THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Minnesota Agricultural Experiment Station
University of Minnesota

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 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 THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUPLICATE 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 SUCCESSIONS, 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 REPLACEMENT OF Viable BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS, EXCEPT THE APPLICANT(S), FROM SELLING THE VARIETY, OFFERING IT FOR SALE, OR REPRODUCING IT; OR IMPORTING IT; OR EXPORTING IT; OR SAVING IT FOR PROPAGATION; OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY ACT. IN THE UNITED STATES SEED OF THIS VARIETY (*) SHALL BE SOLD BY VARIETY NAME ONLY AS A COMMERCIAL SEED AND (@) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY.

SOYBEAN

"MN1301"

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 twenty-sixth day of November, in the year two thousand two.

[Signature]
Commissioner
Plant Variety Protection Office

[Signature]
Agricultural Marketing Service

[Signature]
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

Instructions and information collection burden statement on reverse

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)
   Minnesota Agricultural Experiment Station
   University of Minnesota

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
   M89-936

3. VARIETY NAME
   MN-1361
   MN1361 (LST: 11/15/2002)

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)
   190 Coffey Hall
   1420 Eckles Avenue
   St. Paul, MN 55108

5. TELEPHONE (Include area code)
   (612) 625-4211
   (612) 625-1268

6. FAX (Include area code)
   (612) 625-4211
   (612) 625-1268

7. GENUS AND SPECIES NAME
   Glycine max
   Leguminosae

8. FAMILY NAME (Botanical)
   Soybean

9. CROP KIND NAME (Common name)
   University

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)
    J.H. Orf
    Department of Agronomy and Plant Genetics, 411 Borlaug Hall,
    University of Minnesota
    1991 Upper Buford Circle
    St. Paul, MN 55108

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
    J.H. Orf
    Department of Agronomy and Plant Genetics, 411 Borlaug Hall,
    University of Minnesota
    1991 Upper Buford Circle
    St. Paul, MN 55108

14. TELEPHONE (Include area code)
    (612) 625-8275

15. FAX (Include area code)
    (612) 625-1268

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
   a. XX Exhibit A: Origin and Breeding History of the Variety
   b. XX Exhibit B: Statement of Distinctness
   c. XX Exhibit C: Objective Description of the Variety
   d. xx Exhibit D: Additional Description of the Variety (Optional)
   e. XX Exhibit E: Statement of the Basis of the Applicant's Ownership
   f. XX Voucher Sample (2,500 viable unrooted seed or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)
   g. XX Filing and Examination Fee ($24,460), made payable to "Treasurer of the United States" (Mail to PVP)

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 636 of the Plant Variety Protection Act)
   XX YES if "yes," answer items 18 and 19 below
   ☐ NO if "no," go to item 20

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED TO NUMBER OF GENERATIONS?
   XX YES
   ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
   XX FOUNDATION
   ☐ REGISTERED
   ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
   ☐ YES if "yes," give names of countries and dates
   ☐ NO

21. The applicant(s) 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 applicant(s) hereof, the owner(s) of this sexually reproduced or tuber propagated plant variety, and believes 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.

Applicant(s) hereby certifies that it is not in violation of any laws of any jurisdiction and does not infringe any patent that may exist in the United States and elsewhere

SIGNATURE OF APPLICANT (Owner(s))

Marilyn R. DeLong

NAME (Please print or type)

CAPACITY OR TITLE

Deputy Director, MAES

DATE

1/27/98

SIGNATURE OF APPLICANT (Owner(s))

Marilyn R. DeLong

NAME (Please print or type)

CAPACITY OR TITLE

Deputy Director, MAES

DATE

1/27/98

(See reverse for instructions and information collection burden statement)
Exhibit A

Origin and Breeding History of MN1301 Soybean

'MN1301' soybean traces to the F₅ progeny of a F₄ plant harvested from a population that had been advanced by a modified single seed descent procedure from the cross M84-492 x M74-498. The pedigree of M84-492 is A79-136012 x M75-2. A79-136012 is a selection from the cross Pride B216 x Land O'Lakes 4102. The pedigree of Pride B216 is Corsoy x Wayne. The pedigree of Land O'Lakes 4102 is [Wayne x (Clark x Adams)] x Cutler. The pedigree of M75-2 is Hodgson(4) x [M67-141 x (Chippewa x Higan)]. M67-141 is a selection from the cross Corsoy x Wayne. The line M74-498 has the pedigree Peterson Px20 x [Hodgson(4) Rps1 x Merit]. Peterson Px20 is a blend of 50% P61-22 and 50% Wells. The pedigree of P61-22 is Corsoy x (Magna x Provar). Bulked seed of the F₅ row was designated M89-936 and was used for yield testing in the F₆ (1990). Subsequent tests of strain M89-936 were conducted in Minnesota in the F₇ (1991) and F₈ (1992). In the F₈ generation 50 typical plants were harvested individually to initiate purification for observable traits including reaction to race 1 of phytophthora root rot. In the F₉ (1993) M89-936 was entered in the maturity group I Regional Soybean Prelim Test. In 1994 forty rows were grown for purification purposes. Twenty-seven rows appeared uniform for plant and seed characteristics including reaction to race 1 of phytophthora root rot, therefore seed of these rows were bulked to provide breeders seed. In the F₁₀ (1994), F₁₁ (1995) and F₁₂ (1996) M89-936 continued to be tested in the Uniform Regional Soybean Test Maturity Group I. In the F₁₀ (1994) a small increase of breeders seed was made. In the F₁₁ (1995) Foundation Seed was produced by the Minnesota Foundation Seed Organization. In 1996 Foundation Seed was shared with other states for increase. In the F₁₂ (1996) seed was increased and M89-936 was approved for release as MN1301. On February 15, 1997 seed of MN1301 was provided to seed growers in Minnesota. No off types or variants were noted in the seed multiplication process of MN1301 over three generations. MN1301 has been stable and uniform for the characteristics described in Exhibit C and meets seed certification standards.
Exhibit B

Statement of Distinctiveness

'MN1301' soybean is most similar to 'Parker' soybean. MN1301 is approximately three days earlier in maturity than Parker. The yield of MN1301 is about 7% lower than Parker. MN1301 is about one inch shorter than Parker. Seed of MN1301 is about 0.4 grams per 100 seed smaller than Parker. MN1301 has about 1.2 percent higher protein content and 0.6 percent lower content compared to Parker. Seed of MN1301 has yellow hila while seed of Parker has buff hila.

Data comparing MN1301 is taken from the Uniform Test I, Northern States 1994-1996 (a total of 42 tests for most traits).

<table>
<thead>
<tr>
<th>Variety</th>
<th>Date mature</th>
<th>Yield bu/a</th>
<th>Height inches</th>
<th>Lodging score</th>
<th>Seed quality score</th>
<th>Seed size g/100</th>
<th>Protein %</th>
<th>Oil %</th>
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<tbody>
<tr>
<td>MN1301</td>
<td>9/14</td>
<td>47.5</td>
<td>35</td>
<td>1.5</td>
<td>1.7</td>
<td>17.5</td>
<td>42.7</td>
<td>19.9</td>
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<tr>
<td>Parker</td>
<td>9/17</td>
<td>51.7</td>
<td>36</td>
<td>2.5</td>
<td>1.7</td>
<td>17.9</td>
<td>41.5</td>
<td>20.5</td>
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</tbody>
</table>
OBJECTIVE DESCRIPTION OF VARIETY

SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)
Minnesota Agricultural Experiment Station
University of Minnesota

TEMPORARY DESIGNATION
M89-936

VARIETY NAME
NN1301

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)
190 Coffey Hall
1420 Eckles Avenue
St. Paul, MN 55108

FOR OFFICIAL USE ONLY
PVPO NUMBER
36000099

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. 09). 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)
   2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
   3 = Elongate (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)
   17
   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)
   2 = Type B (SP1)

9. HYPOCOTYL COLOR:
   1 = Green only ('Evans'; 'Davis')
   2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
   3 = Light Purple below cotyledons ('Beeston'; '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'; 'AS512')
    3 = Large ('Crawford'; 'Tracy')
    2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

3  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:

2  1 = Tan
    2 = Brown
    3 = Black

15. PLANT PUBESCENCE COLOR:

1  1 = Gray
    2 = Brown (Tawny)

16. PLANT TYPES:

2  1 = Slender ('Essex'; 'Amsoy 71')
    3 = Bushy ('Gnome'; 'Govan')
    2 = Intermediate ('Amcor'; 'Braxton')

17. PLANT HABIT:

3  1 = Determinate ('Gnome'; 'Braxton')
    3 = Indeterminate ('Nebsoy'; 'Improved Pelican')
    2 = Semi-Determinate ('Wilf')

18. MATURITY GROUP:

4  1 = 000
    2 = 00
    3 = 10
    11 = VII
    12 = IX
    13 = X

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

BACTERIAL DISEASES:

0  Bacterial Pustule (Xanthomonas phaseoli var. sojensis)

0  Bacterial Blight (Pseudomonas glycinea)

0  Wildfire (Pseudomonas tabaci)

FUNGAL DISEASES:

0  Brown Spot (Septoria glycinea)

0  Frogeye Leaf Spot (Cercospora sojina)

0  Race 1
    2 = Race 2
    3 = Race 3
    4 = Race 4
    5 = Race 5
    6 = Other (Specify)

0  Target Spot (Corynespora cassiicola)

0  Downy Mildew (Peronospora trifolii var. manshurica)

0  Powdery Mildew (Microsphaera diffusa)

1  Brown Stem Rot (Cephalosporium gregatum)

0  Stem Canker (Diaporthe phaseoli var. caulivora)
19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

- Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)
- Purple Seed Stain (*Cercospora kikuchii*)
- Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Root Rot (*Phytophthora megasperma* var. *sojae*)

<table>
<thead>
<tr>
<th>Race</th>
<th>Race 1</th>
<th>Race 2</th>
<th>Race 3</th>
<th>Race 4</th>
<th>Race 5</th>
<th>Race 6</th>
<th>Race 7</th>
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<td>0</td>
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<tr>
<td>2</td>
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<td>0</td>
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</tr>
</tbody>
</table>

VIRAL DISEASES:

- Bud Blight (*Tobacco Ringspot Virus*)
- Yellow Mosaic (*Bean Yellow Mosaic Virus*)
- Cowpea Mosaic (*Cowpea Chlorotic Virus*)
- Pod Mottle (*Bean Pod Mottle Virus*)
- Seed Mottle (*Soybean Mosaic Virus*)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- Lance Nematode (*Hoplolaimus Columbus*)
- Southern Root Knot Nematode (*Meloidogyne incognita*)
- Northern Root Knot Nematode (*Meloidogyne hapla*)
- Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- Reniform Nematode (*Rotylenchulus reniformis*)

<table>
<thead>
<tr>
<th>Race</th>
<th>Race 1</th>
<th>Race 2</th>
<th>Race 3</th>
<th>Race 4</th>
<th>Other (Specify)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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

- Iron Chlorosis on Calcareous Soil
- Other (Specify)

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

- Mexican Bean Beetle (*Epilachna varivestis*)
- Potato Leaf Hopper (*Empoasca fabae*)

<table>
<thead>
<tr>
<th>Other (Specify)</th>
</tr>
</thead>
</table>

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>NAME OF VARIETY</th>
<th>CHARACTER</th>
<th>NAME OF VARIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Shape</td>
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<td>Seed Coat Luster</td>
<td>Parker</td>
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<tr>
<td>Leaf Shape</td>
<td>Parker</td>
<td>Seed Size</td>
<td>Parker</td>
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<tr>
<td>Leaf Color</td>
<td>Parker</td>
<td>Seed Shape</td>
<td>Parker</td>
</tr>
<tr>
<td>Leaf Size</td>
<td>Parker</td>
<td>Seedling Pigmentation</td>
<td>Parker</td>
</tr>
<tr>
<td>VARIETY</td>
<td>NO. OF DAYS MATURITY</td>
<td>PLANT LODGING SCORE</td>
<td>CM PLANT HEIGHT</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>MN1301</td>
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<tr>
<td>Parker</td>
<td>Name of Similar Variety</td>
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<td>91</td>
</tr>
</tbody>
</table>

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S):
   Minnesota Agricultural Experiment Station
   University of Minnesota

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country):
   190 Coffey Hall
   1420 Eckles Avenue
   St. Paul, MN 55108

2. TEMPORARY DESIGNATION
   OR EXPERIMENTAL NUMBER
   M89-936

3. VARIETY NAME
   MNI301
   MNI 301 (B19/11/2002)

5. TELEPHONE (include area code)
   (612) 625-4211

6. FAX (include area code)
   (612) 625-0256

7. PVPO NUMBER
   060009

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

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

10. Is the applicant the original owner?  X YES  NO
    If no, please answer the following:
    a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
       X YES  NO
       If no, give name of country

    b. If original rights to variety were owned by a company, is the original owner(s) a U.S. based company?
       X YES  NO
       If no, give name of country

11. Additional explanation on ownership (If needed, use reverse for extra space):
    The University of Minnesota is the employer of the breeder who developed
    MNI 301 (B19/11/2002)

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 owner, both the original owner and the applicant must meet one of the above criteria.

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

According to the Paperwork Reduction Act of 1995, no persons are 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 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information.

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