

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

McNair Seed Company

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 *seventeen* 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, OR 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. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS FIXED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'McNair 612'

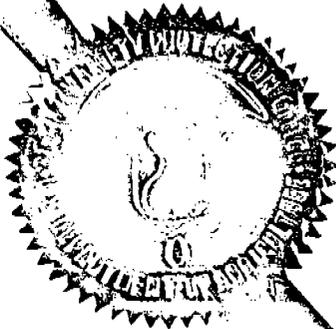
In Testimony Whereof, I have hereunto set
 my hand and caused the seal of the Plant
 Variety Protection Office to be affixed
 at the City of Washington
 this sixth day of March in
 the year of our Lord one thousand nine
 hundred and seventy-four

Attest:

A. J. Rollin
 Commissioner
 U. S. Dept. of Agriculture
 Grain Division
 Agricultural Marketing Service

Earl L. Beth

Secretary of Agriculture



APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION McNair 612	2. KIND NAME Cotton	FOR OFFICIAL USE ONLY	
		PV NUMBER 7400023	
3. GENUS AND SPECIES NAME Gossypium hirsutum	4. FAMILY NAME (Botanical) Hibisceae MALVACEAE	FILING DATE 10.1.73	TIME 10 A.M.
		5. DATE OF DETERMINATION 1972 letter 5/10/74	FEE RECEIVED \$ 250 \$ 250 \$ 250
6. NAME OF APPLICANT(S) McNair Seed Company	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Box 706 Laurinburg, North Carolina 28352	8. TELEPHONE AREA CODE AND NUMBER 919 276-0733	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION North Carolina	11. DATE OF INCORPORATION 11-1-47	

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:
Send all papers to corporate address above.

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Botanical Description of the Variety
- 13C. Exhibit C, Objective Description of the Variety
- 13D. Exhibit D, Data Indicative of Novelty
- 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

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.) YES NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? YES NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? FOUNDATION REGISTERED CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 Protection Act.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

October 16, 1973
(DATE)

McNAIR SEED COMPANY
(SIGNATURE OF APPLICANT)
by S. Harvey Evans Jr. 1
(SIGNATURE OF APPLICANT)

(DATE)

13 A. Exhibit A. Origin and Breeding History of McNair 612

McNair 612 was developed from a cross of Carolina Queen x McNair 1032. The pedigree method was used up to the F₆ generation at which time a single progeny row was bulked. This variety has a high degree of genetic stability for plant type and only slight variations for fiber properties. The line was first yield tested and increased in 1970 as McNair 0612.

Variety maintenance will be carried out by taking several hundred individual plants from the breeder seed block. These individual plants will be screened for lint percent and fiber properties. Plants that survive the screening procedure will be planted in progeny rows and observed several times during the growing season. Any off-type rows will be discarded with the rest being bulked and used as elite seed. An elite seed block will be grown and observed carefully and then advanced to breeder seed.

The most noticeable variant in 'McNair 612' is the occurrence of yellow pollen at the rate of about 1 plant per 1,000. With the variety maintenance procedure described above this variant should soon be greatly reduced, resulting in a variety with cream pollen. The variety is rather uniform for other observed traits.

13 B. Exhibit B. Botanical Description of McNair 612

McNair 612 is a medium tall, early maturing, high yielding variety. Flower color is creamy white and pollen color is ivory. Bolls are medium oblong and predominantly 4-locked. Lint percent is excellent with a range of 39 to 43. Fiber strength averages about 85,000 PSI and micronaire ranges from 4.0 to 4.9.

OBJECTIVE DESCRIPTION OF VARIETY
COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) McNair Seed Company	FOR OFFICIAL USE ONLY	
	PVPD NUMBER 7400023	VARIETY NAME OR TEMPORARY DESIGNATION McNair 612
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 706 Laurinburg, N. C. 28352		

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

1. SPECIES:

1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

EASTERN DELTA CENTRAL HIGH PLAINS EL PASO AREA
 WESTERN LOW HOT VALLEYS SAN JOAQUIN OTHER (Specify) _____

3. MATURITY (50% Open Boll):

<input type="text" value="0"/> <input type="text" value="1"/> NO. OF DAYS EARLIER THAN	<input type="text" value="1"/>	} 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57 8 = OTHER (Specify) _____
<input type="text" value="0"/> <input type="text" value="0"/> NO. OF DAYS LATER THAN	<input type="text" value="1"/>	

4. PLANT HABIT:

1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT 1 = FOLIAGE SPARSE 2 = DENSE
3 = OTHER (Specify) _____

5. PLANT HEIGHT:

<input type="text" value=""/> CM. SHORTER THAN	<input type="text" value=""/>	} 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57 8 = OTHER (Specify) _____
<input type="text" value="0"/> <input type="text" value="5"/> CM. TALLER THAN	<input type="text" value="1"/>	

6. MAIN STEM:

1 = LAX 2 = ASCENDING 3 = ERECT CM. TO FIRST FRUITING BRANCH NO. OF NODES TO FIRST FRUITING BRANCH (from cotyledonary node)

7. LEAF:

CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENCE:

1 = GLABROUS (HAIRS AS SPARSE AS D₂ SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H₁ OR H₂) 5 = OTHER (Specify) _____

9. LEAF COLOR:

1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (Acala-442) 4 = RED
5 = OTHER (Specify) _____

10. LEAF TYPE:

1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (Specify) _____

11. FLOWER:

1 = NECTARILESS 2 = NECTARIED
 Petals: 1 = CREAM 2 = YELLOW Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

1 = CLUSTER 2 = SHORT 3 = NORMAL 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS 1 = NORMAL BUD GOSSYPOL
4 = OTHER (Specify) _____ 2 = HIGH BUD GOSSYPOL

14. SEEDS:

± SEED INDEX (Fuzzy seed basis) Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 4
3 = HEAVY (ACALA SJ-1) 4 = OTHER (Specify) _____

EXHIBIT D

Revised 9-19-74

PVPO Application No. 7400023

Cotton-McNair 612

Novelty is based on the unique combination of the following characters:

'McNair 612' most closely resembles 'Coker 201'. 'McNair 612' differs from 'Coker 201' in that 'McNair 612' is (1) about five (5) days earlier in maturity, (2) has a 1½% higher lint percent (42.5 vs. 41.0), (3) has a .02 inch longer 2.5% ~~upon~~ ^{span} length (1.16 vs. 1.14), and (4) has a slight yield advantage. *JJH*

'McNair 612' differs from 'Coker 310' in that 'Coker 310' has (1) a .04 inch longer 2.5% ~~upon~~ ^{span} length (1.16 vs. 1.20), (2) more resistance to Verticillium wilt and (3) a more determinant plant type. *JJH*

13 E. Exhibit E. Statement of Basis of Applicant's
Ownership

McNair 612 is the property of McNair Seed Company. It was developed by David L. Burns, who was employed by McNair Seed Company as cotton breeder during the period of development of this variety. All costs of development were paid by McNair Seed Company.

ASSIGNMENT OF UNITED STATES PLANT VARIETY
PROTECTION CERTIFICATES AND APPLICATIONS

In consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, McNair Seed Company, a North Carolina corporation, P.O. Box 706, Laurinburg, North Carolina 28352, does hereby sell, assign, transfer and convey to Northrup King Co. a Delaware corporation, 1500 Jackson Street N.E., Minneapolis, Minnesota 55413, the entire right, title and interest in and to the following United States Plant Variety Protection Certificates and Applications, together with all reissues, divisions and continuations thereof and the plant varieties described and claimed therein:

<u>Certificate Number</u>	<u>Variety</u>	<u>Date Issued</u>
7600077	McNair 220 (Cotton)	July 19, 1977
7400023	McNair 612 (Cotton)	March 6, 1974
7200095	McNair 511 (Cotton)	May 21, 1974
7100090	McNair 210 (Cotton)	June 20, 1974
7400035	McNair 944 (Tobacco)	March 18, 1977
7700084	McNair 1003 (Wheat)	August 10, 1978
7200037	McNair 4323 (Wheat)	April 8, 1975
7500006	McNair 1813 (Wheat)	May 1, 1975
7200038	McNair 701 (Wheat)	February 26, 1974
76TQ016	McNair 500 (Soybeans)	February 15, 1977
7100075	McNair 600 (Soybeans)	February 26, 1974
7100042	McNair 800 (Soybeans)	April 10, 1974

<u>Application Number</u>	<u>Variety</u>	<u>Date Filed</u>
7900059	McNair 307 (Cotton)	December 19, 1978
7900053	McNair 308 (Cotton)	December 19, 1978
7800068	McNair 235 (Cotton)	February 23, 1978
N/A	McNair 373 (Tobacco)	October 31, 1979
7900088	McNair 710 (Soybeans)	June 20, 1979
7900089	McNair 770 (Soybeans)	July 10, 1979
7900094	McNair 780 (Soybeans)	July 25, 1979
7900093	McNair 700 (Soybeans)	July 25, 1979

the same to be held and enjoyed by said Northrup King Co. for its own use and benefit, and for the use and benefit of its successors, assigns or other legal representatives, for the full term or terms for which said Certificates are or may be granted or reissued, as fully and entirely as the same would have been held and enjoyed by said McNair Seed Company if this assignment and sale had not been made; together with all claims for damages by reason of past infringement of said Certificates and Applications, including the right to sue for and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns or other legal representatives.

IN WITNESS WHEREOF, McNair Seed Company has caused this assignment to be executed by its duly authorized officer, effective the 1st day of November, 1979.

McNAIR SEED COMPANY

(CORPORATE SEAL)

By *E. R. ...*

**ASSIGNMENT OF FOREIGN AND DOMESTIC PATENTS AND
PLANT VARIETY REGISTRATIONS AND PROTECTION CERTIFICATES**

WHEREAS, SANDOZ LTD., ("ASSIGNOR"), is the owner of all right, title and interest in the cotton seed lines listed in Schedule 1.2 hereto (the "Varieties") and in the germplasm related to the Varieties and in other cotton seed strains and germplasm which it has licensed to or otherwise given Northrup King Co., its wholly owned subsidiary, the right to use in the United States and abroad (the "Germplasm") for which patents, breeder's rights certificates, seed registrations, seed certifications (collectively, the "Applications") have been filed in the United States and abroad.

AND WHEREAS, STONEVILLE PEDIGREED SEED COMPANY, a Mississippi corporation doing business at Old Leland Road, Stoneville, Mississippi 38776 ("ASSIGNEE") desires to acquire the entire right, title and interest in and to the Varieties and the Germplasm and the said Applications:

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR, does hereby acknowledge that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said Applications, and the said Applications and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which have been and may hereafter be filed for the Varieties or the Germplasm in any country or countries foreign to the United States, and all Letters Patent which may be granted for the Varieties or the Germplasm in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States whose duty it is to issue patents, plant variety protection certificates, breeder's rights certificates, seed registrations and seed certifications to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR HEREBY covenants and agrees that ASSIGNOR will communicate to the said ASSIGNEE, its successors, legal representa-

CDMOBL.EXH(C

1)

05/13/90

tives and assigns, any facts known to ASSIGNOR respecting the Varieties and the Germplasm and said Applications, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said Varieties and Germplasm in all countries.

IN TESTIMONY WHEREOF, ASSIGNOR hereunto sets its hand and seal this 30th day of May, 1990.

SANDOZ LTD.

(corporate seal)

By: Edward C. Resler
Title: ATTORNEY IN FACT UNDER POWER OF ATTORNEY DATED MAY 30, 1990

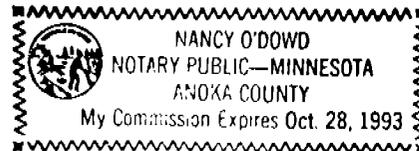
State of Minnesota)
County of Hennepin) ss.
)

On this 30th day of May, in the year 1990, before me, the undersigned, a Notary Public for the State of Minnesota, personally appeared to me Edward C. Resler, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within instrument as the duly authorized agent of Sandoz Ltd. and acknowledged to me that he executed it as a free act on behalf of Sandoz Ltd. with authority to do so.

(Notarial Seal)

Nancy A. O'Dowd
Notary Public

My Commission Expires:



CDMOBLR1.EXH
(C1)
05/21/90

SCHEDULE 1.2**Cotton Varieties**

<u>Variety Name</u>	<u>U. S. Plant Variety Certificate Number</u>	<u>Issue Date</u>
Coker 130	Applied for	
Coker 139	8700070	12/18/87
Coker 208	8300082	09/29/83
Coker 304	7700024	12/21/78
Coker 308	None	
Coker 310	7100021	01/18/74
Coker 315	8000087	12/18/80
Coker 320	Applied for	
Coker 420	7900087	01/29/80
Coker 3131	8100019	09/24/81
Exp. 84-828	None	
Exp. 610-8907	None	
KC-311	Applied for	
KC-380	8700069	06/30/87
McNair 210	7100090	06/24/74
McNair 220	7600077	07/19/77
McNair 235	None	
McNair 511	7200095	05/21/74
McNair 612	7400023	03/06/74

**ASSIGNMENT OF FOREIGN AND DOMESTIC PATENTS AND
PLANT VARIETY REGISTRATIONS AND PROTECTION CERTIFICATES**

WHEREAS, NORTHRUP KING CO., a Delaware corporation, doing business at 7500 Olson Memorial Highway, Golden Valley, Minnesota 55427 ("ASSIGNOR"), owns, is licensed to or otherwise has the right to use the cotton seed lines listed in Schedule 1.2 hereto (the "Varieties") and in the germplasm related to the Varieties and in other cotton seed strains and germplasm in the United States and abroad (the "Germplasm") for which patents, plant variety protection certificates, breeder's rights certificates, seed registrations, seed certifications (collectively, the "Applications") have been filed in the United States and abroad.

AND WHEREAS, STONEVILLE PEDIGREED SEED COMPANY, a Mississippi corporation doing business at Old Leland Road, Stoneville, Mississippi 38776 ("ASSIGNEE") desires to acquire the entire right, title and interest in and to the Varieties and the Germplasm and the said Applications:

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR, does hereby acknowledge that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said Applications, and the said Applications and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which have been and may hereafter be filed for the Varieties or the Germplasm in any country or countries foreign to the United States, and all Letters Patent which may be granted for the Varieties or the Germplasm in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, such official of the United States whose duty it is to issue plant variety protection certificates, and any Official of any country or countries foreign to the United States whose duty it is to issue patents, plant variety protection certificates, breeder's rights certificates, seed registrations and seed certifications to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

CDMOBLR1.EXH
(C1)
05/21/90

AND ASSIGNOR HEREBY covenants and agrees that ASSIGNOR will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Varieties and the Germplasm and said Applications, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said Varieties and Germplasm in all countries.

IN TESTIMONY WHEREOF, ASSIGNOR hereunto sets its hand and seal this 30th day of May, 1990.

NORTHROP KING CO.,
a Delaware corporation

(corporate seal)

By: *[Signature]*
Title: President + CEO

State of Minnesota)
County of Hennepin) ss.

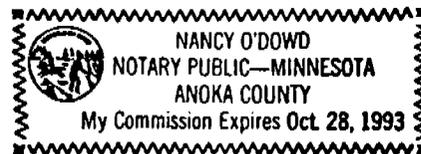
On this 30th day of May, in the year 1990, before me, the undersigned, a Notary Public for the State of Minnesota, personally appeared to me Rent Schulze, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within instrument as President + CEO of Northrup King Co. and acknowledged to me that he executed it as a free act on behalf of Northrup King Co. with authority to do so.

(Notarial Seal)

Nancy A. O'Dowd
Notary Public

My Commission Expires:

CDMOBLR1.EXH
(C1)
05/21/90



SCHEDULE 1.2**Cotton Varieties**

<u>Variety Name</u>	<u>U. S. Plant Variety Certificate Number</u>	<u>Issue Date</u>
Coker 130	Applied for	
Coker 139	8700070	12/18/87
Coker 208	8300082	09/29/83
Coker 304	7700024	12/21/78
Coker 308	None	
Coker 310	7100021	01/18/74
Coker 315	8000087	12/18/80
Coker 320	Applied for	
Coker 420	7900087	01/29/80
Coker 3131	8100019	09/24/81
Exp. 84-828	None	
Exp. 610-8907	None	
KC-311	Applied for	
KC-380	8700069	06/30/87
McNair 210	7100090	06/24/74
McNair 220	7600077	07/19/77
McNair 235	None	
McNair 511	7200095	05/21/74
McNair 612	7400023	03/06/74

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (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.

ITEM

- 5 - Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.
- 13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.
- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

15. BOLLS:

2 Locules: 1 = 3-4
 2 = 4-5 3 5 NO. SEEDS PER BOLL 4 2 5 LINT PERCENT 3 5 MM. DIAMETER
 2 Pitted: 1 = NONE
 2 = FINELY 6 1 8 GRAMS SEED COTTON PER BOLL 2 Breadth: 1 = BROADER AT BASE
 3 = COURSELY 2 = BROADER AT MIDDLE
 3 Type: 1 = STORMPROOF (WESTBURN 70) 3 Shape: 1 = LENGTH < WIDTH
 2 = STORM RESISTANT (LANKART 57) 2 = LENGTH = WIDTH
 3 = OPEN (DELTAPINE 16) 3 = LENGTH > WIDTH

16. BRACTEOLAS:

3 Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH
 1 Teeth: 1 = FINE 2 = COURSE 3 Teeth: 1 = 3-4 2 = 5-7 3 = 8-10
 4 = OTHER (Specify) _____

17. YIELD: Compared to—

PERCENT LESS THAN } 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
 0 3 0 PERCENT MORE THAN 1 } 4 = PAYMASTER 111 5 = ACALA 1517-70
 6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

0 5 8 SPAN LENGTH 50% 1 1 6 SPAN LENGTH 2.5% U.H.M. LENGTH
 MEAN LENGTH 3 5 STAPLE LENGTH 32nd INCHES
 UNIFORMITY RATIO (MEAN/U.H.M.) 5 0 UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

0 8 6 1,000 P.S.I. 0 6 5 ELONGATION E₁ STILOMETER T₀
 4 8 0 MICRONAIRE READING 1 2 2 YARN STRENGTH (Give test method) YTEN 1 9 1 STILOMETER T₁

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

1 VERTICILLIUM WILT 2 FUSARIUM WILT 1 ROOT KNOT NEMATODE 1 BACTERIAL BLIGHT (Race 1)
 1 BACTERIAL BLIGHT (Race 2) 0 ASCOCHYTA BLIGHT 1 PHYMATOTRICHUM ROOT ROT 1 RHIZOCTONIA
 0 ANTHRACNOSE 0 RUST OTHER (Specify) _____

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

1 BOLL WEEVIL 1 APHID 0 FLEAHOPPER 0 LEAFWORM
 0 FALL ARMYWORM 0 GRASSHOPPER 0 LYGUS 0 PINK BOLLWORM
 0 STINKBUG 1 THRIP 0 CUTWORM 1 SPIDERMITE
 OTHER (Specify) _____

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

- (1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.
- (2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.