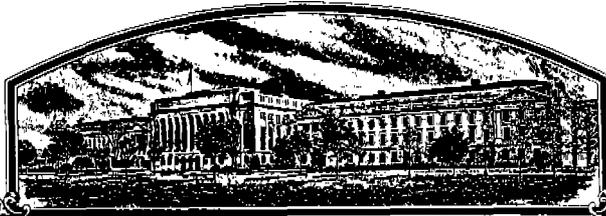


No.

8200107



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Illinois Foundation Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREBY 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 THEREOF IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE SAID SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS 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

'Birch'

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 this 29th day of September in the year of our Lord one thousand nine hundred and eighty-three.

Attest

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

John R. Block
Secretary of Agriculture



APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S) ILLINOIS FOUNDATION SEEDS, INC.		2. TEMPORARY DESIGNATION 76-7008-3	3. VARIETY NAME 'BIRCH'
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) P. O. BOX 722 CHAMPAIGN, ILLINOIS 16820		5. PHONE (Include area code) (217) 485-6260	FOR OFFICIAL USE ONLY PVPO NUMBER 8200107
6. GENUS AND SPECIES NAME Glycine max	7. FAMILY NAME (Botanical) Leguminosea		DATE 4/20/82 TIME 10:30 @ A.M. <input type="checkbox"/> P.M.
8. KIND NAME Soybean	9. DATE OF DETERMINATION January 1981		AMOUNT FOR FILING \$ 500.00 DATE 4/20/82
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) cooperative		AMOUNT FOR CERTIFICATE \$ 250.00 DATE 9/19/83	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Illinois		12. DATE OF INCORPORATION	

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
**Dr. Marvin W. Rode
 P. O. Box 722
 Champaign, Illinois 61820**

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- b. Exhibit B, Novelty Statement
- c. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- d. Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) **7/13/83 RJS** Yes (If "Yes," answer items 16 and 17 below) No

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

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? Foundation Registered Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES? **SM♦ (If "Yes," give names of countries and dates)**
 No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES? **SM♦ (If "Yes," give names of countries and dates)**
 No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable,

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

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

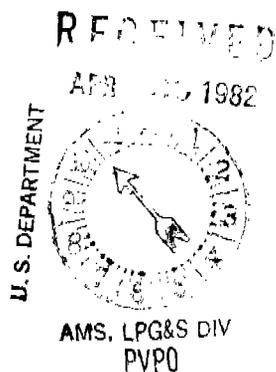
SIGNATURE OF APPLICANT Marvin W. Rode - Director of Research	DATE April 15, 1982
SIGNATURE OF APPLICANT	DATE

/INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (*\$250 filing fee and \$250 examination fee*) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section *180.175 of the Regulations and Rules of Practice.*) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

Item

- 9 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41 (a) of the Act and (2) the date a decision was made to increase the seed.
- 14a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 14b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 15 If "Yes" is specified (*seed of this variety be sold by variety name only as a class of certified seed*) the applicant may **NOT** reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. *However, if the applicant specified "No," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)*
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



<76-7008-3> 'BIRCH'

14A. Exhibit A

Parentage: Hodgson x Harcor

- 1975 - Champaign - made cross
- 1976 - greenhouse Champaign - grew F₁ plants
- 1976 - greenhouse Champaign - grew F₂ population
- 1976 - Champaign - grew F₃ population
- 1977 - Champaign - grew F₄ progeny row and bulk harvested. Also, grew Yield Test (augmented design)
- 1978 - Yield Test at 2 locations
- 1979 - Yield Test at 6 locations
- 1980 - Yield Test at 5 locations and increased breeders seed (.15A)
- 1981 - Yield Test at 5 locations and increased breeders seed (3A)

'BIRCH'
<76-7008-3> is an F₄ line derived from the cross of Hodgson x Harcor. Early generations were handled by a modified pedigree method (single pod descent). All yield tests conducted in-1978 and after were replicated 2-row border plots end trimmed at maturity.

'BIRCH'
<76-7008-3> when needle inoculated with race 1 of Phytophthora megasperma f. sp. glycinea has demonstrated resistance indicating that it has Rps₁^a from 'Harcor' (1) Furthermore, the Rps₁^a gene also conveys resistance to races 10-16 (2), although we have not tested these specifically.

'BIRCH'
<76-7008-3> has appeared stable and uniform during 4 years of testing and 2 years of seed increase. Buff hilum seeds occur at the frequency of 100 seeds in 10,000.

(1) Buzzell, R. I., Jerry H. Haas, B. R. Buttery, and L. J. Anderson, 1976. Harcor soybeans. Can. J. Plant Sci. 56:973-974.

(2) Keeling, B. L. 1979. Research on Phytophthora root and stem rot: isolation, testing procedures and seven new physiologic races. In: World Soybean Research Conference II: Proceedings. ed. Frederick T. Carbin. pp. 367-370

SOYBEAN

8200107

<76-7008-3> 'BIRCH'

14B. Exhibit B Novelty Statement

'BIRCH'
<76-7008-3> is most similar to 'Amsoy 71'. <76-7008-3> differs from
'Amsoy 71' in having tan pods and a dull seed coat luster compared
to brown and shiny. <76-7008-3> is slightly taller than 'Amsoy 71'
and has somewhat larger leaflets. The seed of <76-7008-3> is smaller
than Amsoy 71 and lodges more. BIRCH'

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Amsoy 71	Petiole angle	Amsoy 71
Leaf shape	Amsoy 71	Seed size	Corsoy 79
Leaf color	Amsoy 71	Seed shape	Amsoy 71
Leaf surface	Amsoy 71	Seedling pigmentation	Amsoy 71

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	'BIRCH' 76-7008-3	2.3	97cm	mm 87	mm 135		%	65.6	
Name of similar variety	Amsoy 71	2.0	94cm	82	120			36.8	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form:

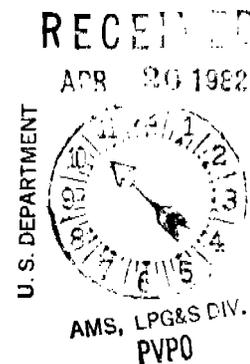
COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) ILLINOIS FOUNDATION SEEDS, INC.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code) P. O. BOX 722 Champaign, Illinois 61820	PVPO NUMBER 8200107
	VARIETY NAME OR TEMPORARY DESIGNATION 2 76-7008-37 BIRCH

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE: <input type="checkbox"/> 1 = SPHERICAL <input type="checkbox"/> 2 = SPHERICAL FLATTENED <input type="checkbox"/> 3 = ELONGATE <input type="checkbox"/> 4 = OTHER (Specify)	
2. SEED COAT COLOR: SHADE: <input type="checkbox"/> 1 = YELLOW <input type="checkbox"/> 2 = GREEN <input type="checkbox"/> 3 = BROWN <input type="checkbox"/> 4 = BLACK <input type="checkbox"/> 1 = LIGHT <input type="checkbox"/> 2 = MEDIUM <input type="checkbox"/> 3 = DARK <input type="checkbox"/> 5 = OTHER (Specify)	
3. SEED COAT LUSTER: <input type="checkbox"/> 1 = DULL <input type="checkbox"/> 2 = SHINY	4. SEED SIZE: <input type="checkbox"/> 1 <input type="checkbox"/> 6 GRAMS PER 100 SEEDS
5. HILUM COLOR: SHADE: <input type="checkbox"/> 1 = BUFF <input type="checkbox"/> 2 = YELLOW <input type="checkbox"/> 3 = BROWN <input type="checkbox"/> 4 = GRAY <input type="checkbox"/> 5 = IMPERFECT BLACK <input type="checkbox"/> 6 = BLACK <input type="checkbox"/> 7 = OTHER (Specify) <input type="checkbox"/> 1 = LIGHT <input type="checkbox"/> 2 = MEDIUM <input type="checkbox"/> 3 = DARK	
6. COTYLEDON COLOR: <input type="checkbox"/> 1 = YELLOW <input type="checkbox"/> 2 = GREEN	7. LEAFLET SIZE (See Reverse): <input type="checkbox"/> 2 <input type="checkbox"/> 1 = SMALL <input type="checkbox"/> 2 = MEDIUM <input type="checkbox"/> 3 = LARGE
8. LEAFLET SHAPE: <input type="checkbox"/> 1 = OVATE <input type="checkbox"/> 2 = OBLONG <input type="checkbox"/> 3 = LANCEOLATE <input type="checkbox"/> 4 = ELLIPTICAL <input type="checkbox"/> 5 = OTHER (Specify)	
9. LEAF COLOR (See reverse): 10. FLOWER COLOR: <input type="checkbox"/> 1 = LIGHT GREEN <input type="checkbox"/> 2 = MEDIUM GREEN <input type="checkbox"/> 3 = DARK GREEN <input type="checkbox"/> 1 = WHITE <input type="checkbox"/> 2 = PURPLE <input type="checkbox"/> 2 <input type="checkbox"/> 3 = OTHER (Specify)	
11. POD COLOR: <input type="checkbox"/> 2 <input type="checkbox"/> 1 = TAN <input type="checkbox"/> 2 = BROWN <input type="checkbox"/> 3 = BLACK	12. POD SET: <input type="checkbox"/> 1 <input type="checkbox"/> 1 = SCATTERED <input type="checkbox"/> 2 = CONCENTRATED
13. PLANT PUBESCENCE COLOR: SHADE: <input type="checkbox"/> 1 <input type="checkbox"/> 1 = GRAY <input type="checkbox"/> 2 = BROWN <input type="checkbox"/> 3 = OTHER (Specify) <input type="checkbox"/> 2 <input type="checkbox"/> 1 = LIGHT <input type="checkbox"/> 2 = MEDIUM <input type="checkbox"/> 3 = DARK	
14. PLANT TYPES (See Reverse): <input type="checkbox"/> 1 <input type="checkbox"/> 1 = SLENDER <input type="checkbox"/> 2 = BUSHY <input type="checkbox"/> 3 = INTERMEDIATE	15. PLANT HABIT: <input type="checkbox"/> 2 <input type="checkbox"/> 1 = DETERMINATE <input type="checkbox"/> 2 = INDETERMINATE <input type="checkbox"/> 3 = OTHER (Specify)
16. HYPOCOTYL COLOR: <input type="checkbox"/> 2 <input type="checkbox"/> 1 = GREEN <input type="checkbox"/> 2 = PURPLE	17. SEED PROTEIN: <input type="checkbox"/> 1 = A <input type="checkbox"/> 2 = B
18. NUMBER OF DAYS TO FLOWERING (Place a zero in first box (e.g. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>) when days are 9 or less.) <input type="checkbox"/> 3 <input type="checkbox"/> 7	19. MATURITY GROUP: <input type="checkbox"/> 4 <input type="checkbox"/> 1 = 00 <input type="checkbox"/> 2 = 0 <input type="checkbox"/> 3 = I <input type="checkbox"/> 4 = II <input type="checkbox"/> 5 = III <input type="checkbox"/> 6 = IV <input type="checkbox"/> 7 = V <input type="checkbox"/> 8 = VI <input type="checkbox"/> 9 = VII <input type="checkbox"/> 10 = VIII
20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box (e.g. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>) when size is 9 mm. or less.)	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MM. LENGTH OF SEEDLING	<input type="checkbox"/> <input type="checkbox"/> MM. LENGTH OF COTYLEDON
<input type="checkbox"/> <input type="checkbox"/> MM. WIDTH OF COTYLEDON	
21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)	
<input type="checkbox"/> 0 BACTERIAL PUSTULE <input type="checkbox"/> 0 SOYBEAN CYST <input type="checkbox"/> 0 DOWNY MILDEW <input type="checkbox"/> 0 PURPLE STAIN <input type="checkbox"/> 0 POD AND STEM BLIGHT <input type="checkbox"/> 0 ROOT KNOT	<input type="checkbox"/> 0 FROGEYE <input type="checkbox"/> 0 STEM CANKER <input type="checkbox"/> 2 PHYTO-PHTHORA <input type="checkbox"/> 0 BROWN STEM ROT <input type="checkbox"/> 0 TARGET SPOT <input type="checkbox"/> 0 BROWN SPOT
<input type="checkbox"/> 0 BUD BLIGHT <input type="checkbox"/> 0 WILDFIRE <input type="checkbox"/> 0 RHIZOCTONIA ROT <input type="checkbox"/> OTHER (Specify)	4