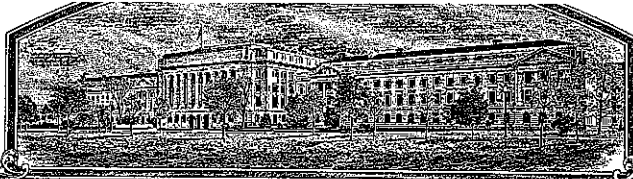


No.

9800101



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

University of Georgia Research Foundation, Inc. (UGARF)

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: IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A SEED OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Boggs'

*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:

*P. M. Zabel*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Anderson*

Secretary of Agriculture

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

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).

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

1. NAME OF OWNER <b>University of Georgia Research Foundation, Inc.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>G89-2223</b>	3. VARIETY NAME <b>Boggs</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>Boyd Graduate Studies Research Center, 6th Floor D.W. Brooks Drive Athens, GA 30602-7411</b>		5. TELEPHONE (include area code) <b>706-542-5944</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <b>9800101</b>
		6. FAX (include area code) <b>706-542-3837</b>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Georgia</b>	9. DATE OF INCORPORATION <b>11/17/1978</b>	FILING DATE <b>2/09/1998</b>
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>University of Georgia Research Foundation, Inc. c/o John Ingle Boyd Graduate Studies Research Center, 6th Floor Athens, GA 30602-7411</b>			FILING AND EXAMINATION FEES: \$ <b>2,450</b> DATE <b>2/09/1998</b> CERTIFICATION FEE: \$ <b>320.00</b> DATE <b>2/19/2003</b>

11. TELEPHONE (Include area code) <b>706-542-5944</b>	12. FAX (Include area code) <b>706-542-3837</b>	13. E-MAIL <b>kmb@ovpr.uga.edu</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 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 (\$2,705), 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 <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <b>BT: 4/10/2003</b> <input type="checkbox"/> NO (If "no", go to item 22) <b>per applicant's permission given 4/10/2003</b>
	20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED <b>per applicant's permission given on 4/10/2003</b>
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE NUMBER 1,2,3, etc. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED <b>per applicant's permission given on 4/10/2003</b>	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 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)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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 	SIGNATURE OF OWNER
NAME (Please print or type) <b>Gordhan L. Patel</b>	NAME (Please print or type)
CAPACITY OR TITLE <b>Executive Vice President</b>	CAPACITY OR TITLE
DATE <b>Nov. 6, 2002</b>	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 unfilled. 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>**

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 3.0 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 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

**EXHIBIT A**  
**THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION**  
**APPLICATION FOR BOGGS**  
**ORIGIN AND BREEDING HISTORY**

1986	Cross of G81-152 x 'Coker 6738' made in Athens, GA G81-152 = D74-7741 x 'Coker 237'; D74-7741 = 'Forrest' x D70-3001; D70-3001 is the same parentage as 'Centennial'
1986-87	F <sub>1</sub> grown during winter at Isabela, Puerto Rico
1987	F <sub>2</sub> grown in Athens, GA
1987-88	F <sub>3</sub> and F <sub>4</sub> generations were advanced in winter at Isabela, Puerto Rico
1988	F <sub>5</sub> was grown in Athens, GA
1988-89	F <sub>5:6</sub> lines were screened for resistance to southern root-knot nematode in the greenhouse during the winter
1989	F <sub>5:6</sub> lines were grown in Athens, GA. Plant row #89-2223 was selected and composited after it was determined to be stable and true breeding for major characteristics as described within the application <i>(11/7/2002)</i> <i>uniform and stable (11/7/2002 per applicant's permission)</i>
1990	Tested as G89-2223 in Athens, GA in 2 reps
1991	Tested at Athens and Plains, GA in 2 reps/location
1992	Tested at Athens, Plains, and Griffin, GA in 3 reps/location
1993	Entered in USDA Uniform Preliminary Test VI grown at 7 locations (2 reps/location)
1994	Evaluated in USDA Uniform Regional Test VI at 28 locations (3 reps/location). Grown at 2 locations in Georgia Soybean Performance Trials (3 reps/location).
1995	Evaluated in USDA Uniform Regional Test VI at 21 locations (3 reps/location). Grown at 6 locations in Georgia Soybean Performance Trials (3 reps/location).
1996	Evaluated in USDA Uniform Regional Test VI at 23 locations (3 reps/location). Grown at 7 locations in Georgia Soybean Performance Trials (3 reps/location).
1997	G89-2223 is released as 'Boggs'

*1996: The variety was found to be uniform and stable with no evidence of variants or off types. Uniformity and stability apply to all characteristics described in exhibit C, including disease and pest resistance. These facts are true for test and trials conducted from 1993 to 1996.*

**EXHIBIT B**  
**THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION**  
**APPLICATION FOR BOGGS**  
**NOVELTY STATEMENT**

To our knowledge Boggs most nearly resembles Brim, Bryan, and Dillon, and Doles. Differences included but are not limited to the following:

**I. Boggs vs. Brim**

Pubescence color: Boggs = tawny, Brim = gray  
Pod wall color: Boggs = tan, Brim = brown  
Leaf color: Boggs = medium green, Brim = dark green  
Hilum color: Boggs = black, Brim = buff  
Soybean cyst nematode (Race 3): Boggs = resistant, Brim = susceptible  
Southern root-knot nematode: Boggs = resistant, Brim = susceptible

**II. Boggs vs. Bryan**

Flower color: Boggs = white, Bryan = purple  
Peanut root-knot nematode: Boggs = susceptible, Bryan = resistant  
Plant type: Boggs = intermediate, Bryan = slender

**III. Boggs vs. Dillon**

Flower color: Boggs = white, Dillon = purple  
Pubescence color: Boggs = tawny, Dillon = gray  
Hilum color: Boggs = black, Dillon = buff to gray  
Soybean cyst nematode (Race 3): Boggs = resistant, Dillon = susceptible  
Stem canker: Boggs = resistant, Dillon = susceptible to moderately susceptible

**IV. Boggs vs. Doles**

Leaf color: Boggs = medium green, Doles = dark green  
Seed protein peroxidase activity: Boggs = low, Doles = high  
Frogeye leaf spot: Boggs = susceptible, Doles = resistant  
Reniform nematode: Boggs = resistant, Doles = susceptible

PLANT VARIETY PROTECTION OFFICE  
 BELTSVILLE, MARYLAND 20705

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

NAME OF APPLICANT(S) The University of Georgia Research Foundation, Inc.	TEMPORARY DESIGNATION G89-2223	VARIETY NAME Boggs
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) Boyd Graduate Studies Research Center University of Georgia Athens, GA 30602-7411		FOR OFFICIAL USE ONLY PVPO NUMBER 9800101

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 ('Corsoy 79'; 'Braxton')      2 = Shiny ('Nebsoy'; '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 (SP1<sup>a</sup>)      2 = Type B (SP1<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')

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12. LEAF COLOR:

2

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

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

★ 13. FLOWER COLOR:

1

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

★ 14. POD COLOR:

1

1 = Tan                      2 = Brown                      3 = Black

★ 15. PLANT PUBESCENCE COLOR:

2

1 = Gray                      2 = Brown (Tawny)

16. PLANT TYPES:

2

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    9

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*)

★  0 Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★  0 Brown Spot (*Septoria glycines*)

Frogeye Leaf Spot (*Cercospora sojina*)

★  0 Race 1     0 Race 2     0 Race 3     0 Race 4     0 Race 5     1 Other (Specify) prevalent field races

0 Target Spot (*Corynespora cassicola*)

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

2 Powdery Mildew (*Microsphaera diffusa*)

★  0 Brown Stem Rot (*Cephalosporium gregatum*)

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

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

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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*)
- ★  0 Race 1     2 Race 2     0 Race 3     0 Race 4     0 Race 5     0 Race 6     0 Race 7
- 0 Race 8     0 Race 9     0 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*)
- ★  0 Race 1     1 Race 2     2 Race 3     1 Race 4     1 Other (Specify) Race 14, Race 9
- 2 Lance Nematode (*Hoplolaimus Colombus*) (shows tolerance, there is no reported resistance)
- ★  2 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★  0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- 1 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- 2 Reniform Nematode (*Rotylenchulus reniformis*)
- 2 OTHER DISEASE NOT ON FORM (Specify): Javanese root-knot nematode

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

- ★  0 Iron Chlorosis on Calcareous Soil
- 2 Other (Specify) Chloride sensitivity

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

- 0 Mexican Bean Beetle (*Epilachna varivestis*)
- 2 Potato Leaf Hopper (*Empoasca fabae*)
- 1 Other (Specify) to most defoliating insects

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Brim	Seed Coat Luster	Doles
Leaf Shape	Brim	Seed Size	Brim
Leaf Color	Bryan	Seed Shape	Doles
Leaf Size	Brim	Seedling Pigmentation	Doles

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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		
Boggs Submitted	150	2.0	76	---	---	44.1	21.1	13.9	---
Brim Name of Similar Variety	148	1.9	89	---	---	44.3	20.2	13.1	---

## 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. 9800101
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<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.

**EXHIBIT D**  
**THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION**  
**APPLICATION FOR BOGGS**  
**ADDITIONAL DESCRIPTION OF VARIETY**

The Georgia Agricultural Experiment Stations announce the release of a new high yielding, multiple-pest resistant variety named BOGGS. This Maturity Group (MG) VI variety was selected to combine superior yield with resistance to southern and javanese root-knot nematodes, race 3 of soybean cyst nematode, and stem canker.

BOGGS was derived from a F<sub>5</sub> plant from the cross G81-152 x Coker 6738. G81-152 is a MG VI breeding line from the cross of D74-7741 x Coker 237. G81-152 was evaluated in the 1985-1987 Regional Test VI. G81-152 was not released because of its susceptibility to stem canker. The generations of the G81-152 x Coker 6738 population were advanced to the F<sub>5</sub> by the pod bulk method in Georgia and Puerto Rico. From 1990 to 1996, Boggs was tested as G89-2223 for nematode and disease resistances, agronomic performance, and seed yield in Georgia. G89-2223 was advanced to Regional Preliminary Group VI in 1993. From 1994 to 1996, it was evaluated in Regional Test VI. Its mean performance in 47 environments is shown below:

Variety	Seed yield	Maturity date	Lodging rating <sup>†</sup>	Plant height inches	Seed quality rating <sup>‡</sup>	Seeds/pound no.	Composition <sup>§</sup>	
	bu/a						Oil %	Protein %
BOGGS	46.3	10-17	2.0	30	1.6	3,266	21.1	44.1
Brim	45.2	10-15	1.9	35	1.7	3,466	20.2	44.3
Dillon	45.0	10-12	1.6	34	1.7	2,966	20.7	43.4

<sup>†</sup> Rating: 1 (plants erect) to 5 (plants prostrate).

<sup>‡</sup> Rating: 1 (very good) to 5 (very poor). <sup>§</sup> Dry-weight basis.

BOGGS averaged 1 bu/a higher in seed yield than Brim and Dillon. It matured 2 days later than Brim and 5 days later than Dillon. Boggs was 4 inches shorter than Dillon and 5 inches shorter than Brim. It was similar in lodging resistance to Brim and somewhat more susceptible than Dillon. Boggs was similar to Brim in seed protein composition and somewhat higher in oil composition. It averaged 200 less seeds/pound than Brim and 300 more than Dillon.

BOGGS has a determinate growth habit, white flowers, tawny pubescence, and tan pod walls. Seeds are yellow with shiny seed coats and a black hila. It is resistant to southern and javanese root-knot nematodes, reniform nematode, race 3 of soybean cyst nematode, and stem canker. It is tolerant to lance nematode.

**EXHIBIT E  
 STATEMENT OF THE BASIS OF OWNERSHIP**

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 APPLICANT(S)  University of Georgia Research Foundation, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  G89-2223	3. VARIETY NAME  Boggs
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  Boyd Graduate Studies Research Center University of Georgia Athens, GA 30602-7411 USA	5. TELEPHONE (include area code) 706-542-6542 <i>5944 (Ext: 11/1/2003)</i>	6. FAX (include area code)
7. PVPO NUMBER: 8800101		

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

YES     NO

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

YES     NO

10. Is the applicant the original breeder? If no, please answer the following:

a. If original rights to variety were owned by individual(s):  
 Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country \_\_\_\_\_

YES     NO

b. If original rights to variety were owned by a company:  
 Is the original breeder(s) U.S. based company? If no, give name of country \_\_\_\_\_

YES     NO

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

SEE REVERSE SIDE

**PLEASE NOTE:**

- Plant variety protection can be afforded only to owners (not licensees) who meet one of 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 breeder, both the original breeder and the applicant must meet one of the above criteria.

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

Public reporting burden for this collection of information is estimated to average 10 minutes 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. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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**EXHIBIT E**  
**THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION**  
**APPLICATION FOR BOGGS**  
**STATEMENT OF APPLICANT'S OWNERSHIP**

The variety for which plant variety protection is hereby sought was developed by H. Roger Boerma, E. Dale Wood, Richard S. Hussey, and Daniel V. Phillips employees at the University of Georgia Agricultural Experiment Stations. The Georgia Agricultural Experiment Stations is a part of The University of Georgia. The University of Georgia is one of the universities of the University System of Georgia. The Board of Regents of the University System of Georgia ("Board of Regents") is a body that was created by the Constitution of the State of Georgia and is charged with the responsibility of operating the Universities in the University System of Georgia. The University of Georgia Research Foundation, Inc. is a Georgia nonprofit corporation which was incorporated to, among other things, own and exploit intellectual property developed or created at The University of Georgia. On November 8, 1995 the board of Regents approved an Intellectual Property Policy regarding inventions and discoveries by persons employed at The University of Georgia. As an employee at the Georgia Agricultural Experiment Stations, H. Roger Boerma, E. Dale Wood, Richard S. Hussey, and Daniel V. Phillips are subject to said Intellectual Property Policy. Rights in novel plant varieties developed at The University of Georgia, including Boggs, are covered by said Intellectual Property Policy. By agreement, the Board of Regents assigned to the University of Georgia Research Foundation, Inc. all rights in intellectual property covered by said Intellectual Property Policy. This agreement applies to then existing intellectual property and to intellectual property which was developed thereafter.

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