

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

FFR Cooperative

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* 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 (P.L. 85-625, STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'FFR 111'

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 24th day of August in
the year of our Lord one thousand nine
hundred and seventy-seven

Attest:

A. J. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Bob Berglund
Secretary of Agriculture



APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION FFR 111	2. KIND NAME Soybean	FOR OFFICIAL USE ONLY	
		PV NUMBER 7600007	
3. GENUS AND SPECIES NAME Glycine max	4. FAMILY NAME (Botanical) Leguminosae	FILING DATE 8-20-75	TIME 2:30 P.M.
		FEE RECEIVED \$ 250.00	BALANCE DUE \$ 8-20-75
	5. DATE OF DETERMINATION January, 1973	\$ 250.00	\$ 5-31-77
		\$ 250.00	\$ 8-1-77
6. NAME OF APPLICANT(S) FFR Cooperative	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 4112 East State Road 225 West Lafayette, Indiana 47906	8. TELEPHONE AREA CODE AND NUMBER 317-567-2115	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION Wisconsin	11. DATE OF INCORPORATION March 11, 1960	

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

G. Robert Taylor Soybean Breeder FFR Cooperative 4112 East State Road 225 West Lafayette, Indiana 47906	R. J. Buker, Ph.D. Executive Vice President & General Manager FFR Cooperative 4112 East State Road 225 West Lafayette, Indiana 47906
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13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Botanical Description of the Variety
- 13C. Exhibit C, Objective Description of the Variety
- 13D. Exhibit D, Data Indicative of Novelty
- 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. 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). (If "Yes," answer 14B and 14C below.) YES NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? YES NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? FOUNDATION REGISTERED CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 is informed that false representation herein can jeopardize protection and result in penalties.

16 July 1975
(DATE)

G. Robert Taylor
(SIGNATURE OF APPLICANT)
00001
(SIGNATURE OF APPLICANT)

7600007

FFR COOPERATIVE4112 E. State Road 225
W. Lafayette, IN 47906

317-567-2115

Plant Variety Protection Application
FFR 111

13A. Exhibit A

FFR 111 was selected from a cross of Adelpia x Harosoy 63 made in the summer of 1968. Seed of these varieties was received from Dr. R. L. Cooper and Dr. R. L. Bernard of Regional Soybean Lab, Urbana, Illinois. The F_1 s were grown in the FFR greenhouse in the fall of 1968; F_2 s were grown in the spring of 1969, and selections were made in the F_3 generation in the field in 1969. Considerable heterogeneity existed for plant height, plant type, canopy penetration and seed quality. Selections were made simultaneously with the first yield tests in 1970 to begin purification of this line. Preliminary increase was made in Brazil in our 1972 winter program following encouraging data from 1971 and 1972 yield tests. Confirmation of its merit as a variety was made in 1972 and first seed increases with extensive roguing were made in 1973. Another increase and a second roguing was made with the 1974 seed production prior to distribution of seed to member cooperatives in March, 1975.

There are no known variants in this population and it should be quite stable as the 1975 crop will be the F_9 or F_{10} generation--depending on which seed lot is used.

LETTER FROM G. ROBERT TAYLOR SENT JULY 14, 1977 STATES "' FFR 111' HAS NO KNOWN VARIANTS RELEASED TO FFR MEMBERS. ONE HUNDRED PLANTS HAVE BEEN PROGENY TESTED AND THE "TRUE TO TYPE" INDIVIDUAL ROWS BUNKED TO FORM BREEDER'S SEED. THIS METHOD WILL ASSURE STABILITY THROUGH SUBSEQUENT GENERATIONS OF PRODUCTION." Rjs

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INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (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

- 5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.
- 13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.
- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

AUG 20 1975

FFR COOPERATIVE

4112 E. State Road 225

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Plant Variety Protection Application
FFR 111

13B. Exhibit B

The seed of FFR 111 are larger than Amsoy 71 but resemble this variety in hilum color and seed coat color. Seedling vigor of FFR 111 is quite good and resembles Hark in general appearance. Mature plants resemble Amsoy 71 except they are of thinner type and the growing tip of the plants penetrates the canopy more. A larger proportion of the seed is produced in the upper portions of the plant. The mature plants stand well (like Hark) and have grey pubescence, limited branching and good shatter resistance.

13D. Exhibit D

1. Yields of FFR 111 have been consistently higher than Hark--a variety of similar maturity and plant type (See Tables 1 & 2).
2. Maturity of FFR 111 is approximately 5 days earlier than Amsoy 71--a variety similar in yield and seedling vigor (See Tables 1 & 2).
3. Seedling vigor of FFR 111 is far superior to Beeson--a variety of similar height.

A sample of seed and photograph comparing FFR 111 with Corsoy are enclosed.

13E. Exhibit E

G. Robert Taylor is employed as a soybean breeder by FFR Cooperative.
Dr. R. J. Buker is Executive Vice President and General Manager of FFR.

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UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 GRAIN DIVISION
 HYATTSVILLE, MARYLAND 20792

EXHIBIT C
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
 SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

FFR Cooperative

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

4112 East State Road 225

West Lafayette, Indiana 47906

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

1. SEED SHAPE: 1 = SPHERICAL 2 = SPHERICAL FLATTENED 3 = ELONGATE 4 = OTHER (Specify)

2. SEED COAT COLOR: 1 = YELLOW 2 = GREEN 3 = BROWN 4 = BLACK 1 = LIGHT 2 = MEDIUM 3 = DARK
 SHADE: 2

3. SEED COAT LUSTER: 1 = DULL 2 = SHINY
 4. SEED SIZE: 18.6 GRAMS PER 100 SEEDS

5. HILUM COLOR: 1 = BUFF 2 = YELLOW 3 = BROWN 4 = GRAY 5 = IMPERFECT 6 = BLACK 7 = OTHER (Specify)
 SHADE: 1 = LIGHT 2 = MEDIUM 3 = DARK

6. COTYLEDON COLOR: 1 = YELLOW 2 = GREEN 1 = SMALL 2 = MEDIUM 3 = LARGE
 7. LEAFLET SIZE (See Reverse): 1

8. LEAFLET SHAPE: 1 = OVATE 2 = OBLONG 3 = LANCEOLATE 4 = ELLIPTICAL 5 = OTHER (Specify)

9. LEAF COLOR (See reverse): 1 = LIGHT GREEN 2 = MEDIUM GREEN 3 = DARK GREEN
 10. FLOWER COLOR: 1 = WHITE 2 = PURPLE 3 = OTHER (Specify)

11. POD COLOR: 1 = TAN 2 = BROWN 3 = BLACK
 12. POD SET: 2 = SCATTERED 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR: 1 = GRAY 2 = BROWN 3 = OTHER (Specify)
 14. PLANT TYPES (See Reverse): 1 = SLENDER 2 = BUSHY 3 = INTERMEDIATE

15. PLANT HABIT: 1 = DETERMINATE 2 = INDETERMINATE
 16. HYPOCOTYL COLOR: 1 = GREEN 2 = PURPLE

17. SEED PROTEIN: 1 = A 2 = B
 18. NUMBER OF DAYS TO FLOWERING: 1 = 00 2 = 0 3 = 1 4 = II 5 = III 6 = IV 7 = V 8 = VI 9 = VII 10 = VIII
 19. MATURITY GROUP: 1 = 00 2 = 0 3 = I 4 = II 5 = III 6 = IV 7 = V 8 = VI 9 = VII 10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box when size is 9 mm. or less.) 0 1 2 (e.g. 0 2) 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8

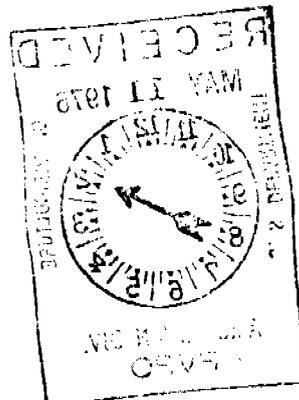
**FFR COOPERATIVE**4112 E. State Road 225
W. Lafayette, IN 47906

317-567-2115

76-7

May 6, 1976

EXHIBIT D



Dr. Robert J. Snyder
Examiner, Plant Variety
Protection Office
United States Department
of Agriculture
Agricultural Marketing Service
6525 Belcrest Road
Hyattsville, Maryland 20782

Dear Sir:

It seems that I have made our applications for Plant Variety Protection unduly complicated in the past. Your suggestion (letter of Nov. 10, 1975) that one trait is sufficient to distinguish a variety from other varieties leads me to an attempt to revise my previous application for FFR 111. A revised copy of the application for this variety is enclosed. Please note that we have compared all traits with Corsoy where possible. We are giving you new data which easily identifies FFR 111 as being different than Corsoy for the phenotypic traits of Height and Maturity. If these two traits are sufficient (your reference indicates only one is necessary) then the remainder of our data under Exhibit A can be ignored. If this is not satisfactory, FFR will need more time to obtain statistical significance for yield, seedling vigor and lodging resistance. We did not have sufficient time to accumulate this data and rerun our analysis before May 10. [Please consider FFR 111 to be different than its nearest variety (Corsoy) in both Maturity and plant height.]

Sincerely,

G. Robert Taylor
Soybean Breeder

Encl.

GRT/ba

cc: S. F. Rollin

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TABLE 7
Height Comparisons for FFR 111 and Corsoy--1975 and 1976

<u>Year</u>	<u>Location</u>	<u>Height--FFR 111</u>	<u>Height--Corsoy</u>
1975	U. of Illinois--DeKalb	42"	38"
	U. of Minnesota--ave. 3 locations	39"	37"
	U. of Michigan--E. Lansing	51"	42"
	U. of Michigan--Ida	38"	31"
	U. of Wisconsin--Janesville	39"	35"
	U. of Wisconsin--Kenosha	37"	33"
	Ohio State U.--Hoytville	21"	28"
1976	FFR--Clarence, Iowa	44"	43"
	FFR--Sciota, Illinois, Test 13	43"	39"
	FFR--Sciota, Illinois, Test 6	42"	41"
	U. of S. Dakota--Brookings	30"	29"
	U. of S. Dakota--Beresford	22"	20"
	U. of S. Dakota--Elk Point	31"	28"
	U. of Illinois--DeKalb	36"	35"
	U. of Illinois--Macomb	37"	35"
	Ohio State U.--Hoytville	30"	23"
	Iowa State U.--Sloan	40.4"	38.0"
	Iowa State U.--Clarence	45.3"	42.7"
	Iowa State U.--Spencer	42.1"	40.4"
	Iowa State U.--Corwith	37.3"	39.0"
	Iowa State U.--Nashua	36.0"	34.0"
	U. of Minnesota--ave. 3 locations	39"	37"
	U. of Michigan--E. Lansing	41"	42"
	U. of Michigan--Lanawee Co.	40"	35"
	Total	822.1"	768.1"
	Average	37.4"	34.9"

Difference between FFR 111 and Corsoy = 2.5"

<u>Variation from Analysis of Variance</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Test*</u>
Replication	1899.52	24	79.15	
Treatment	62.72	1	62.72	12.42**
Error	121.28	24	5.05	

* F Test for significance 1% level = 7.8229; 5% level = 4.2597

s = $\sqrt{5.05}$ or 2.25

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TABLE 8

Maturity Comparisons for FFR 111 and Corsoy
1974, 1975 and 1976--Calculated in days after September 10

<u>Year</u>	<u>Location</u>	<u>Maturity of FFR 111</u>	<u>Maturity of Corsoy</u>
1974	Iowa State University	9-19	9-22
	University of Wisconsin (ave.)	9-27	9-27
	Ohio State University	9-16	9-28
1975	University of Illinois	9-23	9-22
	U. of Minnesota (ave.--3 locations)	9-15	9-19
	University of Michigan	9-24	9-25
	University of Wisconsin	9-27	9-28
	Ohio State University	9-18	9-25
1976	Ohio State University	9-16	9-25
	South Dakota State University	9-20	9-22
	University of Minnesota	9-16	9-20
	University of Michigan	9-17	9-18
	University of Illinois	9-21	9-20
	Iowa State University	9-26	9-22
	Ave. Date of Maturity	9-19.7	9-22.6
	Ave. Difference = 2.9 days		

<u>Variation</u>	<u>ss</u>	<u>df</u>	<u>Mean Square</u>	<u>F Test</u>	<u>5% Level</u>	<u>1% Level</u>
Replication	349.87	15	23.32			
Treatment	72.	1	72.	8.86**	4.5431	8.6831
Error	122.	15	8.13			

$s = \sqrt{8.13} = 2.85$

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Wells but taller	Petiole angle	Adelphia
Leaf shape	Chippewa 64	Seed size	Chippewa 64
Leaf color	Beeson	Seed shape	Disoy
Leaf surface	Corsoy	Seedling pigmentation	Amsoy

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	127	1.3	36"			43.5	19.5%	47	
Name of similar variety	Hark	Wells	Beeson			Beeson	Beeson	Amsoy 71	

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"

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