

No.



9800288

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

'90LDC2'

In Testimony Whereof, I have herunto 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. Jubel

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

[Signature]

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 Privac
 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1

Application is required in order to determine if a plant variety pr
 certificate is to be issued (7 U.S.C. 2421). Information is held con
 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)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER		3. VARIETY NAME	
DEKALB Genetics Corporation				90LDC2	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)		FOR OFFICIAL USE ONLY PVPO NUMBER 9900288	
3100 Sycamore Road DeKalb, IL 60115		(815) 758-3461			
		6. FAX (include area code)		F I L I N G DATE 5/26/1998	
		(815) 758-4106		R E C E I V E D DATE 11/15/02	
7. GENUS AND SPECIES NAME		8. FAMILY NAME (Botanical)		FILING AND EXAMINATION FEE:	
Zea Mays		Gramineae		\$ 2,450	
9. CROP KIND NAME (Common name)				DATE 5/26/98	
Corn				CERTIFICATION FEE: \$ 320.00	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)		11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
Corporation		Delaware		June 15, 1988	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S). IF ANY TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS		14. TELEPHONE (include area code)		15. FAX (include area code)	
Dr. Tim Kain, Patent Scientist Monsanto Company 3100 Sycamore Road DeKalb IL 60115 Ph. 815-758-9281 Fax 815-758-4106 trkain@monsanto.com					
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)					
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?			19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?		
<input type="checkbox"/> YES <input type="checkbox"/> NO			<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))			SIGNATURE OF APPLICANT (Owner(s))		
R. Mark Lawson					
NAME (Please print or type)			NAME (Please print or type)		
R. Mark Lawson					
CAPACITY OR TITLE		DATE		CAPACITY OR TITLE	
Director Research		5/18/98			

JMS
3/15/02

EXHIBIT AOrigin and Breeding History
90LDC2

90LDC2 was selected for combining ability, stalk quality, and test weight.

Winter 1991-92	The inbred line MM501D (a proprietary DEKALB Genetics Corporation inbred) was crossed with LH210 (a line developed by Holden's Foundation Seeds) E117 x E136
Spring 1992	S0 seed was grown. (Hawaii summer faster 9228).
Summer 1992	S1 seed was grown (Hawaii summer faster 9228).
Winter 1992-93	S2 seed was grown ear to row (nursery rows F24:13-1, F25:1-56, F26:56-26).
Summer 1993	S3 seed was grown ear to row (nursery rows 52:53-1, 53:1-47).
Summer 1994	S4 seed was grown ear to row (nursery rows 419:56-72, 420:72-38). The seed from row 419-68 was named 90LDC2.
Winter 1994-95	S5 seed was grown ear to row (nursery row 6U:1340, 6U:1355).
Summer 1995	S6 seed was grown ear to row (nursery rows 352:2-1, 353:1-24).
Winter 1995-96	S7 seed was grown and increased (nursery rows CC:20:67-43, 7E37:63-82, Fla 90-SS:201-220).

Statement of Stability and Uniformity

Corn inbred 90LDC2 was coded in 1994 and has been reproduced by self pollination for the past three years and judged to be stable. Inbred 90LDC2 is uniform for all traits observed.

Statement of Variants

90LDC2 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 BStatement of Distinctness

DEKALB Genetics Corporation believes that 90LDC2 is most similar to corn inbred LH210, an inbred developed by Holden's Foundation Seed.

90LDC2 and LH210 differ most significantly in the following traits:

Qualitative Data for 90LDC2 vs. LH210

TRAIT	90LDC2	LH210
Stalk Anthocyanin	Absent	Strong
Leaf Color	Dark-Green (5 GY 3/4)	Medium-Green (5 GY 4/8)
Anther Color	Green-Yellow (2.5 GY 8/6)	Pink (2.5 R 7/6)
Tassel Glume Band	Absent	Present
Silk Color	Green-Yellow (2.5 GY 8/6)	Red (2.5 R 5/8)
Kernel Cap Color	Orange (7.5 YR 7/8)	Yellow (2.5 Y 8/10)

Isozyme Profile of 90LDC2 and LH210

LOCI	ISOZYME ALLELE	
	90LDC2	LH210
Acph1	2	2
Acph4	4	5
Cat3	9	9
Glu	7	6
Idh1	4	4
Idh2	4	4
Mdh1	6	6
Mdh2	6	6
Mdh3	16	16
Mdh4	12	12
Mdh5	12	12
Pgm1	9	9
Pgm2	4	4
6Pgd1	3.8	3.8
Phi1	4	4

90LDC2 differs from LH210 at the Acph4 and the Glu loci.

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 90LDC2																																									
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	9800288																																								
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 & 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>Co109, 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	Co109, 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 MO17																																										
* 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																																										
		HEAT UNITS																																										
* 0 7 8		1 5 2 6. 0 From emergence to 50% of plants in silk																																										
* 0 7 6		1 4 8 6. 0 From emergence to 50% of plants in pollen																																										
_ _ _		0 0 8 1. 0 From 10% to 90% pollen shed																																										
(*) _ _ _		_ _ _ _ . _ From 50% silk to optimum edible quality																																										
0 5 7		1 1 0 9. 5 From 50% silk to harvest at 25% moisture																																										
4. PLANT:		Standard Deviation	Sample Size	Standard Deviation																																								
* 2 0 9. 3 cm Plant Height (to tassel tip)		14.026	40	2 2 2. 6																																								
* 0 8 1. 4 cm Ear Height (to base of top ear node)		15.882	40	13.282																																								
0 1 3. 1 cm Length of Top Ear Internode		2.316	40	0 8 3. 7																																								
Average Number of Tillers				7.877																																								
* 1. 5 Average Number of Ears per Stalk		0.311	40	0 1 5. 0																																								
1 Anthocyanin of Brace Roots: 1=Absent 2=Faint 3=Moderate 4=Dark				1.568																																								
				0 0 1. 0																																								
				0.085																																								
				170																																								
				1																																								
Application Variety Data		Page 1	Standard Inbred Data																																									

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5. LEAF:			Standard Deviation	Sample Size	Standard Deviation Sample Size		
*	0 0	8. 8 cm Width of Ear Node Leaf	1.080	40	0 0	9. 0	0.736 170
*	0 7	8. 3 cm Length of Ear Node Leaf	3.484	40	0 6	8. 8	3.079 170
*		6. 3 Number of leaves above top ear	0.661	20		5. 1	0.399 85
	3	9. 1 degrees Leaf Angle (measure from 2nd leaf above ear at anthesis to stalk above leaf)	5.375	40	3	3. 4	6.075 170
*	0 3	Leaf Color (Munsell code 5 GY 3/4)			0 2	(Munsell code 5 GY 4/8)	
		5 Leaf Sheath Pubescence (Rate on scale from 1=none to 9=peach fuzz)				2	
		2 Marginal Waves (Rate on scale from 1=none to 9=many)				4	
		3 Longitudinal Creases (Rate on scale from 1=none to 9=many)				2	
6. TASSEL:			Standard Deviation	Sample Size	Standard Deviation Sample Size		
*	9. 0	Number of Primary Lateral Branches	0.763	40	0 5. 9	0.663 170	
	3	9. 8 Branch Angle from Central Spike	10.697	40	4 7. 0	8.439 170	
*	3 6. 3	cm Tassel Length (from top leaf collar to tassel tip)	2.374	40	4 6. 5	5.931 170	
		3. 2 Pollen Shed (Rate on scale from 0=male sterile to 9=heavy shed)				6. 0	
	0 5	Anther Color (Munsell code 2.5 GY 8/6)			0 5	(Munsell code 2.5 GY 8/6)	
	0 2	Glume Color (Munsell code 5 GY 4/8)			0 2	(Munsell code 5 GY 4/8)	
		1 Bar Glumes (Glume Bands): 1=Absent 2=Present				1	
7a. EAR (Unhusked Data):					2 2 (Munsell code 2.5 GY 8/6 with 5 R 5/8)		
*	0 5	Silk Color (3 days after emergence) (Munsell code 2.5 GY 8/6)			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)				3	
*		1 Position of Ear at Dry Husk Stage: 1=Upright 2=Horizontal 3=Pendent				4	
	8	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 3. 3	cm Ear Length	1.377	20	1 8. 4	1.922 80	
*	3 6. 6	mm Ear Diameter at mid-point	0.526	20	3 4. 9	1.676 80	
	0 8	6. 3 gm Ear Weight	11.219	40	1 0 1. 1	24.193 160	
*	1 5	Number of Kernel Rows	0.231	20	1 1	0.651 80	
		2 Kernel Rows: 1=Indistinct 2=Distinct				2	
		2 Row Alignment: 1=Straight 2=Slightly Curved 3=Spiral				2	
	1 0. 3	cm Shank Length	2.213	40	1 3. 2	2.867 160	
		2 Ear Taper: 1=Slight 2=Average 3=Extreme				1	
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	
1	0.5 mm Kernel Length		0.476	20	1	0.4 0.771 80
0	8.5 mm Kernel Width		0.443	20	0	8.5 0.545 80
0	5.2 mm Kernel Thickness		0.597	20	0	4.4 0.339 80
8	2.0 % Round Kernels (Shape Grade)		4.675	500g	7	7.0 6.342 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 (su1) 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	9.5 gm Weight per 100 Kernels (unsized sample)		1.932	400 seeds	2	9.0 4.053 1700 seeds
9. COB:			Standard Deviation	Sample Size	Standard Deviation Sample Size	
*	2	4.0 mm Cob Diameter at mid-point	8.719	20	1	8.2 1.153 80
	1	4 Cob Color (Munsell code 5 R 3/8)			1	4 (Munsell code 5 R 3/8)
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>)			8	
	7	Common Rust (<i>Puccinia sorghi</i>)			7	
		Common Smut (<i>Ustilago maydis</i>)			7	
	7	Eyespot (<i>Xabatiella zeae</i>)			8	
	6	Goss's Wilt (<i>Clavibacter michiganense</i> spp. <i>nebraskense</i>)			6	
	4	Gray Leaf Spot (<i>Cercospora zeae-maydis</i>)			8	Race 2
	8	Helminthosporium Leaf Spot (<i>Bipolaris zeicola</i>) Race 2			8	Race 2
	6	Northern Leaf Blight (<i>Exserohilum turcicum</i>) Race 2			8	Race 0
	6	Southern Leaf Blight (<i>Bipolaris maydis</i>) Race 0			8	Race 0
		Southern Rust (<i>Puccinia polysora</i>)			-	
	5	Stewart's Wilt (<i>Erwinia stewartii</i>)			-	
		Other (Specify) _____			-	
B. Systemic Diseases						
	3	Corn Lethal Necrosis (MCMV and MDMV)			5	
	9	Head Smut (<i>Sphacelotheca reiliana</i>)			8	
		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.						

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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 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>5 1st Generation (Typically Whorl Leaf Feeding)</td> <td></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>6 2nd Generation (Typically Leaf Sheath-Collar Feeding)</td> <td></td> <td></td> <td>5</td> <td></td> </tr> <tr> <td>- Stalk Tunneling :</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>- 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>- 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 Damage			-		- Corn Leaf Aphid (<i>Rhopalosiphum maidis</i>)			-		- Corn Sap Beetle (<i>Carpophilus dimidiatus</i>)			-		- European Corn Borer (<i>Ostrinia nubilalis</i>)			-		5 1st Generation (Typically Whorl Leaf Feeding)			3		6 2nd Generation (Typically Leaf Sheath-Collar Feeding)			5		- Stalk Tunneling :			-		- Fall Armyworm (<i>Spodoptera frugiperda</i>)			-		- Leaf-Feeding			-		- Silk-Feeding :			-		- 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 :			-		- 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 & 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: $GDU = \frac{\text{Daily Max Temp } (<=86^{\circ}F) + \text{Daily Min Temp } (>=50^{\circ}F)}{2} - 50^{\circ}F$</p>																																																																																																																									

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 90LDC2
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 9800288		

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):

90LDC2 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.

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 data needed, and completing and reviewing the collection of information.

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