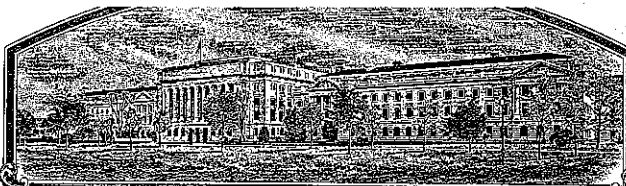


No.

9800179



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**D&H Technology Holding Corp.**

Whereas, THERE HAS BEEN PRESENTED TO THE

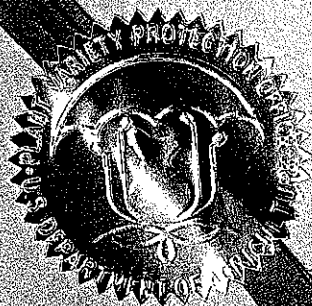
Secretary of Agriculture

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

'SG 678 RR'



*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 twenty third day of May, in the year two thousand three.*

Attest:

*[Signature]*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*[Signature]*

Secretary of Agriculture

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

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

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
 (Instructions and information collection burden statement 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).

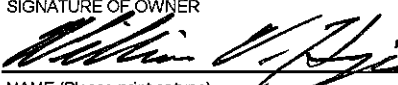
1. NAME OF OWNER <b>D&amp;PL Technology Holding Corp.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>95-04456 DPX 9765 RR</b>	3. VARIETY NAME <b>SG 678 RR</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country ) <b>PO Box 157 100 Main Street Scott, Mississippi 38772 USA</b>		5. TELEPHONE (include area code) <b>(662) 742-4141</b>	PVPO NUMBER <b>9800179</b>
		6. FAX (include area code) <b>(662) 742-3182</b>	
7. IF THE OWNER IS NOT A "PERSON" GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Delaware</b>	9. DATE OF INCORPORATION <b>February 29, 1996</b>	

FILING DATE  
**April 1, 1998**

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Delta and Pine Land Company Kelly Casavechia P.O. Box 157 Scott, MS 38772</b>		FILING AND EXAMINATION FEE <b>4/1/1998 \$ 2,450.00</b>
		DATE <b>4/1/1998</b>
		CERTIFICATION FEE <b>\$ 432.00</b>
		DATE <b>5/7/2003</b>

11. TELEPHONE (include area code) <b>(662) 742-4141</b>	12. FAX (include area code) <b>(662) 742-3182</b>	13. E_MAIL <b>kelly.h.casavechia@deltaandpine.com</b>	14. CROP KIND (Common Name) <b>Soybean</b>
15. GENUS AND SPECIES NAME OF CROP <b>Glycine Max</b>		16. FAMILY NAME (Botanical) <b>Leguminosae</b>	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse). a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), 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) <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)	
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? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO - As of date of original application 3/27/98 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.)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
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.		21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>William V. Hugie</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Vice President/Director of Research</b>	DATE <b>10/14/02</b>	CAPACITY OR TITLE	DATE

## 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 500, 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).)

ROUNDUP READY® <sup>soybean (Br: 12/03/2002)</sup> cotton.

These seeds are covered under U.S. Patents 5,633,435; 5,352,605; 5,530,196; 5,188,642; 4,940,835; 5,717,084; 5,728,925; and 5,804,425.

**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/lsg-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

SG 678 RR

EXHIBIT A

ORIGIN AND BREEDING HISTORY

Summer- Winter	1992	Original cross and first backcross made between DPX 2384, an experimental breeding line and Roundup Resistant experimental line 40-2-3
Fall	1992	DP 415 crossed with Roundup resistant F <sub>1</sub> plants from 2384 BC <sub>1</sub> F <sub>1</sub>
Winter	1993	Hutcheson crossed to Roundup resistant F <sub>1</sub> plants from DP 415 x 2384 BC <sub>1</sub> F <sub>1</sub>
Summer	1993	Cross 93-401 made DP 3682 crossed to Roundup resistant F <sub>1</sub> plants from Hutcheson x (DP 415 x 2384 BC <sub>1</sub> F <sub>1</sub> )
Winter	1993-94	Roundup tolerant F <sub>1</sub> plants advanced to F <sub>2</sub> under lights from cross 93-401 in Costa Rica and F <sub>2</sub> seed was bulked
Summer- Fall	1994	Roundup resistant F <sub>2</sub> advanced to F <sub>4</sub> by modified single seed descent in Costa Rica
Winter	1994-95	Roundup resistant F <sub>4</sub> plants space planted. Individual plant selections harvested and threshed separately
Summer	1995	F <sub>5</sub> Roundup resistant plant rows from cross 93-401 were grown at Scott, MS. Row 95-04456 was selected, composited and determined to be stable and breeding true for characteristics described in "Exhibit C" of this application. Row 95-04456 was selected for apparent yield and general adaptation, based on visual assessment. No variants were known or observed at that time and hence to the present.
Summer	1996	Yield tested at two locations in South Carolina
Fall-Spring	1996-97	Border rows harvested and sent to Costa Rica for a double increase in fall of 1996 and winter of 1997. About 200 units of breeder seed were produced.
Summer	1997	95-04456 yield tested in 8 D&PL tests as DPX 9765 RR and increased to 3980 units of foundation seed.
	1998	DPX 9765 RR designated and released as SG 678 RR. SG 678 RR was observed to be uniform and stable from 1995 to 1998 for traits described in exhibit C. No variants were observed.

## EXHIBIT B

*DPL Technology Holding Corp.'s*  
~~SUREGROW SEED, INC.'S~~ APPLICATION FOR SG 678 RR  
(Br: 12/4/2002)

NOVELTY STATEMENT

To our knowledge, SG 678 RR most resembles DP 3682. Differences include but are not restricted to the following:

1. SG 678 RR carries the Roundup Ready™ trait whereas DP 3682 does not.

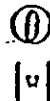
PLANT VARIETY PROTECTION OFFICE  
 BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY  
 SOYBEAN (*Glycine max* L)

NAME OF APPLICANT(S) D&PL Technology Holding Corp. Suregrow Seed, Inc. (BT: 12/4/2002)	TEMPORARY DESIGNATION 95-04456 DPX 9765 RR	VARIETY NAME SG 678 RR
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 7265 Highway 9 South Centre, AL 35960		FOR OFFICIAL USE ONLY PVPO NUMBER 9800179

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.,  ). Starred characters \* are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



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

2 - Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
 4 - Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

\* 2. SEED COAT COLOR: (Mature Seed)

1 - Yellow      2 - Green      3 - Brown      4 - Black      5 - Other (Specify) \_\_\_\_\_

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

1 - Dull ('Conroy 79'; 'Braxton')      2 - Shiny ('Nebroy'; 'Gasoy 17')

\* 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

\* 5. HILUM COLOR: (Mature Seed)

1 - Buff      2 - Yellow      3 - Brown      4 - Gray      5 - Imperfect Black      6 - Black      7 - Other (Specify) \_\_\_\_\_

\* 6. COTYLEDON COLOR: (Mature Seed)

1 - Yellow      2 - Green

\* 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 - Low      2 - High

\* 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 - Type A (SPT<sup>a</sup>)      2 - Type B (SPT<sup>b</sup>)

\* 9. HYPOCOTYL COLOR:

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:

1 - Lanceolate      2 - Oval      3 - Ovate      4 - Other (Specify) \_\_\_\_\_

11. LEAFLET SIZE:

2

1 - Small ('Amsoy 71'; 'A5312')  
3 - Large ('Crawford'; 'Tracy')

2 - Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

2

1 - Light Green ('Weber'; 'York')  
3 - Dark Green ('Gnome'; 'Tracy')

2 - Medium Green ('Corsoy 79'; 'Braxton')

★ 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:

2

1 - Slender ('Essex'; 'Amsoy 71')  
3 - Bushy ('Gnome'; 'Govan')

2 - Intermediate ('Amcor'; 'Braxton')

★ 17. PLANT HABIT:

1 - Determinate ('Gnome'; 'Braxton')

2 - Semi-Determinate ('Will')

3 - Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

0  9

1 - 000  
9 - VI

2 - 00  
10 - VII

3 - 0  
11 - VIII

4 - I  
12 - IX

5 - II  
13 - X

6 - III

7 - IV

8 - V

★ 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*)

★

0

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

2

Other (Specify)

Races Unknown

0

Target Spot (*Corynespora cassicola*)

0

Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)

0

Powdery Mildew (*Microspora diffusa*)

★

0

Brown Stem Rot (*Cephalosporium gregatum*)

1

Stem Canker (*Diaporthe phaseolorum* var. *caylivora*)

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

9800179

FUNGAL DISEASES: (Continued)

- \*  0 Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)
- 0 Purple Seed Stain (*Cercospora kikuchii*)
- 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- \*  Race 1     Race 2     Race 3     Race 4     Race 5     Race 6     Race 7
- Race 8     Race 9     Other (Specify) Races Unknown

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)
- \*  2 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- \*  Race 1     Race 2     Race 3     Race 4     Other (Specify) Race 14
- 0 Lance Nematode (*Hoplostaimus 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*)
- OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

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

- \*  0 Iron Chlorosis on Calcareous Soil
- Other (Specify) \_\_\_\_\_

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

- 0 Mexican Bean Beetle (*Epilachna varivestis*)
- 2 Potato Leaf Hopper (*Empoasca fabae*)
- Other (Specify) \_\_\_\_\_

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	DP 3682	Seed Coat Luster	DP 3682
Leaf Shape	DP 3682	Seed Size	DP 415
Leaf Color	DP 3682	Seed Shape	DP 3682
Leaf Size	DP 3682	Seedling Pigmentation	DP 3682



21. 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		
SG 678 RR Submitted	148	1.3	69					15	
DP 3640 Name of Similar Variety	142	1.6	77					13	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Oldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.J. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> 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.

NOV 1 1973

NOV 1 1973

## EXHIBIT D

D&P Technology Holding Corp.'s  
SUREGROW SEED, INC.'S APPLICATION FOR SG 678 RR  
(BT:12/4/2002)

ADDITIONAL DESCRIPTION OF VARIETY

SG 678 RR is an F<sub>4</sub> selection composited in the F<sub>5</sub> generation from the cross DP 3682 x [Hutcheson x (DPX 2384 (2) x 40-3-2)]. It is a late group VI maturity, on average, 5 days later than DP 3640. It is being released because of its yield potential combined with the Roundup Ready™ trait. SG 678 RR plants are medium in height with purple flowers, grey pubescence, and tan podwalls. The seeds average 3200 per pound and are ~~shiny~~<sup>dull</sup> (BT:12/4/2002) yellow with imperfect black hila. It is resistant to some races of frogeye leaf spot and soybean mosaic virus. SG 678 RR is susceptible to common and peanut root knot nematodes as well as to stem canker. SG 678 RR is moderately susceptible to race 3 of soybean cyst nematode.

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)  <b>D&amp;PL TECHNOLOGY HOLDING CORP.</b>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>95-04456                  DPX 9765 RR</b>	3. VARIETY NAME  <b>SG 678 RR</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  <b>P.O. BOX 157                  SCOTT, MISSISSIPPI 38772</b>	5. TELEPHONE (Include area code)  <b>662.742.4141</b>	6. FAX (Include area code)  <b>662.742.3182</b>
7. PVPO NUMBER  <b>9800179</b>		

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

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

10. Is the applicant the original owner?  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):

**SG 678 RR contains a proprietary gene, patented by the Monsanto Company and licensed to D&PL, which encodes a protein which provides tolerance to glyphosate herbicide in soybean cultivars.**

**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.

*According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.*

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