No. 9300189

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Delta & 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 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 TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'DP 5409'

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, D.C. *this* 31st *day of* August *in the year of our Lord one thousand nine hundred and* ninety-four.

Attest:

Kenneth A. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*: Delta and Pine Land Company
2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.: DPX 549
3. VARIETY NAME: DP 5409
4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*: P. O. Box 157 Scott, MS 38772
5. PHONE *(Include area code)*: (601)742-3351

FOR OFFICIAL USE ONLY
PVPO NUMBER: 9300189
FILING Date: ~~Mar.~~ April 1, 1993
Time: ☐ A.M. ☐ P.M.
FEES RECEIVED — Filing and Examination Fee: $2,325—
Date: 4/1/93
Certificate Fee: $275.00
Date: Aug. 1, 1994

6. GENUS AND SPECIES NAME: Gossypium hirsutum
7. FAMILY NAME *(Botanical)*: Malvaceae
8. CROP KIND NAME *(Common Name)*: Cotton
9. DATE OF DETERMINATION: October 1988
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*: Corporation
11. IF INCORPORATED, GIVE STATE OF INCORPORATION: Delaware
12. DATE OF INCORPORATION: October 19, 1978
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Dr. Harry Collins
Delta and Pine Land Company
100 Main Street
Scott, MS 38772

PHONE *(Include area code)*: (601)742-3351

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*
   - a. ☒ Exhibit A. Origin and Breeding History of the Variety
   - b. ☒ Exhibit B. Novelty Statement.
   - c. ☒ Exhibit C. Objective Description of Variety.
   - d. ☒ Exhibit D. Additional Description of Variety.
   - e. ☒ Exhibit E. Statement of the Basis of Applicant's Ownership.
   - f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office ______
   - g. ☒ Filing and Examination Fee (2,325) made payable to "Treasurer of the United States."

15. 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) of the Plant Variety Protection Act.)*
☐ YES *(If "YES," answer items 16 and 17 below)* ☒ NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through* ☐ Plant Variety Protection Act ☐ Patent Act Give date ______)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds 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 Protection Act.

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

SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE
[signature]	Midsouth Cotton Breeder	3/29/1993
[signature] Harry B Collins	Vice President Director of Research	3/31/93

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A,B,C,E; (3) at least 2,500 viable untreated seeds; (4) check, drawn on a U.S. bank, payable to "Treasurer of the United States" in the amount of $2,325 ($275 filing fee and $2,050 examination fee). *(See section 180.175 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for 30 days, then returned to the applicant as unfiled. Mail application and other requirements to: Plant Variety Protection Office, AMS, USDA, Rm. 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the Application are self-explanatory unless noted below. Corrections on the Application form and Exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a Certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $275 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: 301/504-5518

ITEM

9. Give the date when there has been at least a tentative determination that the variety has been sexually reproduced with recognized characteristics, whether or not the novelty of those characteristics has been determined. *[See section 41(d) of the Plant Variety Protection Act (Act).]*

14a. 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. *(See sections 41 and 52 of the Act.)*

14b. 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 are clear differences; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons which clearly indicate novelty.

14c. Exhibit C forms are available from the PVPO; specify crop kind. Fill in the Exhibit C (Objective Description of Variety form) to describe your variety.

14d. Optional additional characteristics and/or photographs: Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

14e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

15. 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 this affirmative decision after the variety has either been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified the applicant may change the choice. *(See section 180.16 of the Regulations and Rules of Practice.)*

19. See sections 41 (i, j) and 42 of the Act and section 180.7 of the Regulations and Rules of Practice for eligibility requirements.

NOTES:

It is the responsibility of the applicant/owner to keep the PVPO informed of any change of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is $25. *[See section 101 of the Act, and sections 180.130, 180.131, 180.132, and 180.175(h) of the Regulations and Rules of Practice.]*

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Rm. 213, Building 306, Beltsville Agricultural Research Center -- East, Beltsville, MD 20705. Telephone: 301/504-8089

9300189

AMENDMENT TO:

EXHIBIT A

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 5409

ORIGIN AND BREEDING HISTORY

DP 5409 was developed by the pedigree breeding method. The cross for DP 5409 was Deltapine 50 X Deltapine Acala 90.

The cross was made at Scott, Mississippi in 1984. The cross number was 846. The F_1 generation was grown at Tecoman, Mexico during the winter of 1984-1985. The F_2 plant selection was made at Scott, Mississippi in the fall of 1985. The F_2 plant was selected for disease resistance, stalk strength, earliness, storm resistance and yield. The F_3 plant selection was made from F_3 progeny rows in the fall of 1986 at Scott, Mississippi. The F_3 plant selection was made because the progeny row from which it came showed resistance to verticillium wilt, good earliness, stalk strength and yield. The final plant selection was made from F_4 progeny rows in the fall of 1987 at Scott, Mississippi. Similar to the F_3, the progeny row from which the F_4 plant was taken showed excellent disease and agronomic properties. DP 5409 was selected from F_5 progeny rows at Scott, Mississippi in the fall of 1988. In addition to the F_5 progeny row showing good agronomic properties, it also showed superior fiber properties. In particular, fiber strength was increased over the check Deltapine 50. DP 5409 has been evaluated for four years in replicated tests (1989, 1990, 1991 and 1992). During this period of testing, a separate isolated increase of the variety was grown in each year and the variety has been observed to be stable and uniform for the characteristics described in this application.

16JUNE94.kc

EXHIBIT B

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 5409

NOVELTY STATEMENT

DP 5409 most nearly resembles Deltapine 50. The principal differences between DP 5409 and Deltapine 50 are found in boll size, seed index, fiber uniformity, micronaire, fiber strength, lint percentage and plant height. DP 5409's novelty is illustrated by the data collected for the four years 1989 through 1992. Data is given in Exhibits B and C and in appendices A, B, C, D and E.

DP 5409 was tested under the pedigree number 846-549-61-71 and DPX 549.

EXPLANATION OF EXHIBIT B TABLES AND DATA

Exhibit B data is presented in tables designated B1 to B8. All data was collected from Delta and Pine Land Company tests grown in the Midsouth in the years 1991 and 1992.

Most Significant Differences in Exhibit B Tables

Table #	Difference Between DP 5409 & Deltapine 50	LSD .05
Table B2 - Fiber Uniformity Ratio	0.48	0.40
Table B4 - Micronaire	0.28	0.20
Table B5 - Fiber Strength	1.74	0.61
Table B6 - Lint Percentage	1.57	1.20
Table B7 - Plant Height	0.33	0.20

TABLE B1
FIBER ELONGATION

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	8.4		8.6
1992 Lake Cormorant, MS VT	9.7		9.1
1992 Alamo, TN VT	9.3		9.2
1992 Courtland, AL VT	9.7		9.3
1992 Bonita, LA VT	8.9		8.7
1991 Scott, MS VT	10.4		10.2
1991 Lake Cormorant, MS VT	10.2		9.7
1991 Alamo, TN VT	11.4		11.0
1991 Courtland, AL VT	11.0		11.0
1991 Bonita, LA VT	10.1		10.3
Mean	9.91		9.71
Difference		0.20	
LSD .05		0.20	

TABLE B2
FIBER UNIFORMITY RATIO

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	83.9		83.2
1992 Lake Cormorant, MS VT	81.9		82.4
1992 Alamo, TN VT	83.0		82.0
1992 Courtland, AL VT	82.2		82.2
1992 Bonita, LA VT	83.8		83.6
1991 Scott, MS VT	83.0		82.5
1991 Lake Cormorant, MS VT	84.0		83.0
1991 Alamo, TN VT	85.5		84.7
1991 Courtland, AL VT	83.5		83.3
1991 Bonita, LA VT	84.7		83.8
Mean	83.55		83.07
Difference		0.48	
LSD .05		0.40	

TABLE B3
FIBER LENGTH (2.5% SPAN LENGTH) IN INCHES

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	1.17		1.15
1992 Lake Cormorant, MS VT	1.15		1.17
1992 Alamo, TN VT	1.14		1.12
1992 Courtland, AL VT	1.10		1.11
1992 Bonita, LA VT	1.15		1.15
1991 Scott, MS VT	1.15		1.11
1991 Lake Cormorant, MS VT	1.16		1.18
1991 Alamo, TN VT	1.15		1.16
1991 Courtland, AL VT	1.06		1.06
1991 Bonita, LA VT	1.19		1.17
Mean	1.142		1.138
Difference		0.004	
LSD .05		0.610	

TABLE B4
MICRONAIRE VALUES

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	3.8		3.5
1992 Lake Cormorant, MS VT	3.2		3.2
1992 Alamo, TN VT	3.2		3.0
1992 Courtland, AL VT	3.2		2.9
1992 Bonita, LA VT	4.1		3.8
1991 Scott, MS VT	4.6		4.5
1991 Lake Cormorant, MS VT	5.0		4.1
1991 Alamo, TN VT	4.7		4.5
1991 Courtland, AL VT	5.1		4.8
1991 Bonita, LA VT	4.2		4.0
Mean	4.11		3.83
Difference		0.28	
LSD .05		0.20	

TABLE B5
FIBER STRENGTH HVI

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	27.30		27.67
1992 Lake Cormorant, MS VT	28.30		29.77
1992 Alamo, TN VT	28.13		28.75
1992 Courtland, AL VT	26.60		28.70
1992 Bonita, LA VT	25.97		27.03
1991 Scott, MS VT	23.20		25.93
1991 Lake Cormorant, MS VT	25.15		27.25
1991 Alamo, TN VT	23.40		25.30
1991 Courtland, AL VT	23.20		26.10
1991 Bonita, LA VT	25.70		27.95
Mean	25.70		27.44
Difference		1.74	
LSD .05		0.61	

TABLE B6
LINT PERCENTAGE

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	33.1		33.6
1992 Lake Cormorant, MS VT	33.7		35.9
1992 Alamo, TN VT	33.0		32.5
1992 Courtland, AL VT	33.7		36.2
1992 Bonita, LA VT	33.8		35.9
1991 Scott, MS VT	37.3		41.7
1991 Lake Cormorant, MS VT	37.1		38.2
1991 Alamo, TN VT	36.1		34.7
1991 Courtland, AL VT	38.9		41.1
1991 Bonita, LA VT	36.2		38.8
Mean	35.29		36.86
Difference		1.57	
LSD .05		1.20	

TABLE B7
PLANT HEIGHT RATINGS

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	2.0		2.4
1992 Lake Cormorant, MS VT	2.0		2.0
1992 Alamo, TN VT	2.0		2.4
1992 Courtland, AL VT	2.6		2.6
1992 Bonita, LA VT	3.4		3.6
1991 Scott, MS VT	2.0		2.6
1991 Lake Cormorant, MS VT	2.0		2.3
1991 Alamo, TN VT	2.0		2.2
1991 Courtland, AL VT	2.0		2.7
1991 Bonita, LA VT	3.0		3.5
Mean	2.30		2.63
Difference		0.33	
LSD .05		0.20	

TABLE B8
STORM SUSCEPTIBILITY RATINGS

Year and Test	Deltapine 50		DP 5409
1992 Scott, MS VT	2.0		2.2
1992 Lake Cormorant, MS VT	2.4		2.6
1992 Alamo, TN VT	2.6		2.4
1992 Courtland, AL VT	2.2		2.2
1992 Bonita, LA VT	3.2		3.4
1991 Scott, MS VT	2.0		2.4
1991 Lake Cormorant, MS VT	2.0		2.2
1991 Alamo, TN VT	2.0		2.3
1991 Courtland, AL VT	2.0		2.0
1991 Bonita, LA VT	2.0		2.0
Mean	2.24		2.37
Difference		0.13	
LSD .05		0.13	

U.S. DEPARTMENT OF AGRICULTURE
PLANT VARIETY PROTECTION OFFICE, AMS, USDA
NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 500
10301 BALTIMORE Blvd.
BELTSVILLE, MD 20705

EXHIBIT C
(COTTON)

OBJECTIVE DESCRIPTION OF VARIETY
COTTON (Gossypium spp.)

NAME OF APPLICANT(S)
Delta and Pine Land Company

TEMPORARY DESIGNATION: DPX 549

VARIETY NAME: DP 5409

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)
P. O. Box 157
Scott, MS 38772

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PVPO NUMBER
9300189

Place the appropriate data that describes the varietal characteristic of this variety in the space provided. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characters marked with an asterisk * indicate necessary characters to be measured.

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

1. Deltapine 50 2. _____ 3. _____

*1. SPECIES:

X G. hirsutum L. ___ G. barbadense L.

*2. AREA(S) OF ADAPTATION: (A = Adapted, NA = Not Adapted, NT = Not Tested)

X Eastern X Delta X Central ___ Blacklands

___ Plains ___ Western X Arizona ___ San Joaquin

Other (Specify) _____

3. GENERAL: Characteristics which are known to be variable but are still useful for a meaningful description of the variety.

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Plant Habit: Spreading, Intermediate, Compact	Intermediate	Intermediate		
Foliage: Sparse, Intermediate, Dense	Intermediate	Intermediate		
Stem Lodging: Lodging, Intermediate, Erect	Erect	Erect		
Fruiting Branch: Clustered, Short, Normal	Normal	Normal		
Growth: Determinate, Intermediate, Indeterminate	Intermediate	Intermediate		
Leaf Color: Greenish yellow, Light green, Dark green	Light Green	Light Green		

3. GENERAL: (continued)

9300189

Boll Shape: Length less than width, Length equal to width, Length more than width	Length more than width	Length more than width		
Boll Breadth: Broadest at base, Broadest at middle	Broadest at middle	Broadest at middle		

*4. MATURITY: (50 % Open Bolls; Preferred Method; Describe Method If Different Method Was Used)

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Date of 50 % open bolls				

5. PLANT:

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Cm to 1st Fruiting Branch (from cotyledonary node)	___.__	___.__	___.__	___.__
No. of Nodes to 1st Fruiting Branch (excluding cotyledonary node)	___.__	___.__	___.__	___.__
Mature Plant Height cm (from cotyledonary node to terminal)	____.__	____.__	____.__	____.__

*6. LEAF: Upper most, fully expanded leaf.

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Type: Normal, Sub Okra, Okra, Super Okra	Normal	Normal		
Pubescence: Absent, Sparse, Medium Dense OR Trichomes/sq. cm Bottom surface excluding veins	Sparse	Sparse		
Nectaries: Present or Absent	Present	Present		

*7. STEM PUBESCENCE: Glabrous, Intermediate, Hairy

Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Intermediate	Intermediate		

*8. GLANDS: (Gossypol) Absent, Sparse, Normal, More Than Normal

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Leaf:	Normal	Normal		
Stem:	Normal	Normal		
Calyx Lobe: (normal is absent)	Normal	Normal		

*9. FLOWER:

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Petals: Cream, Yellow	Cream	Cream		
Pollen: Cream, Yellow	Cream	Cream		
Petal Spot: Present, Absent	Absent	Absent		

*10. SEED:

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Seed Index (g/100 seed, fuzzy basis)	9.5	10.5		
Lint Index (g lint/100 seeds)				

*11. BOLL:

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
Lint Percent (X Picked __ Pulled)	36.9	35.3		
OR				
Gin Turnout (__ Picked __ Stripped)				
Number of Seeds per Boll				
Grams Seed Cotton per Boll	5.02	5.43		
Number of Locules per Boll	4	4		
Boll Type (Stormproof, Storm Resistant, Open)	Open	Open		

12. FIBER PROPERTIES:

Specify Method (HVI or other): HVI

	Application Variety	Comparison Variety 1	Comparison Variety 2	Comparison Variety 3
* Length (inches, 2.5% SL)	1.14	1.14		
* Uniformity (%)	83.07	83.55		
* Strength, T1 (g/tex)	27.44	25.70		
* Elongation, E1 (%)	9.71	9.91		
* Micronaire	3.83	4.11		
Fineness (Source_____)				
Yarn Tenacity (cN/tex, 27 tex)				
Yarn Strength (lbs. 22's)				

13. DISEASES: (NT = Not Tested, S = Susceptible, MS = Moderately Susceptible, MR = Moderately Resistant, R = Resistant)

NT Alternaria macrospora
NT Anthracnose
NT Ascochyta Blight
NT Bacterial Blight (Race 1)
NT Bacterial Blight (Race 2)
NT Bacterial Blight (Race _____)
NT Diplodia Boll Rot
Other (specify)

MR Fusarium Wilt
NT Phymatotrichum Root Rot
NT Pythium (specify species) _____
NT Rhizoctonia solani
NT Southwestern Cotton Rust
NT Thielayiopsis basicola
MR Verticillium Wilt

14. NEMATODES, INSECTS AND PESTS: (NT = Not Tested, S = Susceptible, MS = Moderately Susceptible, MR = Moderately Resistant, R = Resistant)

9300189

MR Root-Knot Nematode

S Boll Weevil

S Bollworm

S Cotton Aphid

S Cotton Fleahopper

S Cotton Leafworm

S Cutworm (specify species)_____

S Fall Armyworm

___ Other (specify)_____

NT Reniform Nematode

S Grasshopper (specify species)_____

S Lygus (specify species)_____

S Pink Bollworm

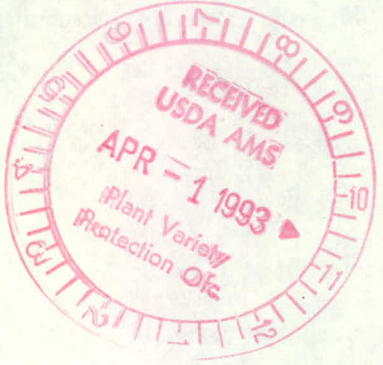
S Spider Mite (specify species)_____

S Stink Bug (specify species)_____

S Thrips (specify species)_____

S Tobacco Bud Worm

15. COMMENTS: Present any additional information that cannot adequately be described in 1 through 13 which significantly distinguishes your variety.



TABLES SUPPORTING EXHIBIT C

Two summary tables from the 1991 High Quality Regional Cotton Variety Tests are given as Tables C1 and C2.

Table C1 shows DP 5409 to be significantly different from Deltapine 50 for boll size.

Table C2 shows DP 5409 to be significantly different from Deltapine 50 for seed index.

1991 HIGH QUALITY REGIONAL COTTON VARIETY TEST
REGIONAL SUMMARY

Table C1

BOLL SIZE, GRAM PER BOLL

STV 0712	6.11	A
Ga 88-88	5.74	B
TAM 211	5.64	C B
COKER 320	5.59	C B D
La 880210	5.51	EC B D
CHEMBRED CB 1135	5.50	EC B D
TX86 GGG 30	5.50	EC B D
PD 5358	5.47	EC B D
DELTAPINE 50	5.43	EC D
CBX 1233	5.43	EC D
La 870222	5.41	EC D
ACALA 1517-88	5.39	EC D
Ga 88-14-6	5.39	EC D
DELTAPINE X 2833	5.35	EC F D
S-1001	5.33	EC F D
PD 5472	5.30	E F D
HS46	5.25	EG F
STV 9727	5.07	G F
DELTAPINE X 549	5.02	G
MD 97-3	4.73	H

Table C2

SEED INDEX

La 880210	11.3	A
La 870222	11.3	A
TAM 211	11.1	B A
PD 5358	10.9	B A C
Ga 88-88	10.8	B D C
TX86 GGG 30	10.8	B D C
STV 0712	10.7	E D C
ACALA 1517-88	10.7	E D C
DELTAPINE 50	10.5	FE D C
Ga 88-14-6	10.4	FE D
PD 5472	10.3	FE
COKER 320	10.3	FE
CHEMBRED CB 1135	10.3	FE
STV 9727	10.1	F G
MD 97-3	9.9	H G
CBX 1233	9.8	H G
HS46	9.8	H G
S-1001	9.7	H
DELTAPINE X 2833	9.6	H
DELTAPINE X 549	9.5	H

EXHIBIT D

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 5409

ADDITIONAL DESCRIPTION OF VARIETY

Exhibit D data is presented in:

Appendix A - 1992 Delta and Pine Land Company Test Data
Appendix B - 1991 Delta and Pine Land Company Test Data
Appendix C - 1990 Delta and Pine Land Company Test Data
Appendix D - 1989 Delta and Pine Land Company Test Data
Appendix E - 1991 National Regional High Quality Test Data

DP 5409 - ADDITIONAL DESCRIPTION

DP 5409 is a mid-maturity upland type cotton which most closely resembles Deltapine 50. It exhibits an indeterminate growth habit and is taller than Deltapine 50. The foliage color of DP 5409 is light green and the shape of the leaves is normal. It is a smooth leaf variety. The flower petals are cream in color and the pollen is cream.

The fiber length and elongation are similar to that of Deltapine 50. The fiber strength is considerably higher than that of Deltapine 50. The micronaire is less than that of Deltapine 50. The uniformity of length of fiber is lower than that of Deltapine 50. The boll size and seed index of DP 5409 are less than Deltapine 50.

It is moderately resistant to verticillium wilt found in the midsouth.

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DOCUMENTATION IN SUPPORT OF CERTIFICATE

A 84 page report containing trial data and advanced strain testing is on file in the Plant Variety Protection Office in support of this Certificate.

EXHIBIT D

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

9300189

AMENDMENT TO:

EXHIBIT E

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 5409

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

DP 5409 originated from a cross made by the breeders of Delta and Pine Land Company. Selection and testing of DP 5409 was performed solely by Delta and Pine Land Company. All seed stocks of DP 5409 are owned by Delta and Pine Land Company.

By agreement between employee and Delta and Pine Land Company, all rights to any invention, discovery or development made by an employee are assigned to the company. No rights to such an invention, discovery or development are retained by the employee.