No. 8200064

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Holden's Foundation Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVELVARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE, VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen * YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'LH119'

AMENDED CERTIFICATE

*Original grant May 26, 1983.

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 31st day of January in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

Kenneth Vrana

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madigan

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY. GRAIN &SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

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

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See *Reverse.*

1a. TEMPORARY DESIGNATION OF VARIETY Ex508	1b. VARIETY NAME LH119	FOR OFFICIAL USE ONLY PV NUMBER 8200064
2. KIND NAME Yellow dent corn	3. GENUS AND SPECIES NAME Zea mays	FILING DATE 1/20/82 — TIME 12:30 A.M. (P.M.) FEE RECEIVED $ 500.00 $ 250.00 — DATE 1/20/82 4/22/83
4. FAMILY NAME (BOTANICAL) Gramineae	5. DATE OF DETERMINATION April, 1980	
6. NAME OF APPLICANT(S) Holden's Foundation Seeds, Inc.	7. ADDRESS (Street *and No. or R.F.D. No., City, State, and ZIP Code)* Box 839, R. R. 2 Williamsburg, Iowa 52361	6. TELEPHONE AREA CODE AND NUMBER 319-668-1100
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Iowa	11. DATE OF INCORPORATION 1968

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:

Mr. Art L. Johnson, Box 839, Williamsburg, Iowa 52361

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [ ] 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of *the Plant* Variety Protection *Act.)*
- [ ] 13B. Exhibit B, Novelty Statement.
- [ ] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant* Variety Protection Office.)
- [ ] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See *Section* 83(a). *(If* "Yes," *answer 14B and 14C below.)* [ ] YES [X] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER Of GENERATIONS7 [ ] YES [X] NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES7 [ ] YES [X] NO (If *"Yes," give name of counties and dates.)*

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

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL7 [X] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

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

DECEMBER 23, 1981 RYS PER LETTER OF 8/6/82 — (DATE) — (SIGNATURE OF APPLICANT)

(DATE) — (SIGNATURE OF APPLICANT)

FORM OR170 (1-78)

Exhibit A

LH119

Origin and Breeding History

LH119 was developed using a pedigreed breeding system. The original cross was H93 x B73)(B73. H93 is a release from Purdue University and B73 is a release from Iowa State University.

Item I is a schematic outline for the development of LH119, nursery row numbers, nursery locations, and years in which the progeny rows were grown are given.

Attached to Item I are copies of Holden's Foundation Seed's nursery books. Rows involved in the development of LH119 are underscored.

LH119 was self-pollinated ear to row enough generations to be stable and uniform. Both field and ear inspections by the Iowa Crop Improvement Association in 1981 have been approved for certification of LH119 therefore indicating LH119 to be uniform in plant and ear type. Attached is a copy of those reports.

Item I

LH119=Ex508=H93 x B73)(B73=Selections 2838-6-1-1-5-4-3

Row #		Location	Year
	H93 B73		
2838	H93 x B73 B73	Iowa	1974
5590 (12 row block)	H93 x B73)(B73	Iowa	1975
1217	H93 x B73)(B73$_{\otimes}$1	Iowa	1976
2811	H93 x B73)(B73$_{\otimes}$2	Iowa	1977
4965	H93 x B73)(B73$_{\otimes}$3	Hawaii	1977-78
5371	H93 x B73)(B73$_{\otimes}$4	Iowa	1978
7260	H93 x B73)(B73$_{\otimes}$5	Hawaii	1978-79
9797	H93 x B73)(B73$_{\otimes}$6	Iowa	1979

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2808. A632)(955 x 956)x3-5305-1
2809. A632)(949 x 950)x3-5307-1
2810. 941 x 942)(N28)x3-9725-1
2811. 941 x 942)(N28)x3-9725-2
2812. W64A)(949 x 950)x3-9726-1
2813. W64A)(949 x 950)x3-9726-2
2814. 949 x 950)x3-9727-1
2815. 941 x 942)x3-9728-1
2816. H69:5779-80-81)x3-9729-1
2817. H69:5779-80-81)x3-9729-2
2818. H69:5779-80-81)x3-9729-3
2819. A632)(955 x 956)x3-9730-1
2820. A632)(955 x 956)x3-9730-2
2821. A632)(955 x 956)x3-9730-3
2822. VA26 x L120x 15 rows
2823. 043 x L120x 11 rows
2824. 043
End of Range #50 North side

Range #51 North to South

2825. 043
2826. 043 x L120x 3 rows
2827. A619 Htx L120x1 15 rows
2828. 11120 x B73 1 row
2829. A632Ht x B73
2830. W64AHt x B73
2831. 043 x B73
2832. OH545 x B73
2833. LH23 x B73
2834. M017 x B73
2835. B73 x H60
2836. N28Ht x B73
2837. LH1 x B73
2838. H93 x B73
2639. B73 x N132
2840. T226 x B73
2841. B77 34 rows
2842. VA26
2843. B76
2844. B73
2845. M017
2846. H93 x H84
2847. H99 28 rows
Blank
Blank
2848. A632Ht
2849. A632Ht
2850. W64AHt
2851. W64AHt
2852. A619Ht
2853. A619Ht
2854. VA26
2855. VA26
2856. B73
2857. B73

8200064

I-75

5560. A632 x Ht x B73 2829 — 15 rows
5561. W64AHt x B73 2830 — 20 rows
5562. LH23 x B73 (2833) — 13 rows
5563. B73
End of Range #84 East side

Range #85 East to West

5564. B73
5565. LH23 x B73 2833 — 2 rows
5566. MO17 x B73 2834 — 30 rows
5567. 043 x B73 2831 — 20 rows
5568. OH545 x B73 3832 — 20 rows
5569. LH1 x B73 2837 — 8 rows
5570. B73
End of Rangm #85 West side

Range #86 West to East

5571. B73
5572. LH1 x B73 2837 — 7 rows
5573. H93 x B73 2838 — 15 rows
5574. B73 x H60 2835 — 15 rows
5575. B73 x N137 2839 — 10 rows
5576. N28Ht x B73 (2836) — 20 row6
5577. T226 x B7 2840 — 3 rows
5578. B73
End of Rangm #86 East side

Range #87 East to West

5579. B73
5580. T226 x B73 2840 — 12 rows
5581. H120 x B73) (B73 2828 — 12 rows
5582. W64AHt x B73) (B73 2830 — 15 rows
5583. A632Ht x B73) (B73 2829 — 10 rows
5584. LH1 x B73) (B73 2037 — 12 rows
5585. B73 x N132) (B73 2831 — 9 rows
5586. B73
End of Range #87 West side

Range #88 West to East

5587. B73
5588. B73 x N132) (B73 2839 — 1 row
5589. 043 x B73) (B73 2831 — 10 rows
5590. H93 x B73) (B73 2838 — 12 rows
5591. B73 x H60) (B73 2835 — 12 rows
5592. N28Ht x B73) (B73 2836 — 15 rows
5593. T226 x B73) (B73 2840 — 8 rows
5594. LH23 x B73) (B73 2833 — 10 rows
5595. MO17 x B73) (B73 2834 — 2 rows
5596. B73
End of Range #88 east side

Range #89 East te West

5597. B73

8200064

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1200. 043 x B73)(B73⊗1-2831-9
1201. 043 x B73) (B73⊗1-2831-10
1202. B73Ht
1203. 043 x B73)(B73⊗1-2831-11
1204. 043 x B73)(B73⊗1-2831-12
1205. || 2831-13
1206. || 2831-14
1207. || 2831-15
1208. 043 x B73)(B73⊗1-2831-16
B37 x H84
End of Range 2 North side

Range 3 N-S

B37 x Ha4
1209. 043 x B73)(B73⊗1-2831-17
1210. 043 x B73)(B73⊗1-2831-18
1211. 043 x B73)(B73⊗1-2831-19
1212. H93 x B73)(B73⊗1-2838-1
1213. H93 x B73)(B73⊗1-2838-2
1214. " 2838-3
1215. n 2838-4
1216. || 2838-5
1217. " 2838-6
1218. " 2838-7
1219. " 2838-8
1220. " 2838-9
1221. " 2838-10
1222. " 2838-11
1223. " 2838-12
1224. (B73⊗ 2838-13
2838-1 4
1226. H93 x B73) 1_ 2838-1 _ 5
1227: B73Ht
1228. H93 x B73)(B73⊗1-2838-16
1229. H93 x B73)(B73⊗1-2838-17
1230. " 2838-18
1231. H93 x B73)(B73⊗1-2838-19
1232. B73 x H60)(B73⊗1-2835-1
1233. B73 x H60)(B73⊗1-2835-2
1234. " 2835-3
1235. " 2835-4
1236. " 2835-5
2237. " 2835 -6
1238. " 2835-7
1239. " 2835-8
1240. " 2835-9
1241. " 2835-10
1242. " 2835-1 1
1243. " 2835-l 2
1244. " 2835-13
1245. " 2835-14
1246. " 2835-15
1247. " 2835-16
1248. B73 x H60) (B73⊗1 -2835-l 7
1249, N28Ht x B73) (B73⊗1-2836-1
1250. N28Ht x B73) (B73⊗1-2836-2

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2804.	043 x $(B73)^2(x)^2$	2831-15-l
2805.	043 x $(B73)^2(x)^2$	2831-15-2
2806.	H93 x $(B73)^2(x)^2$	2838-2-l
2807.	"	2838-Z-2
2808.	"	2838-2-3
2809.	"	2838-3-l
2810.	"	2838-3-2
2811.	"	2838-6-1
2812.	"	2838-6-2
2813.	H93 x $(B73)^2(x)^2$	2838-6-3

End of Range #13 North side
Border CM105 x A632

Range #14 N-S .
Border A635Ht x A632Ht

2815.	H93 x $(B73)^2(x)^2$	2838-6-4
	"	2838-6-5
2816.	"	2838-7-l
2817.	"	2838-7-2
2818.	"	2838-7-3
2819.	"	2838-7-4
2820.	"	2838-7-S
2821.	"	2838-8-l
2822.	"	2838-8-2
2823.	"	2838-g-l
2824.	"	2838-9-2
2825.	"	2838-10-l
2826.	"	2838-10-2
2827.	H93 x $(B73)^2(x)^2$	2838-10-3
2828.	B73	
2829.	H93 x $(B73)^2(x)^2$	2838-14-l
2830.	"	2838-14-2
2831.	"	2838-14-3
2832.	"	2838-14-4
2833.	"	2838-17-l
2834.	"	2838-17-2
2835.	"	2838-17-3
2836.	"	2838-17-4
2837.	"	2838-17-5
2838.	"	2838-18-l
2839.	"	2838-U-2
2840.	"	2838-18-3
2841.	"	2838-18-4
2842.	H93 x $(B73)^2(x)^2$	2838-M-5
2843.	B73 x H60) $(B73(x)^2$	2835-l-l
2844.	" "	2835-I-2
2845.	" "	2835-l-3
2846.	" "	2835-l-4
2847.	" "	2835-2-I
2848.	" "	2835-2-2
2849.	" "	2835-3-l
2850.	" "	2835-J-2
2851.	" "	2835-3-3
2852.	" "	2835-6-I
2853.	" "	2835-6-2
2854.	" "	2835-6-3
2855.	" "	2835-6-4

4944	B73 x N13 2 X B73 ⊗3	- 2839-7-4-6 -	2771	
4945	" x " X B73 ⊗3	- 2839-17-1-1 -	2787	CC
4946	" x " X B73 ⊗3	- 2839-17-1-2 -	2787	
4947	" x " X B73 ⊗3	- 2839-17-1-3 -	2787	
4948	" x " X B73 ⊗3	- 2839-17-1-4 -	2787	
4949	" x " X "	" - 17-1-5 -	2787	
4950	" x " X "	" - 17-1-6 -	2787	
4951	" x " X "	" - 17-2-1 -	2788	
4952	" x " X "	" - 17-2-2 -	2788	
4953	" x " X "	" - 23-3-1 -	2796	
4954	" x " X "	" - 23-3-2 -	2796	
4955	C43 x (B73) 2 ⊗3	2831-1-2-1 -	2803	
4956	" "	" - 1-2-2 -	2803	
4957	H93 x B73 2 ⊗3	2838-2-2-1 -	2807	
4958	" x "	" - 2-2-2 -	2807	
4959	" x "	" - 2-2-3 -	2807	
4960	" x "	" - 2-2-4 -	2807	
4961	" x "	" - 2-3-1 -	2808	
4962	" x "	" - 2-3-2 -	2808	
4963	" x "	" - 2-3-3 -	2808	
4964	" x "	" - 2-3-4 -	2808	
4965	" x "	" - 6-1-1 -	2811	
4966	" x "	" - 6-1-2 -	2811	
4967	" x "	" - 6-1-3 -	2811	
4968	" x "	" - 6-1-4 -	2811	
4969	" x "	" - 6-1-5 -	2811	
4970	" x "	" - 6-1-6 -	2811	
4971	" x "	" - 6-3-1 -	2813	

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ECKHOLM

317 LH42
318 LH42
319 LH42
320 LH42
321 LH42
322 LH42
323 Oh43 x (B73)2@4-2831-1-2-1-1
324 Oh43 x (B73)2@4-2831-1-2-1-2
325 Oh43 x (B73)2@4-2831-1-2-1-3
326 Oh43 x (B73)2@4-2831-1-2-1-4
327 Oh43 x (B73)2@4-2831-1-2-1-5
328 873
329 Oh43 x (B73)2@4-2831-1-2-1-6
5330 Oh43 x (B73)2@4-2831-1-2-2-1
5331 Oh43 x (B73)2@4-2831-1-2-2-2
5332 Mo17
5333 Mo17
5334 HY3 x (B73)2@4-2838-2-2-1-1
5335 H93 x (B73)2@4-2838-2-2-1-2
5336 H93 x (B73)2@4-2838-2-2-1-3
5337 H93 x (B73)2@4-2838-2-2-2-1
5338 H93 x (B73)2@4-2838-2-2-2-2
5339 H93 x (B73)2@4-2838-2-2-2-3
5340 H93 x (B73)2@4-2838-2-2-3-1
5341 H93 x (B73)2@4-2838-2-2-3-2
5342 H93 x (B73)2@4-2838-2-2-3-3
5343 H93 x (b73) 2@4-2838-2-2-4-1
5344 H93 x (B73)2@4-2838-2-2-4-2
5345 B73
9346 H93 x (B73)2@4-2838-2-2-4-3
5347. H93 x (B73)2@4-2838-2-3-1-1
5348 H93 x (B73)2@4-2838-2-3-1-2
5349 H93 x (B73)2@4-2838-2-3-1-3
5350 H93 x (B73)2@4-2838-2-3-1-4
5351 H93 x (B73)2@4-2838-2-3-1-5
5352 H93 x (B73)2@4-2838-2-3-1-6
5353 H93 x (B73)2@4-2838-2-3-1-7
5354 H93 x (B73)2@4-2838-2-3-1-8
5355 H93 x (B73)2@4-2838-2-3-2-1
5356 H93 x (B73) 2@4-2838-2-3-2-2
5357 H93 x (Ei73) 2@4-2838-2-3-2-3
5358 H93 x (B73) 2@4-2838-2-3-3-1
5359 H93 x (B73) 2@4-2838-2-3-3-2
5360 H93 x (B73) 2@4-2838-2-3-3-3
5361 H93 x (B73)2@4-2838-2-3-3-4
5362 H93 x (B73)2@4-2838-2-3-4-1
5363 H93 x (B73)2@4-2838-2-3-4-2
5364 H93 x (B73) 2@4-2838-2-3-4-3
5365 H93 x (B73)2@4-2838-2-3-4-4
5366 H93 x (B73)2@4-2838-6-1-1-1
5367 H93 x (B73)2@4-2838-6-1-1-2
5368 H93 x (B73)2@4-2838-6-1- 1-3
5369 H93 x (B73)2@4-2838-6-1-1-4
5370 B73
5371 H93 x (B73)2@4-2838-6-1-1-5
5372 H93 x (B73)2@4-2838-6-1-2-1

HAWAII THREE

7219	H93	x	(B73)2@5	2838-2-3-2-2-1-5356
7220	H93	x	(B73)2@5	2838-2-3-2-2-2-5356
7221	H93	x	(B73)2@5	2838-2-3-2-2-3-5356
7222	H93	x	(B73)2@5	2838-2-3-2-3-1-5357
7223	H93	x	(B73)2@5	2838-2-3-2-3-2-5357
7224	H93	x	(B73)2@5	2838-2-3-2-3-3-5357
7225	H93	x	(B73)2@5	2838-2-3-3-2-1-5359
7226	H93	x	(B73)2@5	2838-2-3-3-2-2-5359
7227	H93	x	(B73)2@5	2838-2-3-3-2-3-5359
7228	H93	x	(B73)2@5	2838-2-3-3-3-1-5360
7229	H93	x	(B73)2@5	2838-2-3-3-3-2-5360
7230	B73			
7231	H93	x	(B73)2@5	2838-2-3-3-4-1-5361
7232	H93	x	(B73)2@5	2838-2-3-3-4-2-5361
7233	H93	x	(B73)2@5	2838-2-3-3-4-3-5361
7234	H93	x	(B73)2@5	2838-2-3-4-1-1-5362
7235	H93	x	(B73)2@5	2838-2-3-4-1-2-5363
7236	H93	x	(B73)2@5	2838-2-3-4-2-1-5363
7237	H93	x	(B73)2@5	2838-2-3-4-2-2-5363
7238	H93	x	(B73)2@5	2838-2-3-4-2-3-5363
7239	H93	x	(B73)2@5	2838-6-1-1-1-1-5366
7240	H93	x	(B73)2@5	2838-6-1-1-1-2-5366
7241	H93	x	(B73)2@5	2838-6-1-1-1-3-5366
7242	H93	x	(B73)2@5	2838-6-1-1-1-4-5366
7243	H93	x	(B73)2@5	2838-6-1-1-1-5-5366
7244	H93	x	(B73)2@5	2838-6-1-1-2-1-5367
7245	H93	x	(B73)2@5	2838-6-1-1-2-2-5367
7246	H93	x	(B73)2@5	2838-6-1-1-2-3-5367
7247	H93	x	(B73)2@5	2838-6-1-1-2-4-5367
7248	H93	x	(B73)2@5	2838-6-1-1-3-1-5368
7249	H93	x	(B73)2@5	2838-6-1-1-3-2-5368
7250	H93	x	(B73)2@5	2838-6-1-1-3-3-5368
7251	H93	x	(B73)2@5	2838-6-1-1-3-4-5368
7252	H93	x	(B73)2@5	2838-6-1-1-3-5-5368
7253	H93	x	(B73)2@5	2838-6-1-1-4-1-5369
7254	H93	x	(B73)2@5	2838-6-1-1-4-2-5369
7255	H93	x	(B73)2@5	2838-6-1-1-4-3-5369
7256	H93	x	(B73)2@5	2838-6-1-1-4-4-5369
7257	H93	x	(B73)2@5	2838-6-1-1-5-1-5371
7258	H93	x	(B73)2@5	2838-6-1-1-5-2-5371
7259	H93	x	(B73)2@5	2838-6-1-1-5-3-5371
7260	H93	x	(B73)2@5	2838-6-1-1-5-4-5371
7261	H93	x	(B73)2@5	2838-6-1-1-5-5-5371
7262	H93	x	(B73)2@5	2838-6-1-2-1-1-5372
7263	H93	x	(B73)2@5	2838-6-1-2-1-2-5372
7264	H93	x	(B73)2@5	2838-6-1-2-1-3-5372
7265	H93	x	(B73)2@5	2838-6-1-2-1-4-5372
7266	H93	x	(B73)2@5	2838-6-1-2-1-5-5372
7267	t-193	x	(B73)2@5	2838-6-1-2-2-1-5373
7268	H93	x	(B73)2@5	2838-6-1-2-2-2-5373
7269	H93	x	(B73)2@5	2838-6-1-2-2-3-5373
7270	H93	x	(B73)2@5	2838-6-1-2-2-4-5373
7271	H93	x	(B73)2@5	2838-6-1-2-2-5-5373
7272	B73			
7273	H93	x	(B73)2@5	2838-6-1-2-3-1-5374
7274	H93	x	(I573)2@5	2838-6-1-2-3-2-5374

I-79

MOUNTAIN BLOCK A

9769 H93 x (B73)2@6 2838-6-1-1-2-2-1-7245
9770 H93 x (B73)2@6 2838-6-1-1-2-2-2-7245
9771 H93 x (B73)2@6 2838-6-1-1-2-3-1-7246
9772 H93 x (B73)2@6 2838-6-1-1-2-4-1-7247
9773 Mo17
der LH38

Range 2 - SOUTH T O NORTH

der LH38
9774 LH38
9775 B73
9776 H93 x (B73)2@6 2838-6-1-1-2-4-2-7247
9777 H93 x (B73)2@6 2838-6-1-1-3-1-1-7248
9778 H93 x (B73)2@6 2838-6-1-1-3-2-1-7249
9779 H93 x (B73)2@6 2838-6-1-1-3-2-2-7249
9780 H93 x (B73)2@6 2838-6-1-1-3-4-1-7251
9781 H93 x (B73)2@6 2838-6-1-1-4-3-1-7255
9782 H93 x (B73)2@6 2838-6-1-1-4-3-2-7255
9783 H93 x (B73)2@6 2838-6-1-1-4-4-1-7256
9784 H93 x (B73)2@6 2838-6-1-1-4-4-2-7256
9785 H93 x (B73)2@6 2838-6-1-1-5-1-1-7257
9786 H93 x (B73)2@6 2838-6-1-1-4-4-3-7256
9787 H93 x (B73)2@6 2838-6-1-1-5-1-2-7257
9788 H93 x (B73)2@6 2838-6-1-1-5-1-3-7257
9789 t-193 x (B73)2@6 2838-6-1-1-5-2-1-7258
9790 H93 x (B73)2@6 2838-6-1-1-5-2-2-7258
9790 H93 x (B73)2@6 2838-6-1-1-5-2-3-7258
9792 H93 x (B73)2@6 2838-6-1-1-5-3-2-7259
9793 t-193 x (B73)2@6 2838-6-1-1-5-3-3-7259
9794 H93 x (B73)2@6 2838-6-1-1-5-3-1-7259
9795 H93 x (B73)2@6 2838-6-1-1-5-4-1-7260
9796 H93 x (B73)2@6 2838-h-1-1-5-4-2-7250
9797 H93 x (B73)2@6 2838-6-1-1-5-4-3-7260
9798 Mo17
9799 LH38
9800 H93 x (B73)2@6 2838-6-1-1-5-5-1-7261
9801 H93 x (B73)2@6 2838-6-1-1-5-5-3-7261
9802 H93 x (B73)2@6 2838-6-1-1-5-5-2-7261
9803 H93 x (B73)2@6 2838-6-1-2-1-1-3-7262
9804 H93 x (B73)2@6 2838-6-1-2-1-1-1-7262
9805 H93 x (B73)2@6 2838-6-1-2-1-1-2-7262
9806 H93 x (B73)2@6 2838-6-1-2-1-2-1-7263
9807 H93 x (B73)2@6 2838-6-1-2-1-2-2-7263
9808 H93 x (B73)2@6 2838-6-1-2-1-3-1-7264
9809 H93 x (B73)2@6 2838-6-1-2-1-3-2-7264
9810 H93 x (B73)2@6 2838-6-1-2-1-4-2-7265
9811 H93 x (B73)2@6 2838-6-1-2-1-4-1-7265
9812 H93 x (B73)2@6 2838-6-1-2-1-5-1-7266
9813 H93 x (B73)2@6 2838-6-1-2-1-5-2-7266
9814 H93 x (B73)2@6 2838-6-1-2-2-1-2-7267
9815 H93 x (B73)2@6 2838-6-1-2-2-1-1-7267
9816 H93 x (B73)2@6 2838-6-1-2-2-2-1-7268
9817 H93 x (B73)2@6 2838-6-1-2-2-2-2-7268
9818 H93 x (B73)2@6 2838-6-w 1-2-2-2-3-7268
9819 H93 x (B73) 2@6 2838-6-1-2-2-3-1-7269

IOWA CROP IMPROVEMENT ASSOCIATION
Ames, Iowa

8200064

EXHIBIT A
R/S

FIELD INSPECTION REPORT

Applicant Holden's Seeds
ADDRESS

Field Identity LH 119 — 39
POLLEN PARENT — CROP — FIELD NO.

Date 8-6-8 | A.M. P.M.
Time

Your attention is called to the following conditions in the above described field.

POLLEN PARENT

Plants shedding pollen 100 %.
Off-type plants shedding pollen _____ %.

SEED PARENT

% Plants	Pedigree					
	I	I	I	I		
Shedding Pollen						
Receptive to Pollen	100					
Off-type						
Off-type & Shedding Pollen						

REMARKS: Final inspection — isolation not O.K. until cuts are made "inspection only" sections look good — tube seem no off-types.

GROWER'S COPY

Inspector R. Frace 3-79-10M

Harris

8200064

EXHIBIT A RJS

Field No 39 Pollinator LH119 - East

Pollinator

Date	Dryer	Bin	Pedigree	Bushels	Inspection Results	Inspector
	2	6,5,4,3	LH119 Block	600	No Pass	
	1	5,4	LH119 Block	↓	No Pass 9-28	
			V.F. Dad test showed			N D [illegible]
			to be		0%	

Females

Date	Dryer	Bin	Pedigree	Bushels	Inspection Results	Inspector

IOWA CROP IMPROVEMENT ASSOCIATION
Ames, Iowa

8200064

FIELD INSPECTION REPORT

Applicant Holden's Seeds
ADDRESS

Field Identity LH119 38
POLLEN PARENT CROP FIELD NO.

Date 8-6-81 A.M. P.M.
Time

Your attention is called to the following conditions in the above described field.

POLLEN PARENT

Plants shedding pollen 95+ %

Off-type plants shedding pollen _____ %

SEED PARENT

% Plants	Pedigree					
Shedding Pollen						
Receptive to Pollen	95+					
Off-type						
Off-type & Shedding Pollen						

REMARKS:

Final inspection — Isolation ok, well-rogued

R. Fall
Inspector

GROWER'S COPY 3-79-10M

Hanis

8200064

Field No. 38 Pollinator LH119 - South

	Date	Dryer	Bin	Pedigree	Bushels	Inspection Results	Inspector
Pollinator		1	7	LH119 M.R.	200	Passed 11/2	[illegible]

	Date	Dryer	Bin	Pedigree	Bushels	Inspection Results	Inspector
Females	10/20	~~1~~ 2	~~26~~ 48	B73EL mostH x LH119	180	Passed 10/20	[illegible]
		1	17	B73HtxLH119	180	Passed 10/20	[illegible]

Supplement to Exhibit A

Corn Application No. 8200064, 'LH119'

LH119 is very stable and uniform. Either self-pollination or sib mating will maintain the identity of LH119 very well.

LH119 has been increased three generations since the line development process was completed in 1979. Each generation was carefully scrutinized for uniformity.

Supplement to Exhibit A

Corn Application #8200064 'LH119'

There are no variants in LH119 inbred.

Exhibit B

LH119

Novelty Statement

LH119 most clearly resembles B73Ht. However, at anthesis the tassel branches of LH119 are more horizontal than the tassel branches of B73. Photo #1 illustrates the difference. The LH119 tassel is on the left; the B73 tassel on the right.

Photo 1

FORM APPROVED: OMB NO. 40-R3822

EXHIBIT C
(Corn)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
CORN *(ZEA MAYS)*

NAME OF APPLICANT(S)
Holden's Foundation Seeds, Inc.

ADDRESS *(Street and No. of R.F.D. No., City, State, and ZIP Code)*
Box 839
Williamsburg, Iowa 52361

FOR OFFICIAL USE ONLY
PVPO NUMBER 8200064
VARIETY NAME OR TEMPORARY DESIGNATION
LH119

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][9][9] or 0 9) when number is either 99 or less or 9 or less.

1. TYPE:

c [2] 1 -SWEET 2 = DENT 3 = FLINT 4 = FLOUR 5 = POP 6 = ORNAMENTAL

2. REGION WHERE BEST ADAPTED IN THE U.S.A.:

a [7] 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST
5 = SOUTHCENTRAL 6 = SOUTHWEST 7 = MOST REGIONS

3 MATURITY (In Region of Best Adaptability):

(Under "comments" (pg. 3) state how heat units were calculated)

[6][2] DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK — HEAT UNITS [1][3][4][4]

a [-][-] DAYS PROM 50% SILK TO OPTIMUM EDIBLE QUALITY — [-][-][-][-] HEAT UNITS

[9][1] DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE — [1][3][6][2] HEAT UNITS

4. PLANT:

[2][2][0] CM. HEIGHT (To tassel tip) — [0][6][7] CM. EAR HEIGHT (To base of top ear)

[1][2] CM. LENGTH OF TOP EAR INTERNODE

Number of Tillers:

[1] 1 = NONE 2 = 1-2 3 = 2-3 4 = > 3

Number of Ears Per Stalk:

c [2] 1 = SINGLE 2 = SLIGHT TWO-EAR TENDENCY
3 = STRONG TWO-EAR TENDENCY 4 = THREE-EAR TENDENCY

Cytoplasm Type:

a [1] 1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = OTHER (Specify) _____

5. LEAF (Field Corn Inbred Examples Given):

Color:

c [2] 1 = LIGHT GREEN (HY) 2 = MEDIUM GREEN (WF9) 3 = DARK GREEN (B14) 4 = VERY DARK GREEN (K166)

Angle from Stalk (Upper half):

[1] 1 = < 30° 2 = 30–60° 3 = > 60°

Sheath Pubscence:

[1] 1 = LIGHT (W22) 2 = MEDIUM (WF9)
3 = HEAVY (OH26)

Marginal Waves:

c [1] 1 = NONE (HY) 2 = FEW (WF9) 3 = MANY (OH7L)

Longitudinal Creases:

c [1] 1 = ABSENT (OH51) 2 = FEW (OH56A)
3 = MANY (PA11)

Width:

a [0][9] CM. WIDEST POINT OF EAR NODE LEAF

Length:

[0][8][2] CM. EAR NODE LEAF

[1][3] NUMBER OF LEAVES PER MATURE PLANT

6. TASSEL:

[0 9] NUMBER OF LATERAL BRANCHES

Branch Angle from Central Spike:

E -3 I 1 = < 30° 2 = 30–40° 3 = > 45'

Penduncle Length:

[1 0] CM. FROM TOP LEAF TO BASAL BRANCHES

Pdlen Shed:

[2] 1 = LIGHT (WF9) 2 = MEDIUM 3 = HEAVY(KY21)

a 1 Anther Color: } 1 = YELLOW 2 = PINK 3 = RED 4 = PURPLE 5 = GREEN
c 5 I Glume Color: } 6 = OTHER (Specify) _____

Pollen Restoration for Cytoplasms (o = Not Tested, 1 = Partial, 2 = Good)

a 0 "T" c 1 I "S" [1] "C" a OTHER (Specify Cytoplasm and degrees of restoration) _____

7. EAR (Husked Ear Data Except When Stated Otherwise):

JMS 5/30/91 12/4/91

[1 4] CM LENGTH [~~0 5~~ 50] MM. MID-POINT DIAMETER 1 [1 5] GM. WEIGHT

Kernel Rows:

a 2 1 = INDISTINCT 2 = DISTINCT [1 6] NUMBER

[1] 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = SPIRAL

Silk Color (Exposed at Silking Stage):

[1] 1 = GREEN 2 = PINK 3 = SALMON 4 = RED

Husk Color:

c 2 I FRESH } 1 = LIGHT GREEN 2 = DARK GREEN 3 = PINK
a 6 DRY } 4 = RED 5 = PURPLE 6 = BUFF

Husk Extention: (Harvest Stage)

[2] 1 -SHORT (Ears Exposed) 2 = MEDIUM (Barely Covering Ear) 3 = LONG (8–10CM Beyond Ear Tip) 4 = VERY LONG (> 10 CM)

Husk Leaf:

c 1 I 1 = SHORT (< 8 CM) 2 = MEDIUM (8–15 CM) 3 = LONG (> 15 CM)

Shank:

[1 1] CM LONG c 6 L NO. OF INTERNODES

Position at Dry Husk Stage:

[1] 1 = UPRIGHT 2 = HORIZONTAL 3 = PENDENT

Taper:

[2] 1 = SLIGHT 2 = AVERAGE 3 = EXTREME

Drying Time (Unhusked Ear):

c 2 I 1 = SLOW 2 = AVERAGE 3 = FAST

8. KERNEL (Dried):

Size (From Ear Mid-Point):

[1 1] MM LONG [0 8] MM. WIDE [0 5] MM. THICK

Shape Grade (% Rounds)

[1] 1 = < 20 2 = 20–40 3 = 40–60 4 = 60–80 5 = > 80

8. KERNEL (Dried) : 8200064

[8] Pericarp Color: 1 = COLORLESS 2 = RED-WHITE CROWN 3 = TAN 4 = BRONZE 5 = BROWN 6 = LIGHT RED 7 = CHERRY RED 8 = VARIEGATED (Describe) Mostly yellow; some kernels have red stripes up side.

a1 Aleurone Color: 1 = HOMOZYGOUS 2 -SEGREGATING (Dencribs) _____

[11] 1 = WHITE 2 = PINK 3 = TAN 4 = BROWN 5 = BRONZE G-RED 7 = PURPLE 6 = PALE PURPLE 9 = VARIEGATED (Describe) _____

c2 1 Endosperm Color: 1 = WHITE 2 = PALE YELLOW 3 = YELLOW 4 = PIN K-ORANGE 6 = WHITE CAP.

[33] 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 = OTHER (Specify) _____

m 27 GM. WEIGHT /100 SEEDS (Unsized Sample)

9. COB:

m 34 MM. DIAMETER AT MID-POINT

Strength: c1 2 1 = WEAK 2 = STRONG

Color: 3 1 = WHITE 2 = PINK 3 = RED 4 = BROWN 3 5 VARIEGATED 6 OTHER (Specify) _____

10. DISEASE RESISTANCE (0 = Not Tested, 1 = Susceptible. 2 = Resistant):

[0] STALK ROT (Diplodia) [0] STALK ROT (Fusarium) c0 STALK ROT (Gibberella)

[1] NORTHERN LEAF BLIGHT [1] SOUTHERN LEAF BLIGHT c0 SMUT

[0] SOUTHERN RUST c0 CORN SMUT c0 BACTERIAL WILT

[0] BACTERIAL LEAF BLIGHT [0] MAIZE DWARF MOSAIC c0 STUNT

[0] OTHER (Specify)

11. INSECT RESISTANCT (0 = Not Tested. 1 = Susceptible, 2 = Resistant):

[0] CORNBORER c0 EARWORM c0 SAPBEETLE [0] APHID

[0] ROOTWORM (Northern) [0] ROOTWORM (Western)

[0] ROOTWORM (Southern) c0 OTHER (Specify) _____

12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN:

CHARACTER	VARIETY	CHARACTER	VARIETY
Maturity	B73Ht	Kernel Type	B73Ht
Plant Type	B73Ht	Quality (Edible)	
Ear Type	B73Ht	Usage	B73Ht

REFERENCES:

U.S. Department Agriculture. Yearbook 1937.

Corn: Culture, Processing. Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous (Authors)

Emerson. R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies In Maize. Cornell A.E.S., Mem. 180. 1935

Tho Mutants of Maize, 1966. Crop Science Society of America. Madison, Wisconsin.

Stringfield, G.H. Maize Inbred Lines of Ohio, Ohio A.E.S. Bul. 631. 1959.

Butler. D.R. 1954 -A System for the Classification of Corn Inbred Lines — PhD. Thesis, Ohio State University.

COMMENTS:

Heat Units $\frac{H: \text{Temp.5 } 86°F + \text{Low Temp} \geq 50}{2} - 50$

Exhibit D

LH119 looks and behaves like B73Ht. However, LH119 has much lower ear placement and flowers about 3-4 days earlier than B73Ht. The average kernel size of LH119 is slightly larger.

No. 8200064

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Holden's Foundation Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPS. 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 eighteen 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 EXPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 2541, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'LH119'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* May *in the year of our Lord one thousand nine hundred and* eighty-three.

Attest:

Kenneth A. [illegible]
Acting Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R Block
Secretary of Agriculture