



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 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 EXPORT, OFFER FOR SALE, OR OFFERING IT, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR OFFERING 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 (34 STAT. 1435 AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Deltapine 26'



In Testimony Whereof, I have herunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 29th day of September in the year of our Lord one thousand nine hundred and seventy-eight

Attest:

Simon H. Lee
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Bob Berglund
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY 6225-347-42-53	1b. VARIETY NAME Deltapine 26	FOR OFFICIAL USE ONLY	
		PV NUMBER 7800022	
2. KIND NAME Cotton	3. GENUS AND SPECIES NAME Gossypium hirsutum	FILING DATE 1-17-78	TIME 10:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL) Malvaceae	5. DATE OF DETERMINATION October 1965	FEE RECEIVED \$ 250.00	DATE 1-17-78
		\$ 250.00	1-17-78
		\$ 250.00	8-21-78
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. IF INCORPORATED, GIVE STATE AND DATE 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, Novelty Statement.
- 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- 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.) 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

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? YES NO

16. The applicant(s) declare(s) 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) 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.

12 Dec 1977
(DATE)
12 Dec 1977
(DATE)

Delta & Pine Land Company
by: [Signature]
(SIGNATURE OF APPLICANT)
Delta & Pine Land Company
by: [Signature] 1
(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, National Agricultural Library, 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.

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 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 or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

OBJECTIVE DESCRIPTION OF VARIETY
COTTON (GOSSYPIUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) <p style="text-align: center;">Delta & Pine Land Company</p> ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <p style="text-align: center;">Scott, Mississippi 38772</p>	FOR OFFICIAL USE ONLY PVPO NUMBER <p style="text-align: center; font-size: 1.2em;">7800022</p> VARIETY NAME OR TEMPORARY DESIGNATION <p style="text-align: center;">Deltapine 26</p>
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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"/>	NO. OF DAYS EARLIER THAN	<input type="text"/>	1 = COKER 310	2 = DELTAPINE 16	3 = STONEVILLE 213
<input type="text" value="5"/>	NO. OF DAYS LATER THAN	<input type="text" value="2"/>	4 = PAYMASTER 111	5 = ACALA 1517-70	6 = ACALA SJ-1
			7 = LANKART 57	8 = OTHER (Specify) _____	

4. PLANT HABIT:

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

5. PLANT HEIGHT:

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

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:

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 2 = HIGH BUD GOSSYPOL
 4 = OTHER (Specify) _____

14. SEEDS:

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

15. BOLLS:

Locules: = 3-4
 = 4-5
 NO. SEEDS PER BOLL
 LINT PERCENT
 MM. DIAMETER

Pitted: = NONE
 = FINELY
 = COURSELY
 GRAMS SEED COTTON PER BOLL
 Breadth: = BROADER AT BASE
 = BROADER AT MIDDLE

Type: = STORMPROOF (WESTBURN 70)
 = STORM RESISTANT (LANKART 57)
 = OPEN (DELTAPINE 16)
 Shape: = LENGTH < WIDTH
 = LENGTH = WIDTH
 = LENGTH > WIDTH

16. BRACTEOLAS:

Breadth: = LENGTH < WIDTH = LENGTH = WIDTH = LENGTH > WIDTH

Teeth: = FINE = COURSE
 Teeth: = 3-4 = 5-7 = 8-10
 = OTHER (Specify) _____

17. YIELD: Compared to—

PERCENT LESS THAN
 } = COKER 310 = DELTAPINE 16 = STONEVILLE 213
 = PAYMASTER 111 = ACALA 1517-70
 = ACALA SJ-1 = 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 T

MICRONAIRE READING
 YARN STRENGTH (Give test method)
 STILOMETER T

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.

DELTA & PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 26Origin and Breeding History

Deltapine 26 originated from a F₄ plant selected in 1965 from a cross made in 1962 between Deltapine 45 x Stoneville 7A. Individual plant selection in this cross was begun in the F₂ in 1963 with plant selections within progeny rows in the F₃ and F₄ in 1964 and 1965, respectively.

Both parental lines were commercial varieties. Stoneville 7A was released by the Stoneville Pedigreed Seed Company, Stoneville, Mississippi, and Deltapine 45 was released by Delta & Pine Land Company, Scott, Mississippi.

Deltapine 26 was tested as three progeny rows in the F₅ in 1966 and tested in 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976 and 1977 in replicated variety trials.

Deltapine 26 was one of the six original lines used to form Deltapine 25. The pedigree number of Deltapine 26 was 6225-347-42-53. Deltapine 26 has been tested under this number and also under the number 6225-53. Deltapine 26 has been tested in comparison with Deltapine 25 for ten years and has proven superior.



DELTA & PINE LAND COMPANY

OF MISSISSIPPI

Originators of Deltapine Cotton Varieties

PHONE (601) 742-3351

Scott, Mississippi 38772

April 4, 1978

Mr. Joseph J. Higgins
Plant Variety Protection Office
USDA - AMS
National Agricultural Library Building
Beltsville, Maryland 20705

Dear Joe:

This is in reply to your letter of March 1, 1978 in reference to Cotton Application No. 7800022 ('Deltapine 26'). The following is given as an amendment to Exhibit A in the Application.

"No measurable variances were observed during reproduction and multiplication of this variety. None are known to exist except variations caused by environmental differences."

I note that you are basing its novelty on a difference in lint percentage. Certainly this is a valid difference. I think, however, that you do need to deal with yield as one of the factors constituting novelty in a new variety. Yield is the most important criterion in deciding whether or not to establish a new variety. It can be accurately established by the comparison of the candidate with other varieties over a series of years realizing that environmental variations may occur. The reason this factor is so important is that an increase in yield which is due primarily to varietal characteristics does not represent any increased costs (except for harvest and ginning and the harvest doesn't cost the farmer any more if he is doing it himself), so that a 10% increase in yield represents an increase in profit equal to 10% of the gross return. We are confident that our techniques measure differences in varieties at least as low as 5%.

Some of the factors that influence yield are easily measured such as lint percentage and perhaps resistance to insects and diseases. Let us take, for example, the hypothetical situation where a cotton variety is drought tolerant and therefore yields more. This is a situation I think we are going to have in the High Plains of Texas sooner or later. How does one measure quantitatively a character such as drought resistance? Physiologically it might be represented by a more extensive and efficient root system or perhaps by lowered transpiration without a corresponding decrease in photosynthesis. Efficiency of the photosynthetic process has also been mentioned as

EXHIBIT B

DELTA & PINE LAND COMPANY'S APPLICATION FOR DELTAPINE 26

Data Indicative of Novelty

This variety is novel as indicated from seven years of replicated variety testing (Tables 1 and 2).

Deltapine 26 most nearly resembles Deltapine 25.

For the characteristics listed below Deltapine 26 compares with Deltapine 25 as follows:

Lint Yield	8% Higher	Table 1
Lint Percent	1.2% Higher	Table 2
Plant Height	Similar	Table 2
Retention of seed cotton in boll	Slightly Less	Table 2
Wilt Resistance (Verticillium albo atrium)	Similar	Table 2
Staple Length (digital fibrograph)	.01 Shorter	Table 2
Fiber strength	Similar	Table 2
Fiber uniformity	Similar	Table 2
Micronaire	.1 Less	Table 2

Both Deltapine 26 and Deltapine 25 have leaves of moderate hairiness.

Tables supporting claims of novelty for Deltapine 26

Averages of seven years data from tests conducted at Scott, Mississippi; Rolling Fork, Mississippi; Stovall, Mississippi; Lake Cormorant, Mississippi; and Blytheville, Arkansas are given in Tables 1 and 2. Yield data is presented in Table 1. Fiber and agronomic data are given in Table 2.

TABLE 2 - EXHIBIT B
Data Supporting Claims of Novelty for Deltapine 26

Fiber Properties and Agronomic Characteristics of Deltapine Varieties and Strains
Averages for the Test Years 1970, 1971, 1972, 1973, 1974, 1975 and 1976

	DP	DP	DP	DP	DP	DP	DP	DP	Stoneville
<u>Fiber Properties</u>	<u>16</u>	<u>25</u>	<u>61</u>	<u>26</u>	<u>55</u>	<u>213</u>			
Strength grams/tex	23.1	23.4	23.7	23.3	23.1	22.6			
Length 2.5 Span	1.13	1.11	1.13	1.10	1.11	1.10			
Uniformity Ratio	44	44	44	44	43	44			
Micronaire	4.1	4.4	4.3	4.3	4.1	4.5			
<u>Agronomic Characteristics</u>									
Lint %	35.6	36.6	35.7	37.8	37.2	35.3			
Wilt Resistance									
% Infestation	24	13	27	15	20	25			
Plant Height	2.1	2.8	2.4	2.8	2.0	2.4			
Stringing Out	2.0	1.7	2.6	1.9	2.1	2.3			

7800022

COTT

PV No. 7800022

'Deltapine 26' (TREATED)

An excess seed sample of this variety was returned to the PVP Office by the National Seed Storage Laboratory. The excess seed was destroyed by PVPO personnel on ~~JUL 18 1994~~.