



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Soybean Research Foundation, 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 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. THE UNITED STATES 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

'Gutwein 221'



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 April in the year of our Lord one thousand nine hundred and eighty.

Attest:

*Samuel R. Lee*  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*W. B. Berglund*  
Secretary of Agriculture

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

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

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY		1b. VARIETY NAME		FOR OFFICIAL USE ONLY	
		Gutwein 221		PV NUMBER 7900108	
2. KIND NAME		3. GENUS AND SPECIES NAME		FILING DATE	TIME
Soybeans		Glycine max (L.) Merr.		8-30-79	10:30 <input checked="" type="radio"/> A.M. <input type="radio"/> P.M.
4. FAMILY NAME (BOTANICAL)		5. DATE OF DETERMINATION		FEE RECEIVED	DATE
Leguminosae		October, 1975		\$ 500.00	8-30-79
				\$ 250.00	3/17/80
6. NAME OF APPLICANT(S)		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)		8. TELEPHONE AREA CODE AND NUMBER	
Soybean Research Foundation, Inc.		115 N. Perry St. Mason City, IL 62664		217 482-3219	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION
Corporation			Illinois		April 28, 1965
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:					
Arnold L. Matson, Director of Soybean Breeding Soybean Research Foundation, Inc. Mason City, Illinois 62664					

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, Novelty Statement.

13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)

13D. Exhibit D, Additional Description of the Variety.

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

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL?  YES  NO

17. The applicant(s) declare(s) that a viable sample of basic seed 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 Act.

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

August 20, 1979  
 (DATE)

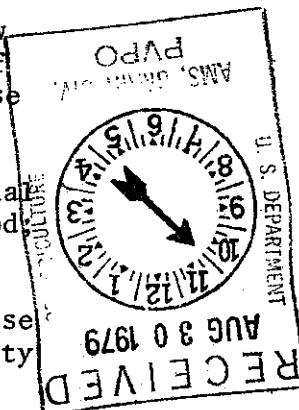
*Arnold L. Matson*  
 (SIGNATURE OF APPLICANT)

## 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. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, 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

- 5 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.
- 13a 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.
- 13b 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.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d 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.
- 14a 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.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



7900108

Gutwein 221

Exhibit A -

The line 72-3176 originates from a single F<sub>4</sub> plant from the cross Corsoy x Amsoy grown in 1971. This line appeared to be phenotypically uniform except that it was segregating for tan and brown pods. In 1976, 746 F<sub>9</sub> progeny rows (seed from individual F<sub>9</sub> plants) from 72-3176 were grown and all rows uniform except for pod color were harvested as individual lines. 376 lines homozygous for brown pod color were put into isolated yield trial in 1977 and the 110 highest yielding lines were bulked to produce breeders seed of Gutwein 221. The bulk is stable for all phenotypic characters and no variant are a part of the variety description. All breeding and selection work was carried out at the Soybean Research Foundation under the supervision of Dr. Arnold L. Matson. I have inspected this variety at all stages of development and I find no evidence of instability in the variety.

Exhibit B -

~~Gutwein 221 is very similar to Matsoy but may be distinguished from Matsoy since it is 2 days earlier in maturity.~~

SEE REVISED EXHIBIT B. rjs 11/9/79

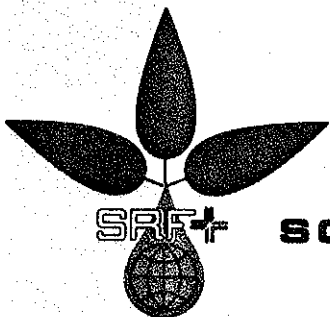


EXHIBIT B - ADDENDUM RJS 2/5/80

SRF

**SOYBEAN RESEARCH FOUNDATION, INC.**

POST OFFICE BOX 72 • MASON CITY • ILL. • 62664 • AC 217/482-3219

January 31, 1980

Dr. Robert J. Snyder  
Examiner, Plant Variety  
Protection Office  
USDA - AMS  
National Agricultural Library Bldg.  
Beltsville, Maryland 20705

Dear Dr. Snyder:

Subject: Soybean Application No. 7900108, 'Gutwein 221'

In my letter of December 20, 1979 I presented data to show that Gutwein 221 was earlier than Matsoy. This data came from five tests with three replications in each test. In three of these tests one of the three replications showed no difference in maturity. This is to be expected since in soybean breeding maturity date is taken to be that date at which 95% of the pods are brown (dry). In a program as large as ours, it is impossible to take maturity notes every day. The practice we follow is to take notes every five to seven days, it being pretty accurate to date 3-4 days in advance and to back-date 2-3 days. However, sometimes we may have two plots which although they are obviously different in maturity, we do not think they are dry enough to date but on the next trip through if we have had low humidity days, both plots may have dried down. In this case, they are both given the same maturity date. Of course different replications may differ depending upon soil type, drainage, location in field, lodging, stand, adjoining plots, etc. I would look with great suspicion on data that was uniform in all replications. These data far exceed the 99% level of confidence that the two lines do differ in maturity.

72-3176 and 72-3299 each were tested as single lines in our yield trials from 1973 to 1976. During this time there was no evidence of segregation for maturity within either line. It is virtually impossible to keep mixture out if seed is saved from yield trial so when it was decided to produce Breeders Seed of these two lines, single plant progeny rows were grown for each line so that any mixture which might have crept in could be removed as a full row. When this was done, it became obvious that both lines were segregating for brown and tan pod wall color. The fact that there was no noticeable segregation for maturity before separating the line by pod wall color and that there was no between plant row difference in maturity when individual plant rows were grown is ample evidence that there was no maturity difference between tan and brown pod lines of the same line.

I hope that this letter satisfactorily explains our data.

Sincerely yours,

*Arnold L. Matson*

Arnold L. Matson

Director of Soybean Breeding

ALM: bjs



EXHIBIT B R/S 1/2/80

**SOYBEAN RESEARCH FOUNDATION, INC.**

POST OFFICE BOX 72 • MASON CITY • ILL • 62664 • AC 217/482-3219

December 20, 1979

Dr. Robert J. Snyder, Examiner  
 Plant Variety Protection Office  
 USDA - ARS  
 National Agr. Library Bldg.  
 Beltsville, Maryland 20705

Dear Dr. Snyder:

Subject: Soybean Application No. 7900108, 'Gutwein 221'

Here are statistical data to support the maturity difference between Gutwein 221 and Matsoy. As mentioned in Exhibit A, Gutwein 221 is the brown pod segregate from the line 72-3176 and Matsoy is the brown pod segregate from the line 72-3299. These data were for Gutwein 221 and Matsoy before we separated out the tan and brown pods however, it is valid data because there is no maturity difference between the tan and brown pods within either line. Maturities are stated as days after August 31. These were all three replication tests.

<u>Test</u>	<u>Year</u>	<u>Location</u>	<u>Gutwein 221</u>	<u>Matsoy</u>	<u>Dif</u>
T42-2A	1974	San Jose, IL	34	38	4
			33	34	1
			34	36	2
T42-2B	1975	San Jose, IL	26	26	0
			27	28	1
			27	28	1
T42-2B	1975	Mason City, IL	23	27	4
			25	26	1
			22	27	5
T42-2C	1976	San Jose, IL	23	24	1
			24	24	0
			23	24	1
T42-2C	1976	Mason City, IL	27	27	0
			25	27	2
			23	27	4
		$\bar{x}$	26.4	28.2	
		s	4.10	4.31	
		s $\bar{x}$	1.06	1.11	

t test for paired variates

$\bar{D}$  1.8  $s_d = 1.66$   
 $s_{\bar{d}} = .43$   
 $t = 4.19^{**}$

t.05 = 2.14 for 14 degrees of freedom  
 t.01 = 2.98

Sincerely yours,



Asgrow Seed Company

79-108

July 22, 1982

Soy - 160twen 22  
\$6 paid

Mr. Kenneth H. Evans, Acting Commissioner  
Plant Variety Protection Office  
National Agricultural Library Building  
Beltsville, Maryland 20705

Dear Mr. Evans:

This letter is a follow up of our recent telephone conversation.

Asgrow would like to obtain photocopies of selected PVP applications for those varieties for which protection is granted. We are interested in receiving applications for the following crops:

Garden Bean	Watermelon	Pepper
Dry Bean	Broccoli	Corn
Lettuce	Cabbage	Cucumber
Onion	Carrot	Eggplant
Parsley	Cauliflower	Muskmelon
Tomato	Pea	Squash
		Soybean

We are interested in applications approved in 1980, 1981 and those granted thus far in 1982.

Exclude the following copies:

1. Do not send photocopies of any Asgrow applications.
2. Do not send a photocopy of the actual certificate.
3. Do not send photocopies of applications issued in 1981 for soybeans and dry beans. Your office has sent these already.

Could you please advise me the cost of the above information and I will send you a check.

For the future, we would be interested in receiving copies of applications for the above species. Again, exclude Asgrow applications and the actual certificate itself. Could you arrange to have this done routinely, perhaps each month or each quarter, and we would reimburse your office.

Very truly yours,

John A. Batcha

*NOTE: In regards to this request made by your Company, the following attached list of Issued Certificates have been photocopied for you. Upon receipt of your check for \$1,363 the photocopies will be mailed to you. Your patience is appreciated in the delay, caused by the reduced PVP staff and the magnitude of this order. Thank you.*

Secretary  
PVP Office  
Jan. 19, 1983

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) <b>Soybean Research Foundation</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <b>7900108</b>
ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code) <b>115 N. Perry St. Mason City, IL 62664</b>	VARIETY NAME OR TEMPORARY DESIGNATION <b>Gutwein 221</b>

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    5 = OTHER (Specify)    SHADE:  1 = LIGHT    2 = MEDIUM    3 = DARK

3. SEED COAT LUSTER:

1 = DULL    2 = SHINY  
*R/S 11/13/79*

4. SEED SIZE

1     6 GRAMS PER 100 SEEDS

5. HILUM COLOR:

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

6. COTYLEDON COLOR:

1 = YELLOW    2 = GREEN

7. LEAFLET SIZE (See Reverse):

1 = SMALL    2 = MEDIUM    3 = LARGE

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:

1 = SCATTERED    2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

1 = GRAY    2 = BROWN    3 = OTHER (Specify)

SHADE:

1 = LIGHT    2 = MEDIUM    3 = DARK

14. PLANT TYPES (See Reverse):

1 = SLENDER    2 = BUSHY    3 = INTERMEDIATE

15. PLANT HABIT:

1 = DETERMINATE    2 = INDETERMINATE    3 = OTHER (Specify)

16. HYPOCOTYL COLOR:

1 = GREEN    2 = PURPLE  
*R/S 11/13/79*

17. SEED PROTEIN:

1 = A    2 = B

18. NUMBER OF DAYS TO FLOWERING

(Place a zero in first box (e.g. 09) when days are 9 or less.)

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 (e.g. 02) 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)

<input type="checkbox"/> BACTERIAL PUSTULE	<input type="checkbox"/> SOYBEAN CYST	<input type="checkbox"/> DOWNY MILDEW	<input type="checkbox"/> PURPLE STAIN	<input type="checkbox"/> POD AND STEM BLIGHT	<input type="checkbox"/> ROOT KNOT
<input type="checkbox"/> FROGEYE	<input type="checkbox"/> STEM CANKER	<input checked="" type="checkbox"/> PHYTO-PHTHORA	<input type="checkbox"/> BROWN STEM ROT	<input type="checkbox"/> TARGET SPOT	<input type="checkbox"/> BROWN SPOT
<input type="checkbox"/> BUD BLIGHT	<input type="checkbox"/> WILDFIRE	<input type="checkbox"/> RHIZOCTONIA ROT	<input type="checkbox"/> OTHER (Specify)		



22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Matsoy	Petiole angle	Matsoy
Leaf shape	Matsoy	Seed size	SRF 200
Leaf color	Matsoy	Seed shape	Matsoy
Leaf surface	Matsoy	Seedling pigmentation	Matsoy

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 Gutwein 221	131	2.1	44	86	117	39.0	20.8%		
Name of similar variety Matsoy	133	2.4	46	74	106	38.5	21.9		

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"

