THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DRAAD Genetics Corporation

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 HEREBITU 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 INDICATIONS IS, IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT IS (ARE) ESTIPULATED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THE CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S), AND THE ASSIGNS, HEIRS, OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THE GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VARIETY BASED HED 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, CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN CREATING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (64 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ)

CORN, FIELD

'99DSQI'

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 nineteenth day of July, in the year two thousand two.

[Signature]

Commissioner

[Title]

[Title]

[Title]
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(IES) (as it is to appear on the Certificate)
DEKALB Genetics Corporation

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)
3100 Sycamore Road
DeKalb, IL 60115

7. GENUS AND SPECIES NAME
Zea Mays

8. FAMILY NAME (Botanical)
Gramineae

9. CROP KIND NAME (Common name)
Corn

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
June 15, 1988

6. TELEPHONE (Include area code)
(815) 758-3461

6. FAX (Include area code)
(815) 758-4106

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. Tim Kain, Patent Scientist
Monsanto Company
3100 Sycamore Road
DeKalb IL 60115
Ph. 815-758-9281 Fax 815-758-4106
tkain@monsanto.com

14. TELEPHONE (Include area code)
(815) 758-3461

15. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. [ ] Exhibit A. Origin and Breeding History of the Variety
b. [ ] Exhibit B. Statement of Distinctness
c. [ ] Exhibit C. Objective Description of the Variety
d. [ ] Exhibit D. Additional Description of the Variety (Optional)
e. [ ] Exhibit E. Statement of the Basis of the Applicant's Ownership
f. [ ] Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)
g. [ ] Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" (Mail to PVPO)

16. TELEPHONE (Include area code)
(815) 758-3461

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 833(a) of the Plant Variety Protection Act)
[ ] 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 AS TO NUMBER OF GENERATIONS?
[ ] YES [ ] NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[ ] 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

U.S. February 1998

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) (the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) 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) informed that false representation hereon can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s))

R. Mark Lawson

NAME (Please print or type)

R. Mark Lawson

CAPACITY OR TITLE
Director Research

DATE 5/18/98

SIGNATURE OF APPLICANT (Owner(s))

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

Origin and Breeding History
09DSQ1

09DSQ1 was selected for combining ability, standability, and grain quality.

<table>
<thead>
<tr>
<th>Season</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 1992</td>
<td>The inbred line 8F196 (a proprietary DEKALB Genetics Corporation inbred) was crossed to a line derived from Pioneer Hi-Bred 3394.</td>
</tr>
<tr>
<td>Winter 1992-93</td>
<td>S0 seed was grown (nursery book row no. 92FL:731).</td>
</tr>
<tr>
<td>Summer 1993</td>
<td>S1 seed was grown (nursery book row nos. 93S:151 to 165).</td>
</tr>
<tr>
<td>Winter 1993-94</td>
<td>S2 seed was grown ear-to-row (nursery book row nos. 93FL:268 to 335).</td>
</tr>
<tr>
<td>Summer 1994</td>
<td>S3 seed was grown ear-to-row (nursery book row nos. 94S:4659 to 4660).</td>
</tr>
<tr>
<td>Winter 1994-95</td>
<td>S4 seed was grown ear-to-row (nursery book row nos. 94HI8J:126 to 127).</td>
</tr>
<tr>
<td>Summer 1995</td>
<td>S5 seed was grown ear-to-row (nursery book row nos. 95S:301 to 333). Seed from rows 308 to 312 was given the designation 09DSQ1.</td>
</tr>
<tr>
<td>Winter 1995-96</td>
<td>S6 seed was grown ear-to-row (nursery book row nos. HQ:181 to 220).</td>
</tr>
<tr>
<td>Summer 1996</td>
<td>S7 seed was grown ear-to-row (nursery book row nos. 96S:10935 to 10954).</td>
</tr>
<tr>
<td>Winter 1996-97</td>
<td>S8 seed was grown ear-to-row (nursery book row nos. 96HIEE 13-71 to 13-80).</td>
</tr>
</tbody>
</table>

Statement of Stability and Uniformity

Corn inbred 09DSQ1 was coded in 1995 and has been reproduced by self pollination for the past three generations and judged to be stable. Inbred 09DSQ1 is uniform for all traits observed.

Statement of Variants

09DSQ1 shows no variants other than what would normally be expected due to environment or that would occur for almost any character during the course of repeated sexual reproduction.
EXHIBIT B

Statement of Distinctness

DEKALB Genetics Corporation believes that 09DSQ1 is most similar to corn inbred 8F196, an inbred developed by DEKALB Genetics Corporation.

09DSQ1 and 8F196 differ most significantly in the following traits:

Qualitative Data for 09DSQ1 and 8F196

<table>
<thead>
<tr>
<th>TRAIT</th>
<th>09DSQ1</th>
<th>8F196</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glume Color</td>
<td>Green (5 GY 4/8)</td>
<td>Red (2.5 R 5/8)</td>
</tr>
<tr>
<td>Silk Color</td>
<td>Pink (2.5 R 7/6)</td>
<td>Green-Yellow (2.5 GY 8/6)</td>
</tr>
<tr>
<td>Leaf Sheath</td>
<td>Light (rating =4)*</td>
<td>Heavy (rating = 9)</td>
</tr>
<tr>
<td>Pubescence</td>
<td>White (Lighter than 5 Y 9/1)</td>
<td>Red (5 R 3/8)</td>
</tr>
</tbody>
</table>

*Rating based on scale 1= none, 9 = heavy

Isozyme Profile Data for 09DSQ1 vs. 8F196

<table>
<thead>
<tr>
<th>LOCI</th>
<th>ISOZYME ALLELE</th>
<th>09DSQ1</th>
<th>8F196</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acph1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Adh1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Cat3</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Got2</td>
<td>3.5</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Got1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Idh1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Idh2</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mdh1</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Mdh2</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Mdh4</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Mdh5</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Pgm1</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Pgm2</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>6Pgd1</td>
<td>3.8</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>6Pgd2</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Phi1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

09DSQ1 differs from 8F196 at the Acph1 and Got2 loci.
**OBJECTIVE DESCRIPTION OF VARIETY**

**CORN (Zea mays L.)**

<table>
<thead>
<tr>
<th>Name of Applicant(s)</th>
<th>Variety Seed Source</th>
<th>Variety Name or Temporary Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEKALB Genetics Corporation</td>
<td></td>
<td>ONSQ1</td>
</tr>
</tbody>
</table>

**Address (Street & No., or R.F.D. No., City, State, Zip Code and Country):**

3100 Sycamore Road, DeKalb, IL 60115 U.S.A.

**FOR OFFICIAL USE**

PVPO Number: 9800272

**COLOR CHOICES** (Use in conjunction with Munsell color code to describe all color choices; describe #25 and #26 in Comments section):

- 01-Light Green
- 02-Medium Green
- 03-Dark Green
- 04-Very Dark Green
- 05-Green-Yellow
- 06-Pale Yellow
- 07-Yellow
- 08-Orange
- 09-Salmon
- 10-Orange
- 11-Pale Purple
- 12-Light Red
- 13-Cherry Red
- 14-Red
- 15-Red & White
- 16-Pale Purple
- 17-Purple
- 18-Colorless
- 19-White
- 20-White Capped
- 21-Buff
- 22-Tan
- 23-Brown
- 24-Bronze
- 25-Variiegated (Describe)
- 26-Other (Describe)

**STANDARD INBRED CHOICES** (Use the most similar (in background and maturity) of these to make comparisons based on grow-out trial data):

- Yellow Dent Families: (Unrelated):
  - C009, N424,
  - C13, Iowa5125, P99, 2132
- B14 CM05, A632, B64, B68
- B37 H37, B76, H84
- B73 M192, A679, B73, NC268
- C103 Mo17, Va102, Va35, A692
- Oh43 A619, M571, H99, Va26
- WF9 W64A, A554, A654, Pa91
- White Dent: CI66, N105, Ky228
- Mo15W, Mo16W, Mo24W
- Popcorn: SG1533, 4722, RP301, HP7211

1. **TYPE:** (describe intermediate types in Comments section)

   - 1 = Sweet
   - 2 = Dent
   - 3 = Flint
   - 4 = Flour
   - 5 = Pop
   - 6 = Ornamental
   - 7 = Pipecorn

   Standard Inbred Name: B73
   2

2. **REGION WHERE DEVELOPED IN THE U.S.A.:**

   - 1 = Northwest
   - 2 = Northcentral
   - 3 = Northeast
   - 4 = Southeast
   - 5 = Southcentral
   - 6 = Southwest
   - 7 = Other

   Standard Seed Source: NCRIPS
   2

3. **MATURITY** (In Region Best Adaptability; show Heat Unit formula in "Comments" section):

   - DAYS
   - HEAT UNITS
   - 0 7 7
   - 1 5 2 0
   - 0 7 6
   - 1 4 7 0
   - 0 0 6 7
   - 2 0 8 7
   - (*) From 50% silk to optimum edible quality
   - 2 6 7 5
   - 0 6 2
   - 1 1 8
   - 1.5 From 50% silk to harvest at 25% moisture

   DAYS
   HEAT UNITS
   0 7 9
   1 5 2 8.0
   0 7 5
   1 5 1 2.0
   -
   0 1 2 9.0
   -
   -
   -
   -
   0 5 8
   1 2 6.7.5

4. **PLANT**:

   - Standard Deviation
   - Sample Size
   - Standard Deviation
   - Sample Size
   - 2 2 3.6 cm Plant Height (to tassel tip)
   - 12.979
   - 40
   - 2 2 9.7
   - 15.678
   - 170
   - 0 6 7.5 cm Ear Height (to base of top ear node)
   - 18.071
   - 40
   - 0 9 6.8
   - 10.088
   - 170
   - 0 1 1.9 cm Length of Top Ear Internode
   - 2.745
   - 40
   - 0 1 4.4
   - 1.874
   - 170
   - Average Number of Tillers
   - 0.050
   - 40
   - 0 0 1.1
   - 0.186
   - 170
   - 4 Anthocyanin of Brace Roots: 1 = Absent 2 = Faint 3 = Moderate 4 = Dark
   - 4

**Application Variety Data**: Page 1

**Standard Inbred Data**:
<table>
<thead>
<tr>
<th>Application Variety Data</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
<th>Standard Inbred Data</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. LEAF:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 0 0 8.6 cm Width of Ear Node Leaf</td>
<td>0.332</td>
<td>40</td>
<td>0 0 9.0</td>
<td>0.737</td>
<td>170</td>
</tr>
<tr>
<td>* 0 8 4.4 cm Length of Ear Node Leaf</td>
<td>2.859</td>
<td>40</td>
<td>0 7 9.4</td>
<td>2.596</td>
<td>170</td>
</tr>
<tr>
<td>* 6 9 Number of leaves above top ear</td>
<td>0.100</td>
<td>20</td>
<td>5.6</td>
<td>0.444</td>
<td>85</td>
</tr>
<tr>
<td>2 3.1 degrees Leaf Angle (measure from 2nd leaf above ear at anthesis to stalk above leaf)</td>
<td>5.218</td>
<td>40</td>
<td>2 5.8</td>
<td>7.800</td>
<td>170</td>
</tr>
<tr>
<td>* 0 2 Leaf Color (Munsell code 5 GY 4/8)</td>
<td></td>
<td></td>
<td>0 3 (Munsell code 5 GY 3/4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Leaf Sheath Pubescence (Rate on scale from 1=none to 9=peach fuzz)</td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Marginal Waves (Rate on scale from 1=none to 9=many)</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Longitudinal Creases (Rate on scale from 1=none to 9=many)</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. TASSEL:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 9.6 Number of Primary Lateral Branches</td>
<td>1.086</td>
<td>40</td>
<td>8.1</td>
<td>1.784</td>
<td>170</td>
</tr>
<tr>
<td>4 4.3 Branch Angle from Central Spike</td>
<td>8.718</td>
<td>40</td>
<td>2 4.6</td>
<td>5.261</td>
<td>170</td>
</tr>
<tr>
<td>* 4 5.3 cm Tassel Length (from top leaf collar to tassel tip)</td>
<td>2.551</td>
<td>40</td>
<td>3 7.4</td>
<td>4.944</td>
<td>170</td>
</tr>
<tr>
<td>5.0 Pollen Shed (Rate on scale from 0=male sterile to 9=heavy shed)</td>
<td></td>
<td></td>
<td>7.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1 Anther Color (Munsell code 2.5 R 7/6)</td>
<td></td>
<td></td>
<td>2 2 (Munsell code 10 Y 8.5/6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 2 Glume Color (Munsell code 5 GY 4/8)</td>
<td></td>
<td></td>
<td>0 2 (Munsell code 5 GY 4/8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Bar Glumes (Glume Bands): 1=Absent 2=Present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7a. EAR (Unhusked Data):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 1 1 Silk Color (3 days after emergence) (Munsell code 5 R 7/6)</td>
<td></td>
<td></td>
<td>0 5 (Munsell code 2.5 GY 0/6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 2 Fresh Husk Color (25 days after 50% silking) (Munsell code 5 GY 4/8)</td>
<td></td>
<td></td>
<td>0 2 (Munsell code 5 GY 4/8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 1 Dry Husk Color (65 days after 50% Silking) (Munsell code 2.5 Y 8/4)</td>
<td></td>
<td></td>
<td>2 1 (Munsell code 2.5 Y 8/4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 3 Position of Ear at Dry Husk Stage: 1=Upright 2=Horizontal 3=Pendant</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Husk Tightness (Rate on scale from 1=very loose to 9=very tight)</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Husk Extension (at harvest): 1=Short (ears exposed) 2=Medium (&lt;8 cm) 3=Long (8-10 cm beyond ear tip) 4=Very Long (&gt;10 cm)</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7b. EAR (Husked Ear Data):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 1 2.3 cm Ear Length</td>
<td>0.739</td>
<td>20</td>
<td>1 3.5</td>
<td>0.706</td>
<td>85</td>
</tr>
<tr>
<td>* 4 1.9 mm Ear Diameter at mid-point</td>
<td>1.669</td>
<td>20</td>
<td>4 3.0</td>
<td>1.766</td>
<td>85</td>
</tr>
<tr>
<td>1 0 6.7 gm Ear Weight</td>
<td>4.419</td>
<td>40</td>
<td>1 1 8.9</td>
<td>27.764</td>
<td>170</td>
</tr>
<tr>
<td>* 1 8 Number of Kernel Rows</td>
<td>0.653</td>
<td>20</td>
<td>1 7</td>
<td>0.758</td>
<td>85</td>
</tr>
<tr>
<td>2 Kernel Rows: 1=Indistinct 2=Distinct</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Row Alignment: 1=Straight 2=Slightly Curved 3=Spiral</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 0.7 cm Shank Length</td>
<td>1.181</td>
<td>40</td>
<td>0 7.8</td>
<td>1.559</td>
<td>170</td>
</tr>
<tr>
<td>2 Ear Taper: 1=Slight 2=Average 3=Extreme</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Application Variety Data

Note: Use chart on first page to choose color codes for color traits.
### Application Variety Data

<table>
<thead>
<tr>
<th>B. KERNEL (Dried):</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
<th>Standard Inbred Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 9.8 mm Kernel Length</td>
<td>0.790</td>
<td>20</td>
<td>1 0.9</td>
</tr>
<tr>
<td>0 6.9 mm Kernel Width</td>
<td>0.443</td>
<td>20</td>
<td>0 7.0</td>
</tr>
<tr>
<td>0 5.0 mm Kernel Thickness</td>
<td>0.443</td>
<td>20</td>
<td>0 3.9</td>
</tr>
<tr>
<td>6 8.0 % Round Kernels (Shape Grade)</td>
<td>5.284</td>
<td>500g</td>
<td>4 1.0</td>
</tr>
</tbody>
</table>

1 Aleurone Color Pattern: 1=Homoygous 2=Segregating

(*) 1 8 Aleurone Color (Munsell code _______)

* 0 7 Hard Endosperm Color (Munsell code 2.5 Y 8/10)
* 0 3 Endosperm Type: 1=Sweet (su) 2=Extra Sweet (sh2) 3=Normal Starch 4=High Amylose Starch 5=Waxy Starch 6=High Protein 7=High Lysine 8=Super Sweet (ss) 9=High Oil 10=Other

2 6.6 gm Weight per 100 Kernels (unsized sample) | 1.418 | 400 seeds | 2 3.5 | 3.944 | 1700 seeds

### COB:

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>Sample Size</th>
<th>Standard Inbred Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 9.0 mm Cob Diameter at mid-point</td>
<td>1.370</td>
<td>20</td>
</tr>
</tbody>
</table>

1 9 Cob Color (Munsell code Lighter Than 5 Y 9/1)

### DISEASE RESISTANCE (Rate from 1 [most susceptible] to 9 [most resistant]; leave blank if not tested; leave Race or Strain Options blank if polygenic):

#### A. Leaf Blights, Wilts, and Local Infection Diseases

7 Anthracnose Leaf Blight (Colletotrichum graminicola) | 7 |
7 Common Rust (Puccinia sorghi) | 5 |
7 Common Smut (Ustilago maydis) | 7 |
7 Eyespot (Kabatiella zea) | 2 |
9 Goss's Wilt (Clavibacter michiganense spp. nebraskense) | 8 Race 2 |
2 Gray Leaf Spot (Cercospora zeae-maydis) | 5 Race 2 |
9 Helminthosporium Leaf Spot (Bipolaris zeicola) Race 2 | 3 Race 0 |
5 Northern Leaf Blight (Exserohilum turcicum) Race 2 | 3 |
7 Southern Leaf Blight (Bipolaris maydis) Race 0 | 3 |
8 Stewart's Wilt (Erwinia stewartii) | - |
8 Southern Rust (Puccinia polysora) | - |
8 Other (Specify) | - |

#### B. Systemic Diseases

3 Corn Lethal Necrosis (MCMV and MDMV) | 3 |
9 Head Smut (Sphaclotheca reiliana) | 7 |
Maize Chlorotic Dwarf Virus (MCDV) | - |
Maize Chlorotic Mottle Virus (NCMV) | - |
Maize Dwarf Mosaic Virus (MDMV) Strain | - |
Sorghum Downy Mildew of Corn (Peronosclerospora sorghi) | - |
Other (Specify) | - |

#### C. Stalk Rots

- Anthracnose Stalk Rot (Colletotrichum graminicola) | - |
- Diplodia Stalk Rot (Stenocarpella maydis) | - |
- Fusarium Stalk Rot (Fusarium moniliforme) | - |
- Gibberella Stalk Rot (Gibberella zeae) | - |
- Other (Specify) | - |

#### D. Ear and Kernel Rots

- Aspergillus Ear and Kernel Rot (Aspergillus flavus) | - |
- Diplodia Ear Rot (Stenocarpella maydis) | - |
- Fusarium Ear and Kernel Rot (Fusarium moniliforme) | - |
- Gibberella Ear Rot (Gibberella zeae) | - |
- Other (Specify) | - |

### Note:
Use chart on first page to choose color codes for color traits.
11. INSECT RESISTANCE (Rate from 1 (most susceptible) to 9 (most resistant); leave blank if not tested):

<table>
<thead>
<tr>
<th>Insect Name</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks Grass Mite (Oligonychus pratensis)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn Earworm (Helicoverpa zea)</td>
<td>Leaf-Feeding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Silk Feeding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bar Damage</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn Leaf Aphid (Rhopalosiphum maidis)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn Scape Beetle (Carpophilus dimidiatus)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>European Corn Borer (Ostrinia nubilalis)</td>
<td>1st Generation (Typically Whocti Leaf Feeding)</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2nd Generation (Typically Leaf Sheath-Collar Feeding)</td>
<td>Stalk Tunneling</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fall Armyworm (Spodoptera frugiperda)</td>
<td>Leaf-Feeding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Silk-Feeding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mg larval wt.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maize Weevil (Sitophilus zeamaize)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Northern Rootworm (Diabrotica barberi)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Southern Rootworm (Diabrotica undecimpunctata)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Southwestern Corn Borer (Diatraea grandiosella)</td>
<td>Leaf Feeding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Stalk Tunneling</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cm tunnelled/plant</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Two-spotted Spider Mite (Tetranychus urticae)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Western Rootworm (Diabrotica virgifera virgifera)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

12. AGRONOMIC TRAITS:

<table>
<thead>
<tr>
<th>Trait Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay Green (at 65 days after anthesis) (Rate on a scale from 1-worst to 9-excellent)</td>
<td>2</td>
</tr>
<tr>
<td>0 4.0% Dropped Ears (at 65 days after anthesis)</td>
<td>0</td>
</tr>
<tr>
<td>0 0.0% Pre-anthesis Brittle Snapping</td>
<td>0</td>
</tr>
<tr>
<td>0 2.1% Pre-anthesis Root Lodging</td>
<td>0</td>
</tr>
<tr>
<td>0 5.0% Post-anthesis Root Lodging (at 65 days after anthesis)</td>
<td>0</td>
</tr>
<tr>
<td>3 6 7 1.9 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture)</td>
<td>3</td>
</tr>
</tbody>
</table>

13. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied)

<table>
<thead>
<tr>
<th>Markers</th>
<th>RELP's</th>
<th>RAPD's</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Isozymes</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

REFERENCES:


Munsell Color Chart for Plant Tissues. Macbeth. P.O. Box 230. Newburgh, N.Y. 12551-0230

The Mutants of Maize. 1968. Crop Science Society of America. Madison, WI.


COMMENTS (eg. state how heat units were calculated, standard inbred seed source, and/or where data was collected. Continue in Exhibit D):

Heat Unit Calculation: GDU = Daily Max Temp (<=86°F) + Daily Min Temp (>=50°F) - 50°F

Data was reported as means across years and locations. Each of the aforementioned characteristics had a wide range of values due to spacial and temporal variation of the test contributing to the large standard deviation. Growing conditions (soil, climate, drought conditions, etc.) contributed significantly to influence the variability of the traits measured.
**EXHIBIT E**

**STATEMENT OF THE BASIS OF OWNERSHIP**

1. **NAME OF APPLICANT(S)**
   - DEKALB Genetics Corporation

2. **TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER**
   - 09DSQ1

3. **VARIETY NAME**
   - 09DSQ1

4. **ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)**
   - 3100 Sycamore Road
   - DeKalb, IL 60115
   - U.S.A.

5. **TELEPHONE (include area code)**
   - (815) 758-3461

6. **FAX (include area code)**
   - (815) 758-4106

7. **PVPO NUMBER**
   - 9800272

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?**
   - [X] YES  [ ] NO

10. **Is the applicant the original owner?**
    - [X] YES  [ ] NO  **If no, please answer one of 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(ies), is(are) 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):**
    - 09DSQ1 was originated and developed by a breeder employed by DEKALB Genetics Corporation. By agreement between DEKALB Genetics Corporation and the breeder, all rights to any invention, discovery, or development are assigned to DEKALB Genetics Corporation. No rights to such invention, discovery, or development are retained by the breeder.

**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.