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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 1967 represents the fourth season in testing new tobacco varieties under the Regional Minimum Standards Program initiated in 1963-1964. Four new flue-cured tobacco varieties met the minimum standards in the 1967 tests as outlined by the Quality Evaluation Committee of the Tobacco Worker's Conference. The new varieties are Bell 93, Coker 254, McNair 14 and Speight G-13. Seed will be available for 1968 plantings from the originating agency of each new variety.

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.

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, Hicks Broadleaf and NC 95, by more than plus or minus 15 percent for measurable chemical traits except nicotine. The acceptable range for nicotine is plus 15 percent and minus 20 percent of the mean of Hicks and NC 95. New varieties should not contain more than 8 percent of the total alkaloids as nornicotine. Variety candidates should compare favorably with the

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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 1967 Official Variety Tests in North Carolina and the Regional Farm Tests. In addition a summary table of variety performance over different years and location 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. 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-half acre plots and is referred to as the Regional

Farm Test. The third phase is the Regional Small Plot Test, conducted in five states, and this data is presented in a separate publication.

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 co-operate 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 1967

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.

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

Speight Seed Farms, Winterville, N. C.

Virginia Agricultural Experiment Station, Chatham, Virginia

^{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 co-operated on the tests for disease reaction. 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.

Test Locations

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

- TV 177 Border Belt Tobacco Research Station, Wallace Dickens, Superintendent, Whiteville, N. C., representing the Border Belt.
- TV 178 Upper Coastal Plain Research Station, Warren Bailey Superintendent, Rocky Mount, N. C., representing the Eastern Belt.
- TV 179 Lower Coastal Plain Tobacco Research Station, Ben Kittrell, Superintendent, Kinston, N. C., representing the Eastern Belt.
- TV 180 Oxford Tobacco Research Station, Billy N. Ayscue, Superintendent, Oxford, N. C., representing the Middle Belt.
- TV 181 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 7 x 7 triple lattice design were used at each location.^{4/} The plants were banded approximately two weeks prior to transplanting and individually selected at transplanting for maximum uniformity within plots at all locations. Each one row plot consisted of 20 competitive

^{4/} Statistical analyses were made in the Computing Center under the supervision of F. J. Verlinden and Joyce Villena. Their assistance is gratefully acknowledged.

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) and Number 20 (1966).

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 1966 and 1967 season through September 29, 1967.

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.

Seasonal Conditions: In general, all tobacco in the Official Variety Test was planted under favorable moisture conditions. Early growing conditions were not favorable in the Border and Eastern Belts due to cool temperature and light rainfall during May and early June. Adequate to heavy rainfall and warm temperatures in late June and July provided conditions favorable for extremely rapid growth, fairly late in the season. The growing season was generally good

in the Middle Belt but conditions of drought existed in areas of the Old Belt. Rainfall data are shown in Table 17.

The Whiteville Test, TV 177, was transplanted under good moisture conditions. The cool, dry periods early in the growing season, with subsequent rains and warm weather, delayed harvests and adversely affected quality. The tobacco in this test tended to be fair in color and had medium-heavy 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 quality.

The Rocky Mount Test, TV 178, was transplanted under adequate moisture conditions. Cool temperatures and limited rainfall were encountered early in the season but adequate rains and warmer weather during June provided for good growth. The leaf produced in this test was fair.

The Kinston Test, TV 179, was planted under good moisture conditions. The early growing season here was cool with periods of low rainfall. The mid and late growing season was favored by warm temperatures but adequate to excessive moisture and Black Shank did considerable damage. The tobacco produced in this test was rather thin and somewhat trashy. Over six inches of rainfall in June and over eight and one-half inches of rainfall in July contributed to chemical imbalance, excessive disease problems and poor leaf quality.

The Oxford Test, TV 180, was transplanted under good moisture. The season, in general, was good at this location. Mosaic was a problem here but the cured leaf was of good quality.

The Reidsville Test, TV 181, was transplanted under adequate moisture conditions. The tobacco was irrigated several times and good growth was obtained. The soil was medium heavy in type and was fairly fertile.

Overall, the quality of the entries was fair to 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 co-operative 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 and R. J. Reynolds Tobacco Company.

Twelve locations were utilized -- two each in Georgia, South Carolina 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.

In general, the 1967 season was dry and cool early in the growing period and more favorable in the mid and latter part of the growing season in the Border, East and sections of the Middle Belt. The Old Belt was extremely dry in some areas during this period.

Edmund transplanted during an extremely dry period, resulting in considerable replanting and a very slow start. It was also unusually cool in the early growing season. Considerable rain and warm weather in mid-season produced excessive growth and poor curing qualities. Brown Spot was a problem at this location.

The test at Harrell's was transplanted in a dry period and it remained relatively dry until mid-season. The season was such that a medium to medium light crop of tobacco was produced with the weight above the average for the Coastal Plain Tests. The general characteristics of the tobacco in the field were good, and the cured leaf was satisfactory. Varieties ranged from fair to good in quality.

Johnson transplanted in mid April and had good moisture and soil conditions at this time, except for cool nights. About 10% of Hicks was lost because of Black Shank. The quality of this crop was good.

Woodlief transplanted on May 8 during a dry period and it remained dry until the 6.02 inch flood of June 18. Replacement topdressing was applied to offset leaching but the crop was somewhat light. Quality of this crop was fair.

Crews had a favorable growing season for this test. The entries grew well and the quality overall was good.

Busick had good moisture and temperature conditions for most of the season. All entries cured fair in this test. Irrigation was used on July 7 for this test.

RESULTS AND DISCUSSION

The data are discussed under the headings (1) Official Variety Test 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 Hicks Broadleaf for the period 1953 to 1967. The varieties with the higher number of comparisons have been included in the tests from two to fifteen years and give a more accurate estimate of their general performance, while the varieties with five comparisons have been in the test only one year. 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 1965, 1966 and 1967 tests are compared for a large number of characteristics. The same general trend was shown in these varieties during all years. Speight G-7, Speight G-36 and Va. 115 had the highest acre value. Speight G-7 and NC 2326 average above \$70.00 per one hundred pounds. Hicks Broadleaf was the earliest to flower. All varieties had about average percent nicotine, ranging from 2.34 for Coker 319 to 2.86 for NC 95. 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 1967 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

All of the fifteen commercially available varieties tested in 1967 yielded equal to or greater than Hicks. There was a fairly wide spread for dollars per hundred weight, ranging from a low of \$64.78 for Coker 298 to a high of \$70.18 for Speight G-7. 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 this would be expected. It appears that the grades as changed in 1963 and 1964 reflect quality according to price to a rather large extent. This is a change for the better in evaluating tobaccos, since it does separate the more desirable from the less desirable types. Varieties differ for quality characteristics as shown by these data.

Most varieties were intermediate in their flowering habit, ranging from 1 to 13 days later than Hicks Broadleaf. All varieties had more leaves per

plant than Hicks, although the maximum difference was only 5.3 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 254 and Speight G-7 had a high ground sucker count. Coker 298 had the lowest axillary sucker count per plant. Measurements on leaf size indicated that most varieties were quite similar, although Speight G-7 might be considered a broadleaf type. 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 Bell 29, Coker 254 and Coker 319 being the lowest in nicotine content as compared with the other varieties. In general, a nicotine content of about 1.75-2.75 percent in a normal year is satisfactory to the trade. 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-13 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 appeared to be in the acceptable range for reducing sugars, although the sugars in general were consistently lower than in 1966. The Kinston Location was extremely low in percent reducing sugars.

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 4.52 for SC 66 to 6.15 for Coker 254.

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. NC 95 and Coker 258 carry 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 developed rather severely at several locations. The varieties were rated for tolerance or sensitivity to 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. Brown Spot readings were made just prior to harvest at one location which was the Border Belt Research Station. This preliminary information will be used to evaluate these lines for Brown Spot tolerance or sensitivity as they are advanced into the varietal testing program.

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 2075 to 2688 pounds per acre for Hicks and Coker 65-188 respectively. Value per acre followed the same trend as yield. Coker 254 had the highest dollars per hundred pounds of the entries in this test.

The tobacco from each of the locations was displayed on a warehouse floor and appraised for the physical quality factors; color, body and texture by leaf and research personnel of each of the seven 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.

In Table 14, an index of the amount graded is shown by grower for each variety. If all seven companies could grade all of a variety into their grades, then it received an index of 7. 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 McNair 14, Coker 254 and NC 95 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 95 and Speight G-13 over the other varieties.

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.

Description of New Varieties

Bell 93 (Developed from a cross of Bell 15 and Coker 187-Hicks) produced

a medium yield of medium quality tobacco as judged by tobacco company buyers. Bell 93 produced a relatively high percentage of orange, medium body, medium to smooth textured tobacco. Bell 93 is a Hicks type plant with medium height, medium to low number of leaves that are medium spaced. The variety was given the following disease resistance rating: low to Black Shank, susceptible to Granville Wilt and Root Knot nematodes and low to Fusarium Wilt.

Coker 254 - (Developed from a cross of Coker 187-Hicks and NC 95) produced a high yield of high quality tobacco as judged by tobacco company buyers. Coker 254 produced a relatively high percentage of lemon, thin to medium body and medium to smooth textured tobacco that had a relatively low nicotine content. Plants are tall, grow with a yellow cast, have a high number of closely spaced leaves. The leaves are medium width and relatively long and generally have a smooth surface. The variety flowered late and ripened at a medium rate but cured easily. Indications are that this variety should be fertilized with 5 to 10% less nitrogen than some other varieties such as Coker 319.

Coker 254 was rated high in resistance to Black Shank, Bacterial Wilt and medium to Fusarium Wilt and resistant to Root Knot nematodes.

McNair 14 - (Developed from a cross of McNair 4126 breeding line and Coker 139 and tested as McNair 4) produced a relatively low yield of medium quality tobacco as judged by tobacco company buyers. McNair 14 produced a relatively high percentage of orange, thin to medium body, open grain tobacco. McNair 14 is a Hicks type plant with low plant height and low number of leaves that are medium spaced. The leaves are medium to broad, with medium length. The variety flowered medium to late and cured fairly easily.

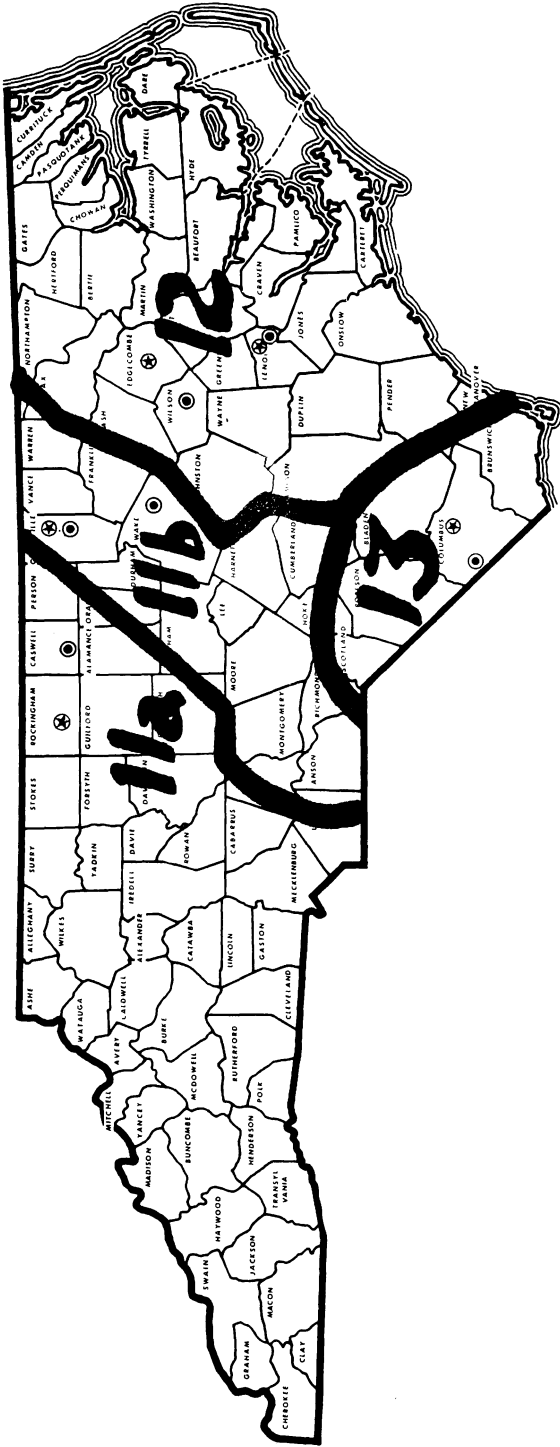
McNair 14 was rated low in resistance to Black Shank and high for Granville Wilt and susceptible to Fusarium Wilt and Root Knot nematodes. Observations indicate this variety is sensitive to Brown Spot.

Speight G-13 - (Developed from a cross of NC 95, Speight 42 and Oxford 1-181) produced a high yield of medium quality tobacco as judged by tobacco company buyers. Speight G-13 produced a relatively high percentage of orange medium to medium heavy body, medium to smooth textured tobacco.

Plants are tall and have a high number of widely spaced leaves. The leaves are medium wide and have medium length and generally have a crinkled surface. The variety matured late and cured easily although there was a tendency for the top leaves to be red.

Speight G-13 was rated moderate in resistance to Black Shank and Bacterial Wilt and susceptible to Fusarium Wilt and unstable for Root Knot resistance.

LOCATION OF TESTS



- ⊗ Experiment Station
- Cooperative Grower

Figure 1

Table 1. Percentage comparison with the mean of Hicks Broadleaf of certain flue-cured tobacco varieties in the Official Tobacco Variety Test. 1953 - 1967.

Standard Hicks Broadleaf	Acre Yield 2033 lbs.	Acre Value \$1253	Value per 100 lbs. \$61.13
No. Comparisons*			
5	Coker 254 (118)	Coker 254 (122)	Coker 254 (103)
5	Speight G-13 (118)	Speight G-13 (119)	NC 2326 (103)
9	Coker 258 (117)	Coker 258 (116)	Bell 93 (101)
23	Speight G-5 (115)	Speight G-5 (113)	Speight G-13 (101)
24	Speight G-36 (114)	Va. 115 (113)	Coker 319 (100)
28	Va. 115 (114)	Speight G-7 (112)	<u>Hicks Broadleaf</u> (100)
14	Speight G-7 (113)	Bell 93 (111)	McNair 14 (100)
24	Coker 298 (111)	SC 66 (111)	Speight G-7 (100)
5	Bell 93 (110)	NC 95 (108)	Coker 258 (99)
37	NC 95 (110)	NC 2326 (107)	Va. 115 (99)
39	Coker 187-Hicks (109)	Speight G-36 (107)	McNair 30 (98)
28	Coker 319 (108)	Coker 319 (105)	NC 95 (98)
9	SC 66 (107)	McNair 14 (105)	Speight G-5 (98)
5	McNair 14 (105)	Coker 298 (104)	SC 66 (98)
23	McNair 30 (105)	Coker 187-Hicks (102)	Coker 298 (94)
24	NC 2326 (104)	McNair 30 (102)	Speight G-36 (94)
68	<u>Hicks Broadleaf</u> (100)	<u>Hicks Broadleaf</u> (100)	Coker 187-Hicks (93)

*Number of times appeared in test with Hicks Broadleaf.

THREE YEAR AVERAGE 1965, 1966 and 1967

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.			
Hicks Broadleaf	2276	1548	67.62	53	16.5	45
NC 95	2532	1759	68.97	60	19.7	48
Coker 298	2672	1729	64.78	64	21.1	53
Coker 319	2547	1770	69.57	62	21.1	49
NC 2326	2454	1727	70.09	54	18.1	48
Speight G-7	2617	1841	70.18	58	19.7	49
Speight G-36	2676	1785	66.53	63	20.2	53
Va. 115	2732	1870	68.36	57	18.9	46

Varieties or Lines	Sucker per Plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Hicks	2.0	25.9	10.5	12.5	12.4	24.9	26.6	24.9
NC 95	1.5	22.1	10.2	12.3	13.7	21.2	24.4	24.8
Coker 298	.7	16.6	10.1	12.2	14.2	21.4	24.7	26.0
Coker 319	1.5	26.2	9.3	11.2	13.3	22.6	25.9	26.6
NC 2326	.6	23.9	10.4	12.4	13.0	24.1	26.3	25.1
Speight G-7	2.6	22.9	11.3	13.3	13.9	21.9	24.7	25.0
Speight G-36	.9	18.9	10.1	12.6	13.7	22.0	25.2	25.1
Va. 115	1.0	20.7	9.8	11.8	13.2	22.6	25.4	25.3

Varieties or Lines	Nic.	NorNic	Red. Sug.	Tot. N.	T.N.	Sug.
	%	%	%	%	Nic.	Nic.
Hicks	2.81	.17	16.41	2.20	.78	4.78
NC 95	2.86	.18	15.78	2.10	.78	5.21
Coker 298	2.84	.15	15.09	2.20	.84	4.92
Coker 319	2.34	.16	15.23	2.24	.96	5.45
NC 2326	2.72	.14	16.53	2.22	.84	5.14
Speight G-7	2.75	.16	16.66	2.17	.76	5.05
Speight G-36	2.80	.15	15.87	2.21	.81	5.08
Va. 115	2.59	.20	17.26	2.22	.87	5.54

WHITEVILLE, ROCKY MOUNT, KINSTON, OXFORD and REIDSVILLE

Table 3. Comparison of varieties in 1967 for certain characteristics, for five locations.

Varieties or Lines	Yield Lbs/A	Value Index		Days to Flower	Leaves per Plant	Height of Plant	Internode Length			
		Dol/A	Dol/Cwt.				0-10"	10-20"	20"-top	
Commercially Available Varieties										
Hicks Broadleaf	2276	1548	67.62	35.9	53	16.5	45	2.0	2.3	3.8
NC 95	2532	1759	68.97	35.3	60	19.7	48	1.9	2.3	2.8
Bell 29	2526	1690	66.93	38.9	57	18.3	51	1.9	2.4	3.5
Bell 93	2495	1715	68.62	36.0	56	18.3	48	1.9	2.2	3.3
Coker 254	2696	1887	69.88	33.3	65	21.8	53	1.9	2.3	2.7
Coker 258	2774	1913	69.05	35.8	64	21.4	48	1.8	2.2	2.5
Coker 298	2672	1729	64.78	38.7	64	21.1	53	1.9	2.4	2.9
Coker 319	2547	1770	69.57	33.7	62	21.1	49	1.9	2.1	2.7
McNair 14	2384	1621	67.91	34.9	59	19.2	47	1.9	2.3	2.9
NC 2326	2454	1727	70.09	31.4	54	18.1	48	1.9	2.2	3.4
Speight G-7	2617	1841	70.18	34.5	58	19.7	49	2.0	2.3	2.8
Speight G-13	2691	1844	68.51	35.9	66	20.5	52	1.9	2.4	2.9
Speight G-36	2676	1785	66.53	37.9	63	20.2	53	1.9	2.5	3.1
SC 66	2538	1723	67.93	35.3	61	19.4	49	1.9	2.3	3.0
Va. 115	2732	1870	68.36	35.1	57	18.9	46	1.8	2.3	3.0
Advanced Breeding Lines										
BY 103	2749	1876	68.03	36.7	59	20.1	52	1.9	2.3	3.1
Coker 65-188	3171	2174	68.60	35.1	63	19.9	49	2.0	2.3	2.8
McNair 6139	2498	1699	67.95	35.1	60	19.3	50	2.0	2.5	2.9
NC TG-10	2913	1959	67.20	37.1	60	20.4	46	1.8	2.1	2.7
NC 5813-C	2586	1791	69.59	34.2	56	18.6	48	1.8	2.2	3.3
NC 6034-C	2620	1813	69.26	33.6	56	17.7	48	2.0	2.4	3.4
NC 6074-C	2399	1650	68.96	34.8	58	18.1	50	1.9	2.4	3.6
NC 6080-C	2225	1513	68.11	36.5	55	17.2	44	1.9	2.3	3.3
NC 6110-C	2635	1834	69.41	33.1	57	19.0	52	2.0	2.5	3.3
NC 6111-C	2561	1780	69.40	34.5	56	18.2	51	2.0	2.4	3.5
NC 6112-C	2621	1792	68.46	34.4	57	18.5	48	1.8	2.3	3.3
NC 6113-C	2634	1735	65.91	38.0	60	18.8	48	1.9	2.3	3.1
NC 6115-C	2681	1808	67.46	35.4	65	20.7	53	1.9	2.4	2.9
NC 6146	2362	1655	70.39	31.7	59	20.2	50	1.9	2.3	3.0
NC 6769	2532	1794	71.16	29.3	56	17.9	46	1.8	2.2	3.2
NC 6772	2476	1753	70.83	31.1	56	18.4	46	1.9	2.2	3.1
NC 6773	2984	2032	68.00	35.7	58	19.6	47	1.8	2.1	3.1
NC 6774	2921	2039	69.70	33.4	58	19.6	48	1.9	2.1	3.1
NC 6792	2785	1838	65.95	37.7	66	22.9	53	1.8	2.1	2.6
NC 6797	2567	1799	69.99	33.6	57	18.5	48	1.9	2.3	3.2
NC 6809	2790	1863	66.66	38.0	66	22.0	53	1.9	2.2	2.7
NC 6857-C	2647	1822	68.98	34.8	59	18.8	50	1.8	2.4	3.4
NC 6920-C	2602	1816	69.97	31.6	55	18.8	48	1.9	2.3	3.1
NC 6934-C	2283	1588	69.73	30.4	55	18.2	48	1.9	2.4	3.4
NC 6973-C	2827	1970	69.68	33.6	58	18.8	47	1.8	2.3	3.1
PD 335	2417	1542	63.83	39.6	63	21.1	51	1.8	2.2	2.8
Speight G-21	2536	1685	66.56	37.3	59	20.2	51	1.8	2.4	3.1
Speight G-22	2663	1793	67.59	36.4	60	19.6	50	1.9	2.3	3.0
Speight G-26	2601	1730	66.43	37.0	62	19.6	52	1.9	2.4	3.2
Speight G-29	2451	1694	69.33	32.9	60	19.6	50	1.9	2.4	3.0
Speight G-30	2516	1683	66.94	37.1	60	19.9	49	1.8	2.2	3.0
Speight G-32	3047	2098	68.75	36.1	61	20.7	49	1.9	2.3	2.7
Speight G-43	2500	1689	67.59	36.0	57	19.0	46	1.9	2.2	2.9
Va. 3149	2489	1691	67.72	35.5	57	18.0	46	1.9	2.3	3.2
L.S.D. (.05)	133	110	1.74	2.8	2	.9	2	.1	.2	.2
(.01)	175	145	2.29	3.6	3	1.1	2	.2	.2	.3
C.V. (%)	4	5	2	6	3	4	3	5	6	6

¹/₁₀ Rating of 10 to 50 with 10 being best.

WHITEVILLE, ROCKY MOUNT, KINSTON, OXFORD and REIDSVILLE

Table 3. Comparison of varieties in 1967 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								
Hicks Broadleaf	2.0	25.9	10.5	12.5	12.4	24.9	26.6	24.9
NC 95	1.5	22.1	10.2	12.3	13.7	21.2	24.4	24.8
Bell 29	.8	19.4	10.8	13.9	15.3	22.6	26.2	25.3
Bell 93	1.3	25.9	10.7	12.9	13.8	24.2	26.4	25.8
Coker 254	3.6	25.2	10.3	12.4	14.0	21.5	25.4	26.0
Coker 258	1.3	20.2	9.4	11.5	12.8	20.8	24.3	25.4
Coker 298	.7	16.6	10.1	12.2	14.2	21.4	24.7	26.0
Coker 319	1.5	26.2	9.3	11.2	13.3	22.6	25.9	26.6
McNair 14	.9	23.9	11.1	12.8	14.0	22.4	25.3	25.3
NC 2326	.6	23.9	10.4	12.4	13.0	24.1	26.3	25.1
Speight G-7	2.6	22.9	11.3	13.3	13.9	21.9	24.7	25.0
Speight G-13	1.3	17.7	10.2	12.5	14.2	21.4	24.9	25.1
Speight G-36	.9	18.9	10.1	12.6	13.7	22.0	25.2	25.1
SC 66	.9	22.3	9.8	12.3	13.4	22.5	25.7	25.6
Va. 115	1.0	20.7	9.8	11.8	13.2	22.6	25.4	25.3
Advanced Breeding Lines								
BY 103	.3	18.2	9.6	11.8	13.5	22.3	25.3	25.6
Coker 65-188	.6	15.6	10.2	12.7	14.2	21.5	25.8	26.8
McNair 6139	2.1	20.4	11.3	13.1	14.0	22.3	25.3	25.2
NC TG-10	1.2	23.9	9.0	11.1	12.8	24.8	27.5	28.0
NC 5813-C	.4	26.8	10.9	12.7	12.5	23.9	26.3	24.9
NC 6034-C	3.6	25.3	11.1	13.8	14.3	24.6	26.9	25.4
NC 6074-C	2.8	23.2	11.0	13.3	14.0	23.8	26.2	25.6
NC 6080-C	2.6	26.5	10.4	12.8	13.5	25.9	27.4	26.3
NC 6110-C	3.9	23.3	10.6	13.1	13.5	22.2	25.2	24.0
NC 6111-C	3.7	24.8	11.4	13.5	13.6	23.6	25.1	23.9
NC 6112-C	2.4	21.3	11.6	14.1	15.1	24.3	27.4	26.7
NC 6113-C	3.9	21.6	10.5	13.2	14.7	23.7	27.1	26.6
NC 6115-C	1.2	17.0	8.8	11.8	13.6	21.4	25.1	25.8
NC 6146	4.8	26.0	9.3	11.6	13.4	22.1	24.8	25.5
NC 6769	2.3	27.9	9.1	11.3	12.1	23.0	25.7	25.0
NC 6772	2.8	29.1	9.6	11.8	12.5	23.8	26.1	25.6
NC 6773	1.2	26.2	10.2	12.5	13.9	23.4	26.3	26.2
NC 6774	1.1	24.1	10.1	11.8	13.3	23.1	25.5	25.2
NC 6792	1.5	21.0	10.1	12.3	14.0	21.7	25.1	26.4
NC 6797	1.5	28.3	10.1	12.4	13.8	24.6	27.0	26.7
NC 6809	1.5	21.3	9.7	11.9	14.0	20.8	25.2	26.3
NC 6857-C	.5	22.4	10.9	13.0	13.6	23.0	26.3	26.0
NC 6920-C	.4	27.8	11.0	12.6	12.8	23.4	25.6	24.9
NC 6934-C	2.7	28.9	9.2	11.5	12.0	23.3	25.9	24.8
NC 6973-C	1.3	25.1	9.9	11.9	13.4	23.7	26.8	26.8
PD 335	2.0	24.1	10.3	12.8	14.7	20.2	24.2	25.2
Speight G-21	1.5	22.8	9.8	11.8	13.8	22.6	25.4	26.0
Speight G-22	1.0	17.2	9.5	11.8	13.4	23.1	26.0	25.8
Speight G-26	1.5	22.7	11.0	12.8	14.2	22.6	25.5	26.0
Speight G-29	1.6	26.7	8.9	11.3	12.9	22.4	26.0	25.8
Speight G-30	.6	20.0	9.3	11.6	13.2	22.2	25.3	25.7
Speight G-32	.4	14.8	10.7	12.9	14.6	21.9	25.6	27.1
Speight G-43	3.0	27.2	10.0	11.7	13.2	23.2	26.5	26.6
Va. 3149	2.0	24.9	10.5	12.1	13.2	23.3	25.6	25.6
L.S.D. (.05)	.7	2.4	.8	.8	.7	1.1	.9	1.0
(.01)	.9	3.2	1.0	1.0	1.0	1.4	1.2	1.3
C.V. (%)	32	9	6	5	4	4	3	3

WHITEVILLE, ROCKY MOUNT, KINSTON, OXFORD and REIDSVILLE

Table 3. Comparison of varieties in 1967 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						
Hicks Broadleaf	2.96	14.48	2.20	.18	.78	4.78
NC 95	2.70	14.21	2.10	.18	.78	5.21
Bell 29	2.52	13.42	2.28	.17	.92	5.27
Bell 93	2.84	13.63	2.21	.16	.80	4.75
Coker 254	2.34	14.62	2.03	.15	.89	6.15
Coker 258	2.76	13.30	2.18	.16	.80	4.71
Coker 298	2.67	13.42	2.20	.17	.84	4.92
Coker 319	2.36	13.12	2.24	.16	.96	5.45
McNair 14	2.66	13.30	2.37	.25	.91	4.92
NC 2326	2.72	14.14	2.22	.17	.84	5.14
Speight G-7	2.92	14.94	2.17	.18	.76	5.05
Speight G-13	2.64	13.38	2.19	.24	.85	5.00
Speight G-36	2.77	14.28	2.21	.15	.81	5.08
SC 66	2.84	13.16	2.23	.18	.80	4.52
Va. 115	2.62	14.57	2.22	.22	.87	5.54
Advanced Breeding Lines						
BY 103	2.56	15.68	2.08	.15	.82	5.99
Coker 65-188	2.45	15.16	2.02	.15	.84	6.12
McNair 6139	2.70	13.76	2.28	.19	.85	5.03
NC TG-10	2.63	14.56	2.03	.15	.78	5.46
NC 5813-C	2.82	14.71	2.26	.20	.82	5.11
NC 6034-C	2.47	14.34	2.31	.15	.95	5.71
NC 6074-C	2.75	13.20	2.26	.16	.88	4.80
NC 6080-C	3.37	14.41	2.44	.17	.74	4.21
NC 6110-C	2.61	15.22	2.20	.21	.86	5.78
NC 6111-C	2.63	16.00	2.23	.14	.85	6.09
NC 6112-C	2.60	13.36	2.28	.14	.89	5.06
NC 6113-C	2.76	13.44	2.29	.18	.85	4.90
NC 6115-C	2.54	14.74	2.23	.17	.93	5.71
NC 6146	2.12	12.68	2.24	.15	1.11	5.86
NC 6769	2.96	15.94	2.08	.21	.73	5.34
NC 6772	2.89	14.86	2.19	.21	.77	5.11
NC 6773	2.27	16.48	1.94	.15	.86	7.13
NC 6774	2.31	16.94	1.95	.15	.85	7.25
NC 6792	1.57	13.37	1.99	.12	1.31	8.40
NC 6797	2.79	15.64	2.13	.17	.78	5.57
NC 6809	1.54	13.20	1.95	.12	1.33	8.39
NC 6857-C	2.79	14.07	2.22	.21	.81	4.46
NC 6920-C	2.76	15.09	2.21	.19	.82	5.42
NC 6934-C	3.02	12.98	2.35	.19	.79	4.19
NC 6973-C	2.05	13.86	2.20	.17	1.12	6.66
FD 335	2.64	12.16	2.24	.19	.86	4.50
Speight G-21	2.69	14.30	2.21	.14	.83	5.29
Speight G-22	2.72	14.20	2.21	.14	.83	5.16
Speight G-26	2.59	15.02	2.16	.17	.83	5.80
Speight G-29	2.92	14.21	2.32	.17	.80	4.78
Speight G-30	2.79	13.45	2.26	.20	.82	4.72
Speight G-32	2.40	14.16	2.12	.14	.90	5.82
Speight G-43	3.37	13.82	2.46	.16	.73	4.05
Va. 3149	3.25	15.25	2.28	.17	.72	4.68
L.S.D. (.05)	.22	3.50	.12	.04	.09	1.89
(.01)	.29	4.59	.16	.06	.12	2.49
C.V. (%)	7	10	4	21	8	14

Table 4. Summary information on disease resistance.

Varieties or Lines	Level of Resistance				
	Black Shank	Granville Wilt	Fusarium Wilt	Brown Spot ^{2/}	Root Knot ^{3/}
Commercially Available Varieties					
Hicks Broadleaf	Susc.	Susc.	Low	Tolerant	
NC 95	High	High	High	Tolerant	Resistant
Bell 29	Mod.	Susc.	High	Tolerant	
Bell 93	Low	Susc.	Low		
Coker 254	High	High	Mod.		Resistant
Coker 258	High	High	High	Tolerant	Resistant
Coker 298	High	High	Low	Sensitive	
Coker 319	Low	Low	Mod.	Tolerant	
McNair 14	Low	High	Susc.		
NC 2326	Mod.	Susc.	Mod.	Tolerant	
Speight G-7	Mod.	Low	Susc.	Tolerant	
Speight G-13	Mod.	Mod.	Susc.		
Speight G-36	High	High	Susc.	Sensitive	
SC 66	Mod.	High	High	Tolerant	Resistant
Va. 115	High	Low	Susc.	Tolerant	
Advanced Breeding Lines ^{1/}					
BY 103	R	R	S		
Coker 65-188	Low	Mod.	Sus.		Resistant
McNair 6139	R	R	S		
NC TG-10	R	R	S		
NC 5813-C	R	R	R		
NC 6034-C	R	R	R		
NC 6074-C	R	S	S		
NC 6080-C	R	S	S		
NC 6110-C	R	R	R		
NC 6111-C	R	R	R		
NC 6112-C	R	R	S		
NC 6113-C	R	S	S		
NC 6115-C	R	R	S		
NC 6146	R	R	S		
NC 6769	R	R	S		
NC 6772	R	R	S		
NC 6773	R	S	S		
NC 6774	R	R	S		
NC 6792	R	R	S		
NC 6797	R	R	S		
NC 6809	R	R	S		
NC 6857-C	R	R	S		
NC 6920-C	R	S	S		
NC 6934-C	R	R	R		
NC 6973-C	R	R	--		
PD 335	High	High	Mod.		Resistant
Speight G-21	R	R	R		
Speight G-22	R	R	R		
Speight G-26	R	R	S		
Speight G-29	Mod.	Low	S		Resistant
Speight G-30	R	R	S		
Speight G-32	R	R	S		
Speight G-43	R	R	S		
Va. 3149	High	Low	S		Resistant

1/ Ratings for level of resistance based on data for 1 year
R = Resistance

2/ Tolerance does not mean resistance. For example: brown spot may cause damage on all varieties under conditions favorable for disease development. Breeding lines are not rated.

3/ Resistant to Meloidogyne incognita, most prevalent species of root knot nematode occurring on flue-cured tobacco.

TV 177 Whiteville 1967

Table 5. Continued. 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.	QI				0-10"	10-20"	20"-top
Hicks Broadleaf	2469	1741	70.66	32.8	59	16.3	44	2.0	2.3	3.6
NC 95	2564	1790	69.73	34.6	63	18.8	48	2.0	2.3	3.0
Bell 29	2634	1816	69.16	36.4	59	17.3	49	1.9	2.4	3.7
Bell 93	2539	1789	70.41	34.2	60	17.3	48	2.0	2.2	3.6
Coker 254	2709	1894	70.01	34.3	65	20.1	54	2.0	2.5	3.1
Coker 258	2919	2065	70.60	33.5	64	20.7	46	1.8	2.2	2.5
Coker 298	2783	1920	68.86	35.5	66	19.3	52	1.9	2.5	3.3
Coker 319	2545	1828	71.72	32.7	62	21.0	48	1.8	2.2	2.6
McNair 14	2451	1710	69.75	34.3	63	18.1	47	1.9	2.4	3.0
NC 2326	2576	1850	71.71	29.6	60	17.8	46	2.0	2.1	3.3
Speight G-7	2727	1967	72.01	35.9	64	19.0	51	2.1	2.4	3.1
Speight G-13	2774	1955	70.48	34.1	67	20.1	52	1.9	2.5	2.9
Speight G-36	2721	1888	69.12	36.3	65	19.9	51	1.9	2.4	3.1
SC 66	2594	1773	68.53	34.4	64	19.3	50	1.8	2.3	3.1
Va. 115	2757	1903	68.84	35.5	60	19.1	45	1.6	2.2	3.1
Advanced Breeding Lines										
BY 103	2892	2064	71.19	33.8	63	18.1	51	2.0	2.6	3.4
Coker 65-188	3193	2210	69.32	35.1	65	19.1	50	1.9	2.3	3.1
McNair 6139	2548	1775	69.69	34.5	62	18.6	49	1.9	2.6	3.0
NC Tg-10	3057	2165	70.83	34.3	63	19.3	44	1.8	2.1	2.7
NC 5813-C	2648	1845	69.87	34.5	60	18.9	48	1.7	2.0	3.5
NC 6034-C	2757	1879	68.07	37.0	60	17.3	48	1.9	2.6	3.5
NC 6074-C	2366	1638	69.27	37.1	61	17.9	49	1.7	2.4	3.7
NC 6080-C	2254	1535	68.33	37.4	60	16.5	42	2.0	2.3	3.4
NC 6110-C	2682	1880	69.90	34.4	60	19.7	55	1.8	2.7	3.4
NC 6111-C	2459	1708	69.28	37.2	60	17.3	50	2.1	2.4	3.8
NC 6112-C	2539	1765	69.51	34.2	61	18.8	47	1.6	2.2	3.4
NC 6113-C	2626	1734	66.13	36.8	62	18.3	47	1.8	2.3	3.2
NC 6115-C	2682	1813	67.44	36.3	65	21.3	54	1.9	2.4	2.9
NC 6146	2262	1594	70.23	33.0	63	19.9	51	1.9	2.3	3.0
NC 6769	2411	1724	71.35	30.7	60	17.7	46	1.8	2.4	3.3
NC 6772	2487	1793	71.97	32.8	61	17.9	44	1.9	2.1	3.1
NC 6773	3041	2145	70.56	33.0	61	17.9	47	1.9	2.3	3.4
NC 6774	2918	2087	71.49	31.8	61	18.1	45	2.0	2.1	3.1
NC 6792	2913	2032	69.69	33.3	65	21.3	52	1.8	2.4	2.8
NC 6797	2625	1867	71.26	34.9	62	18.0	47	1.9	2.4	3.3
NC 6809	2954	2052	69.39	34.4	67	20.7	55	2.2	2.3	3.0
NC 6857-C	2834	1993	70.34	35.3	63	18.3	49	1.7	2.4	3.6
NC 6920-C	2629	1866	71.12	33.0	61	18.4	48	1.8	2.3	3.4
NC 6934-C	2318	1624	70.15	33.5	59	18.5	48	1.7	2.4	3.3
NC 6973-C	2803	1953	69.67	34.0	61	18.2	46	1.8	2.3	3.2
PD 335	2354	1618	68.86	37.4	65	21.2	50	1.7	2.2	2.8
Speight G-21	2688	1804	67.31	36.1	62	18.9	50	1.8	2.5	3.3
Speight G-22	2744	1908	69.54	34.0	61	17.9	49	2.0	2.5	3.3
Speight G-26	2730	1908	69.96	34.6	64	19.2	52	1.8	2.4	3.4
Speight G-29	2386	1679	70.54	33.8	63	18.5	50	1.9	2.3	3.3
Speight G-30	2530	1759	69.38	34.5	64	20.0	49	1.8	2.3	2.9
Speight G-32	3105	2163	69.66	35.2	63	20.4	49	1.7	2.3	2.9
Speight G-43	2568	1758	68.59	37.3	61	19.0	45	1.9	2.2	2.7
Va. 3149	2469	1710	69.05	33.7	60	17.3	45	2.1	2.3	3.1
L.S.D. (.05)	125	106	1.68	2.4	2	1.4	2	.2	.3	.3
(.01)	164	140	2.21	3.2	2	1.9	3	.3	.3	.4
C.V. (%)	3	4	2	5	2	6	3	9	8	7

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Table 5. Continued. Comparison of Varieties for Certain Characteristics.

Varieties	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Hicks Broadleaf	2.9	29.3	10.6	12.0	11.7	25.9	26.5	24.3
NC 95	2.6	23.9	10.7	12.6	14.0	23.7	25.3	24.3
Bell 29	1.9	21.0	11.6	15.0	15.3	23.3	27.2	24.3
Bell 93	.9	26.9	10.7	12.7	13.9	25.9	26.9	24.9
Coker 254	5.6	26.1	11.9	12.8	14.3	23.8	25.6	26.5
Coker 258	2.0	26.3	10.5	11.8	13.5	24.2	25.6	25.9
Coker 298	.6	18.3	11.8	13.3	14.7	23.4	26.3	26.1
Coker 319	2.2	30.6	9.5	10.9	13.2	25.1	26.4	27.0
McNair 14	1.4	25.5	12.3	13.0	14.5	24.5	26.9	25.1
NC 2326	.5	26.0	9.8	12.1	13.1	25.8	27.2	24.6
Speight G-7	3.2	24.6	12.4	13.7	14.3	23.4	25.9	25.0
Speight G-13	1.2	22.2	10.9	13.0	15.1	24.2	25.4	25.3
Speight G-36	.1	19.5	10.8	12.5	13.7	25.3	25.7	25.1
SC 66	1.1	24.4	10.1	12.1	14.5	25.5	27.1	26.7
Va. 115	.6	25.9	10.0	11.9	14.5	24.4	26.7	26.4
Advanced Breeding Lines								
BY 103	.3	22.2	9.8	11.7	13.4	23.9	25.7	25.3
Coker 65-188	1.0	18.7	11.7	13.7	14.4	24.3	27.5	27.6
McNair 6139	2.9	21.6	12.3	13.4	13.8	24.5	26.1	24.7
NC TG-10	1.9	28.4	9.3	10.3	12.6	26.8	27.9	27.9
NC 5813-C	.5	32.9	11.1	12.1	11.7	26.2	27.1	23.3
NC 6034-C	4.1	23.6	12.3	14.5	15.1	27.0	27.8	25.3
NC 6074-C	3.2	26.3	12.6	14.3	14.4	25.5	27.5	24.2
NC 6080-C	3.2	27.5	10.7	13.1	14.5	26.8	27.3	26.2
NC 6110-C	4.8	26.1	11.1	14.1	14.7	22.8	26.5	24.5
NC 6111-C	3.9	26.2	12.4	14.0	14.1	24.7	26.1	23.9
NC 6112-C	3.3	24.4	11.7	14.7	15.4	25.8	28.0	27.3
NC 6113-C	5.0	23.6	12.0	13.9	15.0	25.5	28.2	26.4
NC 6115-C	1.5	21.5	10.3	12.7	14.9	24.1	27.9	27.1
NC 6146	6.7	26.5	10.5	12.2	13.7	24.1	26.3	25.7
NC 6769	2.7	30.8	8.8	10.7	12.3	24.9	26.3	24.8
NC 6772	4.2	34.3	9.2	10.6	11.7	24.5	25.5	24.9
NC 6773	1.6	31.3	10.9	12.5	14.2	25.6	26.9	25.8
NC 6774	1.5	30.2	10.8	11.7	13.8	25.5	27.1	25.4
NC 6792	2.0	26.3	11.9	13.1	14.5	23.8	26.6	27.7
NC 6797	1.8	28.3	9.9	12.1	13.9	26.6	27.3	26.0
NC 6809	3.3	25.9	11.1	11.9	12.7	23.1	25.7	27.5
NC 6857-C	1.0	24.2	11.0	12.7	14.1	24.4	27.3	26.6
NC 6920-C	.5	30.6	10.9	12.3	12.3	24.6	26.6	24.1
NC 6934-C	2.8	36.2	9.8	12.1	13.7	25.8	27.1	25.6
NC 6973-C	1.8	28.5	10.2	11.8	13.7	25.7	27.5	26.3
PD 335	3.5	25.1	11.8	13.9	15.0	22.5	25.6	25.4
Speight G-21	2.1	25.3	10.0	11.9	13.9	24.3	26.3	25.9
Speight G-22	1.5	18.6	10.0	11.6	13.8	24.7	26.2	25.7
Speight G-26	2.9	25.5	12.1	13.2	14.9	24.9	26.7	27.2
Speight G-29	2.4	28.0	9.7	11.7	13.3	24.7	26.5	25.7
Speight G-30	1.2	22.3	9.5	11.9	13.5	25.0	27.3	27.1
Speight G-32	1.2	18.8	11.3	13.5	14.3	24.2	27.3	28.3
Speight G-43	4.9	30.4	10.3	11.9	12.7	24.5	26.5	26.8
Va. 3149	2.7	27.4	10.7	12.4	13.5	25.1	26.3	25.7
L.S.D. (.05)	1.2	3.0	.7	.9	.9	1.2	1.0	1.2
(.01)	1.6	3.9	1.0	1.2	1.2	1.6	1.3	1.6
C.V. (%)	37	8	5	5	5	3	3	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. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
Hicks Broadleaf	3.20	16.78	2.35	.19	.75	5.24
NC 95	2.74	13.84	2.15	.19	.80	5.05
Bell 29	2.61	13.74	2.31	.15	.89	5.26
Bell 93	2.87	15.44	2.35	.18	.81	5.38
Coker 254	2.32	16.80	2.13	.16	.91	7.24
Coker 258	2.91	13.32	2.25	.22	.76	4.58
Coker 298	2.50	13.82	2.13	.14	.85	5.53
Coker 319	2.69	11.79	2.43	.17	.89	4.38
McNair 14	2.65	13.76	2.53	.31	.94	5.19
NC 2326	2.54	13.22	2.13	.09	.86	5.20
Speight G-7	2.98	11.28	2.21	.17	.76	3.79
Speight G-13	2.68	15.15	2.25	.31	.89	5.65
Speight G-36	2.82	14.44	2.30	.21	.81	5.12
SC 66	2.77	12.74	2.28	.18	.82	4.60
Va. 115	2.96	13.97	2.40	.26	.80	4.72
Advanced Breeding Lines						
BY 103	2.62	16.52	2.14	.17	.81	6.31
Coker 65-188	2.34	15.12	2.20	.13	.95	6.46
McNair 6139	2.90	13.81	2.38	.19	.83	4.76
NC TG-10	2.77	17.14	2.02	.10	.74	6.19
NC 5813-C	2.86	14.35	2.26	.21	.81	5.02
NC 6034-C	2.28	12.86	2.28	.11	.98	5.64
NC 6074-C	3.13	10.70	2.38	.22	.77	3.42
NC 6080-C	3.30	13.58	2.39	.21	.74	4.12
NC 6110-C	2.49	12.28	2.27	.24	.91	4.93
NC 6111-C	2.68	12.73	2.38	.20	.88	4.75
NC 6112-C	2.61	11.72	2.48	.18	.95	4.49
NC 6113-C	2.95	12.18	2.36	.16	.81	4.13
NC 6115-C	2.71	14.08	2.38	.20	.88	5.20
NC 6146	2.09	13.18	2.30	.20	1.08	6.31
NC 6769	3.45	15.94	2.26	.31	.68	4.62
NC 6772	3.22	14.98	2.24	.20	.70	4.65
NC 6773	2.41	17.50	1.95	.16	.80	7.26
NC 6774	2.33	16.86	1.99	.18	.86	7.24
NC 6792	1.59	12.84	2.00	.10	1.24	8.08
NC 6797	3.00	13.00	2.31	.13	.76	4.33
NC 6809	1.61	11.36	2.03	.13	1.31	7.06
NC 6857-C	2.95	14.70	2.30	.22	.77	4.98
NC 6920-C	2.59	16.00	2.15	.21	.80	6.18
NC 6934-C	3.06	12.33	2.57	.25	.84	4.03
NC 6973-C	2.28	13.10	2.38	.17	1.05	5.75
PD 335	2.62	11.20	2.28	.25	.87	4.27
Speight G-21	2.86	14.32	2.30	.15	.81	5.01
Speight G-22	3.03	15.38	2.28	.13	.77	5.08
Speight G-26	2.71	16.12	2.27	.22	.83	5.95
Speight G-29	2.94	14.47	2.46	.20	.85	4.92
Speight G-30	3.01	11.22	2.43	.23	.81	3.73
Speight G-32	2.42	10.84	2.27	.12	.99	4.48
Speight G-43	3.57	11.60	2.60	.18	.73	3.25
Va. 3149	3.08	15.14	2.40	.18	.80	4.92
L.S.D. (.05)	.32	3.02	.16	.10	.09	1.37
(.01)	.42	3.97	.21	.13	.12	1.80
C.V. (%)	8	16	5	38	8	19

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

Varieties or Lines	Yield Lbs/A	Value Index		QI	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					0-10"	10-20"	20"-top
Commercially Available Varieties										
Hicks Broadleaf	2374	1561	66.74	36.6	52	16.0	53	1.9	2.6	4.9
NC 95	2358	1601	66.78	40.4	59	19.4	54	1.8	2.5	3.3
Bell 29	2354	1517	64.81	40.8	55	18.2	57	2.0	2.5	4.2
Bell 93	2270	1568	67.74	37.1	54	19.0	55	1.7	2.5	3.8
Coker 254	2530	1716	67.31	35.5	66	22.2	60	1.9	2.5	3.1
Coker 258	2540	1699	66.20	38.6	63	21.6	55	1.9	2.6	2.9
Coker 298	2496	1630	65.15	39.8	65	21.3	58	1.9	2.4	3.3
Coker 319	2384	1659	69.43	31.4	63	20.5	56	2.1	2.4	3.2
McNair 14	2100	1390	66.29	35.6	56	20.0	53	1.8	2.5	3.2
NC 2326	2250	1542	68.20	35.2	54	17.8	54	1.7	2.4	4.3
Speight G-7	2264	1567	69.04	36.0	55	20.0	54	1.8	2.4	3.4
Speight G-13	2440	1602	65.79	40.4	67	20.0	59	2.0	2.8	3.5
Speight G-36	2512	1676	65.80	38.3	60	20.4	60	1.8	3.2	3.5
SC 66	2376	1520	64.15	38.9	63	19.4	55	1.9	2.6	3.5
Va. 115	2588	1794	68.65	35.2	56	17.6	52	1.8	2.8	3.8
Advanced Breeding Lines										
BY 103	2620	1748	66.22	37.6	57	19.9	59	2.0	2.6	3.6
Coker 65-188	2966	1999	67.41	36.6	60	19.7	54	1.9	2.5	3.2
McNair 6139	2376	1589	66.74	38.6	59	19.0	56	1.9	2.7	3.5
NC TG-10	2790	1880	67.00	38.3	59	19.4	52	1.8	2.3	3.4
NC 5813-C	2340	1576	67.78	37.7	54	18.4	53	1.8	2.6	3.7
NC 6034-C	2350	1606	67.93	35.4	52	16.9	53	1.9	2.6	4.4
NC 6074-C	2144	1417	66.22	38.5	54	17.9	56	1.9	2.6	4.2
NC 6080-C	1944	1246	64.87	41.9	52	16.4	47	1.8	2.5	3.9
NC 6110-C	2362	1597	67.32	37.4	56	18.2	57	2.1	2.4	4.0
NC 6111-C	2254	1558	68.70	35.5	53	17.6	56	2.0	2.5	4.3
NC 6112-C	2526	1630	64.86	36.9	55	18.5	54	1.8	2.6	3.9
NC 6113-C	2502	1563	62.86	42.2	56	18.2	53	1.8	2.5	3.7
NC 6115-C	2376	1557	65.00	39.9	64	21.2	59	2.0	2.4	3.4
NC 6146	2306	1626	70.75	30.9	55	19.8	56	1.8	2.5	3.5
NC 6769	2438	1661	69.32	33.9	54	17.4	51	1.8	2.4	4.0
NC 6772	2394	1665	69.17	33.6	54	18.1	52	1.9	2.4	3.8
NC 6773	2888	1957	68.07	37.0	55	19.6	53	1.8	2.3	3.5
NC 6774	2802	1952	69.37	37.0	56	20.1	54	1.7	2.2	3.7
NC 6792	2562	1669	65.61	38.2	67	23.9	60	1.8	2.3	2.9
NC 6797	2540	1726	68.08	35.5	54	18.8	54	1.9	2.3	3.7
NC 6809	2516	1661	66.35	38.6	67	23.2	59	1.8	2.3	2.9
NC 6857-C	2438	1608	65.92	36.5	58	19.4	55	1.9	2.5	3.7
NC 6920-C	2524	1727	68.78	34.8	52	19.3	55	1.8	2.5	3.6
NC 6934-C	2204	1465	67.34	34.3	54	18.1	55	2.0	2.7	3.8
NC 6973-C	2874	1971	69.36	33.8	56	18.9	51	1.9	2.3	3.5
PD 335	2234	1389	62.00	39.9	63	21.3	56	1.8	2.4	3.1
Speight G-21	2375	1560	66.88	37.4	57	19.8	58	1.9	2.6	3.6
Speight G-22	2614	1741	67.08	37.8	60	19.7	56	1.9	2.6	3.5
Speight G-26	2376	1604	66.82	37.0	62	18.9	58	1.9	2.4	3.9
Speight G-29	2334	1558	67.38	34.3	57	19.7	56	1.7	3.0	3.5
Speight G-30	2344	1532	65.27	39.2	57	18.8	53	1.9	2.5	3.6
Speight G-32	2874	1960	67.88	38.4	59	19.4	55	2.0	2.6	3.3
Speight G-43	2454	1607	65.83	36.9	53	19.1	52	2.0	2.4	3.3
Va. 3149	2278	1515	65.11	37.1	54	16.7	51	1.9	2.6	4.0
L.S.D. (.05)	134	109	2.00	3.1	2	1.4	2	.2	.3	.3
(.01)	177	143	2.63	4.1	3	1.8	3	.2	.4	.4
C.V. (%)	4	5	2	6	3	5	3	6	9	7

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

Varieties	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties								
Hicks Broadleaf	1.6	27.5	11.4	14.1	13.8	26.4	28.7	26.8
NC 95	1.6	22.9	11.8	13.5	14.3	22.8	25.8	25.7
Bell 29	.5	21.2	12.2	15.1	16.6	23.8	27.9	27.5
Bell 93	1.7	26.8	11.9	14.2	14.5	24.4	27.7	26.7
Coker 254	3.2	29.0	11.9	13.9	14.3	23.1	26.5	25.5
Coker 258	1.1	20.5	10.7	12.9	14.1	22.1	25.9	27.5
Coker 298	.0	16.9	10.5	13.0	15.3	22.0	24.9	27.1
Coker 319	1.1	26.6	10.3	12.5	14.3	23.2	27.1	28.5
McNair 14	.3	25.0	11.3	13.5	14.2	22.0	25.2	25.8
NC 2326	.3	24.0	11.6	14.0	13.7	24.7	28.3	25.6
Speight G-7	2.2	23.9	12.5	14.0	14.9	22.1	24.3	25.3
Speight G-13	1.2	14.9	11.4	13.7	15.3	21.6	25.9	27.0
Speight G-36	1.1	19.5	11.2	13.8	14.5	22.3	26.4	26.1
SC 66	.4	21.1	11.3	13.9	14.3	23.8	27.9	26.9
Va. 115	.4	21.2	10.9	13.1	13.8	23.4	26.7	26.8
Advanced Breeding Lines								
BY 103	.3	20.5	10.4	12.3	14.8	22.4	26.3	27.2
Coker 65-188	.8	19.8	11.5	13.8	15.1	22.4	26.0	27.7
McNair 6139	1.6	20.9	12.9	14.3	14.7	23.8	26.5	26.6
NC TG-10	1.0	26.6	10.2	12.1	14.3	25.5	29.1	30.1
NC 5813-C	.3	24.2	11.4	13.6	13.7	23.7	26.5	25.4
NC 6034-C	4.0	25.3	12.7	15.5	15.6	26.4	28.5	26.5
NC 6074-C	2.3	22.8	11.7	15.0	15.8	24.3	27.4	27.1
NC 6080-C	1.8	27.4	10.9	13.3	13.4	26.5	28.9	27.6
NC 6110-C	3.8	24.8	11.7	14.1	15.0	24.0	26.5	25.9
NC 6111-C	3.3	25.3	12.3	14.4	14.4	24.0	25.9	24.4
NC 6112-C	2.2	21.0	13.4	15.7	15.6	25.3	28.8	27.5
NC 6113-C	3.5	24.1	11.5	14.0	15.4	24.3	27.5	27.1
NC 6115-C	1.2	19.3	10.2	13.3	15.1	23.3	26.1	26.8
NC 6146	4.9	27.1	10.3	12.9	14.8	23.4	25.5	26.7
NC 6769	2.6	27.0	10.1	11.5	12.9	23.8	26.8	26.7
NC 6772	3.2	28.4	11.2	13.3	12.7	24.4	27.3	25.7
NC 6773	1.3	28.3	11.5	14.5	14.5	24.3	27.8	27.3
NC 6774	1.2	26.6	11.3	12.9	14.5	23.3	26.8	27.2
NC 6792	.8	20.7	11.2	13.0	15.6	22.2	25.7	27.7
NC 6797	2.3	30.5	11.6	13.0	14.2	26.0	28.7	27.7
NC 6809	.8	23.9	10.8	12.9	14.8	21.4	26.4	26.5
NC 6857-C	.7	23.2	12.1	13.3	13.5	23.4	26.9	26.1
NC 6920-C	.3	29.6	11.9	13.8	13.7	24.4	26.7	26.7
NC 6934-C	2.9	28.2	9.5	11.9	13.3	23.6	27.2	26.1
NC 6973-C	1.6	28.8	10.9	13.3	14.3	23.5	28.5	28.3
PD 335	1.9	26.3	11.5	14.0	15.3	20.6	24.7	25.1
Speight G-21	2.7	25.6	11.1	12.9	14.4	23.4	26.4	27.4
Speight G-22	.6	18.0	10.5	12.7	14.5	23.6	27.1	27.4
Speight G-26	.8	25.7	12.1	14.1	15.2	23.7	26.5	27.3
Speight G-29	1.3	29.7	9.9	12.0	13.9	22.7	26.7	27.7
Speight G-30	.5	22.4	10.7	12.1	14.0	22.7	25.9	26.7
Speight G-32	.1	16.9	12.0	13.0	15.0	22.6	25.5	27.1
Speight G-43	3.4	29.8	11.3	12.0	13.7	24.1	26.9	27.5
Va. 3149	1.9	26.2	11.0	12.3	14.3	23.2	26.1	27.4
L.S.D. (.05)	.8	3.5	1.0	.9	.9	1.3	1.4	1.2
(.01)	1.1	4.6	1.3	1.1	1.2	1.7	1.8	1.5
C.V. (%)	36	11	6	5	5	4	4	3

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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. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
Hicks Broadleaf	2.85	14.92	2.30	.16	.80	5.24
NC 95	2.55	11.12	2.38	.21	.89	4.36
Bell 29	2.32	13.04	2.34	.17	1.00	5.62
Bell 93	2.49	11.65	2.36	.16	.93	4.68
Coker 254	2.16	14.21	2.01	.13	.93	6.58
Coker 258	2.48	9.68	2.31	.14	.95	3.90
Coker 298	2.52	11.07	2.30	.25	.95	4.39
Coker 319	2.00	10.48	2.29	.15	1.15	5.24
McNair 14	2.50	11.76	2.69	.24	1.09	4.70
NC 2326	2.40	12.82	2.65	.18	1.08	5.34
Speight G-7	2.86	15.34	2.33	.21	.85	5.36
Speight G-13	2.55	12.40	2.38	.21	.95	4.86
Speight G-36	2.40	12.60	2.26	.10	.95	5.25
SC 66	2.70	8.96	2.39	.17	.92	3.32
Va. 115	2.38	13.24	2.40	.24	1.06	5.56
Advanced Breeding Lines						
BY 103	2.51	13.32	2.23	.18	.90	5.31
Coker 65-188	2.35	13.76	2.10	.16	.90	5.86
McNair 6139	2.58	10.97	2.52	.24	.96	4.25
NC TG-10	2.62	11.93	2.19	.23	.81	4.55
NC 5813-C	2.64	10.16	2.45	.18	.93	3.85
NC 6034-C	2.44	12.77	2.50	.16	1.03	5.23
NC 6074-C	2.44	12.08	2.48	.13	1.24	4.95
NC 6080-C	3.32	13.32	2.50	.18	.78	4.01
NC 6110-C	2.66	13.00	2.57	.18	.98	4.89
NC 6111-C	2.64	12.72	2.55	.16	.96	4.82
NC 6112-C	2.55	10.70	2.51	.15	.97	4.20
NC 6113-C	2.82	11.16	2.50	.17	.89	3.96
NC 6115-C	2.48	12.24	2.52	.22	1.04	4.94
NC 6146	1.93	10.72	2.30	.10	1.27	5.55
NC 6769	2.66	14.32	2.10	.18	.82	5.38
NC 6772	2.95	11.69	2.38	.25	.80	3.96
NC 6773	2.18	14.72	2.10	.10	.93	6.75
NC 6774	2.39	14.78	2.12	.12	.86	6.18
NC 6792	1.28	12.76	2.02	.12	1.55	9.97
NC 6797	2.45	16.46	2.18	.24	.90	6.72
NC 6809	1.41	12.34	2.13	.09	1.63	8.75
NC 6857-C	2.44	12.60	2.28	.16	.97	5.16
NC 6920-C	2.49	15.57	2.28	.19	.92	6.25
NC 6934-C	2.79	11.24	2.43	.15	.86	4.03
NC 6973-C	2.30	12.54	2.53	.22	1.11	5.45
PD 335	2.45	11.54	2.40	.19	.93	4.71
Speight G-21	2.89	10.74	2.43	.15	.85	3.72
Speight G-22	2.47	13.98	2.31	.23	.97	5.66
Speight G-26	2.60	11.58	2.33	.18	.90	4.45
Speight G-29	2.80	12.96	2.51	.15	.88	4.63
Speight G-30	2.64	12.02	2.49	.21	.95	4.55
Speight G-32	2.20	13.16	2.33	.15	1.05	5.98
Speight G-33	3.21	12.30	2.58	.14	.81	3.83
Speight G-43	3.21	12.30	2.58	.14	.81	3.83
Va. 3149	3.14	11.42	2.42	.20	.78	3.64
L.S.D. (.05)	.37	2.36	.21	.07	.18	1.73
(.01)	.49	3.10	.27	.10	.24	2.26
C.V. (%)	11	14	6	31	14	24

Table 7. Continued. 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.				QI	0-10"	10-20"	20"-top
Commercially Available Varieties										
Hicks Broadleaf	1894	1141	59.14	44.3	52	16.2	45	1.9	2.3	3.8
NC 95	2667	1811	67.22	36.9	56	20.1	48	1.8	2.2	2.9
Bell 29	2515	1552	61.89	41.9	56	19.3	52	1.7	2.3	3.4
Bell 93	2675	1732	65.13	40.5	54	19.5	48	1.6	2.2	3.3
Coker 254	2888	1989	69.20	35.5	63	22.0	53	1.8	2.3	2.8
Coker 258	3024	2037	68.13	37.0	62	21.7	51	1.6	2.3	2.8
Coker 298	2746	1640	60.03	42.3	60	21.6	53	1.7	2.4	2.9
Coker 319	2736	1834	67.06	37.6	57	20.7	49	1.7	2.1	2.9
McNair 14	2406	1549	64.21	39.8	56	19.2	48	1.8	2.3	3.1
NC 2326	2690	1861	68.68	35.3	54	19.4	48	1.7	2.2	3.4
Speight G-7	2793	1933	69.07	36.3	57	19.9	48	1.8	2.5	2.9
Speight G-13	2901	1956	67.19	37.0	63	21.1	52	1.7	2.1	3.0
Speight G-36	2684	1722	64.15	41.8	59	21.3	51	1.7	2.2	3.1
SC 66	2846	1913	67.20	36.0	58	19.9	50	1.8	2.1	3.2
Va. 115	2811	1888	67.43	36.1	56	19.8	47	1.7	2.2	3.1
Advanced Breeding Lines										
BY 103	2732	1760	64.48	42.1	57	21.1	53	1.9	2.1	3.1
Coker 65-188	3210	2137	66.52	37.1	59	19.7	49	1.8	2.3	3.1
McNair 6139	2449	1551	63.43	41.1	58	18.7	50	2.0	2.4	3.2
NC TG-10	2942	1922	65.55	39.1	56	20.6	45	1.4	2.0	3.0
NC 5813-C	2876	1917	67.04	37.0	54	19.6	50	1.7	2.2	3.3
NC 6034-C	2834	1922	68.29	34.9	53	17.6	47	1.9	2.3	3.4
NC 6074-C	2659	1757	66.49	39.2	54	18.0	48	1.9	2.5	3.4
NC 6080-C	2413	1558	64.60	40.8	53	18.7	44	1.7	2.1	3.1
NC 6110-C	2881	1999	69.14	35.5	53	19.4	52	1.8	2.3	3.4
NC 6111-C	2649	1832	69.46	35.1	53	18.6	49	1.8	2.3	3.4
NC 6112-C	2630	1745	66.79	37.2	54	18.3	48	1.7	2.4	3.4
NC 6113-C	2669	1713	64.09	40.9	57	18.2	47	1.8	2.4	3.2
NC 6115-C	2759	1797	65.93	37.6	62	21.1	53	1.6	2.5	3.0
NC 6146	2336	1579	68.67	36.5	57	19.2	49	1.8	2.3	3.3
NC 6769	2597	1825	70.44	31.2	55	17.7	45	1.8	2.3	3.3
NC 6772	2545	1780	69.86	35.6	55	18.1	45	1.8	2.2	3.2
NC 6773	2977	1992	65.99	36.9	56	20.7	47	1.5	2.1	2.9
NC 6774	3155	2162	68.19	32.5	57	19.6	50	1.9	2.2	3.2
NC 6792	2817	1747	61.75	41.4	61	24.9	54	1.6	2.1	2.5
NC 6797	2542	1738	67.55	36.9	56	19.2	50	1.7	2.1	3.5
NC 6809	2732	1724	62.62	42.1	63	22.9	53	1.8	2.3	2.6
NC 6857-C	2844	1895	66.95	37.4	57	19.2	50	1.8	2.3	3.3
NC 6920-C	2886	1971	68.07	30.4	55	19.0	49	1.9	2.3	3.1
NC 6934-C	2473	1694	67.83	36.2	54	19.9	49	1.6	2.2	3.3
NC 6973-C	2812	1911	67.06	37.4	60	19.0	47	1.7	2.4	3.1
PD 335	2575	1577	60.89	42.8	61	21.6	52	1.7	2.3	2.9
Speight G-21	2553	1647	64.15	39.4	58	20.2	52	1.7	2.4	3.2
Speight G-22	2754	1766	64.38	39.3	57	19.7	49	1.8	2.2	3.0
Speight G-26	2615	1656	63.29	41.2	59	19.5	51	1.7	2.5	3.3
Speight G-29	2660	1801	67.56	36.3	58	19.5	49	1.6	2.3	3.1
Speight G-30	2543	1637	64.66	39.5	57	19.2	50	1.6	2.4	3.3
Speight G-32	3069	2027	66.23	37.4	59	20.0	49	1.9	2.2	2.9
Speight G-43	2540	1622	63.72	38.7	54	18.6	47	1.7	2.2	3.2
Va. 3149	2653	1775	66.82	38.1	55	18.2	48	1.7	2.1	3.5
L.S.D. (.05)	163	137	2.21	3.0	2	1.5	2	.2	.2	.3
(.01)	215	181	2.91	3.9	2	2.2	3	.3	.2	.4
C.V. (%)	4	6	2	6	2	6	4	9	7	7

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

Varieties	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties								
Hicks Broadleaf	1.9	18.3	12.2	13.3	12.4	28.4	28.3	25.2
NC 95	1.6	19.8	11.9	13.4	13.9	24.1	27.1	25.9
Bell 29	.2	16.4	11.7	14.1	15.2	23.7	26.3	24.8
Bell 93	1.6	22.2	11.8	13.0	13.8	26.6	27.6	26.3
Coker 254	3.4	19.5	11.2	12.4	14.1	23.8	26.9	27.6
Coker 258	1.2	15.6	10.4	12.7	12.6	23.0	26.6	26.3
Coker 298	.9	12.8	11.3	13.3	14.3	23.7	26.9	27.3
Coker 319	1.3	21.7	10.6	12.2	14.1	26.3	28.4	27.9
McNair 14	1.0	16.2	12.9	13.9	13.6	24.6	26.4	25.5
NC 2326	.1	19.2	11.5	12.6	12.0	26.5	28.0	25.8
Speight G-7	2.9	19.0	13.0	15.1	13.4	25.3	26.9	25.6
Speight G-13	1.5	13.6	12.0	13.9	13.6	25.8	28.1	25.5
Speight G-36	.7	15.3	11.4	13.1	13.0	23.9	27.1	25.5
SC 66	.5	16.7	11.5	13.2	12.8	25.2	26.9	25.7
Va. 115	1.3	15.5	11.7	12.1	13.0	25.6	27.7	24.9
Advanced Breeding Lines								
BY 103	.0	11.1	10.6	12.5	13.7	25.0	27.2	26.5
Coker 65-188	.4	13.9	12.7	13.5	14.3	25.4	28.6	27.1
McNair 6139	3.0	18.0	13.1	14.5	14.7	24.9	26.9	25.7
NC TG-10	.6	18.6	10.5	12.3	12.7	28.1	30.0	28.5
NC 5813-C	.4	20.4	12.5	13.5	11.8	26.0	27.9	25.1
NC 6034-C	4.6	21.1	12.5	14.5	13.5	25.7	28.1	24.7
NC 6074-C	3.1	20.1	13.3	15.2	14.0	25.6	27.3	25.8
NC 6080-C	2.8	22.7	12.4	13.3	12.8	28.2	28.4	25.1
NC 6110-C	4.3	21.2	12.1	13.5	12.4	24.0	26.3	23.7
NC 6111-C	4.4	19.9	12.6	13.8	13.0	26.0	26.2	23.5
NC 6112-C	3.2	19.6	12.9	14.3	14.7	25.9	28.2	26.9
NC 6113-C	5.3	18.1	12.0	13.9	14.7	26.1	28.9	26.7
NC 6115-C	1.2	12.6	9.9	13.3	13.5	24.5	26.9	25.7
NC 6146	4.4	21.1	11.0	13.1	13.9	24.9	26.6	26.7
NC 6769	3.0	23.7	10.4	12.0	11.1	25.5	26.8	24.0
NC 6772	2.7	24.7	11.1	12.5	12.3	26.8	27.6	25.5
NC 6773	1.1	19.3	11.9	13.5	13.9	26.4	29.2	27.2
NC 6774	.6	18.7	12.0	13.1	12.8	25.9	26.8	24.1
NC 6792	1.6	16.2	11.7	13.8	14.5	24.7	27.6	28.7
NC 6797	1.9	22.0	10.5	13.1	13.8	25.6	28.4	27.3
NC 6809	1.3	15.7	10.2	13.4	14.8	21.4	27.4	27.3
NC 6857-C	.2	17.4	12.4	14.0	13.1	26.1	28.4	26.5
NC 6920-C	.3	19.7	13.1	13.6	12.9	25.8	27.4	25.7
NC 6934-C	2.9	22.8	10.3	12.3	11.2	25.0	27.4	23.9
NC 6973-C	.7	18.9	11.0	13.1	14.0	26.5	29.2	28.7
PD 335	1.3	19.8	11.9	14.5	15.7	23.3	26.8	27.2
Speight G-21	.8	17.4	11.7	13.1	14.5	25.3	27.7	27.4
Speight G-22	.7	14.2	11.5	13.3	13.1	26.3	28.4	25.7
Speight G-26	1.3	19.5	13.0	14.2	14.2	24.8	27.4	26.2
Speight G-29	1.8	22.9	10.4	12.3	13.2	26.1	29.2	26.5
Speight G-30	.1	14.6	10.6	13.1	13.5	24.8	27.5	25.9
Speight G-32	.1	12.0	12.7	14.1	15.1	24.2	27.0	27.5
Speight G-43	2.3	22.7	11.4	12.1	12.7	26.3	28.9	26.5
Va. 3149	1.9	21.9	10.9	12.3	12.9	24.5	26.9	25.1
L.S.D. (.05)	.6	2.4	.8	.8	1.1	1.1	1.1	1.4
(.01)	.8	3.1	1.0	1.1	1.5	1.5	1.5	1.8
C.V. (%)	26	9	5	4	6	3	3	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. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
Hicks Broadleaf	1.99	6.82	2.01	.14	1.06	3.43
NC 95	2.46	9.44	2.05	.14	.86	3.84
Bell 29	1.99	8.44	2.33	.15	1.17	4.24
Bell 93	2.41	8.26	2.20	.12	.94	3.43
Coker 254	1.88	7.21	2.04	.11	1.17	3.84
Coker 258	2.29	8.20	2.21	.17	.95	3.58
Coker 298	2.31	7.04	2.33	.17	.99	3.05
Coker 319	1.94	7.23	2.19	.12	1.11	3.73
McNair 14	2.14	8.08	2.21	.21	1.07	3.78
NC 2326	2.44	8.30	2.21	.13	.92	3.40
Speight G-7	2.62	7.57	2.22	.13	.86	2.89
Speight G-13	2.25	7.36	2.16	.23	.95	3.27
Speight G-36	2.38	7.76	2.25	.10	.94	3.26
SC 66	2.55	6.90	2.34	.18	.90	2.71
Va. 115	2.36	7.98	2.36	.22	1.01	3.38
Advanced Breeding Lines						
BY 103	2.12	7.30	2.10	.14	.97	3.44
Coker 65-188	2.19	8.74	2.08	.13	.97	3.99
McNair 6139	2.38	7.85	2.32	.16	.99	3.30
NC TG-10	2.38	8.50	2.17	.12	.92	3.57
NC 5813-C	2.53	7.90	2.49	.23	.99	3.12
NC 6034-C	2.24	8.73	2.46	.17	1.11	3.90
NC 6074-C	2.59	8.25	2.32	.19	.88	3.19
NC 6080-C	3.07	7.31	2.62	.19	.85	2.38
NC 6110-C	2.47	9.28	2.22	.16	.90	3.76
NC 6111-C	2.55	9.77	2.35	.11	.91	3.83
NC 6112-C	2.19	8.14	2.18	.12	1.01	3.72
NC 6113-C	2.51	8.56	2.35	.17	.97	3.41
NC 6115-C	1.96	8.40	2.26	.11	1.25	4.29
NC 6146	1.64	6.83	2.26	.12	1.41	4.16
NC 6769	2.43	7.84	2.10	.19	.86	3.23
NC 6772	2.37	8.53	2.17	.16	.93	3.60
NC 6773	1.86	8.90	1.96	.16	1.03	4.78
NC 6774	1.94	10.18	1.98	.13	1.02	5.25
NC 6792	1.40	6.02	2.21	.10	1.59	4.30
NC 6797	2.26	9.44	2.14	.10	.95	4.18
NC 6809	1.25	6.20	1.94	.10	1.55	4.96
NC 6857-C	2.28	8.47	2.22	.19	.96	3.71
NC 6920-C	2.35	7.66	2.32	.15	.99	3.26
NC 6934-C	2.47	6.70	2.21	.16	.89	2.71
NC 6973-C	1.44	6.87	2.30	.11	1.58	4.77
PD 335	2.28	6.06	2.28	.13	1.02	2.66
Speight G-21	2.26	9.56	2.20	.13	.97	4.23
Speight G-22	2.45	6.60	2.32	.11	.95	2.69
Speight G-26	2.58	10.68	2.21	.11	.85	4.14
Speight G-29	2.51	7.98	2.32	.19	.92	3.18
Speight G-30	2.33	6.54	2.24	.18	.97	2.81
Speight G-32	2.03	9.54	2.05	.14	1.00	4.70
Speight G-43	3.12	7.91	2.55	.13	.81	2.54
Va. 3149	3.05	9.59	2.32	.18	.76	3.14
L.S.D. (.05)	.27	1.91	.15	.06	.13	1.06
(.01)	.35	2.51	.20	.08	.18	1.38
C.V. (%)	8	16	5	30	10	21

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

Varieties or Lines	Yield Lbs/A	Value Dol/A	Index		Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
			Dol/Cwt.	QI				0-10"	10-20"	20"-top
Commercially Available Varieties										
Hicks Broadleaf	2170	1561	71.70	35.6	53	14.5	39	2.3	2.2	3.7
NC 95	2198	1553	70.35	39.6	60	18.4	44	2.3	2.4	2.4
Bell 29	2383	1695	70.73	41.4	59	16.7	45	2.1	2.4	3.2
Bell 93	2197	1545	70.60	38.2	57	16.3	41	2.1	2.3	3.0
Coker 254	2385	1708	71.40	35.5	66	20.3	47	2.1	2.1	2.4
Coker 258	2396	1661	69.65	40.4	66	19.5	43	1.9	2.0	2.5
Coker 298	2341	1535	65.36	42.1	67	19.7	48	2.2	2.5	2.5
Coker 319	2277	1574	69.16	42.3	64	20.0	45	1.9	2.1	2.5
McNair 14	2226	1551	69.81	36.4	60	16.9	43	2.2	2.3	2.8
NC 2326	2237	1607	71.77	32.5	54	16.1	44	2.2	2.3	3.2
Speight G-7	2406	1676	69.78	37.7	58	18.1	43	2.2	2.3	2.5
Speight G-13	2397	1681	70.05	37.6	67	19.1	47	2.1	2.3	2.6
Speight G-36	2447	1678	68.57	40.0	63	18.1	47	2.1	2.2	3.2
SC 66	2102	1466	69.80	38.1	59	17.2	43	2.0	2.4	2.8
Va. 115	2495	1733	69.70	37.9	57	17.4	41	2.1	2.2	2.6
Advanced Breeding Lines										
BY 103	2490	1745	69.84	41.1	61	18.8	46	2.0	2.3	2.8
Coker 65-188	2986	2111	70.78	37.1	65	19.3	45	2.2	2.2	2.6
McNair 6139	2303	1620	70.24	35.5	62	18.2	46	2.2	2.6	2.6
NC TG-10	2580	1705	66.16	42.8	62	18.8	43	2.1	2.1	2.4
NC 5813-C	2341	1688	72.23	37.3	57	15.7	42	2.2	2.3	3.2
NC 6034-C	2326	1639	70.45	35.5	57	16.3	42	2.1	2.4	3.1
NC 6074-C	2203	1583	71.82	34.8	61	15.9	43	2.1	2.3	3.5
NC 6080-C	1955	1386	70.78	38.1	59	15.2	40	2.2	2.3	3.4
NC 6110-C	2261	1596	70.38	36.2	57	17.1	45	2.2	2.5	3.0
NC 6111-C	2469	1713	69.42	39.7	56	16.6	44	2.3	2.5	3.2
NC 6112-C	2418	1688	70.00	38.2	56	16.7	42	2.3	2.3	2.9
NC 6113-C	2443	1689	69.10	38.6	61	17.4	44	2.2	2.3	2.9
NC 6115-C	2570	1780	69.20	38.2	68	19.3	48	2.2	2.3	2.8
NC 6146	2108	1474	70.13	39.5	59	19.7	44	1.9	2.0	2.6
NC 6769	2354	1711	72.81	29.3	57	16.5	40	2.0	2.2	2.9
NC 6772	2345	1705	72.64	35.8	57	17.5	43	2.0	2.0	3.0
NC 6773	2554	1758	68.61	41.6	60	18.0	42	2.1	2.1	2.8
NC 6774	2615	1834	70.47	35.9	59	17.9	43	2.1	2.1	2.8
NC 6792	2433	1652	67.73	42.3	69	18.9	45	2.0	2.0	2.9
NC 6797	2287	1635	71.72	33.9	56	16.0	40	2.2	2.3	3.0
NC 6809	2621	1796	68.49	42.2	69	19.3	49	2.1	2.3	2.9
NC 6857-C	2282	1619	70.97	38.1	58	17.0	45	2.0	2.4	3.2
NC 6920-C	2272	1609	71.08	36.6	56	16.4	39	2.1	2.2	2.8
NC 6934-C	2066	1489	72.33	27.2	55	15.6	42	2.1	2.3	3.5
NC 6973-C	2512	1765	70.34	39.5	55	16.9	40	2.0	2.2	3.0
PD 335	2245	1430	63.72	43.2	67	18.9	46	2.0	2.2	2.8
Speight G-21	2209	1499	67.52	42.4	60	18.9	46	2.0	2.2	2.9
Speight G-22	2219	1543	69.59	38.7	63	18.5	45	2.0	2.2	2.8
Speight G-26	2301	1557	67.53	40.9	64	18.0	48	2.2	2.2	3.0
Speight G-29	2167	1554	71.57	35.3	63	18.2	45	2.3	2.2	2.7
Speight G-30	2418	1695	70.27	38.4	62	18.9	45	2.0	2.1	2.7
Speight G-32	2690	1904	70.34	39.0	63	19.1	43	2.1	2.4	2.2
Speight G-43	2210	1550	70.03	38.8	59	17.5	41	2.2	2.3	2.5
Va. 3149	2254	1570	69.60	40.0	59	17.1	42	2.1	2.2	2.9
L.S.D. (.05)	141	108	1.40	3.9	4	.9	2	.2	.2	.3
(.01)	185	142	1.83	5.1	4	1.2	3	.2	.2	.4
C.V. (%)	4	5	1	7	4	4	4	6	6	8

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

Varieties	<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								
Hicks Broadleaf	.8	17.0	10.9	13.4	12.2	23.9	26.3	23.8
NC 95	.7	13.3	9.4	11.9	13.7	18.9	22.5	23.6
Bell 29	.8	10.6	10.7	14.2	15.5	22.6	25.9	24.5
Bell 93	.7	16.6	10.2	13.3	13.7	22.5	26.0	25.2
Coker 254	2.3	15.3	8.9	11.7	13.6	18.3	23.7	24.7
Coker 258	.5	9.5	8.9	11.5	12.8	18.5	23.1	23.7
Coker 298	.2	8.0	8.5	10.9	13.5	17.9	22.2	24.3
Coker 319	.7	15.7	9.0	11.3	13.5	19.9	24.9	25.7
McNair 14	.2	13.5	9.9	12.3	13.8	20.6	23.5	25.0
NC 2326	.4	16.1	10.1	12.1	13.0	21.6	24.3	23.4
Speight G-7	2.5	15.1	9.9	12.9	14.3	19.6	24.0	24.8
Speight G-13	1.0	10.1	9.3	12.1	13.9	18.4	23.1	24.1
Speight G-36	.7	10.7	9.5	12.6	14.3	20.5	24.0	25.2
SC 66	.5	13.4	9.6	12.5	12.4	20.9	24.8	24.0
Va. 115	.3	12.4	9.7	12.7	13.0	20.8	24.1	24.6
Advanced Breeding Lines								
BY 103	.3	7.6	10.3	12.3	13.1	21.5	24.5	24.7
Coker 65-188	.4	6.8	9.2	13.3	14.4	20.1	25.2	26.2
McNair 6139	1.4	12.4	10.3	12.8	14.1	19.7	24.3	24.8
NC TG-10	.4	13.2	8.1	10.5	12.8	22.2	25.3	26.3
NC 5813-C	.3	16.6	10.8	12.7	12.2	22.6	25.5	24.7
NC 6034-C	2.2	18.1	10.0	13.5	14.2	22.1	24.9	24.1
NC 6074-C	2.2	14.8	9.5	12.1	13.1	22.5	25.3	25.4
NC 6080-C	2.4	18.1	9.0	12.4	13.1	22.9	26.6	26.0
NC 6110-C	3.6	14.2	10.5	13.3	13.0	21.7	23.6	22.1
NC 6111-C	3.5	17.4	11.1	14.0	13.4	22.8	24.3	22.9
NC 6112-C	1.8	11.7	11.1	14.9	15.3	22.8	26.7	25.1
NC 6113-C	2.9	11.3	9.1	13.1	15.3	21.5	25.2	26.3
NC 6115-C	.7	5.7	8.3	11.5	14.1	19.0	24.3	24.2
NC 6146	3.8	16.2	8.2	11.3	13.0	19.7	23.3	23.7
NC 6769	.9	21.1	9.7	12.9	11.8	22.1	25.7	24.4
NC 6772	1.7	21.8	9.1	12.1	13.2	22.3	25.4	26.0
NC 6773	1.0	17.4	9.3	12.0	13.6	20.9	24.5	25.7
NC 6774	1.1	16.3	9.1	12.1	13.2	20.9	24.4	24.5
NC 6792	.9	9.4	9.1	11.7	14.1	19.7	23.9	24.1
NC 6797	.7	18.5	10.1	12.7	13.6	22.5	26.0	25.9
NC 6809	.6	10.0	9.0	11.6	15.0	20.3	23.9	25.6
NC 6857-C	.2	11.7	10.7	13.9	13.8	21.3	25.2	25.2
NC 6920-C	.3	19.6	10.6	12.7	12.6	22.2	24.8	23.2
NC 6934-C	2.3	20.2	9.1	11.8	11.5	21.8	24.9	23.7
NC 6973-C	1.4	16.6	9.8	12.0	13.0	22.8	25.2	24.8
PD 335	1.4	14.9	8.5	11.1	14.2	17.2	22.1	23.7
Speight G-21	1.3	13.1	8.7	11.3	13.4	20.5	23.9	24.6
Speight G-22	1.0	10.3	8.5	11.6	13.5	20.9	24.5	24.9
Speight G-26	.8	11.1	9.1	11.7	13.6	19.5	23.3	24.3
Speight G-29	.6	17.7	8.1	11.5	12.7	19.3	24.2	24.3
Speight G-30	.3	10.9	8.9	11.6	13.5	20.3	23.8	25.4
Speight G-32	.3	7.6	10.1	12.9	14.1	19.7	24.4	25.7
Speight G-43	1.9	18.9	9.7	12.1	13.4	21.7	26.2	27.1
Va. 3149	1.5	15.4	9.9	11.8	12.4	21.3	24.3	24.4
L.S.D. (.05)	.6	2.5	1.0	.9	.8	1.5	1.1	1.2
(.01)	.8	3.3	1.3	1.1	1.1	1.9	1.4	1.6
C.V. (%)	35	13	8	5	5	5	4	4

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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. No. %	NorNic. %	T.N. Nic.	Sug. Nic.
Commercially Available Varieties						
Hicks Broadleaf	3.32	16.26	2.20	.21	.66	4.90
NC 95	2.68	17.00	1.97	.16	.75	6.34
Bell 29	2.66	14.89	2.25	.19	.85	5.60
Bell 93	2.99	15.24	2.12	.17	.71	5.10
Coker 254	2.63	16.88	2.05	.16	.78	6.42
Coker 258	2.97	15.67	2.12	.15	.72	5.28
Coker 298	2.85	15.20	2.20	.11	.77	5.33
Coker 319	2.49	15.22	2.25	.19	.91	6.11
McNair 14	2.88	14.90	2.20	.22	.77	5.17
NC 2326	3.20	16.90	2.06	.16	.65	5.28
Speight G-7	2.93	20.08	2.13	.23	.73	6.85
Speight G-13	2.73	14.74	2.17	.18	.80	5.40
Speight G-36	2.78	16.77	2.05	.20	.73	6.03
SC 66	3.00	15.64	2.15	.20	.73	5.21
Va. 115	2.75	16.80	2.03	.18	.74	6.11
Advanced Breeding Lines						
BY 103	2.58	19.42	2.01	.15	.78	7.53
Coker 65-188	2.63	17.24	1.94	.18	.74	6.56
McNair 6139	2.84	16.24	2.29	.21	.81	5.72
NC TG-10	2.54	14.64	1.90	.16	.75	5.76
NC 5813-C	3.05	18.72	2.16	.20	.71	6.14
NC 6034-C	2.75	17.66	2.12	.16	.79	6.42
NC 6074-C	2.55	14.44	2.17	.15	.86	5.66
NC 6080-C	3.47	18.97	2.44	.13	.70	5.47
NC 6110-C	2.45	18.36	2.00	.29	.83	7.49
NC 6111-C	2.45	21.30	1.98	.15	.82	8.69
NC 6112-C	2.58	17.81	2.15	.12	.84	6.90
NC 6113-C	2.43	17.83	2.16	.24	.89	7.34
NC 6115-C	2.47	18.26	2.01	.18	.82	7.39
NC 6146	2.41	13.44	2.29	.15	.95	5.58
NC 6769	3.34	18.27	2.11	.18	.63	5.47
NC 6772	3.01	17.55	2.30	.25	.77	5.83
NC 6773	2.40	19.06	2.00	.18	.83	7.94
NC 6774	2.33	19.88	1.84	.16	.79	8.53
NC 6792	1.65	15.28	2.02	.14	1.25	9.26
NC 6797	3.12	17.09	2.07	.18	.67	5.48
NC 6809	1.54	16.86	1.83	.14	1.18	10.95
NC 6857-C	3.08	13.58	2.24	.27	.73	4.41
NC 6920-C	3.22	16.42	2.29	.23	.72	5.10
NC 6934-C	3.35	15.28	2.31	.22	.69	4.56
NC 6973-C	2.18	16.64	1.91	.15	.89	7.63
PD 335	2.73	13.58	2.13	.15	.78	4.97
Speight G-21	2.51	16.05	2.09	.12	.83	6.39
Speight G-22	2.76	14.24	2.25	.15	.82	5.16
Speight G-26	2.35	16.66	2.03	.17	.87	7.09
Speight G-29	3.03	15.08	2.16	.15	.72	4.98
Speight G-30	2.87	17.32	2.07	.18	.72	6.03
Speight G-32	2.51	17.20	2.00	.13	.80	6.85
Speight G-43	3.34	15.82	2.32	.20	.69	4.74
Va. 3149	3.08	20.68	2.05	.18	.67	6.71
L.S.D. (.05)	.32	2.48	.16	.07	.09	1.32
(.01)	.41	3.26	.22	.10	.12	1.72
C.V. (%)	8	11	6	30	9	15

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

Varieties or Lines	Yield Lbs/A	Value Index		QI	Days to Flower	Leaves per Plant	Height of Plant	Internode Length		
		Dol/A	Dol/Cwt.					0-10"	10-20"	20"-top
Commercially Available Varieties										
Hicks Broadleaf	2472	1737	69.84	30.2	49	19.5	45	1.8	2.0	2.8
NC 95	2872	2038	70.75	25.2	62	21.9	47	1.8	2.1	2.4
Bell 29	2743	1867	68.05	34.1	56	20.1	50	2.0	2.2	2.9
Bell 93	2795	1941	69.20	29.8	52	19.8	46	1.9	2.1	2.7
Coker 254	2970	2130	71.49	25.6	64	24.3	51	1.8	2.1	2.2
Coker 258	2992	2105	70.69	29.2	65	23.3	47	1.8	2.1	2.0
Coker 298	2992	1919	64.51	33.7	63	23.9	53	1.9	2.2	2.4
Coker 319	2792	1956	70.49	24.4	62	23.1	47	1.8	1.9	2.2
McNair 14	2735	1904	69.48	28.3	59	21.5	46	1.9	2.0	2.3
NC 2326	2514	1777	70.11	24.5	51	19.3	45	1.8	2.2	2.8
Speight G-7	2896	2063	71.00	26.7	57	21.5	47	1.9	2.2	2.4
Speight G-13	2944	2027	69.06	30.6	66	22.2	50	1.9	2.2	2.5
Speight G-36	3015	1959	65.02	33.0	65	21.6	53	1.9	2.3	2.8
SC 66	2772	1941	69.96	29.3	61	21.3	47	1.9	2.1	2.4
Va. 115	3010	2034	67.18	30.7	58	20.6	43	1.9	2.0	2.2
Advanced Breeding Lines										
BY 103	3011	2062	68.43	28.8	57	22.4	52	1.9	2.1	2.6
Coker 65-188	3497	2414	69.00	29.4	64	21.6	47	2.0	2.1	2.3
McNair 6139	2813	1962	69.64	26.1	59	22.0	48	1.9	2.1	2.4
NC TG-10	3197	2120	66.48	31.0	60	23.7	45	1.7	1.9	2.0
NC 5813-C	2727	1931	71.01	24.4	55	20.5	46	1.7	2.0	2.8
NC 6034-C	2833	2021	71.53	25.2	56	20.2	48	2.0	2.2	2.7
NC 6074-C	2624	1855	70.98	24.5	59	20.8	52	1.9	2.3	3.0
NC 6080-C	2559	1840	71.96	24.4	53	19.1	44	1.8	2.1	2.8
NC 6110-C	2989	2096	70.33	21.7	59	20.7	52	2.0	2.5	2.7
NC 6111-C	2971	2088	70.17	24.8	56	21.0	53	1.8	2.4	3.0
NC 6112-C	2995	2133	71.13	25.4	60	20.4	49	1.8	2.1	3.0
NC 6113-C	2928	1975	67.38	31.2	63	21.7	48	1.8	1.9	2.6
NC 6115-C	3020	2095	69.74	25.0	64	20.8	49	1.9	2.3	2.6
NC 6146	2796	2002	72.19	18.5	61	22.7	51	1.8	2.1	2.5
NC 6769	2859	2049	71.88	21.5	55	20.3	46	1.8	2.0	2.7
NC 6772	2608	1824	70.49	17.5	55	20.3	45	1.7	2.2	2.5
NC 6773	3461	2310	66.78	29.7	58	21.6	49	1.8	2.0	2.7
NC 6774	3113	2160	69.00	29.8	60	22.2	49	1.7	2.1	2.6
NC 6792	3199	2088	64.96	33.4	66	25.5	51	1.9	1.9	2.1
NC 6797	2840	2028	71.32	26.6	57	20.5	49	1.9	2.1	2.8
NC 6809	3126	2084	66.45	32.7	65	23.8	48	1.8	1.9	2.1
NC 6857-C	2837	1996	70.71	26.6	59	20.3	51	1.7	2.3	3.2
NC 6920-C	2701	1910	70.82	23.3	53	21.0	49	1.8	2.0	2.8
NC 6934-C	2355	1666	71.00	20.9	53	19.1	48	1.9	2.4	2.9
NC 6973-C	3132	2249	71.95	23.3	58	21.0	48	1.6	2.2	2.8
PD 335	2675	1693	63.68	34.7	62	22.4	48	1.9	2.1	2.3
Speight G-21	2853	1917	66.96	31.0	58	23.1	50	1.7	2.1	2.4
Speight G-22	2984	2004	67.38	32.3	61	22.5	49	1.8	2.3	2.3
Speight G-26	2983	1927	64.52	31.6	62	22.2	53	1.9	2.3	2.7
Speight G-29	2710	1880	69.60	24.9	61	22.2	49	1.7	2.1	2.5
Speight G-30	2744	1794	65.14	33.6	59	22.7	49	1.7	2.0	2.5
Speight G-32	3496	2438	69.65	30.4	63	24.4	51	1.7	2.1	2.3
Speight G-43	2728	1905	69.76	28.3	58	20.9	45	1.7	2.1	2.5
Va. 3149	2791	1885	68.04	28.6	57	20.6	44	1.7	2.1	2.5
L. S. D. (.05)	174	121	2.11	3.1	2	1.1	3	.2	.2	.2
(.01)	229	172	2.77	4.1	3	1.5	4	.2	.2	.2
C. V. (%)	4	5	2	8	3	4	4	7	6	5

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

Varieties	Suckers per plant		Width of leaf (in.)			Length of leaf (in.)		
	Ground	Leaf Axil	5th	10th	15th	5th	10th	15th
Commercially Available Varieties /								
Hicks Broadleaf	2.6	37.3	7.5	9.9	12.0	20.1	23.1	24.3
NC 95	1.0	30.5	7.0	10.2	12.9	16.3	21.5	24.5
Bell 29	.7	28.1	8.0	11.3	13.7	19.6	23.7	25.2
Bell 93	1.8	37.1	9.0	11.5	13.0	21.6	23.8	25.5
Coker 254	3.6	36.3	7.8	11.1	13.9	18.4	24.1	25.6
Coker 258	1.4	28.7	6.6	8.5	11.2	16.1	20.5	23.7
Coker 298	1.5	26.8	8.4	10.3	13.4	20.0	23.3	24.9
Coker 319	2.3	26.5	7.0	8.9	11.5	18.3	22.8	24.2
McNair 14	1.8	39.2	8.9	11.5	13.7	20.4	24.5	25.1
NC 2326	1.8	34.2	9.2	11.0	13.2	21.9	23.9	26.0
Speight G-7	2.3	31.8	8.9	10.8	12.7	19.3	22.3	24.2
Speight G-13	1.7	27.5	7.2	9.9	13.1	17.1	21.9	23.8
Speight G-36	2.1	29.7	7.8	10.8	13.1	18.2	22.5	23.6
SC 66	2.1	35.8	6.3	9.6	12.8	17.2	21.7	24.5
Va. 115	2.2	28.4	6.8	9.1	11.6	18.6	21.7	23.9
Advanced Breeding Lines								
BY 103	.6	29.5	7.1	10.1	12.3	18.6	22.7	24.6
Coker 65-188	.3	18.9	5.9	9.4	12.6	15.3	21.8	25.2
McNair 6139	1.8	29.3	8.1	10.3	12.9	18.6	22.5	24.3
NC TC-10	2.0	33.0	6.7	10.0	11.9	21.3	25.1	27.1
NC 5813-C	.6	39.8	9.0	11.7	12.9	21.2	24.5	25.9
NC 6034-C	3.0	38.2	8.2	11.2	13.1	21.6	25.1	26.1
NC 6074-C	2.9	32.2	7.6	9.9	12.6	21.2	23.6	25.3
NC 6080-C	2.8	36.9	8.9	11.9	13.5	25.0	25.9	26.7
NC 6110-C	3.1	30.2	7.7	10.3	12.4	18.3	23.2	24.1
NC 6111-C	3.4	35.2	8.6	11.5	13.1	20.6	23.1	24.6
NC 6112-C	1.6	29.8	8.9	10.9	14.6	21.8	25.5	26.4
NC 6113-C	3.0	31.0	8.1	10.9	13.1	20.8	25.5	26.7
NC 6115-C	1.4	26.0	5.1	8.1	10.7	16.1	20.6	25.1
NC 6146	4.2	39.0	6.6	8.5	11.5	18.3	22.3	24.9
NC 6769	2.1	36.9	6.5	9.5	12.5	18.7	22.9	25.1
NC 6772	2.4	36.4	7.5	10.5	12.5	20.9	24.7	25.9
NC 6773	1.1	34.7	7.3	9.8	13.0	19.6	23.2	25.1
NC 6774	1.4	28.9	7.3	9.2	12.0	19.7	22.3	24.6
NC 6792	2.2	32.3	6.5	9.6	11.4	18.1	21.5	23.8
NC 6797	1.0	42.1	8.5	11.3	13.4	22.4	24.5	26.7
NC 6809	1.5	31.0	7.2	9.5	11.7	17.9	22.5	24.3
NC 6857-C	.4	35.4	8.4	11.1	13.3	19.8	23.9	25.9
NC 6920-C	.8	39.8	8.8	10.6	12.6	19.8	22.3	24.8
NC 6934-C	2.9	36.9	7.2	9.7	11.5	20.4	23.1	24.6
NC 6973-C	1.2	33.0	7.5	9.5	11.8	19.8	23.8	26.1
PD 335	2.0	34.5	7.6	10.3	13.3	17.4	21.7	24.6
Speight G-21	.8	32.5	7.6	9.7	12.8	19.4	22.8	24.6
Speight G-22	1.3	25.1	7.2	9.9	12.2	19.8	23.5	25.6
Speight G-26	1.7	31.7	8.8	10.9	13.0	20.1	23.5	25.2
Speight G-29	1.8	35.0	6.4	9.3	11.7	19.1	23.3	25.0
Speight G-30	1.0	29.8	6.9	9.2	11.5	18.2	22.3	23.7
Speight G-32	.2	18.8	7.3	11.0	14.4	18.5	23.8	26.9
Speight G-43	2.3	34.2	7.2	10.7	13.5	19.5	24.0	25.3
Va. 3149	2.0	33.7	10.0	11.7	12.9	22.3	24.3	25.6
L.S.D. (.05)	.7	4.5	1.1	1.2	1.1	1.9	1.6	1.2
	.9	5.9	1.4	1.6	1.5	2.5	2.2	1.6
C.V. (%)	26	10	10	9	6	7	5	3

TV 181 Reidsville 1967

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						
Hicks Broadleaf	3.44	17.58	2.12	.19	.62	5.11
NC 95	3.04	19.64	1.93	.19	.62	6.46
Bell 29	3.02	16.98	2.18	.21	.71	5.62
Bell 93	3.43	17.56	2.04	.19	.59	5.12
Coker 254	2.70	18.02	1.89	.18	.67	6.67
Coker 258	3.16	19.64	2.03	.10	.64	6.22
Coker 298	3.16	19.94	2.03	.17	.64	6.31
Coker 319	2.69	20.91	2.02	.18	.76	7.77
McNair 14	3.13	18.02	2.22	.29	.69	5.76
NC 2326	3.00	19.46	2.03	.28	.68	6.49
Speight G-7	3.22	20.44	1.94	.18	.60	6.35
Speight G-13	2.96	17.22	1.99	.28	.67	5.82
Speight G-36	3.46	19.80	2.20	.17	.63	5.72
SC 66	3.19	21.54	1.98	.17	.62	6.75
Va. 115	2.63	20.86	1.92	.18	.74	7.93
Advanced Breeding Lines						
BY 103	2.96	21.82	1.91	.11	.66	7.37
Coker 65-188	2.72	20.96	1.81	.16	.64	7.71
McNair 6139	2.80	19.91	1.90	.16	.67	7.11
NC TG-10	2.84	20.58	1.89	.13	.67	7.25
NC 5813-C	3.02	22.42	1.94	.19	.66	7.42
NC 6034-C	2.67	19.66	2.20	.16	.83	7.36
NC 6074-C	3.02	20.54	1.95	.12	.67	6.80 ¹
NC 6080-C	3.71	18.87	2.23	.13	.61	5.09
NC 6110-C	2.96	23.18	1.96	.16	.68	7.83
NC 6111-C	2.81	23.49	1.90	.09	.70	8.36
NC 6112-C	3.09	18.44	2.09	.13	.69	5.97
NC 6113-C	3.09	17.46	2.10	.16	.68	5.65
NC 6115-C	3.08	20.69	1.96	.17	.64	6.72
NC 6146	2.50	19.26	2.03	.20	.82	7.70
NC 6769	2.92	23.31	1.83	.20	.63	7.98
NC 6772	2.87	21.51	1.88	.19	.67	7.49
NC 6773	2.49	22.20	1.69	.13	.69	8.92
NC 6774	2.54	23.00	1.82	.15	.72	9.06
NC 6792	1.92	19.93	1.71	.16	.89	10.38
NC 6797	3.12	22.22	1.96	.19	.63	7.12
NC 6809	1.88	19.24	1.83	.15	.98	10.23
NC 6857-C	3.21	21.02	2.05	.22	.64	6.55
NC 6920-C	3.14	19.82	2.02	.17	.64	6.31
NC 6934-C	3.46	19.38	2.25	.19	.66	5.60
NC 6973-C	2.07	20.11	1.89	.20	.95	9.71
PD 335	3.14	18.42	2.11	.21	.68	5.87
Speight G-21	2.94	20.84	2.01	.14	.69	7.09
Speight G-22	2.89	20.84	1.88	.10	.65	7.21
Speight G-26	2.71	20.02	1.94	.19	.71	7.39
Speight G-29	3.33	20.56	2.12	.17	.64	6.17
Speight G-30	3.10	20.13	2.05	.21	.68	6.49
Speight G-32	2.82	20.04	1.93	.14	.69	7.11
Speight G-43	3.63	21.49	2.25	.16	.62	5.92
Va. 3149	3.88	19.42	2.24	.14	.58	5.01
L.S.D. (.05)	.35	2.24	.16	.08	.06	1.18
(.01)	.46	2.94	.21	.11	.07	1.56
C.V. (%)	8	8	6	34	6	11

REGIONAL FARM TEST - Average of Ten Locations - 1967

Table 10.

Varieties	Yield Lbs./A	Value Index		% Nicotine	% Red. Sugar	% Total N.	% Alpha Amino N.	% W.S.A.	Alk. No. T.V.B.	W.S.A.	Ratio	
		Dol/A	Dol/Cwt.								N/Nic.	Sug/Nic.
Hicks	2075	1418	68.00	3.33	15.69	2.35	.215	4.30	.47	1.69	.73	5.01
NC 95	2202	1532	69.40	3.38	14.40	2.40	.216	4.58	.46	2.26	.73	4.52
Bell 93	2170	1502	69.20	3.14	13.96	2.39	.228	4.25	.46	2.18	.79	4.81
Coker 65-188	2688	1809	67.30	2.92	15.24	2.26	.209	4.27	.42	2.30	.81	5.67
Coker 254	2373	1677	70.70	2.88	13.62	2.29	.221	4.41	.41	2.64	.83	4.99
McNair 14	2082	1451	69.70	2.84	16.24	2.42	.208	4.07	.41	2.62	.88	6.01
PD 335	2105	1327	63.50	3.06	12.23	2.39	.227	4.10	.43	1.30	.80	4.13
Speight G-29	2125	1482	69.60	3.38	14.36	2.55	.252	4.68	.50	1.95	.79	4.53
Speight G-13	2333	1583	67.70	3.29	14.70	2.46	.222	4.47	.46	2.24	.77	4.81
Va. 3149	2159	1400	64.80	3.83	15.32	2.52	.216	4.90	.52	2.21	.68	4.42

REGIONAL FARM TESTS 1967

Combined Across 10 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 ^{1/} Color Index
Hicks	11.5	45.8	4.8	9.2	6.1	1.7	20.9	2.1
NC 95	18.2	45.5	3.2	8.2	5.3	0.8	18.8	2.3
Bell 93	12.3	51.5	2.7	2.1	8.2	1.7	21.4	2.2
Coker 65-188	15.4	47.1	3.9	6.5	6.5	0.5	20.2	2.2
Coker 254	33.4	37.9	2.3	3.5	6.8	0.9	15.3	2.4
McNair 14	26.9	46.0	2.9	2.4	5.5	1.2	15.0	2.3
PD 335	13.4	33.5	1.6	2.2	15.3	0.0	34.0	1.8
Speight G-29	20.7	46.5	5.3	3.3	7.2	0.8	16.1	2.3
Speight G-13	13.4	46.7	5.9	6.2	8.6	2.2	17.1	2.2
Va. 3149	8.7	39.9	9.4	9.9	8.1	1.2	22.7	2.0

Variety	Chaffy Body	Thin Body	Medium Body	Medium Heavy Body	Heavy Body	No. Obsr.
Hicks	4.8	16.2	30.1	20.0	29.0	69
NC 95	7.0	24.1	35.0	16.6	17.2	69
Bell 93	7.2	21.3	31.3	17.2	23.1	69
Coker 65-188	8.2	21.9	35.1	21.7	13.0	69
Coker 254	7.9	29.7	31.2	18.6	12.6	69
McNair 14	7.2	22.9	36.4	19.0	13.0	69
PD 335	11.4	21.9	31.6	17.8	17.2	69
Speight G-29	5.8	21.3	34.4	18.8	19.7	69
Speight G-13	6.4	17.6	30.9	24.6	20.3	69
Va. 3149	4.3	12.6	29.1	22.5	31.6	69

Variety	Open Grain Texture	Medium Texture	Smooth Texture	Slick Texture	Other Texture	Usable	Desirability ^{2/} Index
Hicks	5.9	21.6	27.2	14.8	30.5	16.6	.30
NC 95	13.6	28.1	23.0	8.3	26.9	30.6	.60
Bell 93	10.7	26.3	24.9	12.1	25.6	23.5	.50
Coker 65-188	13.4	23.2	25.5	12.3	25.5	21.7	.40
Coker 254	11.8	24.2	24.2	11.9	28.0	25.3	.50
McNair 14	16.2	20.4	26.7	12.3	24.4	25.1	.50
PD 335	5.6	14.0	28.2	13.4	38.9	12.7	.20
Speight G-29	14.8	25.3	29.3	6.9	23.2	26.2	.50
Speight G-13	10.5	28.5	25.2	9.9	26.1	19.8	.40
Va. 3149	3.8	18.2	28.3	19.7	27.8	10.0	.20

^{1/} Quality of color index - high number shows better quality.^{2/} Desirability index - high number is more desirable.

REGIONAL SMALL PLOT TESTS - 1967
Percent Cured Leaf Usable by Tobacco Companies
Average Across 6 Locations

Table 12.

	Tobacco Companies							Average
	A	B	C	D	E	F	G*	
Hicks	16	26	6	25	27	30	5	19.1
NC 95	25	27	15	32	36	22	9	22.9
Bell 93	18	29	0	10	32	18	15	18.1
Coker 65-188	21	34	0	21	39	10	16	20.6
Coker 254	34	46	0	21	43	8	29	24.9
McNair 14	18	32	5	15	41	14	9	19.8
PD 335	18	28	0	4	37	14	2	15.3
Speight G-29	20	25	14	32	37	20	13	23.4
Speight G-13	17	33	0	24	21	8	15	17.1
Va. 3149	13	23	0	6	21	10	7	11.8

*5 Locations

Rating For Variety Potential
Average Across 6 Locations

	Tobacco Companies ^{a/}							Average ^{c/}
	A	B	C	D	E	F	G ^{b/}	
Hicks	3.5	2.5	3.7	3.0	3.2	3.0	3.7	3.2
NC 95	3.0	2.3	3.0	2.8	2.2	2.8	3.7	2.7
Bell 93	3.3	2.3	4.0	3.5	2.8	3.0	4.0	3.3
Coker 65-188	2.7	1.8	3.7	3.3	2.7	3.5	4.0	3.0
Coker 254	2.5	1.5	4.0	3.2	2.2	3.5	3.3	2.9
McNair 14	2.8	2.0	3.5	3.7	2.7	3.5	3.7	3.0
PD 335	3.3	2.2	3.8	3.8	3.2	3.3	3.7	3.3
Speight G-29	3.3	2.8	3.5	3.0	2.8	2.7	3.7	3.1
Speight G-13	3.2	2.3	4.0	3.3	3.3	3.8	3.7	3.4
Va. 3149	3.7	3.0	3.8	3.8	3.2	3.5	4.0	3.5

^{a/}

1. Good
2. Fair
3. Has some promise
4. Shows no promise as a potential variety

^{b/} 3 Locations only

^{c/} This represents an average of each location so as to take into account that company G rated only 3 locations.

Table 13. REGIONAL FARM TESTS - 1967

% 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	Woodlief	Crews	Busick	
Hicks	78	65	53	76	65	17	59
NC 95	70	56	40	85	74	66	65
Bell 93	64	43	65	89	57	52	62
Coker 65-188	60	42	70	66	69	45	60
Coker 254	59	45	54	85	97	45	64
McNair 14	91	98	34	64	96	45	71
PD 335	60	36	42	65	26	37	44
Speight G-29	81	51	59	82	90	49	69
Speight G-13	64	66	32	56	54	60	55
Va. 3149	20	33	38	92	60	16	43
Average	65	54	49	76	69	43	59

Table 14. Index^{1/} on amount graded of each entry by seven participating companies from the six farms in the North Carolina Regional Farm Test. 1967

Belt and Grower	Variety or Line									
	Hicks	NC 95	Bell 93	Coker 65-188	Coker 254	McNair 14	PD 335	Speight G-29	Speight G-13	Va. 3149
<u>Border</u>										
Edmund	1.17	2.40	1.66	1.18	1.67	1.69	1.17	2.27	2.16	.27
<u>Eastern</u>										
Johnson	.89	1.11	.72	.88	.95	2.32	.59	1.36	1.37	.50
Harrell	1.08	1.21	1.52	1.48	1.04	1.11	.42	1.57	.59	.46
<u>Middle</u>										
Woodlief	1.49	1.96	2.20	1.96	2.58	2.76	1.67	3.05	1.60	1.31
Crews	1.35	1.75	1.62	2.97	2.33	2.23	.45	2.82	2.01	1.48
<u>Old</u>										
Busick	.47	1.49	1.52	1.11	1.18	1.40	1.04	.83	1.17	.30
Overall Average	1.08	1.65	1.54	1.60	1.63	1.92	.89	1.98	1.48	.72

^{1/} 0 = none graded; 7 = all graded by all seven participating companies.

Grower rating^{1/} for preference for each entry in Regional Farm Tests in North Carolina. 1967

Belt and Grower	Variety or Line									
	Hicks*	NC 95	Bell 93	Coker 65-188	Coker 254	McNair 14	PD 335	Speight G-29	Speight G-13	Va. 3149
<u>Border</u>										
Edmund	2	1	10	5	6	7	9	3	4	8
<u>Eastern</u>										
Johnson	10	4	7	5	1	6	9	3	2	8
Harrell	3	4	2	8	9	6	10	1	7	5
<u>Middle</u>										
Woodlief	5	7	6	1	4	8	10	9	3	2
Crews	9	5	3	1	6	4	10	2	7	8
<u>Old</u>										
Busick	9	3	5	1	7	2	8	6	4	10
Overall Average	6.3	4.0	5.5	3.5	5.5	5.5	9.3	4.0	4.5	6.8

^{1/} 1 = most desirable; 10 = least desirable

*The undesirable ratings placed on Hicks were due mainly to its low disease resistance.

Table 15. Grower practices by individual farms, Regional Farm Test in North Carolina - 1967

Belt and County	Farm	Soil Fumigation	Row Width and Hill Spacing	Date of Planting	Date of first Harvest	Fertilizer	Topdressing	Insecticide	Curing Unit	No. Times Irrigated
<u>Border</u> Columbus	Edmund	Shell DD 10 gal./Ac. (Row)	44" Rows 20" Drill	April 13	July 1	1000# 3-9-9	800# 3-9-9 100# Sulphate of Potash 75# N. of Soda	DDT Mala- thion	Mayo jet	None
<u>East</u> Lenoir	Johnson	Shell DD 10 gal./Ac. (Row)	44" Rows 25" Drill	April 17	June 28	1000# 4-8-12	250# 15-0-14	DDT Para- thion	Silent Flame Gastobac	None
Wilson	Harrell	Dorlone 5 gal./Ac. (Row)	44" Rows 22" Drill	April 19 April 22	June 28	900# 4-8-12	300# 4-8-12	None	Gastobac σ	One
<u>Middle</u> Wake	Woodlief	None	44" Rows 24" Drill	May 8	July 21	1120# 3-9-9	480# 8-9-24 200# 3-9-9 50# 15-0-14	Three Way Spray Super Tobacco Spray	Silent Flame	One
Granville	Crews	Shell DD 7 gal./Ac. Deep row)	44" Rows 21" Drill	May 13	July 25	1000# 4-8-12	200# 15-9-14	None	Closed Flame	None
<u>Old</u> Caswell	Busick	None	48" Rows 24" Drill	May 12	August 12	1000# 4-8-12	100# 15-0-14	Super King	Gastobac	One

Table 16. Cultural Practices for the Official Variety Test. 1967

Station	Fertilization	Top Dressing	Soil Type	Fumigation	Irrig.	Date of Transplanting	Date of first Harvest
Border Belt Tobacco Research Station Whiteville, N. C.	1000# 4-8-12	180# 13-0-44	Goldsboro & Norfolk fs1	Dorlone 6 gal/Ac (Row)	None	April 26	July 5
Upper Coastal Plain Research Station Rocky Mt., N. C.	1000# 4-8-12	160# 15-0-14	Norfolk s1	Vorlex 6.5gal/Ac (Row)	1.25	May 10	July 13
Lower Coastal Plain Tobacco Research Station Kinston, N. C.	1000# 3-9-9	400# 8-0-24	Goldsboro s1	None	None	May 8	July 12
Oxford Tobacco Research Station Oxford, N. C.	1200# 4-8-12	67# 13-0-44 133# 4-8-12	Vance s1	None	None	May 15	July 18
Upper Piedmont Tobacco Research Station Reidsville, N. C.	1250# 4-8-12		Appling	9 gal/Ac DD	4.00	May 24	Aug. 1

Table 17.

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

Date	April	May	June	July	August	September
1			.03	.35		
2			.04	.19		
3		.11		.06		
4		.10	.22			
5		.55	.13		.08	
6					.10	
7		.22		.22		
8		.12		.09	1.51	
9						3.14
10						1.34
11	.04		.17	.04	.35	
12					.90	
13		.09		.19	.48	
14				.72		
15				.50		
16		.20				
17	.14		.97		.20	
18		.03	.63	1.05		
19			.49	.03		
20						
21		.15		.80	T	
22	.90	.41			.40	
23	.10	.77	.78			
24		.23			.12	
25					.03	
26	1.17		.93	1.52	.07	
27			.18	.05		.40
28						.63
29						.36
30		.77	.60	.48		
31		.08				
Totals	2.35	3.83	5.17	6.29	4.24	5.87

T = Trace

() = Irrigation

Table 17.
Continued. Upper Coastal Plain Research Station, Rocky Mount, N.C.

Date	April	May	June	July	August	September
1			.05		.59	
2			.07	.29		
3		.11	.04	.10		
4		T	.01			
5		.20			.42	
6					.13	
7		.27		.01		
8		.04		.26	.78	
9		T		.12		.25
10						3.43
11		.02			3.23	.02
12		.08			.33	
13	T	.27	(1.25)		.19	
14				.47		
15		.27		.63		
16		.31		.03		
17	T		.02			.16
18	.65	.01	2.25			
19			2.66			
20		.03		T	.29	
21		.22			2.42	
22	.78	.35			1.74	.32
23	.08	.52	.10		.35	
24					.02	
25			1.30			
26	1.1		.05	.49	.08	
27	.22		.01	.71	.63	
28					.12	.87
29				.24		.95
30		.04	.27	.91		
31		.05				
Totals	2.74	2.79	8.08	4.26	11.32	6.00

T = Trace

() = Irrigation

Table 17.
Continued. Lower Coastal Plain Research Station, Kinston, N. C.

Date	April	May	June	July	August	September
1	0	0	.04	.01	0	0
2	0	0	.08	.36	0	0
3	0	.06	.02	.83	0	0
4	T	.02	0	0	0	0
5	0	.20	0	0	3.24	0
6	0	0	T	0	.02	0
7	0	.11	0	.25	0	0
8	0	T	0	.25	.42	0
9	0	.10	0	0	0	.32
10	0	0	0	0	0	3.99
11	.40	T	0	.11	1.29	.01
12	0	T	0	.21	.87	0
13	0	T	.25	.33	.35	0
14	0	0	.03	.31	.01	0
15	0	.49	0	1.31	0	0
16	0	.15	0	.01	0	0
17	.01	0	.37	0	.01	.07
18	.17	0	.62	.03	0	0
19	0	0	.56	.68	0	0
20	0	0	0	.02	0	0
21	0	.02	0	T	.24	0
22	.07	.30	0	0		T
23	.08	.80	.25	0	1.24	0
24	.03	.02	.37	.01	.11	0
25	0	0	0	T	.05	0
26	1.15	0	T	.62	.08	0
27	.06	0	T	.85	0	0
28	0	0	0	0	.58	1.12
29	0	.15	T	0	0	.02
30	0	.25	.92	.27	0	0
31		0		.01	.01	
Total	1.97	2.67	3.51	6.20	8.57	5.53

T = Trace

() = Irrigation

Table 17.
Continued. Oxford Tobacco Research Station, Oxford, N. C.

Date	April	May	June	July	August	September
1			.13		T	.15
2				.32		
3		.23	.19	.88		
4						
5		.12			.60	
6					.06	
7		.72				
8		.10		.10	.43	
9		.14				.38
10	T				.84	.46
11					.11	
12		.15				
13	T	.14		T		
14				1.60		
15		.14				
16		.14				
17	T					
18	.22		3.65	.39		
19						
20					.15	
21		.35			.02	.12
22	.22	1.42		T	.72	1.30
23		.32	.20		.98	
24	.15				.84	
25					.27	
26	1.41					
27	.19				1.52	
28				.15	T	.84
29				.02		.29
30		.28	.32			
31		.30		.07		
Totals	2.19	4.55	4.49	3.53	6.54	3.54

T = Trace

() = Irrigation

Table 17.
Continued. Upper Piedmont Research Station, Reidsville, N. C.

Date	April	May	June	July	August	September
1		T	.09	.01	.05	
2		T	.28			
3		.55	.03	.05		
4					.05	
5		.02			.04	
6					T	
7		1.23			.55	
8		1.03		.01		
9		.07				T
10				T	.09	.58
11	.09	.03			.35	.02
12				(1.50)		
13	.01	.31		.07		
14				.16		
15		.42				
16		.18				
17					(1.00)	
18	.03	.01	.08	.06		
19			.30	T	.05	
20					.30	
21		.32		1.22	.07	
22	.04	.40			.30	.83
23	.05	.55			.47	T
24	.10	T			1.39	
25					.22	
26	.20			.14	.40	
27	.80					
28					.34	.29
29			(1.50)			.15
30		.06	.38	.42		
31		.94		.36		
Totals	1.32	6.12	2.66	4.00	5.67	1.87

T = Trace

() = Irrigation