No. 7300055

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Planting Seed Division of Agronomics, Inc.

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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Earlycot 31'

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, DC *this* first *day of* June *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(2-12-71)

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

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION: "EARLYCOT 31"	2. KIND NAME: American Upland Cotton	FOR OFFICIAL USE ONLY PVPO NUMBER: 73055
3. GENUS AND SPECIES NAME: Gossypium Hirsutum	4. FAMILY NAME (Botanical): Bombacaceae	FILING DATE: 1-30-73 TIME: 3:00 P.M.
	5. DATE OF DETERMINATION: Sept. 1, 1970	FEE RECEIVED: $750 CHARGES:
6. NAME OF APPLICANT(S): Planting Seed Division of Agronomics, Incorporated	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code): P.O. Box 16051 Lubbock, Texas 79490	8. TELEPHONE AREA CODE AND NUMBER: 806 799 - 1116
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION: Texas	11. DATE OF INCORPORATION: Oct. 1972

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:
Bob G. Anthony
Planting Seed Division
Agronomics, Inc. Box 16051
Lubbock, Texas 79490

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 12A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52, P.L. 91-577)*

[X] 12B. Exhibit B, Botanical Description of the Variety

[X] 12C. Exhibit C, Objective Description of the Variety

[X] 12D. Exhibit D, Data Indicative of Novelty

[X] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

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. *(See Section 52, P.L. 91-577).*

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), P.L. 91-577) (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO

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

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

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

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 (P.L. 91-577).

December 1, 1972
(DATE)

Agronomics, Inc. by
Bob G. Anthony
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

Exhibit A, Origin and Breeding History of the Variety

Earlycot 31 is a breeder's selection from an experimental strain, CA-491. CA-491 is a cross made in the mid 1950's by Dr. Levon Ray of the Texas A & M Agricultural Experiment Station at Lubbock, Texas. It is a product of a cross between Paymaster Stormrider (a commercial variety) and an experimental strain obtained from Yugoslavia. Selections were then made throughout the years for earliness, lint productivity, lint quality and boll stormproofness and plant type. The progeny of these selections was made available to commercial breeders in the mid 1960's.

Mr. Bob Anthony of Lubbock, Texas obtained a portion of this release and made further selections in the year 1969 for only the characters of earliness and stormproofness. These selections were bulked and increased in mass in 1970 and this population was heavily rogued for off-type plants. The progeny from this increase was again increased in 1971 and in 1972 the increase was distributed among growers under contract for production of seed toward a commercial release date of 1973.

There are three common variants found in the "Earlycot 31" population. One is a relatively intermediate type that is taller than the other plants. It is fairly indeterminate, pyramidal in shape and possesses additional vegetative branches. Its pollen is dark yellow in color. This variant occurs at the approximate rate of 1 in 300. The second variant is distinguished from the rest of the population only by its leaf type. It possesses a darker green, five lobed leaf 4/5 cut into lanceolate acuminate lobes. This variant occurs at the rate of approximately 1 in 800. The third variant is smaller in stature, more determinate and earlier maturing than the rest of the population and has a smaller, ovule-shaped boll. Fiber length in this boll is also shorter (approximately 7/8 inch). This variant occurs at the rate of approximately 1 in 500.

Stability in this population is reasonably good. Since the cross was made in 1956, fifteen years of further selection by qualified cotton breeders has been accomplished. For the past three years the percentage of the three variants has remained relatively constant, and fiber data indicate uniformity in staple length, strength and micronaire for the past three years.

Exhibit B, Botanical Description

The seed of "Earlycot 31" has near 90% light to moderate fuzz-coat with the fuzz light grey to slightly greenish in color. The remaining 10% ~~has little or no fuzz-coat.~~ is tufted. letter 6/28/74

The plant possesses no unique characteristics while passing through the seedling stage, however, it is an extremely early flowerer. In Texas A & M Research Center tests at Lubbock, Texas in 1970, 1971, and 1972 (the only years "Earlycot 31" was entered in tests) "Earlycot 31" flowered or "bloomed" 5 to 7 days before any other commercial variety. Consequently, it also had the first mature, open boll in the tests.

The main stem at maturity is shorter in stature than most other upland, storm resistant, stripper types. It attains a height of approximately 76 to 78 cm with normal weather patterns at Lubbock, Texas. The lateral branches throughout the whole length of the main stem at maturity is shorter than most other types. Thus, the plant has the appearance of one with moderately columnate form. The nodes up the main stem and those of the fruiting branches are closely spaced. All stems are moderately pubescent.

The leaves are medium in size, cordate 1/3 to 1/2 cut into 3 to 5 lobes. The lobes are broadly triangular acuminately not constricted. All leaves have moderate to heavy pubescence.

The flowers are medium sized with a short staminal column. The upper filaments are longer than the lower. Pollen is light yellow and very fine in particle size. The bracteoles are slightly longer than broad, cordate, gashed into 10 to 12 long acuminate teeth which are more than 4 times as long as broad.

The bolls are medium sized to small, round with a slightly pointed end and contain a moderate number of oil glands. Approximately 50% of the bolls contain 5 carpels and 50% contain 4 carpels. Usually 7 to 8 seeds are found in each lock. The plants have 98% storm resistant bolls. The lint staples 15/16" to 31/32" with fiber strength of 75,000 to 85,000 psi, Pressley. The fiber is very coarse with micronaire in the 3.8 to 4.5 range.

Exhibit B, Botanical Description (Con't.)

"Earlycot 31" exhibits extremely early maturity. It blooms earlier than any other commercial variety in the United States. Planted June 1, at Lubbock, Texas, the plant normally flowers within 43 to 45 days from planting. The time required from planting to mature, open boll is usually 88 to 93 days.

"Earlycot 31" is well adapted to northen areas of the South Plains of Texas and to other areas with marginal growing seasons, where time of first frost is a limiting production factor.

"Earlycot 31" exhibits the following comparative characteristics:
Same plant type as Lockett 4789A, but approximately 10 days earlier with coarser, shorter fiber; approximately 5 days earlier than Paymaster 54-B, but is much more storm resistant; has similar fiber characteristics to Stripper 31, but, again is approximately 7 days earlier. There are presently no commercial varieties which exhibit the same earliness as does "Earlycot 31".

Exhibit D, Data Indicative of Novelty

Application No. 73055, "Earlycot 31"

"Earlycot 31" was developed for areas in the cotton belt which have extremely short growing seasons. It does not have the yield potential other commercial varieties have, if the other varieties have enough growth time to mature; however, in short-season situations, where growth is pre-maturely terminated due to a frost or freeze, "Earlycot 31" has consistently outyielded all other commercial varieties.

"Earlycot 31" is novel due to its extreme earliness. In experiment station tests conducted by Dr. Levon Ray at the Texas A&M Research Center at Lubbock, Texas, "Earlycot 31" has initiated first flower approximately two days earlier than "Paymaster Dwarf", the variety nearest in earliness to "Earlycot 31". Compared to other early maturing commercial varieties, "Earlycot 31" initiates first flower approximately 5 days earlier than Paymaster 54-B, 7 days earlier than "Rilcot 90","Gregg 35", and "Stripper 31", and 10 days earlier than"Paymaster 111" and "Lankart 57".

As far as we have been able to determine, no other commercial variety in the United States initiates first flower as early as does "Earlycot 31".

Earlycot 31 is similar to Paymaster Dwarf except that Earlycot 31 exhibits a significantly greater degree of earliness than does Paymaster Dwarf, both in days to first white bloom and percentage of open cotton at approximately 150 days from planting.

Comparative data was compiled and computed at three locations in two tests by Dr. Lavon Ray at Lubbock, Texas, Dr. Douglas Owen at Halfway and Bob Anthony at Seminole, Texas.

The accompanying tables show results of the tests. Computations for variance show that the difference for both number of days from planting to first white bloom and also percentage of open bolls between Earlycot 31 and Paymaster Dwarf was significant in all tests at the .05 level of probably.

'Earlycot 31' PV No. 73055

EXHIBIT D

'Earlycot 31' most closely resembles 'Paymaster Dwarf' except that 'Earlycot 31' initiates flowers 2 days earlier, matures 5 days earlier, has smaller bolls (5.0 vs 5.5 grs seed cotton), has shorter lateral branch nodes, dark green leaves (vs light green), yellow pollen (vs cream), fine boll pitting (vs coarse), stormproof bolls (vs storm resistant, bractiole length > width (vs length < width), fine bractiole teeth (vs coarse), has a 2.5 percent span length of .95 inches (vs 1.00), has a micronaire of 4.5 (vs 4.25) and is not resistant to bacterial blight.

FORM GR-470 (REVERSE)

RECEIVED JAN 30 73 OF AGRICULTURE PVPO

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unles noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety.

12a 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.

12b 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.

12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.

12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

TABLE 3

GALENAY, TEXAS % OPEN Bolls 10/2/75 146 days after planting

Irrigation Method	Variety	Replication 1	2	3	4	Average
A	Paymaster Dwarf	15.0	13.5	19.4	16.2	16.0
	Early Cot 31	18.5	25.8	25.4	23.4	23.3
B	Paymaster Dwarf	8.9	7.6	15.6	2.4	8.6
	Early Cot 31	16.3	11.9	11.5	5.0	11.2

	Paymaster Dwarf	Early Cot 31	Average
A	16.0	23.3	19.65
B	8.6	11.2	9.9
Average	12.3	17.25	14.78

Analysis of Variance

Source	df	Sum of Squares	Mean Squares	F.
Methods	1	380.25	380.25	15.7 *
Blocks	3	77.63	25.88	1.07 N.S.
Error (A)	3	72.52	24.17	
Varieties	1	96.04	96.04	10.29 *
Variety x Method	1	22.09	22.09	2.37 N.S.
Error (b)	6	55.97	9.33	

* Significant at the .05 level of probability
that is, the two varieties had a different percentage of open bolls
unless a one in twenty chance in sampling has occurred

1975 Irrigation-Variety Test TABLE 1

% Open Bolls 10/2 thru 10/7 HALFWAY, TEXAS

Variety	Irrigation Method * A	B	Z
Paymaster Dwarf	20.6	17.1	18.8
Dunn 119	6.9	3.2	5.0
Tamicot 788	12.7	7.9	10.3
Paymaster 18	13.4	3.7	8.6
Early cot 31	22.6	20.7	21.6
Delta Pine SR-2	14.7	3.8	9.2
Stripper 31	15.8	7.5	11.7
GSA 71	4.1	5.6	4.9
Rilcot Stripper N	9.5	5.4	7.5
Coker 312	7.7	3.1	5.4
Lockett 4789A	19.8	8.4	14.1
Tamicot SP-23	5.9	7.7	6.8
Rilcot 90A	16.0	18.2	17.1
Gregg 35W	11.2	5.0	8.1
Paymaster 111A	5.5	3.8	4.6
Lockett BXL	7.3	3.2	5.2
Average	12.1	7.8	9.9

* Method A = No preplant, one alternate row at Bloom 8/11/75

" B = No preplant, alternate row at 50 centibars tension @ 12" depth (8-1-75, 8-11-75, 8-25-75)

TABLE 5

Days from Planting to First Bloom for Six Cultivars Planted on Three Planting Dates at Lubbock, Texas, 1974

Cultivar	Planting Dates May 29	June 14	June 28	Average
Earlycot 31	50	47	51	49.3
CA 1815	53	46	50	49.7
CA 1371	54	47	52	51.0
Paymaster Dwarf	54	50	52	52.0
Tamcot SP-21	50	52	54	52.3
Rilcot 90	51	54	55	53.0

TABLE 6

Date of Bloom Test taken at Seminole, Texas- Planted June 2, 1975

Variety	No. of Days from Planting to First white Bloom Rep. # 1	Rep. # 2	Rep. # 3	Rep. # 4	Average
Earlycot 31	48	47	49	47	47.75
Paymaster Dwarf	51	50	49	49	49.75
Stripper 31	58	56	56	56	56.5
Lankart 57	58	57	60	57	58.0
Paymaster 111	60	59	59	58	59.0
Blightmaster A-5	62	62	61	60	61.25

TABLE 1

LUBBOCK, TEXAS % of Open Bolls 10/2/75 - 151 Days from Planting

VARIETY	REPLICATION 1	2	3	4	AVERAGE
Paymaster Dwarf	31%	50%	18%	30%	32%
Earlycot 31	64%	60%	64%	55%	61%

TABLE 2

SEMINOLE, TEXAS % of Open Bolls 10/2/75 - 148 Days from Planting

VARIETY	REPLICATION 1	2	3	4	AVERAGE
Paymaster Dwarf	42%	64%	48%	36%	48%
Earlycot 31	58%	71%	62%	48%	59%

Supplement to Exhibit "D", Data Indicative of Novelty

Application No. 73055 "Earlycot 31"

The commercial variety most closely resembling "Earlycot 31" is "Paymaster Dwarf". The following is a list of comparable characters.

	Plant Type	Plant Height	Main Stem	cm to 1st fruit branch	No. of nodes to 1st fruit branch
"Earlycot 31"	Compact	78cm	Erect	9	4
"Paymaster Dwarf"	Compact	76cm	Erect	11	5

	Leaf Width	Leaf Pubes.	Leaf Color	Leaf type	Flower Nectaries	Petal Color	Pollen Color
"Earlycot 31"	9 cm	mod.	Dk. Gr.	Normal	Yes	Cream	Yellow
"Paymaster Dwarf"	11 cm	mod.	Lt. Gr.	Normal	Yes	Cream	Cream

	Fruiting Branch	Gossypol Condition	Seed Index	Seed Fuzz	No. boll Locules	Boll Pitting
"Earlycot 31"	Short, Det.	Normal	11.5	Sparse	4-5	Fine
"Paymaster Dwarf"	Short, Det.	Normal	11.0	Mod.	4-5	Coarse

	Boll Type	Boll Shape	Boll Breadth	Grams seed cotton/boll
"Earlycot 31"	Stormproof	Length greater	Broad Mid.	5.0
"Paymaster Dwarf"	Storm Res.	Width greater	Broad Mid.	5.5

	Lint %	Bractiole Breadth	No. of teeth Bractioles	Bractioles type of teeth
"Earlycot 31"	35.0	Length Greater	8 to 10	Fine
"Paymaster Dwarf"	40.0	Width Greater	8 to 10	Coarse

	Lint Yield	Fiber 50% Span	Fiber 2.5% Span	Unif. Index	Staple Length	Fiber Strength
"Earlycot 31"	100%	.43	.95	.45	31/32"	79,000 psi
"Paymaster Dwarf"	105%	.45	1.00	.45	1"	80,000 psi

	Micro-naire	Bacterial Blight Res.	Verticillium Wilt Res.	Fusarium Wilt Res.	Nematode Resistance
"Earlycot 31"	4.5	No	No	No	No
"Paymaster Dwarf"	4.25	Yes	No	No	No

"Earlycot 31" iniates first flower approximately 2 days prior to "Paymaster Dwarf". Also, the boll maturation period is approximately 3 days shorter for "Earlycot 31", giving a net earlier maturity of approximately 5 days for "Earlycot 31".

Bolls of "Paymaster Dwarf" are much larger that those of "Earlycot 31". Spacing between lateral nodes is greater for "Paymaster Dwarf" than for "Earlycot 31"

Rec 11/20/74

Exhibit E, Statement of the Basis of Applicant's Ownership

"Earlycot 31" was developed through plant selection from CA-491, a Texas A & M experimental breeding strain. Although this strain was made available to all area breeders, only Agronomics, Inc. elected to make subsequent selections toward release of a commercial variety from this strain; and, at this date, Agronomics, Inc. is the first to apply for Plant Variety Protection for progeny selected from this strain.

Dr. Levon Ray of the Texas A & M Research Center, Lubbock, Texas made the cross of Paymaster Stormrider and an extremely early Yugoslavian strain during the mid 1950's, which resulted in the development of CA-491. If proof of this cross and subsequent selection is needed, Dr. Ray is willing to supply evidence of the cross.

To our knowledge. no othercotton breeder in the U.S. made this combination between Paymaster Stormrider and the Yugoslavian strain, thus it is inconcievable that another commercial variety with the same genetic characteristics would exist.

Only those breeders that received seed stock from Dr. Ray might have a variety genetically similar to "Earlycot 31" and they have assured Agronomics, Inc. that no such commercial variety exists.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8
(10-2-72)

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

EXHIBIT C
(Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON *(GOSSYPIUM SPP.)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
AGRONOMICS, INC.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
P.O. Box 16051
Lubbock, Texas 79490

FOR OFFICIAL USE ONLY
PVPO NUMBER 73055
VARIETY NAME OR TEMPORARY DESIGNATION
"EARLYCOT 31"

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. SPECIES:

[1] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

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

[0] EASTERN [0] DELTA [0] CENTRAL [2] HIGH PLAINS [0] EL PASO AREA
[0] WESTERN LOW HOT VALLEYS [0] SAN JOAQUIN [ ] OTHER *(Specify)* _____

3. MATURITY (50% Open Boll):

[1 0] NO. OF DAYS *EARLIER* THAN ..... [4]
[0 0] NO. OF DAYS *LATER* THAN ..... [8]

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)* All Varieties

4. PLANT HABIT:

[3] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[3] 1 = FOLIAGE SPARSE 2 = DENSE
3 = OTHER *(Specify)* Intermediate

5. PLANT HEIGHT:

[0 6] CM. *SHORTER* THAN ..... [7]
[0 2] CM. *TALLER* THAN ..... [8]

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)* _____

6. MAIN STEM:

[3] 1 = LAX 2 = ASCENDING 3 = ERECT

[9] CM. TO FIRST FRUITING BRANCH

[0 4] NO. OF NODES TO FIRST FRUITING BRANC *(from cotyledonary node)*

7. LEAF:

[0 6] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[3] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER *(Specify)* _____

9. LEAF COLOR:

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

10. LEAF TYPE:

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

11. FLOWER:

[2] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW

[1&2] Pollen: 1 = CREAM 2 = YELLOW Heterozygous

12. FRUITING BRANCH TYPE:

[2] 1 = CLUSTER 2 = SHORT 3 = NORMAL

[1] 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

[3] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER *(Specify)* _____

[1] 1 = NORMAL BUD GOSSYPOL
2 = HIGH BUD GOSSYPOL

14. SEEDS:

[1 1 0] ± [1 5] SEED INDEX *(Fuzzy seed basis)*

[1] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16)
3 = HEAVY (ACALA SJ-1) 4 = OTHER *(Specify)* 5

73055 EARLY COT

FORM GR-470-8 (REVERSE)

15. BOLLS:

[2] Locules: 1 = 3-4, 2 = 4-5

[30] NO. SEEDS PER BOLL

[35.0] LINT PERCENT

[35] MM. DIAMET

[2] Pitted: 1 = NONE, 2 = FINELY, 3 = COURSELY

[5.00] GRAMS SEED COTTON PER BOLL

[2] Breadth: 1 = BROADER AT BASE, 2 = BROADER AT MIDDLE

[1] Type: 1 = STORMPROOF (WESTBURN 70), 2 = STORM RESISTANT (LANKART 57), 3 = OPEN (DELTAPINE 16)

[3] Shape: 1 = LENGTH < WIDTH, 2 = LENGTH = WIDTH, 3 = LENGTH > WIDTH

16. BRACTEOLES:

[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—

[200] PERCENT *LESS* THAN . . . . . .

[000] PERCENT *MORE* THAN . . . . . .

[4] 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 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):

[0.43] SPAN LENGTH 50%

[0.95] SPAN LENGTH 2.5%

[ ] U.H.M. LENGT

[ ] MEAN LENGTH

[31] STAPLE LENGTH 32nd INCHES

[ ] UNIFORMITY RATIO (MEAN/U.H.M.)

[45] UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

[0.79] 1,000 P.S.I.

[ ] ELONGATION E_1

[ ] STILOMETER T

[4.50] MICRONAIRE READING

[ ] YARN STRENGTH *(Give test method)* _____

[ ] STILOMETER T

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

[1] VERTICILLIUM WILT

[1] FUSARIUM WILT

[1] ROOT KNOT NEMATODE

[1] BACTERIAL BLIGHT *(Race 1)*

[1] BACTERIAL BLIGHT *(Race 2)*

[1] ASCOCHYTA BLIGHT

[1] PHYMATOTRICHUM ROOT ROT

[1] RHIZOCTONIA

[0] ANTHRACNOSE

[0] RUST

[0] OTHER *(Specify)* _____

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

[0] BOLL WEEVIL

[1] APHID

[1] FLEAHOPPER

[1] LEAFWORM

[1] FALL ARMYWORM

[1] GRASSHOPPER

[1] LYGUS

[1] PINK BOLLWORM

[0] STINKBUG

[1] THRIP

[1] 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.