

No.

9800294



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## DEKALB 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 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 TWENTY 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 CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, 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.)

CORN, FIELD

'911S16'

*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.*



Attest:

*Paul M. Gubel*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

*John W. Danforth*

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Private Plant Variety Protection Act (PPVPA) of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1980.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

**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)  DEKALB Genetics Corporation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  91IS16
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  3100 Sycamore Road DeKalb, IL 60115		6. TELEPHONE (include area code)  (815) 758-3461	FOR OFFICIAL USE ONLY PVPO NUMBER 9800294
		6. FAX (include area code)  (815) 758-4106	
7. GENUS AND SPECIES NAME  Zea Mays	8. FAMILY NAME (Botanical)  Gramineae		FILING DATE 5/26/1998 FILING AND EXAMINATION FEE: \$2450.00 DATE 5/26/98 CERTIFICATION FEE: \$320.00 DATE 11/15/02
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	
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 trkain@monsanto.com			14. TELEPHONE (include area code)
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			15. FAX (include area code)
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input checked="" type="checkbox"/> NO (If "no," go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> 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? <input type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> 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) is(are) 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) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))  R. Mark Lawson		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type)  R. Mark Lawson		NAME (Please print or type)	
CAPACITY OR TITLE  Director Research	DATE  5/18/98	CAPACITY OR TITLE	DATE

3/4/02  
JMS

**EXHIBIT A**

Origin and Breeding History  
91IS16

91IS16 was selected for earliness, improved grain quality, root strength, general combining ability, and yield.

Winter 1990-91	The inbred line 3IBZ2 ( a proprietary DEKALB Genetics Corporation inbred) was crossed to inbred line 3IIH6 (a proprietary DEKALB Genetics Corporation inbred) (Range/row numbers E22 and E24).
Summer 1991	The S0 seed was grown (range/row number 212-17).
Summer 1992	The S1 seed was grown (range/row number 104-36 to 70).
Summer 1993	The S2 seed was grown ear-to-row (range/row number 4-136 was advanced).
Summer 1994	The S3 seed was grown ear-to-row (range/row number 108-142 was advanced).
Winter 1994-95	The S4 seed was grown ear-to-row (range/row number 4M-1205 was advanced).
Summer 1995	S5 seed was grown ear-to-row (range/row number 211-28 was advanced). The seed harvested from this row was designated 91IS16.
Winter 1995-96	The S6 seed was grown ear-to-row (range/row number 2Y11-43 to 45).
Summer 1996	S7 seed was grown ear-to-row (range/row numbers 520-1 to 24 and 521-1 to 6). Seed from these rows was bulked.

Statement of Stability and Uniformity

Corn inbred 91IS16 was coded in 1995 and has been reproduced by self pollination for the past two generations and judged to be stable. Inbred 91IS16 is uniform for all traits observed.

Statement of Variants

91IS16 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 91ISi6 is most similar to corn inbred 3IIH6, an inbred developed by DEKALB Genetics Corporation.

91ISi6 and 3IIH6 differ most significantly in the following traits:

Trait	91ISi6	3IIH6
No. of days from emergence to 50% of plants in silk	68	76
Heat Units from 50% silk to harvest at 25% moisture	989.0	1316.0
Silk Color	Pink (2.5 R 7/6)	Red (2.5 R 5/8)

## Isozyme Profile Data for 91ISi6 vs. 3IIH6

LOCI	ISOZYME ALLELE	
	91ISi6	3IIH6
Acph1	2	2
Adh1	4	4
Cat3	9	9
Got3	NS	4
Got2	2	4
Got1	4	4
Idh1	4	4
Idh2	6	6
Mdh1	6	6
Mdh2	6(4k)*, 3.5(1k), 3.5/6 (1k)	3.5
Mdh3	16	16
Mdh4	12	12
Mdh5	12	12
Pgm1	9	9
Pgm2	4	4
6Pgd1	3.8	3.8
6Pgd2	5	5
Phi1	4	4

NS - enzyme system was not scorable

\* - allele is probably a 6, but a null cannot be ruled out.

United States Department of Agriculture, Agricultural Marketing Service  
Science Division, Plant Variety Protection Office  
National Agricultural Library Building, Room 500  
Beltsville, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY  
CORN (*Zea mays* L.)

Name of Applicant(s) DEKALB Genetics Corporation		Variety Seed Source	Variety Name or Temporary Designation 91ISI6																																									
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	9800294																																								
Place the appropriate number that describes the varietal characters typical of this inbred variety in the spaces below. Right justify whole numbers by adding leading zeroes if necessary. Completeness should be striven for to establish an adequate variety description. Traits designated by a '*' are considered necessary for an adequate variety description and must be completed.																																												
<p>COLOR CHOICES (Use in conjunction with Munsell color code to describe all color choices; describe #25 and #26 in Comments section):</p> <table border="0"> <tr> <td>01=Light Green</td> <td>06=Pale Yellow</td> <td>11=Pink</td> <td>16=Pale Purple</td> <td>21=Buff</td> </tr> <tr> <td>02=Medium Green</td> <td>07=Yellow</td> <td>12=Light Red</td> <td>17=Purple</td> <td>22=Tan</td> </tr> <tr> <td>03=Dark Green</td> <td>08=Yellow-Orange</td> <td>13=Cherry Red</td> <td>18=Colorless</td> <td>23=Brown</td> </tr> <tr> <td>04=Very Dark Green</td> <td>09=Salmon</td> <td>14=Red</td> <td>19=White</td> <td>24=Bronze</td> </tr> <tr> <td>05=Green-Yellow</td> <td>10=Pink-Orange</td> <td>15=Red &amp; White</td> <td>20=White Capped</td> <td>25=Variegated (Describe)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>26=Other (Describe)</td> </tr> </table>					01=Light Green	06=Pale Yellow	11=Pink	16=Pale Purple	21=Buff	02=Medium Green	07=Yellow	12=Light Red	17=Purple	22=Tan	03=Dark Green	08=Yellow-Orange	13=Cherry Red	18=Colorless	23=Brown	04=Very Dark Green	09=Salmon	14=Red	19=White	24=Bronze	05=Green-Yellow	10=Pink-Orange	15=Red & White	20=White Capped	25=Variegated (Describe)					26=Other (Describe)										
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<p>STANDARD INBRED CHOICES (Use the most similar (in background and maturity) of these to make comparisons based on grow-out trial data):</p> <table border="0"> <tr> <td colspan="2">Yellow Dent Families:</td> <td colspan="2">Yellow Dent (Unrelated):</td> <td>Sweet Corn:</td> </tr> <tr> <td>Family</td> <td>Members</td> <td>Col09, ND246,</td> <td>Oh7, T232</td> <td>C13, Iowa5125, P39, 2132</td> </tr> <tr> <td>B14</td> <td>CM105, A632, B64, B68</td> <td>W117, W153R</td> <td>W182BN</td> <td>Popcorn:</td> </tr> <tr> <td>B37</td> <td>B37, B76, H84</td> <td></td> <td></td> <td>SG1533, 4722, HP301, HP7211</td> </tr> <tr> <td>B73</td> <td>N192, A679, B73, NC268</td> <td></td> <td></td> <td>Pipecorn:</td> </tr> <tr> <td>C103</td> <td>Mo17, Va102, Va35, A682</td> <td></td> <td></td> <td>Mo15W, Mo16W, Mo24W</td> </tr> <tr> <td>Oh43</td> <td>A619, MS71, H99, Va26</td> <td>White Dent:</td> <td></td> <td></td> </tr> <tr> <td>WF9</td> <td>W64A, A554, A654, Pa91</td> <td>CI66, H105, Ky228</td> <td></td> <td></td> </tr> </table>					Yellow Dent Families:		Yellow Dent (Unrelated):		Sweet Corn:	Family	Members	Col09, ND246,	Oh7, T232	C13, Iowa5125, P39, 2132	B14	CM105, A632, B64, B68	W117, W153R	W182BN	Popcorn:	B37	B37, B76, H84			SG1533, 4722, HP301, HP7211	B73	N192, A679, B73, NC268			Pipecorn:	C103	Mo17, Va102, Va35, A682			Mo15W, Mo16W, Mo24W	Oh43	A619, MS71, H99, Va26	White Dent:			WF9	W64A, A554, A654, Pa91	CI66, H105, Ky228		
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1. TYPE: (describe intermediate types in Comments section)		Standard Inbred Name A619																																										
* 2 1=Sweet 2=Dent 3=Flint 4=Flour 5=Pop 6=Ornamental 7=Pipecorn		2																																										
2. REGION WHERE DEVELOPED IN THE U.S.A.:		Standard Seed Source NCRIPS _____																																										
* 2 1=Northwest 2=Northcentral 3=Northeast 4=Southeast 5=Southcentral 6=Southwest 7=Other _____		2																																										
3. MATURITY (In Region Best Adaptability; show Heat Unit formula in "Comments" section):		DAYS																																										
DAYS		HEAT UNITS																																										
* 0 6 8	1 3 5 2.0	0 7 4 1 4 2 5.0																																										
From emergence to 50% of plants in silk																																												
* 0 6 1	1 3 2 2.0	0 6 9 1 3 5 9.0																																										
From emergence to 50% of plants in pollen																																												
- - -	0 0 8 3.0	- - - 0 0 7 3.0																																										
From 10% to 90% pollen shed																																												
(*) - - -	- - - . - -	- - - - -																																										
From 50% silk to optimum edible quality																																												
0 5 6	0 9 8 9.0	0 5 9 1 2 9 7.0																																										
From 50% silk to harvest at 25% moisture																																												
4. PLANT:		Standard Deviation	Sample Size	Standard Deviation																																								
* 1 6 7.1 cm Plant Height (to tassel tip)	17.253	20	Size	Sample																																								
* 0 6 2.0 cm Ear Height (to base of top ear node)	3.465	20	1 7 6.9	13.188 120																																								
0 1 1.4 cm Length of Top Ear Internode	1.909	20	0 3 9.7	6.368 120																																								
Average Number of Tillers			0 1 1.2	2.129 120																																								
* 1.0 Average Number of Ears per Stalk	0.000	20	0 0 1.0	0.000 120																																								
3 Anthocyanin of Brace Roots: 1=Absent 2=Faint 3=Moderate 4=Dark			1																																									
Application Variety Data		Page 1		Standard Inbred Data																																								

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Application Variety Data			Page 2	Standard Inbred Data		
5. LEAF:			Standard Deviation	Sample Size	Standard Deviation	Sample Size
*	0 0	8. 4 cm Width of Ear Node Leaf	0.141	20	0 0 9. 0	0.306 120
*	0 6	9. 0 cm Length of Ear Node Leaf	0.283	20	0 6 4. 5	3.918 120
*		5. 1 Number of leaves above top ear	0.424	10	5. 5	0.366 50
	3	7. 5 degrees Leaf Angle (measure from 2nd leaf above ear at anthesis to stalk above leaf)	4.243	20	2 8. 0	8.812 100
*	0 2	Leaf Color (Munsell code 5 GY 4/8)			0 2 (Munsell code 5 GY 4/8)	
		2 Leaf Sheath Pubescence(Rate on scale from 1=none to 9=peach fuzz)			1	
		3 Marginal Waves (Rate on scale from 1=none to 9=many)			5	
		5 Longitudinal Creases (Rate on scale from 1=none to 9=many)			4	
6. TASSEL:			Standard Deviation	Sample Size	Standard Deviation	Sample Size
*	1 0. 0	Number of Primary Lateral Branches	1.485	20	8. 6	1.804 120
	4 2. 0	Branch Angle from Central Spike	14.849	20	2 8. 8	3.766 100
*	4 0. 0	cm Tassel Length (from top leaf collar to tassel tip)	3.394	20	3 4. 7	4.928 120
	4. 8	Pollen Shed (Rate on scale from 0=male sterile to 9=heavy shed)			5. 3	
	0 5	Anther Color (Munsell code 2.5 GY 8/6)			0 5 (Munsell code 2.5 GY 8/6)	
	1 4	Glume Color (Munsell code 2.5 R 5/8)			0 2 (Munsell code 5 GY 4/8)	
	1	Bar Glumes (Glume Bands): 1=Absent 2=Present			1	
7a. EAR (Unhusked Data):					0 5 (Munsell code 2.5 GY 8/6)	
*	1 1	Silk Color (3 days after emergence) (Munsell code 2.5 R 7/6)			0 2 (Munsell code 5 GY 4/8)	
	0 2	Fresh Husk Color (25 days after 50% silking) (Munsell code 5 GY 4/8)			2 1 (Munsell code 2.5 Y 8/4)	
	2 1	Dry Husk Color (65 days after 50% Silking) (Munsell code 2.5 Y 8/4)			1	
*	2	Position of Ear at Dry Husk Stage: 1=Upright 2=Horizontal 3=Pendent			5	
	3	Husk Tightness (Rate on scale from 1=very loose to 9=very tight)			2	
	2	Husk Extension (at harvest): 1=Short (ears exposed) 2=Medium (<8 cm) 3=Long (8-10 cm beyond ear tip) 4=Very Long (>10 cm)				
7b. EAR (Husked Ear Data):			Standard Deviation	Sample Size	Standard Deviation	Sample Size
*	1 4. 2	cm Ear Length	1.768	10	1 3. 9	1.201 60
*	4 0. 0	mm Ear Diameter at mid-point	0.283	10	4 4. 3	2.024 60
	0 9	4. 8 gm Ear Weight	11.314	20	0 9 2. 3	12.867 120
*	1 7	Number of Kernel Rows	0.283	10	1 5	0.599 60
		2 Kernel Rows: 1=Indistinct 2=Distinct			2	
		1 Row Alignment: 1=Straight 2=Slightly Curved 3=Spiral			2	
	0 8. 8	cm Shank Length	1.556	20	1 3. 1	0.727 120
		2 Ear Taper: 1=Slight 2=Average 3=Extreme			2	
Application Variety Data					Standard Inbred Data	

Note: Use chart on first page to choose color codes for color traits.

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Application Variety Data			Page 3	Standard Inbred Data		
8. KERNEL (Dried):			Standard Deviation	Sample Size	Standard Deviation Sample Size	
0	9. 7 mm Kernel Length	0.990	10	1 0. 4	0.608	60
0	7. 5 mm Kernel Width	0.141	10	0 8. 1	0.612	60
0	4. 6 mm Kernel Thickness	0.566	10	0 3. 9	0.403	60
5	3. 0 % Round Kernels (Shape Grade)	4.764	500g	4 3. 0	2.876	500g
	1 Aleurone Color Pattern: 1=Homozygous 2=Segregating			1		
(*)	1 8 Aleurone Color (Munsell code _____)			1 9 (Munsell code Lighter Than 2.5 Y 9/2)		
*	0 7 Hard Endosperm Color (Munsell code 2.5 Y 8/10)			0 7 (Munsell code 2.5 Y 8/10)		
*	0 3 Endosperm Type: 1=Sweet (sul) 2=Extra Sweet (sh2) 3=Normal Starch 4=High Amylose Starch 5=Waxy Starch 6=High Protein 7=High Lysine 8=Super Sweet (se) 9=High Oil 10=Other			0 3		
2	3. 7 gm Weight per 100 Kernels (unsized sample)	3.394	200	2 5. 8	3.098	1200
seeds				seeds		
9. COB:			Standard Deviation	Sample Size	Standard Deviation Sample Size	
*	2 2. 7 mm Cob Diameter at mid-point	0.424	10	2 6. 3	0.985	60
	1 4 Cob Color (Munsell code 5 R 3/8)			1 9 (Munsell code Lighter Than 5 Y 9/1)		
10. 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 ( <i>Colletotrichum graminicola</i> )			7		
	4 Common Rust ( <i>Puccinia sorghi</i> )			-		
	Common Smut ( <i>Ustilago maydis</i> )			6		
	8 Eyespot ( <i>Kabatella zeae</i> )			6		
	3 Goss's Wilt ( <i>Clavibacter michiganense</i> spp. <i>nebraskense</i> )			4		
	1 Gray Leaf Spot ( <i>Cercospora zeae-maydis</i> )			9 Race 2		
	8 Helminthosporium Leaf Spot ( <i>Bipolaris zeicola</i> ) Race 2			4 Race 2		
	6 Northern Leaf Blight ( <i>Exserohilum turcicum</i> ) Race 2			7 Race 0		
	7 Southern Leaf Blight ( <i>Bipolaris maydis</i> ) Race 0			-		
	Southern Rust ( <i>Puccinia polysora</i> )			-		
	Stewart's Wilt ( <i>Erwinia stewartii</i> )			-		
	Other (Specify) _____			-		
B. Systemic Diseases						
	6 Corn Lethal Necrosis (MCMV and MDMV)			4		
	9 Head Smut ( <i>Sphacelotheca reiliana</i> )			7		
	Maize Chlorotic Dwarf Virus (MCDV)			-		
	Maize Chlorotic Mottle Virus (MCMV)			-		
	Maize Dwarf Mosaic Virus (MDMV) Strain _____			- Strain _____		
	Sorghum Downy Mildew of Corn ( <i>Peronosclerospora sorghi</i> )			-		
	Other (Specify) _____			-		
C. Stalk Rots						
	Anthracnose Stalk Rot ( <i>Colletotrichum graminicola</i> )			-		
	Diplodia Stalk Rot ( <i>Stenocarpella maydis</i> )			-		
	Fusarium Stalk Rot ( <i>Fusarium moniliforme</i> )			-		
	Gibberella Stalk Rot ( <i>Gibberella zeae</i> )			-		
	Other (Specify) _____			-		
D. Ear and Kernel Rots						
	Aspergillus Ear and Kernel Rot ( <i>Aspergillus flavus</i> )			-		
	Diplodia Ear Rot ( <i>Stenocarpella maydis</i> )			-		
	Fusarium Ear and Kernel Rot ( <i>Fusarium moniliforme</i> )			-		
	Gibberella Ear Rot ( <i>Gibberella zeae</i> )			-		
	Other (Specify) _____			-		
Application Variety Data				Standard Inbred Data		

Note: Use chart on first page to choose color codes for color traits.

Application Variety Data	Page 4	Standard Inbred Data																																																																																																																																											
<p>11. INSECT RESISTANCE (Rate from 1 (most susceptible) to 9 (most resistant); leave blank if not tested):</p> <table border="0"> <thead> <tr> <th></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 (<i>Oligonychus pratensis</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Corn Earworm (<i>Helicoverpa zea</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Leaf-Feeding</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Silk Feeding :</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>  Ear _____ mg larval wt.</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>- Ear Damage</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Corn Leaf Aphid (<i>Rhopalosiphum maidis</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Corn Sap Beetle (<i>Carpophilus dimidiatus</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- European Corn Borer (<i>Ostrinia nubilalis</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 1st Generation (Typically Whorl Leaf Feeding)</td> <td></td> <td>7</td> <td></td> <td></td> </tr> <tr> <td>1 2nd Generation (Typically Leaf Sheath-Collar Feeding)</td> <td></td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>- Stalk Tunneling :</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>  _____ cm tunneled/plant</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>- Fall Armyworm (<i>Spodoptera frugiperda</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Leaf-Feeding</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Silk-Feeding :</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>  _____ mg larval wt.</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>- Maize Weevil (<i>Sitophilus zeamais</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Northern Rootworm (<i>Diabrotica barberi</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Southern Rootworm (<i>Diabrotica undecimpunctata</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Southwestern Corn Borer (<i>Diatraea grandiosella</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Leaf Feeding</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Stalk Tunneling :</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>  _____ cm tunneled/plant</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>- Two-spotted Spider Mite (<i>Tetranychus urticae</i>)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Western Rootworm (<i>Diabrotica virgifera virgifera</i>)</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>		Standard Deviation	Sample Size	Standard Deviation	Sample Size	- Banks Grass Mite ( <i>Oligonychus pratensis</i> )					- Corn Earworm ( <i>Helicoverpa zea</i> )					- Leaf-Feeding					- Silk Feeding :					Ear _____ mg larval wt.	_____	_____	_____	_____	- Ear Damage					- Corn Leaf Aphid ( <i>Rhopalosiphum maidis</i> )					- Corn Sap Beetle ( <i>Carpophilus dimidiatus</i> )					- European Corn Borer ( <i>Ostrinia nubilalis</i> )					3 1st Generation (Typically Whorl Leaf Feeding)		7			1 2nd Generation (Typically Leaf Sheath-Collar Feeding)		5			- Stalk Tunneling :					_____ cm tunneled/plant	_____	_____	_____	_____	- Fall Armyworm ( <i>Spodoptera frugiperda</i> )					- Leaf-Feeding					- Silk-Feeding :					_____ mg larval wt.	_____	_____	_____	_____	- Maize Weevil ( <i>Sitophilus zeamais</i> )					- Northern Rootworm ( <i>Diabrotica barberi</i> )					- Southern Rootworm ( <i>Diabrotica undecimpunctata</i> )					- Southwestern Corn Borer ( <i>Diatraea grandiosella</i> )					- Leaf Feeding					- Stalk Tunneling :					_____ cm tunneled/plant	_____	_____	_____	_____	- Two-spotted Spider Mite ( <i>Tetranychus urticae</i> )					- Western Rootworm ( <i>Diabrotica virgifera virgifera</i> )					- Other (Specify) _____					
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<p>REFERENCES:</p> <p>Butler, D.R. 1954. A System for the Classification of Corn Inbred Lines. PhD Thesis, Ohio State University.</p> <p>Emerson, R.A., G.W. Beadle, and A.C. Fraser. 1935. A Summary of Linkage Studies in Maize. Cornell A.E.S., Mem. 180.</p> <p>Farr, D.F., G.F. Bills, G.P. Chamuris, A.Y. Rossman. 1989. Fungi on Plant and Plant Products in the United States. The American Phytopathological Society, St. Paul, MN.</p> <p>Inglett, G.E. (Ed.) 1970. Corn: Culture, Processing, Products. Avi Publishing Company, Westport, CT.</p> <p>Jugenheimer, R.W. 1976. Corn: Improvement, Seed Production, and Uses. John Wiley &amp; Sons, New York.</p> <p>McGee, D.C. 1988. Maize Diseases. APS Press, St. Paul, MN. 150 pp.</p> <p>Munsell Color Chart for Plant Tissues. Macbeth. P.O. Box 230. Newburgh, N.Y. 12551-0230</p> <p>The Mutants of Maize. 1968. Crop Science Society of America. Madison, WI.</p> <p>Shurtleff, M.C. 1980. Compendium of Corn Diseases. APS Press, St. Paul, MN. 105 pp.</p> <p>Sprague, G.F., and J.W. Dudley (Editors). 1988. Corn and Corn Improvement, Third Edition. Agronomy Monograph 18. ASA, CSSA, SSSA, Madison, WI.</p> <p>Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S., Bul. 831. 1959.</p> <p>U.S. Department of Agriculture. 1936, 1937. Yearbook.</p>																																																																																																																																													
<p>COMMENTS (eg. state how heat units were calculated, standard inbred seed source, and/or where data was collected. Continue in Exhibit D):</p> <p>Heat Unit Calculation: <math>GDU = \frac{\text{Daily Max Temp } (&lt;=86^{\circ}F) + \text{Daily Min Temp } (&gt;=50^{\circ}F)}{2} - 50^{\circ}F</math></p>																																																																																																																																													

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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.



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

**EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP**

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)  DEKALB Genetics Corporation	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  91ISI6
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  9800294		

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

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

10. Is the applicant the original owner?  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)?  
 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?  
 YES  NO *If no, give name of country*

11. Additional explanation on ownership (if needed, use reverse for extra space):

91ISI6 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:

- 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.
- 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.
- 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.

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