No. 7900115

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

North Carolina Agricultural Research Service

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Roy'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* February *in the year of our Lord one thousand nine hundred and* eighty-one.

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

Attest:

Commissioner
Plant Variety Protection Office
Grain Division

John R Blair

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY: N.C. 74-36	1b. VARIETY NAME: Roy	FOR OFFICIAL USE ONLY — PV NUMBER: 7900115
2. KIND NAME: Wheat	3. GENUS AND SPECIES NAME: Triticum aestivum	FILING DATE: 8-31-79 — TIME: 1:30 A.M. (P.M.)
4. FAMILY NAME (BOTANICAL): Gramineum	5. DATE OF DETERMINATION: September 20, 1979	FEE RECEIVED: $ 500.00 / $ 250.00 — DATE: 8-31-79 / 1-27-81
6. NAME OF APPLICANT(S): North Carolina Agricultural Research Service	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code): North Carolina State University, School of Agriculture and Life Sciences, N. C. Agricultural Research Service, Box 5847, Raleigh, N. C. 27650	8. TELEPHONE AREA CODE AND NUMBER: (919) 737-2704
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.): Public Institution	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:
R. W. McMillen, Manager
N. C. Foundation Seed Producers, Inc.
P. O. Box 5687, State University Station
Raleigh, North Carolina 27650

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [X] YES [ ] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? [X] YES [ ] NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? [X] FOUNDATION [X] REGISTERED [X] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [X] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

8/28/79 (DATE) — (SIGNATURE OF APPLICANT)

(DATE) — (SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

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AUG 31 1979
U. S. DEPARTMENT OF AGRICULTURE
AMS, PVPO

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

EXHIBIT A

7900115

Roy Wheat

The wheat line proposed for release under the name, "Roy" has been tested as N.C. 74-36 and is listed in the World Wheat Collection as C.I. 17763. It was derived from the cross Blueboy x Coker 65-20. The cross was made in 1969 with the final selection (F_5) having been made in 1974.

N.C. 74-36 has been yield tested for three years at the Piedmont Research Station (Rowan Co.) and Central Crops Research Station (Clayton, N.C.). It was tested in the 1977 and 1978 N.C. Official Variety Tests and in the 1977 and 1978 Uniform Southern Soft Wheat Nurseries. Results from these tests are attached (Tables 1-6).

This line appears to have excellent yield potential and a broad range of adaptability. (Table 1). Mean results from 29 test locations indicate N.C. 74-36 to yield 2% more than McNair 1003, 16% more than Coker 747 and 37% more than the popular Arthur 71. Like Blueboy, it runs somewhat low in test weight (Table 2) but, also like Blueboy, it has excellent milling and baking characteristics (third column, Table 4).

N.C. 74-36 has excellent straw strength, which is essential for maximum yield, and extremely good winter hardiness. With winter hardiness at least equal to the popular Indiana variety Arthur 71, this line should have the potential to move into the Virginia, Maryland, Pennsylvania, New Jersey and Deleware production areas. Southern varieties have usually been too winter tender for this region but Blueboy was very successful in those states and "Roy" should be also.

Two diseases, powdery mildew and glume blotch, have been very damaging to southeastern wheats in recent years. The mildew situation has been complicated by constantly changing strains of the mildew organism. This line is quite resistant to the newest mildew strain (which attacks Arthur and other commonly grown Indiana wheats) but it is moderately susceptible to the older mildew strains. Mildew readings (Percents or reactions) are shown in Table 5. We have not encountered a situation of serious mildew damage (yield reduction) with this line.

No resistance to glume blotch is currently available but N.C. 74-36 does not show the extreme susceptibility of some lines, such as Blueboy. The percentages of infection shown in Table 6 were obtained in a special Septoria nodorum (glume blotch) nursery with mist irrigation. While some differences in levels of susceptibility are apparent with moderate infections, such as 1977, heavy infections, such as those obtained in 1978, cause heavy damage to all of our lines.

The name Roy is suggested to honor former Experiment station Director Roy A. Lovvorn. It is a short name which should be easily remembered by producers. Mr. McMillen has increased approximately 130 bushels of "Roy" (from 36 lbs. a year ago). This increase will provide a plentiful supply of seed to sell to Certified growers in 1979.

The variety is considered stable and uniform with the following variances:

- .045% tall
- .03 % tall awnless
- .045% tall were sterile

7900115

THE NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION

RALEIGH, NC 27650

NOTICE OF NAMING AND RELEASE OF ROY WHEAT

The North Carolina Agricultural Experiment Station announces the development and naming of a new wheat cultivar, Roy.

Roy, C.I. 17763, is a soft red winter wheat possessing excellent yield potential, a high level of winter hardiness, short straw and very good lodging resistance. It has relatively low test weight but excellent milling characteristics.

Roy is a pure line selection from the cross 'Blueboy' x 'Coker 65-20.' The cross was made in 1969 with the final selection (F_5) having been made in 1974. It was tested, as NC 74-36, by the North Carolina Agricultural Experiment Station from 1976-78. It was also tested from 1977-78 in the North Carolina Official Variety Test and the Uniform Southern Small Grain Nursery.

Roy is moderately resistant to those strains of powdery mildew (*Erysiphe graminis* DC. f. sp. *tritici* Em. Marchal) which currently attack 'Arthur' but moderately susceptible to those to which Arthur is resistant. It has shown some tolerance to both glume blotch (*Septoria nodorum* Berk.) and soil-borne mosaic virus.

Breeders seed will be maintained by the North Carolina Agricultural Experiment Station. Foundation seed are being produced by the North Carolina Foundation Seed Producers, Inc.

Suggested date for press release on Roy wheat is October 1, 1978.

Kenneth R. Kelley
Director
North Carolina Agricultural Experiment Station
Raleigh, NC 27650

9-20-78
Date

EXHIBIT B - Roy Wheat

Characteristics	*Blueboy*	*Roy*
Spike shape	*Oblong*	*Fusiform*
Spike position	*Nodding*	*Inclined*
Glume length	*Midlong*	*Long*
Shoulder shape	*Square*	*Rounded*
Kernel length	*Midlong*	*Short*
Germ size	*Midsized*	*Small*
Crease width	*Midwide*	*Narrow*
Crease depth	*Deep*	*Shallow*
Brush size	*Large*	*Small*
Brush length	*Midlong*	*Short*

We don't know of any particular variety "most similar" to Roy, but we believe "Blueboy" is as similar as exists.

Note: In Foundation plantings an occasional tall plant was observed. Some of these taller plants were awned, some were awnless, and a few had large sterile spikes. New breeders seed is being made available for Foundation planting.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-6
(2-15-73)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT *(TRITICUM SPP.)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
North Carolina Agricultural Research Service

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
North Carolina State University
School of Agriculture and Life Sciences
N. C. Agricultural Research Service, Box 5847
Raleigh, North Carolina 27650

FOR OFFICIAL USE ONLY

PVPO NUMBER
7900115

VARIETY NAME OR TEMPORARY DESIGNATION
ROY

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0|8|9] or [0|9]) when number is either 99 or less or 9 or less.

1. KIND:

[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

[2] 1 = SPRING 2 = WINTER 3 = OTHER *(Specify)* _____

[1] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* _____

[2] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

[| |] FIRST FLOWERING [| |] LAST FLOWERING

4. MATURITY *(50% Flowering)*:

[|] NO. OF DAYS *EARLIER* THAN ..... [ ] 1 = ARTHUR 2 = SCOUT 3 = CHRIS

[0|2] NO. OF DAYS *LATER* THAN ..... [1] 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT *(From soil level to top of head)*:

[0|9|1] CM. HIGH

[0|2] CM. TALLER THAN ..... [1] 1 = ARTHUR 2 = SCOUT 3 = CHRIS

[|] CM. SHORTER THAN ..... [ ] 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING *(See reverse)*:

[3] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

8. STEM:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom: 1 = ABSENT 2 = PRESENT

[ ] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

[1] Internodes: 1 = HOLLOW 2 = SOLID

[0|4] NO. OF NODES *(Originating from node above ground)* B 4/23/80

[|] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT B 4/23/80

[ ] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____

[ ] Flag leaf: 1 = NOT TWISTED 2 = TWISTED

[ ] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

[1|5] MM. LEAF WIDTH *(First leaf below flag leaf)* B 4/23/80

[|] CM. LEAF LENGTH *(First leaf below flag leaf)*:

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11. HEAD:

[*] Density: 1 = LAX 2 = DENSE (Mid-dense)*

[4] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) Fusiform

[3] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[2] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____ 4/23/80

[ ][ ] CM. LENGTH [ ][ ] MM. WIDTH

12. GLUMES AT MATURITY:

[3] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[2] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[3] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[1] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[ ] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[ ] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT 4/23/80

16. SEED:

[1] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[1] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[ ] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[ ][ ] MM. LENGTH [ ][ ] MM. WIDTH [ ][ ] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] STEM RUST (Races) _____ [0] LEAF RUST (Races) _____ [0] STRIPE RUST (Races) _____ [0] LOOSE SMUT

[2] POWDERY MILDEW [0] BUNT [2] OTHER (Specify) soil-borne mosaic virus

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY [ ] APHID (Bydv.) (tolerent) [0] GREEN BUG 11/10/80 [0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____

HESSIAN FLY RACES: [1/0] GP [1/0] A [1/0] B [0] C [0] D [1/0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Blueboy	Seed size	Blueboy
Leaf size	Blueboy	Seed shape	Blueboy
Leaf color	Blueboy	Coleoptile elongation	Blueboy
Leaf carriage	Blueboy	Seedling pigmentation	Blueboy

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phe[illegible] Method for Testing Wheat Seeds for Varietal Purity, [illegible]tribution No. 28 to the handbook of seed testing prepared by the Associa[illegible] of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

RECEIVED AUG 31 1979 U. S. DEPARTMENT AMS PV

Table 3. Percent survival of N.C. 74-36 and selected check varieties

Variety	Waynesville A.T. 1976-78	Waynesville A.T. 1977-78	Waynesville U.N. 1977-78	U.N. 1977 1/
N.C. 74-36	56	37	47	90
Blueboy II	48	33	-	-
Coker 747	-	68	65	81
Coker 68-15	30	21	-	-
McNair 1003	-	31	-	76
Arthur 71	55	65	-	80
Oasis	-	-	65	78

1/ Average of 6 locations in 6 states

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Table 4. Comparative agronomic and quality and quality data for N.C. 74-36 and selected check varieties

Variety	Height 1/ in.	Lodging 2/ %	Quality 3/ score
N.C. 74-36	35.9	8.2	107.4
McNair 1003	34.6	8.4	106.5
Coker 747	32.3	11.2	106.9
Arthur 71	35.0	20.7	97.3

1/ Mean of 19 locations

2/ Mean of 13 locations

3/ Mean of 3 tests (Quality score determined from Protein %, Particle Size Index and Alkaline Water Retention Capacity) -- Score of 100 assigned to high quality check variety. Maximum possible score, 110.

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Table 5. Mildew readings[1/] on N.C. 74-36 and selected check varieties

Variety	1977										1978	
	Qunicy Fla.	Exp. Ga.	Tifton Ga.	Bozeman MT	Clayton N.C.	Clemson S.C.	Florence S.C.	Hartsville S.C.	Overton Tx	Warsaw Va.	Clayton 4/24	Clayton 5/9
N.C. 74-36	60	20	0	R	MR	20	0	t	1	IR	MR	10
McNair 1003	0	0	10	R	R	0	1	t	0	S	S	20
Coker 747	0	30	40	R	S	5	0	40	0	S	VS	50
Author 71	0	30	40	R	S	t	5	60	2	S	VS	60
Oasis	20	30	40	R	S	0	1	40	10	S	-	-
N.C. 74-6	t	40	20	R	MS	5	0	5	0	S	S	20

1/ Percent infection or disease reaction

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Table 6. Percent septoria at Clayton, N.C., on N.C. 74-36 and selected check varieties

	1977				1978 (5/31)			
	U.N.		A.T.		U.N.		A.T.	
Variety	Leaves 5/10	Heads 5/26	Leaves 5/10	Heads 5/26	Flag Leaves	Glumes	Flag Leaves	Glumes
N.C. 74-36	20	13	40	25	80	70	85	85
Blueboy II	-	-	70	30	-	-	83	93
Coker 747	30	23	60	28	60	75	90	88
Coker 68-15	-	-	65	15	-	-	90	83
McNair 1003	35	13	55	20	-	-	95	85
Arthur 71	30	28	60	40	-	-	90	83
Oasis	45	30	-	-	60	80	-	-

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Table 13. Wheat, milling, and flour analytical and baking data, and quality scores, Uniform Southern Soft Red Winter Wheat Nursery composite entries, 1978 crop.

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	WHEAT MOIS. PCT.	TEST WT. KG/HL	PROT. PCT.	ASH PCT.	PART. SIZE INDEX PCT.	SIZING FLOUR CONT. PCT.	RED. PASS	BREAK FLOUR YIELD PCT.	FLOUR YIELD PCT.	MILLAB. SCORE
UNIF.	SOUTHERN SOFT RED NUR.													
78359	MCNAIR 3069	112.4 A	93.6 C	93.6 C	10.6	70.0*	10.4	1.50	47.6	9.8	10.	35.7	76.1	119.7
78360	MCNAIR 3003	104.1 A	93.9 C	93.9 C	10.4	72.1	10.6	1.56	42.7	11.7*	10.	35.3	74.8*	109.6
78361	VA 72-54-14	108.8 A	95.9 B	95.9 B	10.6	72.1	10.5	1.51	37.2Q	10.7	10.	32.1	76.1	117.9
78362	DELTA QUEEN	94.3 C	77.2 F	77.2 F	10.6	75.1	10.9	1.61	32.0Q	11.4	10.	27.1Q	75.0*	99.2
78363	COKER 747	101.7 A	99.1 B	99.1 B	10.5	76.2	11.1	1.68	40.5	10.3	10.	36.1	75.6	106.6
78364	LA 754	96.0 B	91.0 C	91.0 C	10.6	72.4	10.9	1.54	39.1	11.7*	10.	33.3	74.2Q	100.2
78365	HOLLEY	86.3 D	91.3 C	86.3 D	10.7	74.4	11.2	1.70	40.1	13.5Q	11.	32.9	73.6Q	85.9
78366	OASIS	87.7 D	88.4 D	87.7 D	10.5	75.8	12.0*	1.69	38.7	12.5Q	11.	30.6Q	74.7*	89.5
78367	ROSEN	100.0 A	100.0 A	100.0 A	10.5	72.2	10.7	1.58	39.9	11.0	10.	32.5	75.5	105.1
78368	COKER 76-22	98.9 B	91.6 C	91.6 C	10.7	72.1	10.5	1.56	45.4	11.5*	11.	38.1	74.8*	101.1
78369	COKER 76-35	106.9 A	103.7 A	103.7 A	10.8	76.9	10.7	1.56	38.9	9.5	10.	32.5	76.5	113.8
78370	N.C. 74.6	107.5 A	89.0 D	89.0 D	10.4	69.4Q	10.7	1.45	40.2	9.2	10.	33.5	75.8	116.5
78371	N.C. 74-31	100.7 A	83.7 E	83.7 E	10.5	68.6Q	10.1	1.72	41.3	9.8	10.	35.7	75.5	105.1
78372	N.C. 74-36	108.7 A	91.6 C	91.6 C	10.6	70.9*	10.8	1.55	45.7	9.6	10.	37.8	75.8	115.9
78373	LA 724	99.9 B	86.2 D	86.2 D	10.7	74.3	11.3	1.52	35.2Q	11.1	10.	30.2Q	75.2	107.1
78374	COKER 76-26	104.3 A	97.1 B	97.1 B	10.4	73.5	11.6*	1.69	36.2Q	9.0	10.	28.7Q	76.7	113.9
78375	COKER 77-13	96.0 B	92.3 C	92.3 C	10.7	75.8	11.3	1.59	34.7Q	12.4Q	10.	29.7Q	74.9*	101.3
78376	FLA 7111A3-G1-10	85.8 D	88.8 D	85.8 D	10.4	73.5	11.7*	1.80	34.6Q	13.3Q	10.	28.3Q	73.6Q	88.7
78377	POTOMAC	101.0 A	105.7 A	101.0 A	10.8	76.2	11.2	1.65	38.3*	11.3	10.	32.9	74.9*	106.8
78378	T-76-2015	82.8 E	79.9 F	79.9 F	10.5	73.5	12.3*	1.74	40.6	14.3Q	11.	33.8	73.6Q	83.2
78379	OMEGA 76	89.3 D	83.9 E	83.9 E	10.6	72.6	11.2	1.70	41.0	12.8Q	11.	32.9	73.8Q	90.7
78380	T-76-2051	97.7 B	81.9 E	81.9 E	10.8	74.5	11.0	1.66	38.8	11.3	10.	31.6*	74.8*	102.0
78381	VA 75-57-53	103.5 A	91.1 C	91.1 C	10.6	75.1	11.2	1.71	41.3	10.6	10.	33.7	75.4	109.2
78382	VA 75-24-95	110.7 A	97.3 B	97.3 B	10.6	73.8	10.4	1.51	36.4Q	10.6	10.	33.5	76.2	119.9
78383	SOUTHERN BELLE	97.9 B	79.4 F	79.4 F	10.5	77.1	11.6*	1.82	38.4*	11.6*	10.	31.8*	74.4Q	103.2

Table 13 (contd.) Wheat, milling, and flour analytical and baking data, and quality scores, Uniform Southern Soft Red Winter Wheat Nursery composite

Table 13 (contd.) Wheat, milling, and flour analytical and baking data, and quality scores, Uniform Southern Soft Red Winter Wheat Nursery composite entries, 1978 crop.

LAB NO.	STRAIGHT-GRADE FLOUR								CAKE PATENT FLOUR							
	MOIS. PCT.	ASH PCT.	PROT. PCT.	VISC. AS IS MACM.	VISC. ADJ. MACM.	MICRO AWRC PCT.	COOKIE DIAM. CM.	TOP GRAIN	ASH PCT.	PROT. PCT.	INIT. PH	FINAL PH	CHLORINE RESPONSE PH/ML/G	OPT. LIQUID LEVEL ML.	CAKE VOLUME ML.	INTER-NAL SCORE
78359	13.8	.38	9.4	107.	125.Q	50.4*	17.9	5.	.29	8.7	5.84	4.81	2.98	130.	1053.*	85.
78360	13.9	.37	9.3	100.	121.Q	49.7	17.9	5.	.28	8.4	5.77	4.79	3.05	125.	1098.	80.
78361	13.9	.38	9.2	58.	72.	49.8	17.9	6.	.30	8.4	5.87	4.82	3.02	125.	1075.	80.
78362	13.8	.42	9.9	101.	104.*	52.4Q	17.4*	5.	.35	9.3*	6.01	4.86	2.70	120.	1055.*	79.
78363	13.8	.42	9.8	78.	81.	50.3	18.1	6.	.33	9.1	5.89	4.83	2.67	130.	1068.	85.
78364	13.7	.39	9.8	104.	108.*	48.8	17.5*	5.	.32	9.1	5.88	4.84	2.70	120.	1096.	81.
78365	13.7	.39	9.9	96.	95.	50.3	17.5*	4.	.29	9.1	5.77	4.80	2.91	130.	1075.	88.
78366	13.8	.41	10.5*	112.	96.	50.2	17.6	6.	.31	9.6*	5.78	4.76	2.77	125.	1082.	85.
78367	13.9	.41	9.2	71.	90.	49.3	17.8	6.	.33	8.4	5.85	4.82	2.65	130.	1082.	87.
78368	13.7	.38	8.9	60.	82.	52.4Q	17.9	7.	.28	8.0	5.88	4.80	3.13	120.	1091.	82.
78369	13.7	.42	9.6	87.	97.	48.6	17.9	6.	.33	8.8	5.93	4.81	2.48	140.	992.Q	88.
78370	13.9	.39	9.1	68.	87.	51.1*	17.7	7.	.31	8.3	5.86	4.78	2.84	140.	1058.	83.
78371	13.8	.42	8.9	67.	95.	50.1	17.3Q	4.	.31	8.3	5.71	4.84	2.40	130.	1071.	79.
78372	13.7	.39	9.8	79.	96.	50.4*	17.8	4.	.30	8.6	5.82	4.84	2.80	130.	1047.	83.
78373	13.9	.40	10.2*	129.	121.Q	48.9	17.5*	4.	.31	9.4*	5.85	4.85	2.69	120.	1082.	74.*
78374	14.1	.42	10.4*	62.	56.	48.8	17.8	4.	.34	9.5*	5.84	4.83	2.35	130.	1044.*	84.
78375	13.9	.40	9.8	86.	88.	49.0	17.5*	3.*	.30	9.0	5.90	4.82	2.93	130.	1061.	83.
78376	13.8	.41	10.6*	126.	104.*	49.0	17.6	4.	.31	9.7*	5.77	4.81	2.57	120.	1085.	79.
78377	13.7	.39	9.8	84.	86.	47.4	17.9	6.	.29	8.8	5.85	4.82	2.85	130.	1050.*	88.
78378	13.9	.40	11.1Q	111.	80.	51.3*	17.4*	4.	.28	10.1Q	5.72	4.81	2.66	120.	1105.	79.
78379	13.8	.39	10.1*	120.	113.*	49.8	17.6	5.	.29	9.3*	5.78	4.84	2.75	120.	1109.	72.*
78380	13.7	.41	9.9	95.	96.	50.6*	17.3Q	5.	.31	9.2	5.84	4.79	2.55	120.	1077.	82.
78381	13.8	.40	9.8	89.	93.	49.9	17.8	6.	.32	9.0	5.80	4.80	2.65	130.	1095.	81.
78382	13.8	.37	8.7	77.	111.*	48.6	17.6	5.	.28	7.9	5.87	4.83	3.03	120.	1087.	82.
78383	13.7	.39	10.6*	143.	117.Q	51.7Q	17.4*	4.	.30	9.9*	5.87	4.85	2.74	130.	1076.	83.