



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Delta and Pine Land 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 (STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Deltapine 55'



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 14th day of May in the year of our Lord one thousand nine hundred and seventy-six

Alfred
R. J. Rollins
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION Deltapine 55	2. KIND NAME Cotton	FOR OFFICIAL USE ONLY	
		PV NUMBER 7500103	
3. GENUS AND SPECIES NAME Gossypium hirsutum	4. FAMILY NAME (Botanical) Malvaceae	FILING DATE 6.30.75	TIME 10 A.M.
		FEE RECEIVED \$ 250	BALANCE DUE \$ -
	5. DATE OF DETERMINATION October 1968	\$ 250	\$ -
6. NAME OF APPLICANT(S) Delta & Pine Land Company	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Scott, Mississippi 38772	8. TELEPHONE AREA CODE AND NUMBER (601) 742-3351	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. STATE OF INCORPORATION Mississippi	11. DATE OF INCORPORATION April 29, 1886

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

Research Department
Delta & Pine Land Company
Scott, Mississippi 38772

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.

May 27, 1975
(DATE)

June 27, 1975
(DATE)

Delta & Pine Land Company
by: Early Ewing Vice P.
(SIGNATURE OF APPLICANT)
Delta & Pine Land Company
by: W. J. ... Pres.
(SIGNATURE OF APPLICANT)

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.

EXHIBIT A

DELTA & PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 55

Origin and Breeding History

Deltapine 55 originated from an F₄ plant selected in 1968 from a cross made in 1965 between a Delta & Pine Land Company Experimental Strain 5916-022-11-21 and Stoneville 7A, a commercial variety. Individual plant selection in this cross was begun in the F₂ in 1966 with plant selections within progeny rows in the F₃ and F₄ in 1967 and 1968, respectively.

Deltapine 55 was tested as three progeny rows in the F₅ in 1969 and tested during the years 1970, 1971, 1972 and 1973 in replicated variety tests throughout the Mississippi Valley and throughout the cotton belt. A re-selection program for Deltapine 55 was begun in 1971 and completed in 1973 to assure the stability and purity of this strain.

Data has been taken on Deltapine 55 for a number of characteristics since the F₃ generation.

EXHIBIT B

DELTA & PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 55

Botanical Description

Deltapine 55 is a variety of upland cotton, Gossypium hirsutum. Plant height is moderate with an erect, many branched stem. Leaves are moderately hirsute and of medium size and light green color. Flower petals and anthers are cream colored. Bolls are 4 to 5 lock, obovate and open fully. Linters are light gray and seed are brown.

Deltapine 55 has a very high lint percent and is resistant to Verticillium Wilt and Fusarium Wilt. Fiber length and strength are similar to the Stoneville 7A parent, while fiber micronaire is lower than either parent. Retention of seed cotton in boll is similar to the Deltapine 5916 parent.

EXHIBIT D

Amendment of November 4, 1975 to Delta & Pine Land Company's Application for Deltapine 55, No. 7500103

Data Indicative of Novelty

PART I

Deltapine 55 (Deltapine 652) most nearly resembles Deltapine 16. Its 5916-022-11-21 parent was an F₄ sib line of Deltapine 16. Its difference from this variety was established on data from a number of replicated variety tests.

For the characteristics listed below Deltapine 55 compares with Deltapine 16 as follows:

Lint yield	5% higher	Table I
Lint percent	1.7% higher	Table II
Earliness	Slightly earlier	Table III, p. 5
Plant Height	Similar	Table II
Retention of seed cotton in boll	Similar	Table II
Wilt resistance (<i>Verticillium albo atrum</i>)	Slightly better	Table II
Staple length (digital fibrograph)	.02 shorter	Table II
Fiber strength	Same	Table II
Micronaire	Same	Table II

Deltapine 55 has a leaf of moderate hairiness; that of Deltapine 16 is moderately smooth.

Similar differences have been observed in tests conducted by experiment stations and other breeders. (Deltapine 55 was tested under the pedigree number 652-679-72)

Tables supporting claims of novelty for Deltapine 55

Average of four years' tests at Scott, Mississippi conducted by Delta & Pine Land Company - Tables I and II - Yield, Fiber Properties and Agronomic Data

PART II

Deltapine 55 differs from all other varieties of its type. Results are available for tests repeated over several years for several other varieties: All items from Table II except yield Table I. The averages for three years' tests are given 1971-73.

EXHIBIT D - Continued

Deltapine 55 differs from listed varieties in that the following characters are different as compared with Deltapine 55:

<u>Character</u>	<u>Deltapine 45A</u>	<u>Deltapine 25</u>	<u>Deltapine 61</u>	<u>Coker 310</u>	<u>Stoneville 213</u>
	is	is	is	is	is
Lint yield	7% less	3% less	1% more	9% less	5% less
Lint %	1.6% less	0.3% less	1.3% less	1.2% less	2.3% less
Plant Height	Same	Shorter	Slightly Shorter	Slightly Shorter	Slightly Shorter
Ret. of S/C (1)	Less SR	More SR	Less SR	Same	Same
W. R. (2)	Same	More Resist.	Less Resist.	Much Less Resist.	Less Resist.
Staple (3)	Slightly Shorter	Same	Slightly Longer	Much Longer	Same
Fiber strength (4)	Same	Slightly Stronger	Slightly Stronger	Slightly Stronger	Slightly Weaker
Micronaire	Same	Higher	Higher	Same	Higher

Differences below line two are given numerically in Table II.

- (1) Retention of seed cotton in the boll (Storm Resistant SR)
- (2) Wilt Resistance (Verticillium albo atrum)
- (3) Digital fibrograph
- (4) Stelometer at 1/8" gauge

EXHIBIT D - Continued

Similar differences have been observed in tests conducted by experiment stations and other breeders. (Deltapine 55 was tested under the pedigree number 652-679-72.) The purpose of including these large amounts of data is to enter it on the record in case additional comparisons are needed in the future.

Results of 1974 tests at various experiment stations in the Cotton Belt. The average for several years is not given. Deltapine 55 was widely tested only in 1974, so long term averages at a given location are not available.

Mississippi - Table III (Bulletin Enclosed)

Mississippi Cotton Variety Tests for 1974, MAFES Bulletin No. 830 Results for five locations in the Delta are presented individually and as an average (page 5). The claim for earliness is substantiated in these results. This bulletin also gives results for the Hill section of the state but this is not an important cotton producing area and little or no attention should be paid these. Deltapine 16 outyielded Deltapine 55 in these tests.

Tennessee

Table IV - Coker's Pedigreed Seed Company - Mississippi Valley Test 1974. Gives yield and fiber properties for 1974.

Table V - The average yield of Deltapine 55 in comparison with 21 other varieties is given for four locations in this table.

Louisiana

Table VI - Bossier City 1974
Table VII - Alexandria 1974
Table VIII - Baton Rouge 1974

Alabama

Table IX - North Alabama 1974
Table X - North Alabama 3 years average 1972-1974
Table XI - Southern Alabama 1974
Table XII - Southern Alabama 3 year average 1972 - 1974
Table XIII - Tallassee, Alabama - Percentage of plants showing Fusarium Wilt

Georgia

Table XIV - Tifton 1974

EXHIBIT D - Continued

North Carolina

Table XV - Laurinburg, N. C. (McNair Seed Co.) 1974

South Carolina

Table XVI - Hartsville (Coker's Pedigreed Seed Co.) 1974

Texas

Table XVII - Los Indios Rio Grande Valley (D&PLCO Test) 1974

Table XVIII - Marburger Farm, San Patricio Co., 1974

Table XVIII - Hoelscher Farm, Nueces Co., 1974

Table XX - Teltschik Farm, San Patricio Co., 1974

Table XXI - A&M Plantation, 1974

TABLE I - EXHIBIT D (Amended November 4, 1975)
Data Supporting Claims of Novelty for Deltapine 55

Lint Yield of Deltapine Varieties and Strains for Years 1970, 1971, 1972, and 1973

C.V.	Test		LSD's Lbs. & %	DP 16	DP 45A	DP 25	DP 61	DP 55	Coker 310	Stoneville 213	
	Year	Location									
<u>1970</u>											
9.4	Scott		74/114-8/14	866	869	954	1026	1026		858	
6.7	Rolling Fork		112/147-6/8	1790	1684	1692	1828	1828		1604	
8.9	Stovall		85/112-8/11	1027	1020	1009	1136	1136		896	
8.9	Lake Cormorant		127/166-9/12	1381	1308	1457	1418	1418		1362	
	Avg. Yield in % of DP 16			100	96	101	107	107		93	
<u>1971</u>											
7.6	Scott		93/124-7/10	1262	1190	1233	1414	1315	1186	1268	
10.1	Rolling Fork		162/214-10/13	1644	1518	1532	1743	1690	1511	1599	
10.1	Stovall		119/157-8/11	1423	1363	1388	1554	1467	1312	1270	
11.5	Lake Cormorant		179/237/12/15	1547	1538	1616	1646	1659	1533	1480	
	Avg. Yield in % of DP 16			100	95	98	108	104	94	96	
<u>1972</u>											
7.2	Scott		84/112-8/10	1110	1171	1232	1233	1237	1055	1189	
9.4	Rolling Fork		94/124-9/12	1022	1000	1039	1027	1092	980	1042	
8.9	Stovall		91/121-9/11	1062	983	1044	1060	1082	951	1088	
10.8	Lake Cormorant		114/152-11/15	1042	1008	1187	1047	1060	1023	1106	
	Avg. Yield in % of DP 16			100	98	106	103	106	95	104	
<u>1973</u>											
8.9	Scott		78/103-9/12	865	854	848	875	892	860	806	
14.2	Rolling Fork		123/163-13/17	953	974	1048	1062	1009	930	980	
5.9	Lake Cormorant		58/176-6/8	986	967	951	1001	1012	953	977	
	Avg. Yield in % of DP 16			100	100	102	105	104	98	99	

TABLE 2 - EXHIBIT D
Data Supporting Claims of Novelty for Deltapine 55

Fiber Properties and Agronomic Characteristics of Deltapine Varieties and Strains
Averages for the Test Years 1970, 1971, 1972, and 1973

	DP 16	DP 45A	DP 25	DP 5916-65	DP 61	DP 6225-53	DP 55	DP 66	Coker 310	Stoneville 213
<u>Fiber Properties</u>										
Strength grams/tex	22.6	22.7	23.1	23.0	23.4	22.8	22.6	23.4	23.9	21.9
Length 2.5 Span	1.13	1.09	1.11	1.14	1.13	1.10	1.11	1.07	1.16	1.10
Uniformity Ratio	44	45	45	45	45	45	44	43	44	44
Micronaire	4.4	4.4	4.7	4.6	4.6	4.6	4.4	4.1	4.4	4.8
<u>Agronomic Characteristics</u>										
Lint %	35.6	35.7	37.0	36.1	36.0	38.1	37.3	35.1	36.1	35.0
Earliness - % first pick	86	88	84	86	86	85	87	-	87	87
Wilt Resistance										
% Infestation	26	21	16	26	28	16	23	40	46	30
Plant Height	2.1	2.1	2.8	2.4	2.4	2.9	2.0	2.3	2.4	2.4
Stringing Out	2.0	2.6	1.6	2.6	2.6	2.0	2.1	2.4	2.0	2.2

TABLE II - EXHIBIT D
Data Supporting Claims of Novelty for Deltapine 55

Fiber Properties and Agronomic Characteristics of Deltapine Varieties and Strains
Averages for the Test Years 1970, 1971, 1972, and 1973

	DP 16	DP 45A	DP 25	DP 5916-65	DP 61	DP 6225-53	DP 55	DP 66	Coker 310	Stoneville 213
<u>Fiber Properties</u>										
Strength grams/tex	22.6	22.7	23.1	23.0	23.4	22.8	22.6	23.4	23.9	21.9
Length 2.5 Span	1.13	1.09	1.11	1.14	1.13	1.10	1.11	1.07	1.16	1.10
Uniformity Ratio	44	45	45	45	45	45	44	43	44	44
Micronaire	4.4	4.4	4.7	4.6	4.6	4.6	4.4	4.1	4.4	4.8
<u>Agronomic Characteristics</u>										
Lint %	35.6	35.7	37.0	36.1	36.0	38.1	37.3	35.1	36.1	35.0
Earliness - % first pick	86	88	84	86	86	85	87	-	87	87
Wilt Resistance										
% Infestation	26	21	16	26	28	16	23	40	46	30
Plant Height	2.1	2.1	2.8	2.4	2.4	2.9	2.0	2.3	2.4	2.4
Stringing Out	2.0	2.6	1.6	2.6	2.6	2.0	2.1	2.4	2.0	2.2

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EXHIBIT E

DELTA & PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 55

Applicant's ownership is based on the fact that breeders are employees of applicant and have executed assignments of plant variety rights to Delta & Pine Land Company

15. BOLLS:

Locules: 1 = 3-4
 2 = 4-5

NO. SEEDS PER BOLL

LINT PERCENT

MM. DIAMETER

Pitted: 1 = NONE
 2 = FINELY
 3 = COURSELY

GRAMS SEED COTTON PER BOLL (Table III)

Breadth: 1 = BROADER AT BASE
 2 = BROADER AT MIDDLE

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

Shape: 1 = LENGTH < WIDTH
 2 = LENGTH = WIDTH
 3 = LENGTH > WIDTH

16. BRACTEOLAS:

Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

Teeth: 1 = FINE 2 = COURSE

Teeth: 1 = 3-4 2 = 5-7 3 = 8-10
 4 = OTHER (Specify) _____

17. YIELD: Compared to—

PERCENT LESS THAN

PERCENT MORE THAN

} 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):

SPAN LENGTH 50%

SPAN LENGTH 2.5%

U.H.M. LENGTH

MEAN LENGTH

STAPLE LENGTH 32nd INCHES

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

UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

1,000 P.S.I.

ELONGATION E₁

STILOMETER T₀

MICRONAIRE READING

YARN STRENGTH (Give test method)

STILOMETER T₁

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

VERTICILLIUM WILT

FUSARIUM WILT

ROOT KNOT NEMATODE

BACTERIAL BLIGHT (Race 1)

BACTERIAL BLIGHT (Race 2)

ASCOCHYTA BLIGHT

PHYMATOTRICHUM ROOT ROT

RHIZOCTONIA

ANTHRACNOSE

RUST

OTHER (Specify) _____

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

BOLL WEEVIL

APHID

FLEAHOPPER

LEAFWORM

FALL ARMYWORM

GRASSHOPPER

LYGUS

PINK BOLLWORM

STINKBUG

THRIP

CUTWORM

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.

Deppine 55-

12 sheets to

Certificate Folder

2/3/76 JH

Note: Record Serial No
on application