No. 9800141

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DeKalb Technology Holding Corp.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED 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 TWENTY 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 CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , 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.)

SOYBEAN

'DP 5354'

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 tenth day of April, in the year two thousand three.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. ***Include form number and date on all reproductions*** Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

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 OWNER
D&PL Technology Holding Corp.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
93-13892
DPX 9752

3. VARIETY NAME
DP 5354

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
100 N. Main Street
Scott, Mississippi 38772

5. TELEPHONE *(include area code)*
662.742.4141

6. FAX *(include area code)*
662.742.3182

FOR OFFICIAL USE ONLY

PVPO NUMBER
9800141

FILING DATE
27 February, 1998

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

9. DATE OF INCORPORATION
February 29, 1996

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Kelly H. Casavechia
Research Coordinator
Delta and Pine Land Company
P.O. Box 157
Scott, MS 38772

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 2,450.00
DATE 27 February, 1998

CERTIFICATION FEE:
$ 320.00
DATE 11/22/02

11. TELEPHONE *(Include area code)*
662.742.4141

12. FAX *(Include area code)*
662.742.3182

13. E-MAIL
kelly.h.casavechia@deltaandpine.com

14. CROP KIND *(Common Name)*
SOYBEAN

15. GENUS AND SPECIES NAME OF CROP
GLYCINE MAX

16. FAMILY NAME *(Botanical)*
LEGUMINOSAE

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☐ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 20 and 21 below)* ☒ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☐ YES ☒ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO
IF YES, SPECIFY THE NUMBER 1,2,3, *etc.* ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

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

SIGNATURE OF OWNER
William V. Hugie

NAME *(Please print or type)*
William V. Hugie

CAPACITY OR TITLE
Vice President
Director of Research

DATE
8/29/02

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete. *(See reverse for instructions and information collection burden statement)*

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) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, 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 $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. 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) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety 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 (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. 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.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. 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 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 Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

~~**22. CONTINUED FROM FRONT** *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*~~

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative 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 or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

EXHIBIT A

~~DELTAPINE~~ SEED'S APPLICATION FOR DP 5354
D&PL Technology Holding Corporation (BT: 8/28/2002)

ORIGIN AND BREEDING HISTORY 9800141

Summer	1991	Cross 91651 made between A5403 and DP 3589
Winter	1991-92	F_1 advanced to F_2 under lights in Costa Rica
Summer	1992	F_2 advanced to F_3 by bulk pod method in Costa Rica
Fall	1992	F_3 advanced to F_4 by bulk pod method in Costa Rica
Spring	1993	F_4 plants pulled and threshed individually in Costa Rica from cross 91651
Summer	1993	F5 plant rows from cross 91651 grown in Scott, MS. Row 93-13892 was bulk harvested and determined to be stable or breeding true for characteristics listed in exhibit C of this application. There were no known variants.
	1994	Line 93-13892 grown in a 2 rep. preliminary yield test at Scott, MS
	1995-1997	Line 93-13892 grown in advanced yield tests at 35 southern locations. Foundation seed increased to 260 bushels (1996)
	1997	Line 93-13892 designated as DPX 9752 and entered into state yield tests. DPX 9752 further increased to 1500 bushels
	1998	Released as DP 5354

EXHIBIT B

D&PL Technology Holding Corporation
~~DELTAPINE~~ SEED'S APPLICATION FOR DP 5354
(BT: 8/28/2002)

NOVELTY STATEMENT

9800141

To our knowledge, DP 5354 most resembles DP 3519^{S}, A5403 AND A5547. Differences include but are not restricted to the following:

1) DP 5354 does not have the gene for tolerance to sulfonylurea herbicides whereas DP 3519^{S} has sulfonylurea herbicide tolerance.
2) DP 5354 is susceptible to race 14 soybean cyst nematode whereas A5403 and A5547 are resistant.
3) DP 5354 has purple flowers whereas A5547 has white flowers.
4) DP 5354 is a chloride includer and is intolerant to high chloride soils; whereas A5403 is a chloride excluder and is tolerant to high chloride soils.

FORM APPROVED: OMB NO. 0581-0056

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT C
(Soybean)

PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
D&PL Technology Holding Corporation ~~DELTAPINE SEED~~ (8/28/2002)	93-13892 DPX 9752	DP 5354

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)

100 MAIN STREET, P.O. BOX 157
SCOTT, MS 38772

FOR OFFICIAL USE ONLY

PVPO NUMBER

9800141

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]

1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[2] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

[1][5] Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

[5] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

[0] 1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

[0] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ 9. HYPOCOTYL COLOR:

[3] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

5

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

★ 13. FLOWER COLOR:

[2] 1 = White 2 = Purple 3 = White with purple throat

★ 14. POD COLOR:

[1] 1 = Tan 2 = Brown 3 = Black

★ 15. PLANT PUBESCENCE COLOR:

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[3] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

★ 17. PLANT HABIT:

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

[0][8] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ [2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [2] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [ ] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [1] Other *(Specify)* RACE UNKNOWN

[2] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [0] Brown Stem Rot *(Cephalosporium gregatum)*

[2] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum var. sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

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[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma var. sojae)*

★ [1] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Race 6 [ ] Race 7

[ ] Race 8 [ ] Race 9 [ ] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [ ] Race 1 [ ] Race 2 [2] Race 3 [ ] Race 4 [1] Other *(Specify)* RACE 14

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [1] Southern Root Knot Nematode *(Meloidogyne Incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[1] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[0] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [0] Iron Chlorosis on Calcareous Soil

[1] Other *(Specify)* SENSITIVE TO HIGH CHLORIDE SOILS

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[2] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	A5403	Seed Coat Luster	DP 3519S
Leaf Shape	DP 3519S	Seed Size	DP 3519S
Leaf Color	DP 3519S	Seed Shape	DP 415
Leaf Size	DP 3519S	Seedling Pigmentation	A5403

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
DP 5354 Submitted	124	1.9	69			36.5	18.6	14.7	
DP 3519S Name of Similar Variety	122	1.3	58			39.4	16.8	15.3	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.

2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci. 8: 722-725.

3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci. 13: 420-421.

4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

D&PL Technology Holding Corporation
~~DELTAPINE~~ SEED'S APPLICATION FOR DP 5354
(BT: 8/28/2002)

ADDITIONAL DESCRIPTION OF VARIETY

9800141

DP 5354 is an F_4 selection composited in the F_5 from the cross of A5403 x DP 3589. It is early group V maturity 2 days later than DP 3519^S. It is being considered for release because of its superior yield, taller growth and disease resistance compared to other early group V varieties. It has purple flowers, gray pubescence and tan pods. Seeds average 3000 per pound and are shiny yellow with buff to imperfect black hila. DP 5354 is resistant to race 3 soybean cyst nematode and stem canker. It is susceptible to root knot nematode and sensitive to high chloride soils. In 35 DP tests, DP 5354 has yielded 11% more than DP 3519^S.

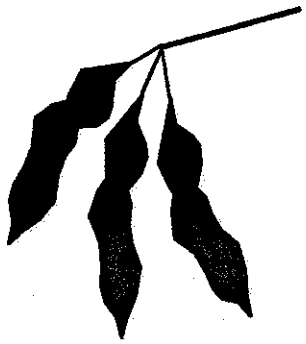
SOYBEAN PRODUCT NOMINATION FORM

Suggested Nominee Number: DPX 9752

9800141

Experimental Designations: 93-13892 Key #5578

Submitted by: Grover Shannon and Gus Dunlap



Date Submitted: January 1, 1997

Parentage: A5403 x DP 3589 Cross 91-651

Maturity: Early group V RM = 5.2

Data Collected from 19 Replicated Yield Tests.

I. Plant & Seed Characteristics:

Flower Color:	Purple
Pubescence Color:	Gray
Hilum Color:	Imperfect Black
Pod Wall Color:	Tan
Seed Coat Luster:	Shiny
Leaf Shape:	Ovate
Plant Type: (Habit) (BT: 3/28/2002)	Determinate

10

DP 5354

PRODUCT SUMMARY SHEET

KEY FEATURES

7 days earlier than DP 3588 with tall growth
Excellent yield potential over soil types & planting dates
Resistant to stem canker and SCN race 3

PRODUCT DESCRIPTION

Trait	Phenotype
Relative maturity	5.3
Roundup Ready™	No
STS®	No
Flower color	Purple
Pubescence color	Grey
Hilum color	Imperfect Black
Podwall color	Tan
Seed size	Medium - 3000 SD/LB
Seed protein	36.5%
Seed oil	18.6%
Peroxidase reaction	Untested
Seedcoat luster	Shiny
Hypocotyl color	Purple
Seed shape	Spherical Flattened
Leaflet size	Medium
Leaflet color	Dark Green
Canopy	Full
Growth habit	Determinate
SCN race 3	Resistant
SCN race 14	Moderately Susceptible
Common root knot	Susceptible
Peanut root knot	Susceptible
Javanese root knot	Susceptible
Lance nematode	Untested
Frogeye leafspot	Moderately Susceptible
Sudden death	Susceptible
Stem canker	Resistant
Phytophthora root rot	Field Tolerant
Red crown rot	Untested
Chloride tolerance	Sensitive
SMV	Segregating
Aerial Blight	Moderately Susceptible

BREEDER'S SUBJECTIVE RATINGS

Narrow rows	Very Good
Wide rows	Excellent
No-till	Excellent
Late planting	Very Good
Early planting	Excellent
Sandy soils	Excellent
Medium soils	Excellent
Poorly-drained soils	Excellent
Shatter resistance	Excellent

9800141

PRODUCT IDENTITY

Line selected by:	Dr. Grover Shannon
Suggested name:	DP 5354
Former designation:	DPX 9752, 93-13892
Pedigree:	A5403 X DP 3589
Areas of adaptation:	Midsouth And Southeast
Replace:	DP 415
Complement:	DP 3588, DP 3519^{s} or DP 3478
Main competition:	DP 3519^{s}, A5547
Most similar line:	A5547

YIELD HISTORY

Outyielded DP 3519^{s} by 11% in 35 DP tests
Yield Rank was 14 out of 36 in 1997
Yield Rank was 18 out of 48 in 1996
Yield Rank was 1 out of 48 in 1995

KNOWN WEAKNESSES

Susceptible to race 14 SCN and root knot nematodes
Not tolerant to high chloride and moderately susceptible to aerial blight

SEED STOCK STATUS

There are about 15,000 units of commercial seed for sale in 1998.

ADDITIONAL DESCRIPTION

DP 5354 is an F_4 selection composited in the F_5 generation from the cross of A5403 x DP 3589. It is an early group V maturity 2 days later than DP 3519^{S} and 6 days earlier than DP 3588. It has shown superior yield, taller growth and disease resistance compared to other early group V varieties. It has purple flowers, grey pubescence and tan pods. Seeds are shiny yellow with buff to imperfect black hila averaging 3000 seed per pound. There may be up to 1% plants with either/or white flowers, tawny pubescence and hila other than imperfect black. DP 5354 is resistant to race 3 soybean cyst nematode, stem canker and soybean mosaic virus. It is susceptible to root knot nematode and sensitive to high chloride soils. In DP tests, DP 5354 has yielded 11% more than DP 3519^{S}.

II. Agronomic Characteristics: 1995-96

Line	Mat.	Plant Height	Ldg.	Shat.	Seeds /Lb.
DPX 9752	-1	30	2.1	Exc.	2950
A5403	0	25	1.2	Exc.	2750
DP 3519^{S}	-2	26	1.5	Exc.	3000
P9501	-5	33	1.4	Exc.	2600
RA452	-3	36	2.0	Exc.	3500

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III. Yield Data:

1995-96 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat.	Hgt.	Ldg.
DPX 9752	52.4	113	-1	30	2.1
DP 3519^{S}	46.5	100	-2	26	1.5
RA452	44.4	96	-3	36	2.0
P9501	43.2	93	-5	33	1.4
A5403	43.1	93	0	25	1.2
# Tests	19	19	16	19	19

1996 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat.	Hgt.	Ldg.
HUTCHESON	47.2	111	+5	16	1.0
A5547	46.1	108	+2	18	1.0
DPX 9752	45.6	107	+2	23	1.3
DP 3519^{S}	42.8	100	0	18	1.0
RA452	41.8	98	+3	29	1.4
P9501	38.5	90	-1	26	1.0
# Tests	9	9	3	9	9

1995 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat.	Hgt.	Ldg.
DPX 9752	58.6	118	-3	33	3.0
DP 415	49.8	100	0	31	2.6
RA452	46.8	94	-3	39	3.0
P9501	46.6	94	-4	37	2.3
A5403	40.3	81	+3	26	1.5
# Tests	10	10	4	10	10

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Yield Summary in Bu/A

By Region: 1995-96

LINE	MIDSOUTH						SOUTHEAST		OVERALL	
	N of I-40		S of I-40		MEAN					
	YLD	% YLD	YLD	% YLD	YLD	% YLD	YLD	% YLD	YLD	% YLD
DPX 9752	40.0	98	54.4	115	51.3	112	55.7	115	52.4	113
DP 3519[S]	40.8	100	47.2	100	45.8	100	48.2	100	46.5	100
RA452	36.1	89	45.4	96	43.5	95	47.1	98	44.4	96
A5403	41.3	101	45.7	97	44.8	98	38.5	80	43.1	93
P9501	30.4	75	45.5	97	42.3	92	45.7	95	43.2	93
# TESTS	3	3	11	11	14	14	5	5	19	19

By States: 1995-96

LINE	TN	AR	MS	LA	NC	SC	MEAN
DPX 9752	48.1	40.0	54.6	60.8	55.8	55.5	52.4
DP 3519[S]	48.9	40.2	44.2	51.6	50.7	44.5	46.5
RA452	44.5	35.2	49.1	45.6	46.8	47.5	44.4
A5403	41.7	46.7	41.4	47.8	48.6	23.5	43.1
P9501	34.3	40.6	42.5	47.7	50.0	39.5	43.2
# TESTS	2	4	4	4	3	2	

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By Soil Type Planting and Disease Situation: 1995-96

Line	Loam	Clay	Cyst	Early Planted	Aerial Blight
DPX 9752	50.0	60.7	46.1	56.6	44.5
DP 3519[S]	44.6	49.8	46.9	45.5	43.0
RA452	43.7	49.0	39.8	47.6	38.6
A5403	40.0	46.8	45.6	40.0	42.7
P9501	40.2	45.4	44.7	43.1	48.0
# TESTS	7	5	4	2	1

1994-96 HEAD TO HEAD COMPARISONS 1995-96

DPX 9752 vs	Total Comp.	Won by-Bu/A	# Wins	% Wins
DP 3519[S]	19	5.9	15	79
A5403	19	9.3	15	79
P9501	19	9.2	15	79
RA452	19	8.0	15	79

YIELD IN BU/A
BY TESTS AND LOCATIONS

1996 - 655M

MIDSOUTH									
LINE	TN UC	AR DW	AR FS	AR DM	MS SL	MS SC	LA LP	LA MG	Mid Sth Mean
A5547	46.8	56.1	40.7	57.3	26.3	38.6	69.3	42.7	47.2
DPX 9752	48.1	41.6	23.7	60.8	49.2	36.1	77.1	44.5	47.6
DP 3519^{S}	46.3	50.8	24.7	53.3	39.5	30.8	66.8	43.0	44.4
P9501	29.5	53.3	22.7	46.9	35.1	22.5	61.8	48.0	40.0
RA452	50.9	46.6	19.4	46.6	41.2	39.2	63.1	38.6	43.2
HUTCHESON	46.8	58.6	41.0	54.4	31.1	35.4	69.9	50.8	48.5
C.V. %	10.4			7.7	13.4	14.2	5.9	9.4	
LSD.10	6.1			4.6	6.1	5.7	4.2	4.7	

SOUTHEAST			
LINE	NC CL	Sth East Mean	Over All Mean
A5547	37.7	37.7	46.1
DP 9752	29.3	29.3	45.6
DP 3519^{S}	30.0	30.0	42.8
P9501	34.7	34.7	38.5
RA452	30.3	30.3	41.8
HUTCHESON	36.7	36.7	47.2
C.V. %	20.1		
LSD.10	9.2		

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YIELD IN BU/A
BY TESTS AND LOCATIONS

1995 - 651A

MIDSOUTH							
LINE	TN RP	AR DM	MS SE	MS SC	LA TL	LA MG	Mid-Sth Mean
DPX 9752	48.0	34.0	64.0	69.0	60.0	61.5	56.1
DP 415	51.5	32.0	51.5	55.0	42.5	54.0	47.8
P9501	39.0	39.5	51.0	61.5	30.5	50.5	45.3
RA452	38.0	28.0	54.0	62.0	30.0	50.5	43.8
A5403	36.5	32.5	53.5	47.0	34.5	44.5	41.4
C.V. %	10.0	13.0	8.7	7.1	7.7	5.6	
LSD.10	6.0	5.5	6.2	5.6	4.7	4.2	

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SOUTHEAST						
LINE	NC CL	NC SF	SC HV	SC MA	Sth East Mean	Over All Mean
DPX 9752	74.0	64.0	60.0	51.0	62.3	58.6
DP 415	63.0	59.0	50.0	39.0	52.7	49.8
P9501	65.0	50.0	44.0	35.0	48.5	46.6
RA452	63.0	47.0	56.0	39.0	51.2	46.8
A5403	54.0	54.0	24.0	23.0	38.7	40.3
C.V. %	12.0	12.0	8.9	12.0		
LSD.10	9.0	10.0	6.6	6.6		

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IV. DISEASE REACTION AND OTHER INFORMATION:

Cyst Nematode

DPX 9752 is resistant to race 3 but is moderately susceptible to race 14 of soybean cyst nematode.

	Race 3									
	1995					1996				
	1	2	3	4	5	1	2	3	4	5
DPX 9752	5	2	0	0	0	4	2	0	0	0
Res. Chk.	7	0	0	0	0	5	1	0	0	0
Sus. Chk.	0	0	0	3	4	0	0	0	0	6

Location: Jackson, TN
Conducted by: Dr. Lawrence Young
USDA, Nematologist

	Race 14									
	1995					1996				
	1	2	3	4	5	1	2	3	4	5
DPX 9752	0	0	0	1	4	0	0	2	3	1
Res. Chk.	4	2	1	0	0	4	3	0	0	0
Sus. Chk.	0	0	1	3	3	0	0	2	4	1

Location: Jackson, TN
Conducted by: Dr. Lawrence Young
USDA, Nematologist

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Root Knot Nematode 1 = No galling 5 = Very severe galling
DPX 9752 appears to have some resistance to peanut root knot but is not susceptible to common root knot nematode.

	Common Root Knot M. Incognita 1996	Peanut Root Knot M. arenaria 1996
DPX 9752	3.5	0.5
Res. Check	2.0	2.0
Sus. Check	5.0	3.0

Location: Jay, FL
Conducted by: Dr. Robert Kinloch
Professor of Nematology
University of Florida

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Stem Canker
DPX 9752 is resistant to stem canker by nature of parentage although is untested.

Frogeye Leaf Spot
DPX 9752 is untested against frogeye leafspot.

Sudden Death Syndrome
DPX 9752 is untested against sudden death syndrome.

Aerial Blight 1 = None 5 = Very Severe
DPX 9752 is moderately susceptible to aerial blight.

	1996
DPX 9752	2.4
DP 3588	1.3
HUTCHESON	2.7
CLIFFORD	4.6

Location: Morganza, LA
Conducted by: Grover Shannon

Herbicide Tolerance
DPX 9752 has no known sensitivity to common soybean herbicides used at label rates.

Chloride Tolerance
DPX 9752 is sensitive to high chloride.

Seed Stock
There are 260 bushels of DPX 9752 foundation seed.

DP 5354

PRODUCT PERFORMANCE

Combined data, all locations:

	YIELD		MAT*	HGT	LDG
	bu/ac	%YLD			
DP 5354	**52.2**	**111**	**+2**	**27**	**1.9**
DP 3519^{S}	47.1	100	0	23	1.3
A 5547	46.0	98	+3	23	1.2
Locations	35	35	19	35	35

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Midsouth data

Midsouth, all locations

	YIELD		MAT*	HGT	LDG
	bu/ac	%YLD			
DP 5354	**50.4**	**111**	**+2**	**25**	**1.8**
A 5547	45.9	101	+3	21	1.1
DP 3519^{S}	45.6	100	0	21	1.2
Locations	27	27	17	27	27

* + indicates days later than DP 3519^{S}

Midsouth, by state:

	YIELD		AR	LA	MO	MS	TN
	bu/ac	%YLD					
DP 5354	**50.4**	**111**	**43.4**	**58.0**	**49.4**	**57.6**	**45.4**
A 5547	45.9	101	46.5	45.5	52.3	45.7	43.2
DP 3519^{S}	45.6	100	42.5	46.4	49.9	49.1	45.3
Locations	27	27	9	6	1	6	5

DP 5354
PRODUCT PERFORMANCE

Southeast data:

Southeast, all locations:

	YIELD bu/ac	YIELD %YLD	MAT*	HGT	LDG
DP 5354	**58.5**	**112**	**+2**	**36**	**1.8**
DP 3519^{S}	52.2	100	0	32	1.2
A 5547	46.7	89	+4	32	1.1
Locations	8	8	2	8	8

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* + indicates days later than DP 3519^{S}.

Southeast, by state:

	YIELD bu/ac	YIELD %YLD	NC	SC
DP 5354	**58.5**	**112**	**65.4**	**47.0**
DP 3519^{S}	52.2	100	58.7	41.3
A 5547	46.7	89	57.7	28.4
Locations	8	8	5	3

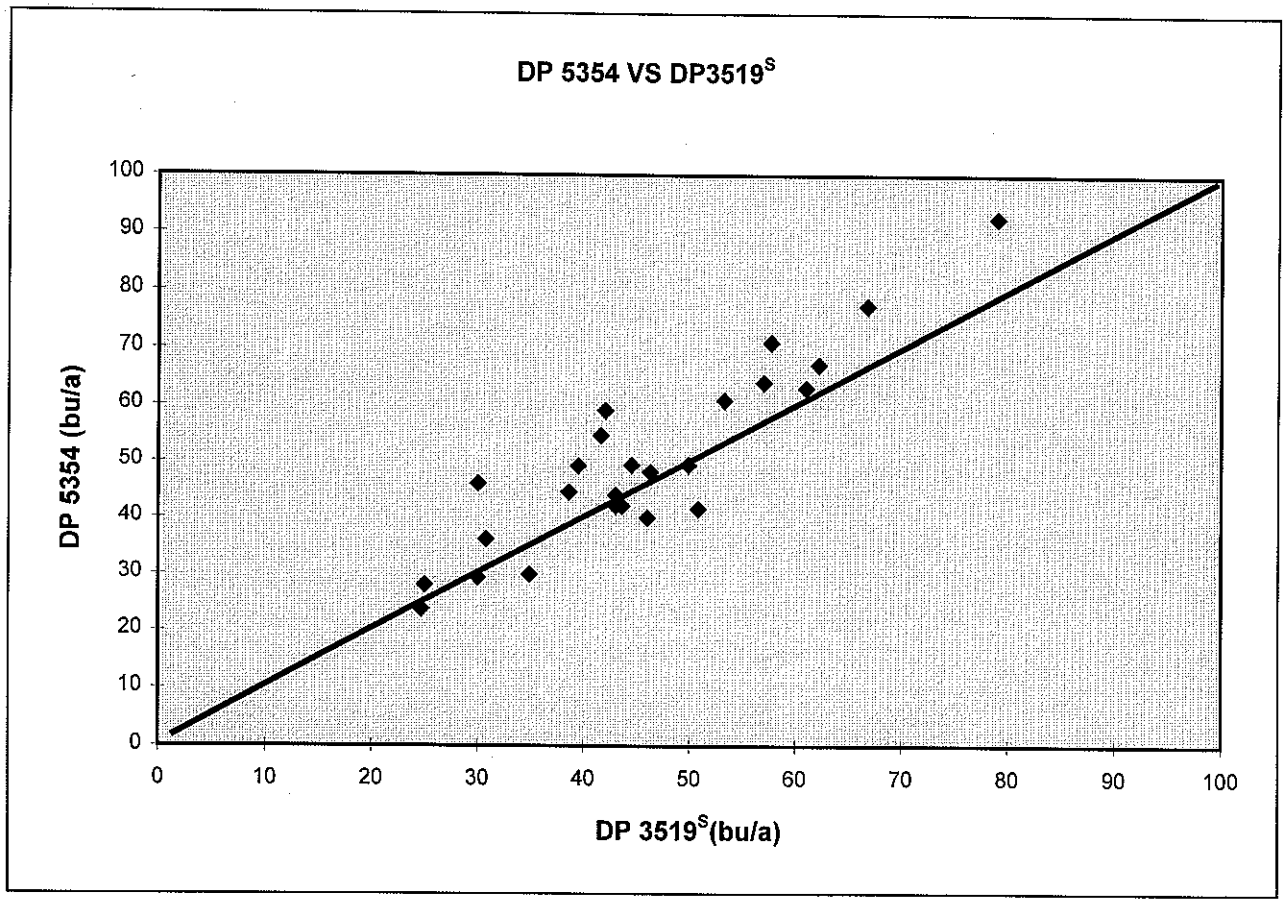
DP 5354 Versus DP 3588

	MIDSOUTH			SOUTHEAST			OVERALL		
NAME	1997	1996	MEAN	1997	1996	MEAN	MEAN	MAT	HGT
DP 3588	50.4	50.9	50.6	57.7	35.6	52.2	50.9	0	28
DP 5354	**49.5**	**47.6**	**48.8**	**63.8**	**29.3**	**55.2**	**49.0**	**-7**	**25**
Locations	13	8	21	3	1	4	25	6	25

By soil type, planting and disease situation

NAME	LOAM	CLAY	CYST	EARLY PLANTED	AERIAL BLIGHT	MEAN
DP 5354	**51.6**	**57.2**	**44.3**	**58.7**	**44.5**	**52.2**
DP 3519^{S}	46.8	46.8	47.1	50.7	43.0	47.1
A 5547	46.1	45.4	47.5	45.0	42.7	46.0
Locations	15	9	7	3	1	35

DP 5354
PRODUCT PERFORMANCE



This scattergram illustrates head-to-head performance of DP 5354 compared to DP 3519^{S}. In 25 comparisons, DP 5354 outyielded DP 3519^{S} eighteen times.

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DP 5354

DISEASE REACTION DOCUMENTATION

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Soybean Cyst Nematode (*Heterodera glycines*)

DP 5354 is resistant to race 3 but is moderately susceptible to race 14 of soybean cyst nematode.

Data from Dr. Lawrence Young, USDA, Jackson, Tennessee 1997

Line	Race 3 Score 1995	Race 3 Score 1996	Race 3 Score 1997	Race 14 Score 1995	Race 14 Score 1996	Race 14 Score 1997
DP 5354	**1.2**	**1.3**	**1.5**	**4.8**	**3.9**	**3.0**
RES. CHK	1.0	1.1	1.3	1.6	1.8	1.8
SUS. CHK	4.6	5.0	5.0	4.3	3.9	4.7

Scale: 1= 0 to 5 females/plant, 2= 6 to 10, 3= 11 to 20, 4 = 21-40, 5 = more than 40 females/plant

Root Knot Nematode (*Meloidogyne incognita* and *M. arenaria*)

DP 5354 is not susceptible to root knot nematodes.

Data from Dr. Robert Kinloch, Univ. of Florida, Jay, Florida 1997

Line	*M.I.* Score 1996	*M.I.* Score 1997	*M.A.* Score 1996	*M.A.* Score 1997
DP ~~5534~~ 5354 (BT: 8/28/2002)	**3.5**	**5.0**	**0.5**	**5.0**
RES. CHK	2.0	0.0	2.0	1.0
SUS. CHK	5.0	3.0	3.0	4.5

Scale: 1=no galling, 5=very severe galling

Stem Canker (*Diaporthe phaseolorum* (Cooke & Ellis) Sacc. f. sp. *meridionalis* (Morgan-Jones)

DP 5354 is resistant to stem canker by nature of parentage and limited tests.

Data from Dr. Grover Shannon, ~~Deltapine Seed~~ D&PL Technology Holding Corporation (BT: 8/28/2002), Scott, Mississippi 1997

Line	1997
DP 5354	**1.0**
DP 3588	1.0
P 9594	4.0

Scale: 1=no symptoms, 5=very severe symptoms

DP 5354

DISEASE REACTION DOCUMENTATION

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FROGEYE LEAF SPOT

DP 5354 is moderately susceptible to frogeye leaf spot based on limited tests.

Line	1997
DP 5354	**3.0**
DP 3588	1.0

Scale: 1=no symptoms, 5=very severe symptoms

Location: Scott, MS - Greenhouse
Conducted By: Dr. Robert Keeling - Retired USDA Plant Pathologist.

SUDDEN DEATH SYNDROME

DP 5354 is susceptible to sudden death syndrome based on parentage.

AERIAL BLIGHT

DP 5354 is moderately susceptible to aerial blight.

Line	1996
DP 5354	**2.4**
DP 3588	1.3
HUTCHESON	2.7
CLIFFORD	4.6

Scale: 1=no symptoms, 5=very severe symptoms

Location: Morganza, LA
Conducted By: Dr. Grover Shannon

HERBICIDE TOLERANCE

DP 5354 has no known sensitivity to common soybean herbicides used at label rates. However DP 5354 has not been tested against the new herbicide Authority.

CHLORIDE TOLERANCE

DP 5354 is sensitive to high chloride soil conditions.

SEED STOCK

There are approximately 15,000 units of DP 5354 commercial seed.

REPRODUCE LOCALLY; Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

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

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
D&PL Technology Holding Corp.	93-13892 DPX 9752	DP 5354
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	**5. TELEPHONE** (Include area code)	**6. FAX** (Include area code)
100 N. Main Street	662.742.4141	662.742.3182
	7. PVPO NUMBER	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain** [X] YES [ ]

9. Is the applicant (individual or company) a U.S. National or a U.S. based company? **If no, give name of country** [X] YES [ ] NO

10. Is the applicant the original owner? [X] YES [ ] NO **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

[ ] YES [ ] NO **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

[ ] YES [ ] NO **If no, give name of country**

11. Additional explanation on ownership *(If needed, use the reverse for extra space)*:

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

EXHIBIT E

DELTAPINE SEED'S APPLICATION FOR DP 5354

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STATEMENT OF APPLICANT'S OWNERSHIP

DP 5354 was originated and developed by Grover Shannon, Ph.D., soybean breeder, Delta and Pine Land Company, dba ~~Deltapine Seed~~ D&PL Technology Holding Corporation (8/28/2003). By agreement between employee and ~~Delta and Pine Land Company~~ D&PL Technology Holding Corporation (8/28/2003), all rights to any invention or discovery are assigned to the Company. No rights to any invention or discovery are retained by the employee.