No. 7300018

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Farmers Forage Research 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, OR 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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'FFR 777'

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* eighthday *of* November *in the year of our Lord one thousand nine hundred and* seventy-three

Attest:

S. J. Rollin

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz

Secretary of Agriculture

No. 7300018

THE UNITED STATES OF AMERICA

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Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470-2
(6-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN *(GLYCINE MAX)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
FARMERS FORAGE RESEARCH COOPERATIVE

ADDRESS *(Street and No., or R.F.D. No.; City, State, and ZIP Code)*
G. Robert Taylor, Soybean Breeder
4112 East State Road 225
West Lafayette, Indiana 47906

FOR OFFICIAL USE ONLY
PVPO NUMBER: 73018
VARIETY NAME OR TEMPORARY DESIGNATION: FFR777

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

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

2. SEED COAT COLOR: [1] 1 = YELLOW 2 = GREEN 3 = BROWN 4 = BLACK 5 = OTHER *(Specify)*
SHADE: [2] 1 = LIGHT 2 = MEDIUM 3 = DARK

3. SEED COAT LUSTER: [2] 1 = DULL 2 = SHINY

4. SEED SIZE [4 3] GRAMS PER 100 SEEDS

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

6. COTYLEDON COLOR: [2] 1 = YELLOW 2 = GREEN

7. LEAFLET SIZE *(See Reverse)*: [ ] 1 = SMALL 2 = MEDIUM 3 = LARGE

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

9. LEAF COLOR *(See reverse)*: [2] 1 = LIGHT GREEN 2 = MEDIUM GREEN 3 = DARK GREEN

10. FLOWER COLOR: [2] 1 = WHITE 2 = PURPLE 3 = OTHER *(Specify)*

11. POD COLOR: [1] 1 = TAN 2 = BROWN 3 = BLACK

12. POD SET: [2] 1 = SCATTERED 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR: [1] 1 = GRAY 2 = BROWN 3 = OTHER *(Specify)*
SHADE: [2] 1 = LIGHT 2 = MEDIUM 3 = DARK

14. PLANT TYPES *(See Reverse)*: [2] 1 = SLENDER 2 = BUSHY 3 = INTERMEDIATE

15. PLANT HABIT: [1] 1 = DETERMINATE 2 = INDETERMINATE 3 = OTHER *(Specify)*

16. HYPOCOTYL COLOR: [2] 1 = GREEN 2 = PURPLE

17. SEED PROTEIN: [ ] 1 = A 2 = B

18. NUMBER OF DAYS TO FLOWERING *(Place a zero in first box (e.g. [0 9]) when days are 9 or less.)* [6 9]

19. MATURITY GROUP: [9] 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 (e.g. [0 2]) when size is 9 mm. or less.)*
[ ] MM. LENGTH OF SEEDLING [ ] MM. LENGTH OF COTYLEDON [ ] MM. WIDTH OF COTYLEDON

21. DISEASE: *(Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)*

[0] BACTERIAL PUSTULE	[1] SOYBEAN CYST	[0] DOWNY MILDEW	[0] PURPLE STAIN	[0] POD AND STEM BLIGHT	[0] ROOT KNOT
[0] FROGEYE	[0] STEM CANKER	[0] PHYTO-PHTHORA	[0] BROWN STEM ROT	[0] TARGET SPOT	[0] BROWN SPOT
[0] BUD BLIGHT	[0] WILDFIRE	[0] RHIZOCTONIA ROT	[ ] OTHER *(Specify)*		

FORM GR-470-2 (REVERSE)

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Bragg	Petiole angle	Hood
Leaf shape	Hood	Seed size	Hood
Leaf color	Hood	Seed shape	Hood
Leaf surface	Hood	Seedling pigmentation	Hood

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT cm	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	168	1.3	96 38			42.2	20.6%	80	
Name of similar variety	Hood	Hood	Hood			Beeson	Beeson	Hood	

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"

7300018

SOYBEAN

'FFR 777'

13A. Exhibit A:

'FFR 777' originated as a single plant selection from the 'Hood' variety. Thirty-four seedlings from this selection were grown in the greenhouse during the winter of 1968-69. Progenies from these lines were compared with the parent variety in side-by-side rows the following summer. Multiplication of seed was accomplished in Brazil, Virginia, North Carolina, Georgia, and Tennessee. No identifiable variants or changes in plant morphology from the original plant selection have been observed during three years of production.

13B. Exhibit B:

Seed characteristics are very similar to the variety 'Hood.' 'FFR 777' differs from 'Hood' as follows: Leaves are lighter green; matures 7 days later; mature plants are taller and larger; inflorescences are larger; plants bear a higher percentage of 2-seeded pods; and yields are greater than those for the variety 'Hood.'

13C. Exhibit C:

Seed shape	:	Sperhical flattened
Seed color	:	Yellow
Seed luster	:	Shiny
Seed size	:	14 G/100 seeds
Hilum color	:	Medium buff
Cotyledon color	:	~~Green~~ YELLOW RfS
Protein content	:	42.2% } Similar to
Oil content	:	20.6% } 'Beeson'
Leaflet shape	:	Ovate
Leaflet color	:	Medium green
Leaflet size	:	Large
Flower color	:	Purple
Pod color	:	Tan

13C. Exhibit C:

Ave.No.of pods/plant	:	80
Set	:	Concentrated
Plant pubescence color	:	Gray
Plant habit	:	Bushy, determinate
Hypocotyl color	:	Purple
No. days to flowering	:	69
Maturity group	:	VII - 168 days ('Hood'VI-161 days)
Lodging score	:	1.3
Height	:	96 cm. ('Hood' 81 cm.)
Disease	:	Susceptible to Soybean Cyst

13D. Exhibit D:

'FFR 777' resembles the variety 'Hood' in general plant appearance and seed characteristics. Both have spherically flattened seeds, shiny yellow seedcoat with buff hilum, yellow cotyledons, tan pods, grey pubescence, purple hypocotyl color, purple flowers and determinate growth habit. When 'FFR 777' and 'Hood' are grown in the greenhouse the seedlings are indistinguishable. It differs from 'Hood' in maturity (7 days later) and daylength requirement ('Hood' is in Group VI whereas 'FFR 777' is in Group VII). The inflorescences of 'FFR 777' are larger than those of 'Hood' but they develop a higher percentage of 2-seed pods. 'FFR 777' is about 15 cm. taller than 'Hood'.

13E. Exhibit E:

The applicants are employees of the Farmers Forage Research Cooperative and Farmers Forage Research Cooperative is the sole owner of the soybean 'FFR 777'.

FORM GR-470
(2-12-71)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION FFR777	2. KIND NAME Soybean	FOR OFFICIAL USE ONLY PVPO NUMBER 73018
3. GENUS AND SPECIES NAME Glycine Max	4. FAMILY NAME *(Botanical)* Leguminoseae	FILING DATE 10/24/72 TIME 3:30 P.M.
	5. DATE OF DETERMINATION	FEE RECEIVED $250 CHARGES
6. NAME OF APPLICANT(S) FFR Farmers Forage Research Cooperative	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* 4112 East State Road 225 West Lafayette, Indiana	8. TELEPHONE AREA CODE AND NUMBER 317+ 567-2700

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Cooperative	10. STATE OF INCORPORATION Wisconsin	11. DATE OF INCORPORATION 1961

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
4112 East State Road 225
West Lafayette, Indiana 47906

Robert J. Buker, Executive Vice President and General Manager
FFR
4112 East State Road 225
West Lafayette, Indiana 47906

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 12A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52, P.L. 91-577)*
- [X] 12B. Exhibit B, Botanical Description of the Variety
- [X] 12C. Exhibit C, Objective Description of the Variety
- [X] 12D. Exhibit D, Data Indicative of Novelty
- [X] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

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. *(See Section 52, P.L. 91-577).*

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), P.L. 91-577) (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO per call 4/26/73

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

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? 3

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

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 (P.L. 91-577).

October 24, 1972
(DATE)

G Robert Taylor
(SIGNATURE OF APPLICANT)

October 24, 1972
(DATE)

R J Buker
(SIGNATURE OF APPLICANT)

FORM GR-470 (REVERSE)

RECEIVED OCT 26 1972 OF AGRICULTURE

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INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unles noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety.

12a 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.

12b 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.

12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.

12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

#73018

Farmers Forage Research

FARMERS FORAGE RESEARCH COOPERATIVE

4112 East State Road 225 West Lafayette, Indiana 47906 Tel. 317-567-2700

12A Exhibit A:

FFR777 is a single plant selection made in September 1968 by G. R. Taylor from a field of foundation Hood soybeans growing in a nematode infested area near Halls, Tennessee. (photo of the original plant, enclosed - Photo 1) Hood was a cross of Roanoke x N45-745. N45-745 was from CNS x Ogden. 34 seedlings from this single plant were grown in the greenhouse in the winter of 1968-69. (see photo 2) These were compared with the parent variety in side-by-side rows the following summer (see photo 3). First yield tests were conducted at three locations in 1970. Second year yield tests and university tests were made in 1971. Multiplication of seed was accomplished in Brazil in the winter of 1970-71, and in Virginia, North Carolina, Georgia, and Tennessee in the summer of 1971. No identifiable variants have been recognized during multiplication of this seed.

No changes in plant morphology, seed quality, etc. from the original plant have been observed during the three years of production in five eastern states.

12B Exhibit B:

Seed characteristics are very similar to the variety Hood. The seedlings grow faster and produce larger plants than Hood. The immature leaves are a lighter green color than similar leaves of Hood. Maturity is 7 days later than Hood. The mature plants of FFR777 are taller and larger than Hood. The inflorescences are larger and bear more 2-seeded pods than Hood. Yield data submitted indicates FFR777 out-yielded Hood as much as 37%.

EXHIBIT C AMENDED TO EXHIBIT D AS PER TELEPHONE CALL TO DR. BUKER, 10/12/73 RJS

12C ~~Exhibit C~~ EXHIBIT D (See also Form GR-471-1):

This variety resembles the variety Hood in general appearance in that both have spherically flattened seed, shiney yellow seed coats, with buff hilum. Both have yellow cotyledons, tan pods, grey pubescence, purple/green hypocotyl color, purple flower color, and determinate growth habit. FFR777 differs from Hood in that it is about 7 days later and falls into a different maturity class, (Hood is Group VI - FFR is Group VII). See tables 1 and 2; plots 1,3,&4. The inflorescences of FFR777 are larger than Hood, but have more 2-seeded pods. The incidence of two-seeded pods can be seen in the photos enclosed. The greenhouse appearance of these seedlings was indistinguishable. Their progeny were individually tested for lab nematode resistance and were all found to be susceptible. The remnant greenhouse produced seed was bulked. It was grown in a side-by-side comparison with the variety Hood in 1969 at Jackson, Tennessee. We harvested the 8489 rows in 1969 providing seed for yield plots in Tennessee, North Carolina, Virginia, and Georgia.

#73018

12D Exhibit D: (Photographs, plus Tables I & II)

The following photographs indicate the novelty of FFR777)previously designated as FFR8489).

Photo 1: Mr. Larry Davis and Mr. Charles Rooks with the single plant whose progeny later designated FFR8489 and a typical plant of Hood taken from same field - September 1968.

Photo 2: FFR8489 growing in the greenhouse in winter of 1968-69.

Photo 3: Paired rows of FFR8489 and Hood grown at Jackson, Tennessee in 1969.

Photo 4: Eight check rows of Hood at the edge of the 1971 4-acre increase of 8489 (now FFR777) at Hales Point, Tennessee.

Photo 5: A single mature plant showing racemes and 2-seeded pods.

12E Exhibit E: (See also Tables I & II)

G. Robert Taylor is Soybean Breeder for Farmers Forage Research Cooperative; Dr. Robert J. Buker is Vice President and General Manager for Farmers Forage Research Cooperative.