.6	10.5	13.3	19.3	22.4	22.1
Speight G-28	1.4	29.1	8.2	9.7	13.0	18.8	20.8	21.8
Speight G-41	2.3	32.4	7.5	9.4	12.8	18.1	21.7	21.9
Va. 115	1.4	31.9	7.2	9.3	12.5	19.5	22.1	22.3
Advanced Breeding Lines								
Bell 110	1.8	32.0	8.2	10.3	13.0	20.7	23.1	22.5
Coker 347	2.3	34.7	8.1	9.2	12.5	19.5	22.1	23.1
Coker 68-354-1M	2.9	43.0	6.7	8.7	11.6	19.1	22.3	23.4
Ga. 1498	2.7	35.7	8.1	11.9	15.5	21.3	25.1	24.9
McNair 9132	0.9	33.0	8.2	10.5	14.1	20.9	24.1	24.6
McNair 9138	0.9	34.5	7.7	10.2	13.5	19.9	22.7	22.6
McNair 9140	1.1	35.1	8.1	10.3	14.4	20.5	23.3	23.9
McNair 9171	2.4	32.7	9.1	11.3	14.5	21.6	23.4	23.8
McNair 9233	4.1	38.1	7.7	9.0	13.1	19.7	22.7	22.9
NC 6772	4.3	42.2	7.3	9.3	13.5	21.3	23.2	23.3
NC 68-W-22	0.8	40.1	6.6	9.3	14.5	19.2	21.9	22.5
NC 7818-2-2C	0.4	36.5	8.3	10.9	13.7	20.2	23.3	23.3
NC 8839	0.7	30.5	9.2	10.7	14.0	20.5	23.5	24.4
NC 8908	1.1	36.3	7.9	10.1	14.9	19.9	22.5	24.3
NC 8931-3	1.6	42.0	7.1	9.9	13.0	21.7	23.5	23.5
NC 9003	3.1	36.6	9.1	10.3	14.1	19.2	21.5	21.9
NC 9005	3.4	35.6	9.3	12.7	14.7	21.0	24.1	23.6
NC 9040	3.3	33.2	10.2	12.6	15.2	21.3	23.3	23.7
NC 9069	2.1	37.7	8.1	11.2	14.6	22.2	23.9	23.3
NC 9085	1.7	32.6	8.8	11.4	14.7	20.5	21.9	22.5
NC 9800	2.3	36.3	7.3	9.7	13.7	19.9	22.1	22.8
NC TG-11	2.4	34.8	6.7	8.5	12.8	20.4	21.9	23.1
PD 113	1.6	30.0	7.1	10.0	13.1	18.3	21.1	21.7
PD 175	2.1	33.3	9.1	12.1	14.5	18.8	22.4	22.3
Speight G-14	2.8	28.7	9.3	10.5	13.7	18.9	21.0	22.0
Speight G-33	2.2	34.2	7.7	9.5	12.4	19.7	22.3	23.5
Speight G-34	2.5	34.6	7.7	8.6	12.8	18.5	20.7	21.6
Speight G-38	2.1	29.1	8.1	10.2	13.9	18.7	21.5	22.2
Speight G-53	1.2	35.2	8.6	11.2	13.7	18.2	21.7	22.3
Speight G-70	2.9	35.9	8.7	11.1	14.4	18.9	21.6	21.7
Speight G-144	2.9	32.4	7.7	9.7	13.9	19.6	23.4	23.7
Speight G-25-H	3.1	35.6	8.5	9.5	12.9	19.3	20.7	22.1
Va. 770	4.4	39.9	8.5	11.2	13.9	19.1	23.2	23.3
L.S.D. (.05)	1.3	5.4	.9	1.2	1.6	1.5	1.5	1.3
(.01)	1.7	7.1	1.2	1.5	2.0	2.0	2.0	1.7
C.V. (%)	36	10	7	7	7	5	4	3

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Table 5. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	Nor.Nic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	3.88	16.27	2.19	.19	.56	4.24
NC 95	3.82	15.40	2.15	.18	.56	4.06
Coker 213	4.02	14.93	2.17	.10	.54	3.71
Coker 254	3.19	14.63	2.04	.36	.64	4.71
Coker 258	3.65	15.17	2.08	.28	.57	4.21
Coker 319	3.24	16.47	2.04	.08	.63	5.12
Coker 411	4.25	13.57	2.14	.22	.57	3.19
Ga. 1469	3.60	13.03	2.27	.11	.53	3.66
McNair 14	3.94	16.20	2.16	.23	.60	4.19
McNair 30	4.10	11.70	2.30	.20	.58	2.89
McNair 133	3.92	13.37	2.42	.22	.59	3.47
McNair 135	4.03	13.43	2.26	.28	.58	3.33
Speight G-7	3.69	17.20	2.31	.36	.57	4.73
Speight G-13	3.83	15.23	2.06	.17	.56	3.98
Speight G-28	2.71	15.83	2.14	.20	.56	5.96
Speight G-41	4.11	15.07	2.02	.22	.74	3.68
Va. 115	3.39	14.97	2.13	.15	.52	4.55
Advanced Breeding Lines						
Bell 110	3.65	14.70	2.04	.28	.60	4.10
Coker 347	3.74	14.27	2.14	.21	.59	3.81
Coker 68-354-1M	4.45	12.17	2.54	.18	.57	2.74
Ga. 1498	4.68	11.37	2.47	.34	.53	2.47
McNair 9132	3.50	18.03	2.05	.17	.59	5.16
McNair 9138	3.36	17.93	1.99	.28	.59	5.37
McNair 9140	3.43	20.47	2.01	.23	.59	6.17
McNair 9171	4.34	13.27	2.35	.17	.54	3.22
McNair 9233	2.79	15.27	1.89	.11	.68	5.64
NC 6772	3.88	15.63	2.20	.30	.57	4.07
NC 68-W-22	3.37	17.40	1.97	.13	.58	5.27
NC 7818-2-2C	3.69	15.77	2.18	.17	.59	4.33
NC 8839	3.06	15.23	2.10	.38	.69	5.08
NC 8908	3.26	14.80	2.01	.09	.62	4.56
NC 8931-3	3.62	15.83	2.17	.29	.60	4.46
NC 9003	3.90	16.57	2.11	.22	.54	4.29
NC 9005	2.97	18.00	2.07	.10	.70	6.08
NC 9040	3.74	14.00	2.42	.39	.65	3.84
NC 9069	3.86	17.17	2.13	.26	.55	4.47
NC 9085	3.72	14.50	2.32	.29	.62	3.99
NC 9800	3.67	14.53	2.06	.11	.56	3.96
NC TG-11	3.57	14.80	2.02	.19	.56	4.15
PD 113	3.63	17.53	2.08	.23	.57	4.88
PD 175	4.21	12.33	2.31	.23	.55	2.99
Speight G-14	3.99	14.33	2.07	.23	.52	3.60
Speight G-33	3.54	17.27	2.12	.15	.60	4.89
Speight G-34	3.22	16.70	1.95	.19	.60	5.22
Speight G-38	3.94	16.30	2.10	.33	.53	4.16
Speight G-53	2.72	18.10	2.06	.12	.76	6.77
Speight G-70	4.27	15.80	2.24	.31	.52	3.71
Speight G-144	4.51	14.13	2.41	.29	.53	3.13
Speight G-25-H	2.99	10.69	1.93	.18	.64	3.82
Va. 770	3.49	14.93	2.28	.31	.65	4.45
L.S.D. (.05)	.55	3.78	.25	.22	.07	1.65
(.01)	.73	4.96	.34	.28	.09	2.17
C.V. (%)	9	15	7	61	7	24

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Table 6. Comparison of varieties for certain characteristics.

Varieties or Lines	Yield Lbs/A	Value Index		Days to Flower	Leaves per Plant	Height of Plant	Internode Length			
		Dol/A	Dol/Cwt.				Q.I.	0-10"	10-20"	20"-top
Commercially Available Varieties										
NC 2326	2610	2011	77.04	30.9	56	21.9	42	1.6	1.9	2.1
NC 95	2814	2111	75.01	33.2	61	22.6	42	1.6	2.0	2.0
Coker 213	2732	2076	75.97	33.4	64	24.7	50	1.6	2.0	2.3
Coker 254	2802	2152	76.80	30.6	66	23.8	50	1.6	2.1	2.3
Coker 258	2650	2006	75.73	32.4	63	23.9	43	1.5	1.9	2.0
Coker 319	2634	2041	77.50	27.6	61	23.6	44	1.5	2.0	2.1
Coker 411	2606	1998	76.68	29.5	61	23.3	46	1.6	1.9	2.3
Ga. 1469	2782	2072	74.51	36.3	61	24.5	48	1.6	1.9	2.1
McNair 14	2492	1924	77.18	29.2	60	22.5	44	1.5	2.2	2.1
McNair 30	2620	1986	75.77	29.6	60	22.0	46	1.7	2.1	2.4
McNair 133	2744	2066	75.31	34.5	63	22.3	45	1.6	2.0	2.3
McNair 135	2898	2232	77.05	30.7	61	24.0	47	1.6	1.9	2.2
Speight G-7	2678	2056	76.82	32.2	61	24.1	46	1.5	1.8	2.2
Speight G-13	2794	2131	76.30	30.9	67	21.3	49	1.6	2.2	2.8
Speight G-28	2622	1896	72.28	36.9	60	25.7	40	1.4	1.4	1.7
Speight G-41	2666	2052	76.98	29.7	65	22.0	44	1.6	1.8	2.4
Va. 115	2694	2074	76.94	29.8	60	23.0	43	1.5	1.9	2.1
Advanced Breeding Lines										
Bell 110	2556	1924	75.35	33.2	61	24.7	47	1.5	2.0	2.1
Coker 347	2770	2126	76.74	28.3	65	23.3	46	1.7	1.8	2.2
Coker 68-354-1M	2608	1949	74.71	34.2	63	25.0	46	1.5	1.8	2.0
Ga. 1498	2456	1840	74.84	32.6	59	22.3	45	1.6	2.0	2.2
McNair 9132	3138	2467	78.63	27.2	61	22.9	44	1.5	1.9	2.3
McNair 9138	2986	2347	78.59	26.0	60	23.1	41	1.5	1.7	2.0
McNair 9140	3192	2496	78.18	25.0	62	23.5	44	1.5	1.9	2.1
McNair 9171	2976	2248	75.55	31.6	62	21.9	47	1.7	2.1	2.4
McNair 9233	2782	2177	78.21	28.3	64	23.5	49	1.6	2.0	2.4
NC 6772	2614	2054	78.59	27.1	58	22.9	45	1.8	1.7	2.2
NC 68-W-22	2424	1812	74.77	34.3	58	23.5	47	1.6	1.9	2.3
NC 7818-2-2C	2852	2216	77.70	27.8	57	23.4	46	1.6	2.0	2.2
NC 8839	3016	2320	76.91	29.6	59	22.9	47	1.6	1.9	2.4
NC 8908	2870	2189	76.26	30.3	61	22.5	45	1.6	1.9	2.3
NC 8931-3	2534	1951	77.01	29.6	59	24.7	46	1.5	1.9	2.1
NC 9003	2986	2312	77.42	30.6	67	24.4	49	1.5	2.0	2.3
NC 9005	2694	2090	77.51	30.4	57	22.4	47	1.7	2.1	2.3
NC 9040	2638	1985	75.23	33.1	55	20.1	42	1.8	2.1	2.3
NC 9069	2470	1903	77.04	30.7	56	21.9	44	1.7	1.9	2.2
NC 9085	2194	1639	74.49	36.3	55	20.9	46	1.6	2.2	2.6
NC 9800	2712	2071	76.35	33.7	59	24.7	48	1.5	2.0	2.2
NC TG-11	2936	2226	75.80	32.2	61	24.5	46	1.5	1.8	2.1
PD 113	2648	1903	71.84	39.0	61	24.2	44	1.5	1.8	2.0
PD 175	2716	2035	74.90	35.1	62	22.7	45	1.5	2.2	2.2
Speight G-14	2780	2147	77.20	28.7	62	24.3	46	1.5	1.9	2.1
Speight G-33	2604	1950	74.89	35.7	61	23.6	47	1.5	2.0	2.3
Speight G-34	2744	2104	76.65	32.1	62	26.7	46	1.5	1.7	1.9
Speight G-38	2734	2105	76.97	31.6	63	23.6	44	1.6	1.9	2.0
Speight G-53	2474	1804	72.88	35.9	61	23.1	44	1.6	2.0	2.1
Speight G-70	2634	1952	74.16	36.2	61	21.9	45	1.6	2.2	2.3
Speight G-144	2434	1858	76.32	34.0	62	24.9	46	1.7	1.6	2.1
Speight G-25-H	2934	2267	77.24	29.4	63	24.6	48	1.6	1.8	2.1
Va. 770	2410	1865	76.84	31.5	60	22.2	44	1.7	2.0	2.2
L.S.D. (.05)	180	145	2.33	4.4	3	2.2	4	.2	.3	.3
(.01)	236	191	3.06	5.7	4	3.0	6	.3	.4	.4
C.V. (%)	4	4	2	9	3	6	6	8	10	8

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Table 6. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	<u>Suckers per plant</u>		<u>Width of leaf (in.)</u>			<u>Length of leaf (in.)</u>		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties								
NC 2326	0.0	32.3	7.4	9.3	12.3	19.0	23.0	21.7
NC 95	0.0	28.9	8.9	10.9	12.6	18.4	21.7	21.3
Coker 213	4.3	24.0	9.5	10.5	12.8	19.4	22.3	22.5
Coker 254	3.8	25.1	8.9	10.7	12.1	18.4	22.2	23.1
Coker 258	0.0	23.4	7.9	9.5	11.7	17.1	21.3	21.9
Coker 319	0.0	28.1	8.1	9.5	12.3	20.5	23.1	22.9
Coker 411	0.0	23.8	8.7	10.5	12.3	21.7	24.6	23.1
Ga. 1469	0.0	30.5	8.1	9.7	11.7	18.7	22.9	22.1
McNair 14	0.0	30.2	9.5	10.6	11.6	20.1	22.5	22.1
McNair 30	0.0	25.7	7.9	9.3	11.8	19.7	22.7	22.7
McNair 133	0.0	26.7	10.3	11.2	12.9	20.7	23.0	22.8
McNair 135	0.0	25.7	7.9	8.8	11.9	20.6	23.2	22.7
Speight G-7	0.0	27.7	8.8	10.5	12.5	19.1	22.6	22.1
Speight G-13	0.0	18.6	9.3	11.7	12.8	19.5	23.5	23.7
Speight G-28	0.0	24.0	7.8	9.2	10.5	18.0	20.3	20.9
Speight G-41	0.0	17.6	8.0	10.1	11.3	17.9	21.6	22.0
Va. 115	0.0	23.6	7.8	9.7	11.9	18.7	22.1	22.1
Advanced Breeding Lines								
Bell 110	0.0	24.7	8.2	9.8	12.5	20.3	22.7	22.3
Coker 347	0.0	22.8	8.3	9.9	12.0	19.7	23.3	23.9
Coker 68-354-1M	0.0	30.0	7.7	8.9	11.5	19.3	21.6	22.1
Ga. 1498	0.0	29.9	8.1	9.9	11.9	20.1	22.9	23.1
McNair 9132	0.0	23.5	8.3	10.7	11.8	19.5	23.3	22.2
McNair 9138	0.0	28.0	8.2	9.6	12.1	19.1	21.9	21.9
McNair 9140	0.0	22.1	8.7	10.3	12.5	20.5	23.5	23.4
McNair 9171	0.0	23.4	9.7	11.2	13.1	20.8	24.1	23.5
McNair 9233	0.0	27.9	8.4	10.6	12.4	19.7	23.6	22.7
NC 6772	0.3	33.9	7.8	9.1	11.5	20.4	23.0	22.3
NC 68-W-22	0.0	32.6	6.8	8.9	11.7	20.1	22.6	21.9
NC 7818-2-2C	0.0	30.3	7.3	8.9	11.9	19.7	21.6	22.4
NC 8839	0.0	24.5	8.1	10.4	12.6	18.9	23.1	23.9
NC 8908	0.0	26.9	8.5	10.4	12.4	20.6	23.5	22.9
NC 8931-3	0.0	29.7	7.3	9.3	11.7	20.3	23.3	22.4
NC 9003	0.9	24.9	9.2	10.5	12.9	18.8	22.1	22.5
NC 9005	0.0	33.6	8.1	10.3	13.6	19.3	22.7	22.9
NC 9040	0.0	34.1	8.9	11.4	13.7	19.1	23.4	23.2
NC 9069	0.0	30.8	7.7	10.0	11.9	21.4	23.3	22.6
NC 9085	0.0	26.9	8.1	10.9	12.3	18.9	21.9	21.6
NC 9800	0.0	32.1	6.8	9.0	11.8	19.1	21.8	22.1
NC TG-11	0.0	23.6	7.3	8.5	10.3	19.5	23.1	22.3
PD 113	0.0	26.1	7.1	8.5	11.4	18.2	21.3	21.7
PD 175	0.0	27.3	8.8	10.9	13.0	18.1	21.3	21.7
Speight G-14	0.0	25.6	8.8	10.6	12.4	18.3	21.5	21.4
Speight G-33	0.0	28.5	7.3	9.2	11.1	18.3	21.2	22.3
Speight G-34	0.0	24.4	7.7	9.0	11.3	18.6	21.1	21.5
Speight G-38	0.0	19.9	9.3	10.3	11.6	19.1	22.2	21.6
Speight G-53	1.2	27.2	9.0	10.9	12.9	18.6	21.9	21.4
Speight G-70	0.0	27.3	10.0	11.0	13.3	19.9	22.6	21.6
Speight G-144	0.8	29.4	7.7	9.4	12.1	19.1	22.2	22.7
Speight G-25-H	1.1	25.0	8.9	10.4	12.1	19.8	21.9	21.8
Va. 770	5.1	29.3	7.7	9.6	11.9	17.8	20.9	21.9
L.S.D. (.05)	.8	5.5	.9	1.0	1.2	1.5	1.4	1.4
(.01)	1.1	7.2	1.2	1.4	1.6	1.9	1.8	1.9
C.V. (%)	152	13	6	6	6	5	4	4

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Table 6. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	Nor.Nic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	3.93	7.47	2.70	.27	.69	1.90
NC 95	3.90	5.80	2.82	.17	.72	1.58
Coker 213	3.72	7.73	2.62	.25	.70	2.06
Coker 254	3.38	6.13	2.67	.07	.79	1.84
Coker 258	3.62	8.27	2.42	.21	.67	2.31
Coker 319	3.55	6.30	2.68	.17	.75	1.80
Coker 411	4.23	5.93	2.66	.26	.77	1.42
Ga. 1469	3.75	5.37	2.66	.26	.63	1.44
McNair 14	3.79	5.70	2.78	.31	.74	1.46
McNair 30	3.66	6.73	2.86	.27	.75	1.86
McNair 133	4.79	4.90	2.58	.42	.70	1.02
McNair 135	3.93	7.60	2.70	.32	.56	1.95
Speight G-7	4.02	7.30	2.57	.19	.65	1.94
Speight G-13	3.44	6.17	2.63	.26	.65	1.81
Speight G-28	3.22	4.27	2.70	.23	.78	1.31
Speight G-41	3.80	7.93	2.61	.20	.81	2.07
Va. 115	3.61	7.30	2.51	.33	.66	2.03
Advanced Breeding Lines						
Bell 110	4.00	5.97	2.69	.26	.74	1.51
Coker 347	3.47	7.17	2.70	.40	.68	2.07
Coker 68-354-1M	4.16	5.20	2.77	.66	.68	1.27
Ga. 1498	4.36	5.63	2.72	.62	.66	1.31
McNair 9132	3.30	11.83	2.48	.75	.62	3.58
McNair 9138	3.48	12.97	2.33	.67	.75	3.78
McNair 9140	3.78	9.73	2.46	.65	.67	2.70
McNair 9171	3.79	5.93	2.56	.68	.65	1.56
McNair 9233	3.14	7.07	2.49	.79	.68	2.30
NC 6772	3.72	7.33	2.44	.66	.79	1.97
NC 68-W-22	4.19	5.87	2.70	.64	.66	1.40
NC 7818-2-2C	3.25	10.30	2.55	.78	.64	3.11
NC 8839	3.47	8.17	2.56	.74	.78	2.39
NC 8908	2.92	8.80	2.55	.87	.74	2.95
NC 8931-3	3.57	6.67	2.58	.72	.87	1.94
NC 9003	3.88	8.10	2.56	.66	.72	2.17
NC 9005	3.28	9.17	2.65	.81	.66	2.88
NC 9040	3.82	7.23	2.81	.74	.81	1.87
NC 9069	3.68	8.03	2.53	.69	.74	2.18
NC 9085	3.84	8.20	2.94	.76	.69	2.12
NC 9800	3.50	8.43	2.50	.71	.76	2.41
NC TG-11	3.74	6.63	2.46	.66	.71	1.77
PD 113	4.00	6.60	2.60	.65	.66	1.61
PD 175	3.88	9.27	2.60	.67	.65	2.44
Speight G-14	4.17	8.43	2.53	.61	.67	2.03
Speight G-33	3.72	6.77	2.63	.71	.61	1.82
Speight G-34	3.75	6.73	2.58	.69	.71	1.80
Speight G-38	4.00	9.20	2.45	.61	.69	2.32
Speight G-53	3.20	4.40	2.75	.86	.61	1.49
Speight G-70	3.83	6.20	2.67	.70	.86	1.66
Speight G-144	4.25	6.33	2.86	.67	.70	1.51
Speight G-25-H	3.27	8.23	2.47	.76	.67	2.60
Va. 770	3.47	9.60	2.67	.77		2.83
L.S.D. (.05)	.72	3.04	.72	.21	.13	1.00
(.01)	.94	3.99	.96	.27	.18	1.32
C.V. (%)	12	26	12	50	12	31

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Table 7. Comparison of varieties for certain characteristics.

Varieties or Lines	Yield Lbs/A	Value Index		Q.I.	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					0-10"	10-20"	20" top
Commercially Available Varieties										
NC 2326	2302	1777	77.21	34.2	47	18.3	48	1.9	2.5	3.2
NC 95	2416	1784	73.81	37.2	52	19.9	51	1.9	2.6	2.9
Coker 213	2312	1734	74.97	37.1	54	21.3	53	1.9	2.6	2.7
Coker 254	2476	1883	75.97	30.6	55	20.7	52	1.9	2.4	2.9
Coker 258	2434	1830	75.21	34.9	55	23.7	54	1.7	2.3	2.5
Coker 319	2344	1763	75.17	29.1	53	21.1	51	1.8	2.5	2.7
Coker 411	2654	2021	76.13	35.6	51	20.3	48	2.0	2.4	2.6
Ga. 1469	2412	1820	75.45	32.4	54	22.0	51	1.9	2.4	2.5
McNair 14	2236	1683	75.31	38.2	50	19.1	49	2.0	2.4	2.9
McNair 30	2348	1724	73.38	34.2	47	18.3	50	1.9	2.6	3.2
McNair 133	2414	1855	76.82	31.1	53	20.5	52	1.8	2.6	2.9
McNair 135	2614	1957	74.93	36.9	53	21.1	52	2.0	2.5	2.7
Speight G-7	2614	2028	77.57	30.4	49	21.0	51	1.9	2.4	2.7
Speight G-13	2572	1945	75.58	37.4	52	18.1	51	2.2	2.5	3.2
Speight G-28	2466	1847	74.90	32.5	51	20.3	47	1.9	2.3	2.6
Speight G-41	2552	1925	75.37	33.5	53	19.9	51	1.8	2.5	3.0
Va. 115	2616	1997	76.33	36.3	49	19.5	48	1.8	2.5	2.8
Advanced Breeding Lines										
Bell 110	2436	1794	73.50	36.3	52	1919	52	1.9	2.5	3.1
Coker 347	2486	1870	75.25	36.6	55	21.7	52	1.8	2.4	2.7
Coker 68-354-1M	2322	1715	73.86	38.5	55	23.1	53	1.9	2.3	2.5
Ga. 1498	2332	1772	75.93	39.5	47	17.7	49	1.9	2.6	3.4
McNair 9132	2732	2113	77.32	28.6	51	19.1	48	1.9	2.3	3.0
McNair 9138	2704	2088	77.24	30.3	51	20.4	50	1.9	2.5	2.8
McNair 9140	2846	2203	77.42	28.9	53	19.7	50	1.9	2.3	3.0
McNair 9171	2620	1955	74.63	36.9	53	18.9	50	1.9	2.5	3.1
McNair 9233	2470	1927	78.03	28.9	52	20.2	50	1.9	2.5	2.8
NC 6772	2386	1838	77.07	34.2	49	18.9	48	1.8	2.4	3.0
NC 68-W-22	2228	1650	74.08	38.5	48	20.2	50	1.9	2.3	2.9
NC 7818-2-2C	2582	2009	77.80	29.2	46	18.9	49	1.9	2.4	3.0
NC 8839	2760	2137	77.41	35.8	53	19.1	52	1.9	2.5	3.3
NC 8908	2818	2094	74.27	34.3	53	19.1	51	1.9	2.6	3.1
NC 8931-3	2388	1838	76.98	30.7	49	18.8	50	1.9	2.5	3.1
NC 9003	2718	2106	77.48	27.0	54	23.0	54	1.9	2.3	2.6
NC 9005	2600	2022	77.76	25.9	48	19.8	53	1.9	2.5	3.2
NC 9040	2306	1730	74.97	40.7	45	17.7	47	1.9	2.3	3.5
NC 9069	2226	1673	75.19	38.0	45	18.0	49	1.8	2.6	3.4
NC 9085	2030	1552	76.36	40.0	45	18.1	49	1.9	2.5	3.4
NC 9800	2528	1940	76.74	32.0	53	19.0	50	1.9	2.6	3.1
NC TG-11	2658	2017	75.90	35.1	53	19.7	50	1.7	2.4	3.0
PD 113	2512	1864	74.19	35.7	54	21.6	53	1.9	2.5	2.7
PD 175	2438	1824	74.83	32.1	52	20.6	53	1.9	2.6	2.9
Speight G-14	2684	2040	76.00	36.7	52	21.3	54	1.9	2.6	2.8
Speight G-33	2236	1649	73.72	37.4	53	19.8	52	2.0	2.5	3.0
Speight G-34	2498	1895	75.85	31.8	54	21.5	51	1.9	2.2	2.7
Speight G-38	2438	1848	75.80	34.0	54	20.5	53	1.9	2.4	3.0
Speight G-53	2316	1716	74.07	34.5	53	20.2	50	1.9	2.4	2.8
Speight G-70	2218	1690	76.19	29.4	53	20.7	51	1.7	2.5	2.9
Speight G-144	2382	1843	77.37	26.2	52	20.7	51	1.9	2.5	2.8
Speight G-25-H	2502	1921	76.79	29.1	54	21.7	52	1.9	2.3	2.7
Va. 770	2174	1661	76.39	33.2	49	18.8	51	1.9	2.5	3.2
L.S.D. (.05)	173	155	1.83	6.7	2	1.5	3	.2	.3	.3
(.01)	228	203	2.41	8.8	3	2.0	4	.3	.4	.4
C.V. (%)	4	5	2	12	2	5	4	7	7	6

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Table 7. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Suckers per plant			Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf	Axill	5th	10th	15th	5th	10th	15th
Commercially Available Varieties									
NC 2326	0.1	17.2		8.7	10.5	13.3	18.7	22.1	24.4
NC 95	0.9	21.1		9.4	11.0	14.1	18.4	21.7	24.9
Coker 213	5.5	22.7		9.7	11.8	14.7	19.2	22.5	25.4
Coker 254	5.0	22.0		9.5	10.8	13.7	19.3	22.3	24.6
Coker 258	2.0	14.9		9.3	10.5	13.6	18.4	21.9	25.1
Coker 319	2.1	21.2		8.7	10.6	12.7	19.7	22.9	25.0
Coker 411	0.1	17.8		8.4	10.7	13.7	20.1	23.5	25.4
Ga. 1469	1.1	20.2		8.5	10.1	13.7	18.0	21.9	24.9
McNair 14	0.6	17.1		10.3	12.3	14.4	20.2	24.0	25.5
McNair 30	0.9	21.3		9.8	11.5	14.8	21.9	24.2	26.6
McNair 133	2.0	17.0		9.9	10.7	13.5	18.9	21.3	23.7
McNair 135	0.5	19.7		8.5	10.1	13.5	19.1	22.7	25.2
Speight G-7	2.6	22.1		9.9	12.7	15.9	19.0	22.5	25.0
Speight G-13	0.7	17.3		9.8	12.2	14.9	18.8	23.0	25.1
Speight G-28	0.1	16.5		8.7	10.3	12.8	18.1	21.7	23.7
Speight G-41	0.3	16.0		8.9	9.9	12.9	18.7	21.1	23.7
Va. 115	0.3	16.9		8.7	10.5	13.6	19.2	22.7	24.5
Advanced Breeding Lines									
Bell 110	1.1	18.8		9.2	11.5	14.9	19.7	23.3	25.6
Coker 347	1.2	17.7		8.3	9.9	12.3	18.4	21.5	24.5
Coker 68-354-1M	1.5	19.2		8.1	9.6	13.9	19.3	22.5	26.0
Ga. 1498	4.1	19.6		9.4	11.7	15.3	21.2	24.1	26.9
McNair 9132	0.1	18.8		9.3	10.8	14.1	19.9	23.1	24.9
McNair 9138	0.1	18.6		8.8	10.1	13.8	19.3	22.1	24.9
McNair 9140	0.1	16.9		9.0	10.4	12.9	19.3	21.9	24.3
McNair 9171	0.2	12.9		9.9	11.7	14.6	19.2	22.5	25.1
McNair 9233	3.5	20.1		8.7	10.3	12.1	19.9	22.0	23.9
NC 6772	2.0	25.2		8.3	10.4	13.5	19.9	23.7	25.3
NC 68-W-22	0.2	21.9		8.1	10.6	13.9	20.1	23.1	24.5
NC 7818-2-2C	0.0	18.6		8.7	10.9	13.5	19.0	22.6	24.7
NC 8839	0.3	12.5		9.1	11.1	13.9	19.9	23.2	25.1
NC 8908	0.1	17.0		10.2	12.0	15.4	20.9	24.5	25.7
NC 8931-3	0.3	23.9		8.6	10.5	12.7	21.1	23.5	25.1
NC 9003	4.7	18.4		9.5	11.4	15.0	18.7	21.7	24.9
NC 9005	3.8	22.1		10.5	13.4	15.9	21.3	24.4	25.6
NC 9040	1.1	22.6		11.3	13.7	15.7	21.9	25.0	26.2
NC 9069	0.4	18.7		10.3	13.4	14.7	22.6	26.0	25.7
NC 9085	0.5	19.2		10.3	12.0	14.2	21.9	24.3	25.0
NC 9800	1.2	18.9		8.6	11.1	15.5	19.2	23.0	24.9
NC TG-11	1.5	15.5		7.9	9.9	12.7	20.2	23.3	25.2
PD 113	0.4	16.9		8.3	10.1	12.5	17.6	21.9	24.9
PD 175	1.1	18.0		9.1	11.3	14.1	18.4	22.9	24.2
Speight G-14	1.2	19.6		10.2	12.2	16.1	19.3	23.3	26.2
Speight G-33	0.4	16.3		8.6	9.8	12.5	19.5	22.4	24.9
Speight G-34	0.4	16.7		8.3	9.9	12.7	18.3	21.1	23.5
Speight G-38	0.3	15.5		9.2	10.3	13.4	18.4	21.5	23.9
Speight G-53	4.5	20.6		10.1	11.2	13.9	18.4	21.5	24.4
Speight G-70	1.9	17.4		9.5	10.7	14.5	18.6	21.7	23.7
Speight G-144	3.2	17.8		8.3	11.2	13.5	18.4	23.1	25.8
Speight G-25-H	1.8	17.3		9.5	10.9	14.1	19.6	22.5	25.0
Va. 770	5.8	24.2		9.8	11.1	14.5	19.9	22.6	24.9
L.S.D. (.05)	1.2	4.4		1.1	1.5	1.7	1.8	1.8	1.3
(.01)	1.6	5.8		1.5	2.0	2.2	2.3	2.4	1.8
C.V. (%)	52	15		8	8	8	6	5	3

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Table 7. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	Nor.Nic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	2.56	17.83	2.05	.09	.80	6.99
NC 95	2.87	13.17	2.25	.13	.78	4.70
Coker 213	2.94	13.17	2.18	.11	.74	4.84
Coker 254	2.49	12.23	2.14	.11	.86	4.98
Coker 258	2.51	15.77	2.08	.06	.83	6.34
Coker 319	2.43	13.67	2.30	.10	.95	5.65
Coker 411	3.02	15.53	2.15	.06	.84	5.19
Ga. 1469	2.65	14.93	2.24	.0	.74	5.65
McNair 14	2.55	13.13	2.16	.19	.82	5.26
McNair 30	2.61	13.07	2.48	.09	.97	5.06
McNair 133	2.51	17.00	2.03	.07	.78	6.81
McNair 135	2.59	14.93	1.97	.06	.78	5.78
Speight G-7	2.70	16.43	2.03	.22	.78	6.10
Speight G-13	3.06	13.83	2.03	.09	.75	4.62
Speight G-28	2.14	14.07	2.28	.06	.74	6.58
Speight G-41	2.43	15.63	2.08	.08	.97	6.46
Va. 115	2.54	17.43	1.91	.15	.79	7.10
Advanced Breeding Lines						
Bell 110	2.50	15.83	2.05	.12	.81	6.49
Coker 347	2.55	15.03	2.06	.0	.82	6.01
Coker 68-354-1M	2.92	12.33	2.38	.09	.82	4.30
Ga. 1498	3.13	15.40	2.21	.14	.71	5.20
McNair 9132	2.13	20.90	1.78	.09	.84	10.06
McNair 9138	2.37	18.90	1.99	.10	.84	8.14
McNair 9140	2.07	20.23	1.76	.04	.85	9.81
McNair 9171	2.72	15.90	2.03	.07	.75	5.98
McNair 9233	2.00	15.07	2.04	.07	1.02	7.68
NC 6772	2.54	17.30	2.03	.19	.80	6.86
NC 68-W-22	2.96	14.77	2.19	.22	.74	5.23
NC 7818-2-2C	2.17	20.03	1.95	.04	.90	9.47
NC 8839	1.88	18.23	1.78	.05	.95	9.76
NC 8908	2.16	16.27	2.02	.21	.94	7.55
NC 8931-3	2.69	15.03	2.18	.04	.81	5.67
NC 9003	2.30	16.43	1.87	.18	.81	7.16
NC 9005	2.00	17.97	1.88	.06	.94	8.98
NC 9040	2.79	14.30	2.38	.15	.85	5.33
NC 9069	2.77	16.60	2.11	.12	.76	6.14
NC 9085	2.51	12.87	2.36	.13	.94	5.44
NC 9808	2.21	18.60	1.91	.11	.86	8.48
NC TG-11	2.30	16.60	1.91	.07	.77	7.24
PD 113	2.53	17.23	2.00	.11	.79	6.84
PD 175	2.36	17.17	1.96	.07	.83	7.53
Speight G-14	2.89	15.93	2.08	.18	.72	5.54
Speight G-33	2.33	14.60	2.25	.19	.96	6.30
Speight G-34	2.32	17.17	1.93	.04	.83	7.50
Speight G-38	2.95	15.00	2.16	.15	.73	5.19
Speight G-53	1.80	14.83	2.08	.09	1.16	8.30
Speight G-70	2.75	17.07	2.16	.09	.79	6.80
Speight G-144	2.56	16.80	2.11	.14	.82	6.64
Speight G-25-H	2.05	12.77	2.08	.34	1.01	6.23
Va. 770	2.27	17.10	2.04	.11	.90	7.72
L.S.D. (.05)	.48	2.99	.27	.19	.11	2.17
(.01)	.63	3.93	.36	.25	.15	2.85
C.V. (%)	12	12	8	110	8	21

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Table 8. Comparison of varieties for certain characteristics.

Varieties or Lines	Yield Lbs/A	Value Index		Q.I.	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					o-10"	10-20"	20"-top
Commercially Available Varieties										
NC 2326	2486	1938	77.94	29.3	52	16.5	42	2.1	2.6	2.8
NC 95	2662	2017	75.71	36.1	60	19.5	43	2.0	2.2	2.4
Coker 213	2504	1901	75.87	39.2	61	19.1	46	2.3	2.4	2.4
Coker 254	2648	2039	76.98	30.2	62	20.9	49	2.0	2.4	2.5
Coker 258	2582	1928	74.68	35.9	63	19.9	43	1.9	2.2	2.3
Coker 319	2406	1841	76.55	33.6	61	18.7	44	2.1	2.3	2.5
Coker 411	2610	2000	76.64	35.8	55	19.4	43	2.0	2.3	2.4
Ga. 1469	2596	1985	76.45	36.3	61	19.1	45	2.0	2.2	2.6
McNair 14	2490	1919	77.07	32.0	57	17.2	41	2.2	2.3	2.6
McNair 30	2300	1738	75.52	39.8	54	16.8	44	2.2	2.4	3.0
McNair 133	2546	1957	76.84	34.4	60	19.3	46	2.3	2.2	2.5
McNair 135	2774	2123	76.54	35.0	58	19.5	45	2.0	2.3	2.5
Speight G-7	2568	1988	77.46	29.7	56	18.9	44	2.2	2.3	2.5
Speight G-13	2740	2118	77.23	32.8	64	19.3	48	2.1	2.5	2.7
Speight G-28	2632	2003	76.08	32.6	55	19.7	40	1.9	2.0	2.1
Speight G-41	2742	2057	75.00	37.6	63	18.3	42	2.0	2.2	2.5
Va. 115	2716	2094	77.04	34.2	58	19.0	40	2.0	2.1	2.2
Advanced Breeding Lines										
Bell 110	2358	1758	74.70	36.5	59	18.5	43	2.1	2.3	2.5
Coker 347	2568	1933	75.30	31.8	63	18.2	41	2.0	2.1	2.5
Coker 68-354-1M	2434	1846	75.81	34.1	61	20.5	45	2.0	2.2	2.3
Ga. 1498	2138	1610	75.36	35.5	60	17.9	44	2.0	2.3	2.9
McNair 9132	2808	2176	77.50	33.3	58	19.5	42	2.0	2.1	2.3
McNair 9138	2918	2287	78.37	28.9	61	18.9	43	2.0	2.3	2.5
McNair 9140	2836	2210	77.94	31.6	56	18.9	40	1.9	2.2	2.2
McNair 9171	2718	2063	75.90	36.0	61	19.5	46	2.1	2.3	2.5
McNair 9233	2718	2130	78.37	29.9	58	20.1	45	2.2	2.3	2.3
NC 6772	2514	1962	78.01	29.8	54	17.3	43	2.2	2.3	2.7
NC 68-W-22	2196	1656	75.41	34.9	54	19.1	44	1.9	2.1	2.6
NC 7818-2-2C	2694	2074	76.96	30.7	56	18.3	44	2.0	2.2	2.7
NC 8839	2696	2082	77.27	30.8	61	17.7	45	2.0	2.3	3.0
NC 8908	2982	2246	75.32	35.6	58	18.6	44	2.0	2.2	2.6
NC 8931-3	2406	1872	77.76	30.3	56	18.0	43	2.0	2.2	2.7
NC 9003	2958	2315	78.28	29.2	63	18.5	46	2.2	2.2	2.8
NC 8005	2748	2170	78.93	29.9	56	18.5	45	2.0	2.3	2.8
NC 9040	2256	1667	74.11	37.8	52	17.0	40	2.1	2.2	2.6
NC 9069	2254	1734	76.91	35.9	49	16.3	41	2.0	2.4	3.0
NC 9085	2206	1704	77.23	33.0	52	16.9	43	2.0	2.5	2.9
NC 9800	2568	1981	77.16	28.5	57	17.6	45	2.1	2.3	3.0
NC TG-11	2760	2060	74.62	34.6	60	20.7	43	1.9	2.1	2.2
PD 113	2626	1914	72.89	36.9	63	19.3	45	2.0	2.0	2.7
PD 175	2588	1939	74.95	39.6	58	19.1	44	2.1	2.2	2.4
Speight G-14	2664	2060	77.31	31.8	61	18.3	43	2.0	2.5	2.5
Speight G-33	2424	1843	76.06	35.1	63	18.4	44	2.1	2.4	2.6
Speight G-34	2926	2234	76.44	33.0	60	22.0	45	1.9	2.1	2.1
Speight G-38	2742	2130	77.70	32.5	56	18.1	45	2.0	2.5	2.7
Speight G-53	2536	1934	76.25	35.6	61	18.6	43	1.9	2.3	2.6
Speight G-70	2628	2048	77.95	32.2	56	17.9	48	2.2	2.5	3.0
Speight G-144	2608	2046	78.43	32.6	57	21.7	45	1.9	2.0	2.2
Speight G-25-H	2327	1787	76.71	31.6	62	19.9	46	1.8	2.3	2.6
Va. 770	2300	1774	77.08	37.3	56	18.7	42	2.0	2.2	2.3
L.S.D. (.05)	286	228	2.35	5.4	4	1.8	4	.3	.3	.4
(.01)	376	299	3.09	7.1	5	2.4	5	.4	.4	.4
C.V. (%)	7	7	2	10	4	6	5	8	8	9

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Table 8. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	<u>Suckers per plant</u>		<u>Width of leaf (in.)</u>			<u>Length of leaf (in.)</u>			
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th	
Commercially Available Varieties									
NC 2326	0.2	16.3	9.9	12.7	14.7	21.9	24.8	24.0	
NC 95	0.2	13.2	10.4	11.6	13.5	20.4	23.1	24.1	
Coker 213	1.5	14.4	9.1	11.4	14.7	19.3	22.9	24.4	
Coker 254	1.6	17.1	9.6	12.1	14.6	20.2	23.7	25.1	
Coker 258	0.6	11.0	8.5	11.1	13.5	19.3	22.9	24.3	
Coker 319	0.5	16.5	8.1	10.4	14.0	19.7	23.5	25.3	
Coker 411	0.1	14.6	8.4	10.7	13.7	20.5	24.2	25.3	
Ga. 1469	0.5	12.3	9.2	11.1	13.6	19.9	22.9	23.2	
McNair 14	0.2	14.8	10.1	11.6	14.4	20.6	22.8	23.9	
McNair 30	0.3	16.7	9.6	11.6	14.3	21.7	24.1	24.5	
McNair 133	1.4	13.9	10.5	12.7	13.8	20.1	23.0	23.9	
McNair 135	0.6	15.1	8.3	10.1	13.7	20.1	22.9	23.5	
Speight G-7	0.6	15.4	9.4	10.9	14.4	19.7	22.6	23.5	
Speight G-13	0.1	11.4	9.6	11.9	14.9	19.8	23.5	25.1	
Speight G-28	0.0	12.9	8.1	9.7	13.0	18.1	21.8	23.3	
Speight G-41	0.3	10.4	10.2	13.2	15.5	20.6	24.1	25.2	
Va. 115	0.4	14.9	9.3	11.2	13.8	21.0	23.3	25.5	
Advanced Breeding Lines									
Bell 110	0.3	13.3	8.9	11.6	14.9	20.5	24.5	24.5	
Coker 347	0.3	11.4	8.3	11.4	14.0	19.9	24.8	25.3	
Coker 68-354-1M	0.7	15.2	8.3	11.3	13.5	19.8	23.5	24.9	
Ga. 1498	1.0	15.3	9.9	12.5	14.9	22.4	26.5	26.9	
McNair 9132	0.1	13.4	9.7	11.9	15.2	21.2	24.1	25.0	
McNair 9138	0.1	12.0	8.5	11.4	12.5	19.3	23.4	22.9	
McNair 9140	0.2	13.9	9.3	11.2	14.3	20.3	22.7	24.4	
McNair 9171	0.2	8.9	9.9	12.3	14.6	20.6	23.8	24.4	
McNair 9233	1.0	19.3	8.4	11.2	13.3	20.1	23.3	23.9	
NC 6772	1.2	21.1	8.5	10.8	13.3	21.5	24.1	23.7	
NC 68-W-22	0.1	18.9	7.9	10.1	12.3	19.7	22.5	23.4	
NC 7818-2-2C	0.1	16.4	9.9	12.2	14.6	22.3	26.3	26.8	
NC 8839	0.4	8.8	9.1	11.3	14.0	20.4	24.1	24.9	
NC 8908	0.1	16.1	9.1	11.7	14.3	20.6	25.0	25.7	
NC 8931-3	0.3	17.1	8.2	10.9	14.2	21.3	23.9	24.4	
NC 9003	0.9	14.1	8.8	11.7	13.8	18.9	22.5	24.3	
NC 9005	1.0	17.6	9.7	12.1	14.3	21.8	24.5	24.7	
NC 9040	0.2	20.9	9.9	12.0	13.5	20.3	24.9	24.0	
NC 9069	0.3	19.5	9.9	11.7	13.5	22.7	24.7	24.1	
NC 9085	0.5	19.4	9.6	12.3	15.0	20.9	24.4	24.3	
NC 9800	0.9	14.3	8.8	10.9	14.6	20.3	23.5	24.6	
NC TG-11	0.6	12.3	7.9	10.5	13.1	20.9	25.0	26.9	
PD 113	0.3	10.9	8.1	10.2	13.3	18.7	22.9	24.1	
PD 175	0.5	17.2	9.7	12.4	15.5	19.8	23.6	24.1	
Speight G-14	0.6	13.5	10.1	12.4	14.4	20.1	24.0	24.7	
Speight G-33	0.4	11.8	8.9	10.9	13.6	20.4	23.6	24.9	
Speight G-34	0.0	11.6	9.0	10.7	14.3	19.9	23.2	25.3	
Speight G-38	0.5	13.9	9.7	11.7	14.1	19.2	22.3	23.7	
Speight G-53	1.8	18.2	9.7	12.7	15.2	20.1	24.0	24.7	
Speight G-70	1.1	19.2	9.9	12.1	15.2	19.6	22.7	22.8	
Speight G-144	1.5	19.1	8.5	10.2	13.9	19.9	22.5	24.5	
Speight G-25-H	0.7	11.3	8.5	11.4	14.0	19.1	23.5	24.1	
Va. 770	2.7	22.8	9.1	11.6	15.7	20.0	23.6	25.5	
L.S.D.	(.05)	.6	3.6	1.3	1.4	1.5	1.6	1.9	1.8
	(.01)	.8	4.8	1.7	1.8	2.0	2.1	2.5	2.3
C.V.	(%)	63	15	9	8	7	5	5	5

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Table 8. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	3.44	16.83	2.13	.18	.62	5.21
NC 95	3.20	14.47	2.21	.19	.69	4.53
Coker 213	3.28	14.67	2.17	.26	.66	4.67
Coker 254	3.30	12.10	2.29	.15	.69	3.78
Coker 258	3.61	12.67	2.27	.12	.63	3.64
Coker 319	2.95	15.03	2.18	.05	.74	5.57
Coker 411	3.83	13.27	2.26	.17	.66	3.50
Ga. 1469	3.15	13.80	2.35	.11	.61	4.36
McNair 14	3.03	18.13	2.12	.35	.67	6.10
McNair 30	3.59	14.37	2.26	.30	.74	4.27
McNair 133	3.22	14.80	2.30	.21	.64	4.78
McNair 135	3.39	16.37	2.21	.22	.69	5.10
Speight G-7	3.37	16.83	2.15	.22	.63	5.16
Speight G-13	3.24	14.47	2.11	.15	.63	4.51
Speight G-28	2.54	16.97	2.26	.10	.70	7.15
Speight G-41	3.49	15.27	1.93	.27	.76	4.43
Va. 115	3.39	14.33	2.18	.26	.62	4.41
Advanced Breeding Lines						
Bell 110	3.39	14.20	2.28	.12	.67	4.40
Coker 347	3.45	14.60	2.14	.14	.63	4.23
Coker 68-354-1M	3.39	18.53	2.27	.16	.67	5.59
Ga. 1498	3.72	12.37	2.19	.12	.59	3.32
McNair 9132	3.22	17.53	2.13	.26	.66	5.75
McNair 9138	2.90	18.93	2.04	.27	.70	6.68
McNair 9140	2.91	17.90	1.96	.12	.67	6.35
McNair 9171	3.31	14.97	2.18	.15	.66	4.72
McNair 9233	2.63	16.57	1.88	.15	.71	6.48
NC 6772	2.96	17.27	2.01	.28	.68	5.89
NC 68-W-22	3.76	14.83	2.29	.21	.61	4.08
NC 7818-2-2C	3.58	13.40	2.37	.24	.66	3.81
NC 8839	2.21	16.20	1.93	.20	.87	7.61
NC 8908	2.94	16.10	2.10	.26	.71	5.59
NC 8931-3	3.20	13.57	2.18	.14	.68	4.47
NC 9003	3.16	15.50	2.02	.13	.64	4.91
NC 9005	2.96	15.40	2.24	.14	.76	5.35
NC 9040	3.72	15.67	2.51	.34	.67	4.40
NC 9069	4.21	13.13	2.38	.22	.56	3.12
NC 9085	3.86	10.77	2.65	.32	.69	2.79
NC 9800	3.00	16.33	2.05	.15	.68	5.44
NC TG-11	3.50	14.97	2.08	.05	.59	4.30
PD 113	3.57	12.87	2.23	.10	.62	3.70
PD 175	3.81	14.80	2.31	.22	.61	4.07
Speight G-14	3.46	14.00	2.10	.07	.61	4.10
Speight G-33	3.16	15.50	2.26	.24	.72	4.93
Speight G-34	3.44	17.23	2.13	.20	.62	5.09
Speight G-38	3.40	16.93	2.11	.19	.62	5.08
Speight G-53	2.67	13.80	2.25	.12	.84	5.19
Speight G-70	4.09	15.33	2.47	.26	.60	3.76
Speight G-144	4.18	13.53	2.37	.23	.57	3.27
Speight G-25-H	2.98	14.87	2.10	.14	.70	5.08
Va. 770	3.38	14.13	2.34	.19	.69	4.19
L.S.D. (.05)	.53	3.38	.25	.19	.08	1.66
(.01)	.69	4.44	.33	.25	.10	2.18
C.V. (%)	10	14	7	63	7	22

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Table 9. Comparison of varieties for certain characteristics.

Varieties or Lines	Yield Lbs/A	Value Index		Q.I.	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					0-10 ¹¹	10-20 ¹¹	20 ¹¹ -top
Commercially Available Varieties										
NC 2326	2330	1817	77.93	24.8	51	19.7	43	1.6	1.9	2.9
NC 95	2440	1859	76.35	31.2	58	19.3	41	1.6	1.9	2.6
Coker 213	2250	1730	76.94	30.4	59	20.9	44	1.5	1.9	2.7
Coker 254	2478	1916	77.38	29.2	59	21.3	45	1.6	1.8	2.6
Coker 258	2462	1901	77.27	29.2	57	21.9	42	1.5	1.8	2.3
Cole r 319	2456	1906	77.83	27.0	54	21.7	44	1.6	1.7	2.5
Coker 411	2426	1866	77.00	30.6	55	21.8	41	1.5	1.6	2.3
Ga. 1469	2420	1829	75.52	31.3	57	21.3	44	1.6	1.8	2.6
McNair 14	2342	1817	77.59	27.6	53	21.5	43	1.5	1.8	2.4
McNair 30	2282	1762	77.16	31.0	53	20.6	44	1.6	1.9	2.8
McNair 133	2450	1907	77.74	28.3	55	21.1	46	1.6	1.9	2.7
McNair 135	2570	1948	75.76	30.9	56	23.3	46	1.6	1.6	2.4
Speight G-7	2442	1913	78.37	27.5	55	21.5	44	1.6	1.8	2.5
Speight G-13	2402	1842	76.65	31.3	59	20.3	49	1.7	2.0	3.1
Speight G-28	2458	1829	74.59	32.2	57	21.7	39	1.5	1.6	2.2
Speight G-41	2572	2010	78.15	28.3	56	21.7	46	1.6	1.9	2.6
Va. 115	2532	1984	78.31	25.9	51	20.0	42	1.6	1.8	2.6
Advanced Breeding Lines										
Bell 110	2342	1789	76.42	31.6	55	21.1	44	1.6	1.9	2.5
Coker 347	2464	1907	77.50	30.8	59	21.3	43	1.5	1.9	2.4
Coker 68-354-1M	2246	1734	77.22	28.5	58	22.1	45	1.5	1.8	2.6
Ga. 1498	2324	1759	75.75	31.3	54	19.7	42	1.6	1.9	2.8
McNair 9132	2686	2082	77.51	30.8	57	21.1	43	1.5	1.7	2.7
McNair 9138	2590	2030	78.40	31.2	56	20.9	42	1.5	2.0	2.4
McNair 9140	2882	2245	77.98	30.5	57	20.1	43	1.6	1.9	2.7
McNair 9171	2790	2155	77.24	30.8	56	21.9	50	1.6	1.9	3.0
McNair 9233	2674	2125	79.46	19.2	55	20.9	45	1.6	2.1	2.6
NC 6772	2586	2022	78.20	27.1	52	20.4	41	1.5	1.9	2.4
NC 68-W-22	2136	1639	76.87	29.8	55	20.5	42	1.6	1.7	2.7
NC 7818-2-2C	2676	2070	77.45	30.8	54	20.9	46	1.6	2.0	2.7
NC 8839	2678	2093	78.14	29.8	58	18.9	43	1.6	2.0	3.0
NC 8908	2588	1945	75.12	32.2	58	20.2	43	1.6	1.9	2.6
NC 8931-3	2246	1762	78.53	27.9	56	20.4	46	1.6	1.8	3.0
NC 9003	2882	2240	77.69	26.9	59	20.9	45	1.6	1.8	2.8
NC 9005	2738	2156	78.76	23.1	52	20.5	45	1.6	2.1	2.7
NC 9040	2316	1734	74.98	32.1	49	17.9	40	1.6	2.1	2.9
NC 9069	2314	1799	77.76	30.1	49	19.4	42	1.6	2.1	2.6
NC 9085	1836	1406	76.60	30.3	47	18.4	40	1.6	1.8	3.0
NC 9800	2616	2029	77.54	25.7	57	20.1	47	1.6	1.9	3.1
NC TG-11	2730	2086	76.48	31.9	55	22.2	45	1.5	1.7	2.6
PD 113	2428	1811	74.71	33.2	56	22.4	44	1.5	1.8	2.3
PD 175	2608	1907	73.38	32.4	52	21.7	46	1.6	2.1	2.5
Speight G-14	2686	2118	78.83	27.3	57	21.3	46	1.6	1.8	2.7
Speight G-33	2384	1802	75.73	30.8	58	20.1	45	1.6	2.0	2.8
Speight G-34	2534	1956	77.30	28.4	57	24.0	44	1.5	1.7	2.1
Speight G-38	2398	1868	77.97	27.5	56	20.3	43	1.5	2.1	2.6
Speight G-53	2338	1744	74.67	30.0	57	21.0	41	1.5	1.8	2.5
Speight G-70	2042	1579	77.37	29.5	57	20.3	45	1.5	2.1	2.7
Speight G-144	2304	1812	78.61	23.2	56	21.9	47	1.5	1.9	2.6
Speight G-25-H	2632	2059	78.23	27.7	58	22.8	48	1.6	1.9	2.6
Va. 770	2188	1668	76.23	30.5	56	19.7	44	1.5	2.1	2.9
L.S.D. (.05)	310	241	2.04	3.2	3	1.9	4	.2	.3	.3
(.01)	407	317	2.68	4.1	4	2.5	6	.2	.4	.4
C.V. (%)	8	8	2	7	3	6	6	7	12	7

TV 206 REIDSVILLE 1970

Table 9. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties								
NC 2326	0.0	27.1	9.8	11.7	13.3	23.7	26.5	24.3
NC 95	0.1	20.1	10.7	11.8	13.1	21.2	23.7	23.7
Coker 213	1.6	24.7	10.5	12.3	13.9	22.1	24.4	23.6
Coker 254	2.0	28.5	10.7	12.0	13.5	23.1	25.5	24.4
Coker 258	0.0	21.3	9.8	10.9	12.3	22.4	23.9	23.1
Coker 319	0.1	29.7	9.3	10.5	12.3	23.7	24.7	24.9
Coker 411	0.0	18.7	9.9	10.8	12.7	24.5	25.6	25.3
Ga. 1469	0.2	24.5	9.5	10.9	12.2	22.0	23.8	22.9
McNair 14	0.1	30.1	10.6	11.7	12.5	22.6	24.3	23.4
McNair 30	0.2	23.4	9.3	11.3	12.9	22.7	24.2	23.1
McNair 133	1.0	25.5	11.2	11.9	13.5	22.4	23.8	23.9
McNair 135	0.0	22.8	8.6	10.0	12.1	24.0	24.9	24.9
Speight G-7	0.7	22.5	9.5	10.7	12.1	21.3	22.7	22.6
Speight G-13	0.0	15.4	10.3	11.4	13.1	22.2	24.6	24.6
Speight G-28	0.0	20.3	9.1	10.1	11.3	20.4	22.3	22.7
Speight G-41	0.1	20.1	9.7	12.2	12.5	22.3	23.4	23.7
Va. 115	0.0	23.6	8.7	10.5	13.1	21.9	22.9	23.9
Advanced Breeding Lines								
Bell 110	0.0	20.1	9.0	10.5	12.5	21.6	23.1	24.0
Coker 347	0.0	20.8	9.3	10.9	12.5	23.2	24.9	25.1
Coker 68-354-1M	0.1	20.4	8.4	10.1	12.1	22.0	24.2	24.6
Ga. 1498	0.5	29.7	9.9	12.4	14.1	23.3	26.6	25.6
McNair 9132	0.1	18.6	10.1	11.9	12.9	23.1	24.9	25.0
McNair 9138	0.0	19.2	9.0	11.3	12.7	21.1	24.1	23.5
McNair 9140	0.0	22.1	10.5	11.7	13.7	24.4	26.3	25.8
McNair 9171	0.0	19.5	10.7	12.9	13.7	22.7	24.5	24.5
McNair 9233	0.5	26.6	9.4	11.3	12.7	22.2	24.7	25.5
NC 6772	1.3	34.1	8.3	10.7	11.8	21.8	23.1	23.5
NC 68-W-22	0.0	26.3	8.4	10.5	11.7	21.9	23.9	22.5
NC 7818-2-2C	0.0	22.5	9.5	10.9	12.7	22.9	25.0	25.5
NC 8839	0.0	13.9	10.1	12.2	13.8	22.6	26.1	25.1
NC 8908	0.0	16.2	9.2	11.1	13.2	22.9	25.3	25.0
NC 8931-3	0.1	24.0	8.9	11.9	13.2	24.9	26.5	24.7
NC 9003	0.9	24.4	10.5	12.3	13.6	22.1	24.1	24.2
NC 9005	0.5	30.3	10.6	12.1	13.6	23.8	25.5	25.1
NC 9040	0.1	31.1	11.9	12.5	14.5	23.4	25.2	24.7
NC 9069	0.0	27.4	10.2	11.9	12.5	23.5	25.5	23.6
NC 9085	0.1	26.6	10.1	11.7	13.3	22.9	24.5	23.3
NC 9800	0.0	17.9	9.6	12.4	13.7	23.3	25.6	24.9
NC TG-11	0.2	20.7	8.7	10.1	11.7	23.9	24.7	24.9
PD 113	0.1	18.2	8.4	10.5	11.9	21.0	23.1	23.1
PD 175	0.3	27.3	10.1	11.8	14.9	20.1	23.4	23.4
Speight G-14	0.7	20.0	9.7	10.6	12.8	20.7	23.6	23.5
Speight G-33	0.0	19.1	9.3	11.0	12.9	22.3	24.8	24.2
Speight G-34	0.0	21.3	8.9	10.2	12.9	20.7	22.9	23.5
Speight G-38	0.0	17.6	10.1	12.3	13.8	22.3	24.2	23.9
Speight G-53	0.8	24.8	10.3	11.7	12.8	21.7	23.4	23.5
SpeightG-70	0.1	18.5	10.3	11.5	12.8	21.6	23.7	22.9
Speight G-144	0.4	23.1	8.8	10.5	12.1	22.2	24.3	23.7
Speight G-25-H	0.0	22.4	10.5	11.9	13.6	23.0	25.2	24.7
Va. 770	1.7	28.6	9.5	11.5	13.0	21.9	23.8	24.9
L.S.D. (.05)	.7	7.3	1.1	1.4	1.5	2.0	2.1	1.7
(.01)	1.0	9.5	1.4	1.8	1.9	2.7	2.8	2.2
C.V. (%)	160	20	7	8	7	6	5	4

TV 206 REIDSVILLE 1970

Table 9. Continued. Comparison of varieties for certain characteristics.

Varieties or Lines	Analysis of Cured Leaf				Ratios	
	Nic. %	Sol. Sug. %	Tot. N. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
NC 2326	3.70	14.60	2.36	.34	.64	4.03
NC 95	3.62	13.03	2.34	.20	.65	3.68
Coker 213	3.29	15.00	2.21	.28	.67	4.64
Coker 254	2.50	15.57	1.93	.11	.77	6.32
Coker 258	3.31	16.73	2.17	.21	.66	5.08
Coker 319	3.06	15.23	2.32	.13	.76	5.18
Coker 411	3.63	14.43	2.21	.20	.69	4.05
Ga. 1469	3.28	14.90	2.31	.07	.64	4.59
McNair 14	3.36	14.73	2.07	.35	.63	4.49
McNair 30	3.16	15.80	2.47	.11	.74	5.11
McNair 133	3.00	16.03	2.12	.24	.67	5.38
McNair 135	3.31	14.40	2.17	.06	.72	4.35
Speight G-7	3.51	16.53	2.22	.25	.67	4.90
Speight G-13	2.99	16.50	2.15	.31	.61	5.55
Speight G-28	2.66	13.20	2.07	.22	.69	4.98
Speight G-41	3.48	15.40	2.22	.12	.83	4.45
Va. 115	2.96	19.60	2.11	.12	.61	6.66
Advanced Breeding Lines						
Bell 110	3.12	15.13	1.93	.39	.65	4.96
Coker 347	3.32	14.87	2.18	.16	.70	4.61
Coker 68-354-1M	3.70	15.37	2.35	.13	.64	4.28
Ga. 1498	3.45	16.30	2.16	.27	.63	5.02
McNair 9132	2.62	19.20	1.90	.16	.72	7.41
McNair 9138	2.60	21.10	1.87	.11	.72	8.57
McNair 9140	2.67	19.10	2.02	.30	.76	7.29
McNair 9171	3.18	16.07	2.08	.07	.65	5.09
McNair 9233	2.38	18.80	1.97	.10	.83	7.91
NC 6772	3.16	17.47	2.08	.36	.66	5.68
NC 68-W-22	3.06	17.70	2.04	.21	.67	6.16
NC 7818-2-2C	3.04	16.70	2.11	.11	.69	5.57
NC 8839	2.52	15.57	2.01	.30	.80	6.18
NC 8908	2.71	17.53	1.94	.18	.72	6.57
NC 8931-3	3.19	15.53	2.19	.18	.69	5.27
NC 9003	3.38	17.03	2.08	.17	.62	5.17
NC 9005	2.81	17.43	2.11	.05	.75	6.25
NC 9040	3.51	15.67	2.45	.26	.70	4.59
NC 9069	3.89	15.23	2.25	.18	.58	3.95
NC 9085	3.34	13.77	2.41	.32	.72	4.16
NC 9800	2.90	17.00	2.10	.13	.72	5.87
NC TG-11	3.26	15.57	1.99	.15	.61	4.96
PD 113	3.25	17.17	2.16	.22	.66	5.30
PD 175	3.48	15.63	2.27	.15	.69	4.66
Speight G-14	3.43	17.57	2.01	.24	.59	5.26
Speight G-33	3.10	16.50	2.12	.17	.68	5.42
Speight G-34	2.94	17.43	2.01	.15	.68	5.98
Speight G-38	3.48	14.30	2.09	.18	.60	4.13
Speight G-53	2.55	15.13	2.24	.04	.88	5.97
Speight G-70	3.84	15.40	2.20	.10	.57	4.15
Speight G-144	3.41	17.03	2.20	.13	.65	5.04
Speight G-25-H	2.63	15.13	2.02	.19	.77	6.00
Va. 770	2.64	16.73	2.07	.21	.78	6.57
L.S.D. (.05)	.46	3.10	.24	.18	.13	1.57
(.01)	.60	4.08	.31	.24	.18	2.07
C.V. (%)	9	12	7	61	12	18

REGIONAL FARM TEST - AVERAGE OF ELEVEN LOCATIONS - 1970

Table 10.

Varieties	Yield Lbs/A	Value Dol/A	Index Dol/Cwt.	% Nicotine	% Red Sugar	% Tot N.	% Alpha Amino N.	% W.S.A.	T.V.B.	Alk. No. W.S.A.	Nor. Nic.	Ratio	
												N/Nic.	Sug/Nic.
NC 2326	2304	1708	74.00	2.99	12.35	2.38	.238	3.94	.47	3.01	.18	.85	4.90
NC 95	2516	1804	71.91	3.24	11.00	2.48	.236	4.26	.49	3.48	.15	.80	3.91
PD 175	2388	1666	70.00	2.97	13.20	2.35	.202	3.80	.47	2.46	.12	.86	5.21
NC 6772	2538	1868	73.54	3.10	12.91	2.37	.212	4.02	.45	3.46	.16	.80	4.85
Speight G-34	2430	1738	71.54	2.82	13.10	2.26	.196	3.80	.45	3.42	.11	.85	5.55
PD 113	2307	1604	69.27	3.00	11.65	2.42	.210	3.49	.47	2.99	.17	.83	4.22
Coker 354	2222	1597	71.73	3.46	10.35	2.65	.274	4.28	.53	2.56	.12	.81	3.38
NC TG-11	2648	1881	71.09	3.09	12.22	2.39	.226	3.87	.48	2.80	.15	.83	4.87
Va. 770	2069	1455	70.63	2.81	12.88	2.42	.240	3.78	.44	3.23	.16	.89	5.14
Bell 110	2259	1616	71.45	3.07	11.42	2.42	.231	4.29	.47	3.33	.12	.82	4.24
Ga. 1498	2278	1660	72.45	3.34	11.59	2.48	.240	4.08	.50	2.74	.13	.77	4.07
Speight G-33	2388	1727	72.18	2.86	11.98	2.46	.242	4.03	.48	3.66	.18	.92	4.99

REGIONAL FARM TESTS - 1970

Combined Across 11 Farms and All Tobacco Companies

Percent Tobacco in Various Color, Body and Texture Classes;
Quality of Color Index, Percent Usable and Desirability Index

Table 11.

Variety	Lemon	Orange	Greenish Lemon	Greenish Orange	Brown	Red	Other Color	Quality of Color Index
NC 2326	4.8	54.5	1.5	8.0	11.4	1.0	18.9	2.3
NC 95	6.5	42.8	2.0	14.5	15.9	0.6	17.7	2.1
PD 175	7.2	43.0	1.0	5.4	19.2	2.3	21.9	2.0
NC 6772	13.2	44.3	4.9	14.8	7.5	1.3	14.0	2.2
Speight G-34	6.2	42.0	2.2	16.1	13.4	1.9	18.2	2.1
PD 113	5.5	38.7	0.7	2.7	27.2	2.2	23.0	1.9
Coker 354	6.2	43.3	1.1	4.1	22.1	1.5	21.8	2.0
NC TG-11	7.9	42.3	2.1	16.8	8.2	1.1	21.6	2.0
Va. 770	7.3	47.6	1.1	10.4	12.9	1.1	19.6	2.1
Bell 110	6.2	40.6	2.9	18.0	13.9	0.7	17.6	2.0
Ga. 1498	5.7	42.2	2.1	13.0	14.9	2.2	19.9	2.0
Speight G-33	6.6	44.4	2.5	9.4	19.1	1.2	16.7	2.2

Variety	Chaffy Body	Thin Body	Medium Body	Medium Heavy Body	Heavy Body	No. Obser.
NC 2326	4.8	19.2	34.3	24.0	17.8	94
NC 95	5.4	29.2	37.1	19.4	8.9	94
PD 175	7.3	20.3	38.2	16.9	17.3	94
NC 6772	3.1	21.7	31.5	22.8	20.9	94
Speight G-34	5.6	27.4	32.9	17.9	16.1	94
PD 113	8.0	24.8	31.5	22.2	13.5	94
Coker 354	6.7	24.4	35.8	22.2	10.8	94
NC TG-11	3.6	17.8	28.0	22.0	28.6	94
Va. 770	6.8	26.3	36.9	19.7	10.3	94
Bell 110	5.1	22.6	35.3	22.2	14.8	94
Ga. 1498	5.8	22.9	36.4	18.6	16.4	94
Speight G-33	6.4	25.1	34.8	21.2	12.5	94

Variety	Open Grain Texture	Medium Texture	Smooth Texture	Slick Texture	Other Texture	Usable	Desirability Index
NC 2326	9.3	28.3	22.4	10.9	29.1	35.3	0.7
NC 95	9.9	28.6	25.5	6.1	29.9	34.9	0.6
PD 175	6.8	20.7	23.2	15.0	34.4	29.2	0.5
NC 6772	7.0	19.1	31.6	16.1	26.1	29.6	0.5
Speight G-34	10.2	26.7	24.5	11.7	26.8	32.6	0.6
PD 113	9.4	26.4	18.6	7.8	37.8	32.5	0.5
Coker 354	9.3	25.1	22.8	6.3	36.6	31.8	0.5
NC TG-11	8.2	17.6	26.1	15.7	32.4	27.4	0.5
Va. 770	10.7	28.0	26.4	10.0	24.8	31.7	0.5
Bell 110	7.3	27.1	22.6	12.7	30.2	29.2	0.5
Ga. 1498	7.2	23.8	26.8	11.2	31.0	29.6	0.5
Speight G-33	9.9	33.5	19.4	8.0	29.2	34.5	0.6

REGIONAL SMALL PLOT TESTS - 1970

Percent Cured Leaf Usable by Tobacco Companies

Average Across 6 Locations

Table 12.

	Tobacco Companies								Average
	A	B	C	D	E	F	G	H	
NC 2326	0	39.5	9.0	7.5	27.6	43.7	29.5	81.2	29.8
NC 95	10.2	36.5	6.3	10.2	31.8	32.8	27.2	59.5	26.8
PD 175	0	30.0	0	16.7	30.6	35.0	13.5	65.3	23.9
NC 6772	9.7	40.3	3.8	9.7	28.8	52.2	33.0	77.2	31.8
Speight G-34	6.5	38.3	6.3	16.8	37.2	39.3	44.5	53.5	30.3
PD 113	0	36.5	0	27.8	26.8	33.7	26.8	58.8	26.3
Coker 354	8.3	38.0	3.2	14.8	27.0	43.0	26.2	73.0	29.2
NC TG-11	8.3	32.2	3.3	23.8	24.8	33.2	29.5	83.0	29.8
Va. 770	7.8	32.8	0	16.7	29.0	41.3	29.5	62.7	27.5
Bell 110	13.7	43.5	3.2	23.8	34.0	44.5	38.8	73.3	34.4
Ga. 1498	4.5	33.5	0	22.3	15.0	36.8	37.5	67.7	27.2
Speight G-33	12.2	38.2	6.0	20.2	29.2	30.2	53.0	54.5	30.4

Rating For Variety Potential

Average Across 6 Locations

	Tobacco Companies								Average
	A	B	C	D	E	F	G	H	
NC 2326	3.8	2.2	3.8	3.7	2.2	2.8	3.0	2.0	2.9
NC 95	3.5	2.7	3.8	3.5	2.4	3.0	3.0	2.0	3.0
PD 175	4.0	2.8	4.0	3.5	2.4	3.2	3.8	2.4	3.3
NC 6772	3.7	2.2	3.8	3.2	2.2	2.5	2.8	2.4	2.8
Speight G-34	3.8	2.5	3.7	3.2	2.2	2.8	2.8	3.0	3.0
PD 113	3.8	3.2	4.0	3.0	2.6	3.2	3.2	2.6	3.2
Coker 354	3.7	2.3	3.8	3.2	2.2	2.8	3.5	2.0	2.9
NC TG-11	3.5	2.7	3.7	3.2	2.2	3.3	3.0	2.0	3.0
Va. 770	3.7	2.2	3.8	3.5	2.6	3.0	3.0	2.2	3.0
Bell 110	3.0	2.2	3.8	2.8	2.2	2.5	2.5	2.4	2.7
Ga. 1498	3.8	3.0	3.8	3.2	3.0	3.0	3.2	1.8	3.1
Speight G-33	3.7	2.7	3.7	2.8	2.6	3.2	2.2	2.6	2.9

Table 13. REGIONAL FARM TESTS - 1970
 % Usable Tobacco by at Least One Company
 Individual North Carolina Farms
 and a Mean for all Farms and Varieties

Variety	North Carolina						Average
	Edmund	Johnson	Harrell	King	Crews	Busick	
NC 2326	78.2	99.7	100	100	100	100	95.9
NC 95	82.8	100.0	100	100	100	100	97.3
PD 175	72.1	84.5	82.5	100	100	100	90.0
NC 6772	89.7	84.1	100	100	100	100	95.8
Speight G-34	55.2	87.4	90.9	100	100	100	89.1
PD 113	87.9	99.4	100	100	100	100	98.1
Coker 68-354-1M	70.5	85.8	73.0	100	100	100	88.4
NC TG-11	85.2	86.0	47.4	100	100	100	86.6
Va. 770	85.2	82.4	100	100	100	100	94.8
Bell 110	76.8	98.3	100	100	100	100	96.0
Ga. 1498	62.8	98.7	100	100	100	100	93.8
Speight G-33	58.5	82.0	100	100	100	100	90.3
Average	75.1	90.3	90.7	100	100	100	92.6

Table 14. Index^{1/} on amount graded of each entry by eight participating companies from the six farms in the North Carolina Regional Farm Test. 1970

Belt and Grower	Variety or Line											
	NC 2326	NC 95	PD 175	NC 6772	Speight G-34	PD 113	Coker 354	NC TG-11	Va. 770	Bell 110	Ga. 1498	Speight G-33
<u>Border</u>												
Edmund	2.7	2.8	2.1	2.3	2.4	2.6	2.3	2.8	1.9	2.3	2.2	2.0
<u>Eastern</u>												
Johnson	2.6	2.7	1.6	2.6	3.2	2.5	2.5	1.8	2.5	2.5	1.9	2.6
Harrell	2.8	3.1	3.1	2.3	3.4	3.2	3.0	1.4	2.6	3.6	4.0	3.2
<u>Middle</u>												
King	3.1	3.7	2.7	3.2	3.0	2.0	2.3	2.5	2.4	2.2	2.0	2.1
Crews	1.6	.8	1.5	2.2	1.0	.6	1.1	1.4	.8	1.0	.4	.9
<u>Old</u>												
Busick	2.1	1.9	2.2	3.1	.6	3.9	2.0	1.0	2.1	1.5	.9	2.8
<u>Overall</u>												
Average	2.5	2.5	2.2	2.6	2.3	2.5	2.2	1.8	2.1	2.2	1.9	2.3

^{1/}0 - None graded; 8 - All graded by all eight participating companies.

Table 14. Grower rating^{1/} for preference for each entry in Regional Farm Test in North Carolina. 1970

Belt and Grower	Variety or Line											
	NC 2326	NC 95	PD 175	NC 6772	Speight G-34	PD 113	Coker 354	NC TG-11	Va. 770	Bell 110	Ga. 1498	Speight G-33
<u>Border</u>												
Edmund	3	5	8	1	2	12	11	6	9	10	4	7
<u>Eastern</u>												
Johnson	7	6	9	4	5	11	1	8	12	10	2	3
Harrell	1	4	12	2	3	11	10	9	8	5	7	6
<u>Old</u>												
Busick	11	10	1	3	8	4	2	6	12	9	7	5
<u>Overall</u>												
Average	5.2	6.2	7.5	2.5	4.5	9.5	6.0	7.2	10.2	8.5	5.0	5.2

^{1/} 1 - Most desirable; 10 least desirable

Table 15. Grower practices by individual farms, Regional Farm Test in North Carolina - 1970.

Belt and County	Farm	Soil Fumigation	Row Width and Hill Spacing	Date of Planting	Date of first Harvest	Fertilizer	Top-dressing	Insecticide	Curing Unit	No. Times Irrigated
<u>Border</u> Columbus	Edmund	Mocap Broadcast 50 lbs/A	44" Rows 20" Drill	April 20	June 23	1200# 3-9-9	500# 3-9-9 100# 15-0-14	Sevin	H & N	None
<u>Eastern</u> Lenoir	Johnson	Mocap Broadcast 80#/A	44" Rows 21" Drill	April 20 and 21	June 22	900# 4-8-12	100# 15-0-14	Sevin & Lannate	Golden Cure	None
Wilson	Harrell	None	42" Rows 24" Drill	April 29 May 1	July 9	1000# 4-8-12	200# 8-9-24	None	Tharington	0.8 (6-12) 0.8 (6-24)
<u>Middle</u> Richmond	King	None	44" Rows 22" Drill	May 6	July 27	1200# 3-9-9	300# 15-0-14 500# 3-9-9	Sevin	Gastobac	1.0 (6-18) 1.0 (7-18)
Granville	Crews	None	48" Rows 21" Drill	May 19 May 20	August 5	1250# 4-8-12	150# 15-0-14	None	Mayo	None
Caswell	Busick	Telone 7 gal/A	48" Rows 24" Drill	May 16	August 3	1000#	100# 15-0-14	None	Tobacco Jet	1.0 (6-22)

Table 16. Cultural practices for the Official Variety Test - 1970

Station	Fertilization	Top Dressing	Soil Type	Fumigation	Irrigation	Date of Transplanting	Date of first Harvest
Border Belt Tobacco Research Station Whiteville, N. C.	600# 6-12-18	165# 15-0-14	Norfolk FSL	Terroicide 15D 12 gal/A	None	May 1	July 8
Lower Coastal Plain Tobacco Research Station Kinston, N. C.	700# 5-10-15	None	Goldsboro FSL	Terroicide 15 12 gal/A	None	April 28	June 30
Upper Coastal Plain Research Station Rocky Mount, N. C.	1000# 4-8-12	160# 15-0-14	Norfolk SL	Terroicide 15D 12 gal/A	1.25 June 14	May 18	July 14
Oxford Tobacco Research Station Oxford, N. C.	700# 6-12-18	100# 15-0-14	Durham SL	Terroicide 15 12 gal/A	0.7 June 22	May 22	July 20
Upper Piedmont Research Station Reidsville, N. C.	710# 5-10-15	300# 5-10-15	Acil SL	Terroicide 15D 12 gal/A	1.5 June 22 1.5 July 8 1.0 July 20	May 29	July 29

Table 17. Border Belt Tobacco Research Station, Whiteville, N. C.

Date	April	May	June	July	August	September
1						
2	.20					.03
3				.55	.58	.54
4		.31			.14	
5			.11			
6	.15				.22	
7	.25				.02	
8						
9				.20	1.00	
10					.13	
11				.10		
12		T				2.42
13				.82	.33	
14	.08	T	.04		.25	
15	.02	.08		.50	.51	
16				1.10		
17		.27	.05			
18						.25
19					.82	
20	.02					.23
21			.09	.20		
22			.20	.80	.38	
23			.03	1.51	.03	
24				.06	1.55	
25		.34	.64	1.00	.39	
26	T	.95	.53			
27	.32		.10			
28						1.95
29	.07					
30				.20	.05	
31		.44		.50		
TOTALS	1.11	2.39	1.79	7.54	6.40	5.42

T - Trace

() - Irrigation

Table 18. Lower Coastal Plain Research Station, Kinston, N. C.

Date	April	May	June	July	August	September
1	.02					
2	.59					
3				.62		
4		.25				
5		.01		.18		.53
6				.59	.53	
7	.24		.24			
8						
9				.69		
10				.04		
11				2.11	.54	
12						
13						
14	1.01		.13		.28	
15	.04			3.15		
16				.07		
17		.68			.67	
18		1.05			.56	
19					.72	
20	.10					
21			.07	.51		
22			.12	1.59	.30	
23			.46	.27		
24				.25	1.99	
25						
26	.16	1.13	1.07			
27	.65					
28						.69
29						
30		.12		1.11		
31		.24		.10	.05	
TOTALS	2.81	3.48	2.09	11.28	5.64	1.22

T - Trace

() Irrigation

Table 19. Upper Coastal Plain Research Station, Rocky Mount, N. C.

Date	April	May	June	July	August	September
1	.21				.52	
2	.55					
3				.46		
4		.55			.25	.11
5		.04		.73		.73
6			.50		T	
7	.24		.02		.15	
8						
9				.40		
10				.10	.23	
11				.64	.15	
12						.25
13						
14	1.03		(1.25)			
15				.10	.03	
16						
17		.15	.06		3.56	
18					.33	
19						
20	.09				.30	
21		.10	.98	.41		
22			.04	1.10		
23			2.05	.35		
24				.28	.12	
25			.02			
26	.28	.76	1.75			
27	1.47					.18
28	.27					1.13
29				.17		
30				.20		
31				.13		
TOTALS	4.14	1.60	5.42	5.07	5.64	2.40

T - Trace

() - Irrigation

Table 20. Oxford Tobacco Research Station, Oxford, N. C.

Date	April	May	June	July	August	September
1	.22		.01			
2	.56				.16	
3		.03				
4		1.19			.15	
5		T		.44		.21
6	T		.09		.08	
7	.07		.16		T	
8						
9	T			.34	T	
10				2.42	.98	
11			.12	.02	.20	
12		.02				
13						
14	1.42					
15	T				.07	
16				T		
17		.55	(.70)			
18						
19						
20	.04		.02	.35	T	
21			.38	.01		
22			.01	.17		
23				.51	T	
24	.09			.24	.03	
25			1.05	T		
26	.16	.15	.35			
27	.03			.10		.13
28	.36			1.40		.48
29						
30						
31		.03		.33		
TOTALS	2.95	1.97	2.89	6.33	1.67	.82

T - Trace

() - Irrigation

Table 21. Upper Piedmont Research Station, Reidsville, N. C.

Date	April	May	June	July	August	September
1					T	
2	.50		T		.15	
3	.08					.10
4		1.23			.57	
5		.31	.61	T		.07
6			.42	.11		
7	T		.05		1.68	
8				(1.50)		
9					.27	
10				1.89	2.40	
11		T	T	.05	.89	.60
12		T		.05		
13		.06			.01	
14	.37			.19	T	
15		.15				
16		T				
17		1.00				
18		.10				
19					.06	
20	.28				.11	
21			.08	.02	.03	
				(1.00)		
22			.06	.13	T	
			(1.50)			
23		.12	2.21	.06	.46	
24	.01			.19		
25			.36	.01		
26		.01	1.71	.22		
27	.84			T		
28	.09			.04		.21
29	.64			T		
30				.13		
31		.01		.01	.01	
TOTALS	2.81	2.99	7.00	5.60	6.64	.98

T - Trace

() - Irrigation