No. 200500113

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

California Planting Cotton Seed Distributors

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 [illegible]TING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE [illegible] PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PU[illegible] OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PRO[illegible] THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHA[illegible]LD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER[illegible]RATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Acala NemX HY'

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 September, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

S[illegible] Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

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

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

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.

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 OWNER: California Planting Cotton Seed Distributors

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME: C101

3. VARIETY NAME: Acala NemX HY

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*: PO Box 80357, Bakersfield, CA 93380.0357

5. TELEPHONE *(include area code)*: (661) 399-1400

6. FAX *(include area code)*: (661) 399-3169

FOR OFFICIAL USE ONLY

PVPO NUMBER: 2005 00113

FILING DATE: FEBRUARY 3, 2005

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*: Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION: California

9. DATE OF INCORPORATION: May 13, 1936

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Dr. Stephen R. Oakley
30597 Jack Avenue
Shafter, CA 93263

FEES RECEIVED

FILING AND EXAMINATION FEES: $ 3,652.00 DATE 2/3/05

CERTIFICATION FEE: $ 682.00 DATE 8/16/05

11. TELEPHONE *(Include area code)*: (661) 746-3366

12. FAX *(Include area code)*: (661) 746-6905

13. E-MAIL: sroakley@cpcsd.com

14. CROP KIND *(Common Name)*: cotton

15. GENUS AND SPECIES NAME OF CROP: Gossypium hirsutum L.

16. FAMILY NAME *(Botanical)*: Malvaceae

17. IS THE VARIETY A FIRST GENERATION HYBRID? ☐ YES ☒ NO

18. 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 Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ 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. ☒ Filing and Examination Fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☐ YES ☒ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety has been 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 owner(s) is(are) the owner 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.

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

SIGNATURE OF OWNER: [signature]

SIGNATURE OF OWNER:

NAME *(Please print or type)*: Stephen R. Oakley

NAME *(Please print or type)*:

CAPACITY OR TITLE: Vice President, Director of R&D

DATE: 28 Jan 2005

CAPACITY OR TITLE:

DATE:

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $3,652 ($432 filing fee and $3,220 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not 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 3.0 hours 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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

'ACALA NEMX HY' LAW PER MAIL 3/21/05 4/27/05

Exhibit A. Origin and Breeding History – ~~C101~~

C101 is a variety of cotton developed from the cross N656 X Acala Prema made in 1992 at the CPCSD Cotton Research and Development Station, Shafter, California. The parents N656 and Acala Prema are CPCSD cotton varieties selected for nematode resistance and fiber quality in the San Joaquin Valley of California. N656 was developed from the cross B1662 x N6072, while Acala Prema was developed from T4585 x T5694 and is a commercial Acala cotton variety owned by CPCSD (PVP# 8800171). The lines were developed as follows: B1662 came from the cross T6754 x T7044. T6754 was derived from C6TE, while T7044 is developed from NM B3080. N6072 is tolerant to root-knot nematode, Meloidogyne incognita, and was developed by A. H. Hyer from a cross between FBCX-2, a Missouri breeding line, and AXTE 22. The breeding lines C6TE and N6072 were developed at the USDA Cotton Research Station, Shafter, CA, while NM B3080 came from the New Mexico State University cotton breeding program. The backgrounds of these lines are detailed by Calhoun, D.S., D.T. Bowman, and O.L. May, 1994, Pedigree of Upland and Pima Cotton Cultivars Released Between 1970 and 1990, MAFES Bulletin 1017, Mississippi State University, MS 39762.

Details of Selection

Seed from the cross N656 X Acala Prema were planted in the 1993 CPCSD Shafter nursery as an F_1 population and subsequently planted in 1994 as an F_2 row, in 1995 as an F_3 row, and in 1996 as an F_4 row. The F_2 through F_4 seed were bulk harvested and and these populations were selected on the basis of root-knot nematode tolerance, Verticillium wilt tolerance, fiber quality and yield potential. A pedigree selection procedure followed in the F_5 and F_6 (plant to row basis) as individual plants were each selected on the basis of agronomic characteristics, nematode tolerance, yield potential, and fiber properties. In 1998 F_7 seed from the F_6 row N1720 was bulk harvested, designate N1720, and entered into the 1999 CPCSD Nematode Lines Test. N1720 continued evaluation in the 2000 through 2004 CPCSD testing programs.

In 2001 N1720 was entered into the San Joaquin Valley Cotton Board (SJVCB) testing program as C101, and continued testing by the SJVCB testing until March, 2004, when C101 was approved by the SJVCB for commercial release in the San Joaquin Valley. Seed of C101 will be sold as Acala NemX HY.

Variants and Stability

CPCSD C101 was evaluated for six generations and no variants have been observed. The performance of C101 has been uniform and stable.

Population Size for Selection

Population	Approximate Number of Individuals
F_1	180
F_2 - F_4	2000
F_5 - F_6	60

'ACALA NEMX HY' LAW PEREMAIL 3/21/05 4/27/05

Exhibit A. Origin and Breeding History – ~~C101~~

Year	Event	Generation
1992	Cross: N656 X Acala Prema Pedigree: N656 = B1662 X N6072 Acala Prema = T4585 x T5694	
1993	Planted as row A5924	F1
1994	Planted as row A6016	F2
1995	Planted as row B4420	F3
1996	Planted as A6908	F4
1997	Plant selection A6908-15 planted as row A6962	F5
1998	Plant selection A6962-3 planted as row N1720 and N1720 was bulk harvested as a progeny row	F6
1999	N1720 entered into CPCSD Nematode Lines Test	
2000	N1720 entered into CPCSD Nematode Preliminary Strain Test	
2001	N1720 entered into CPCSD Nematode Advanced Strain Test, and also entered into in SJVCB Acala Screening Test as C101	
2002	C101 advanced by SJVCB into Acala Variety Test 1	
2003	C101 advanced by SJVCB into Acala Variety Test 2	
2004	C101 approved for commercial release by SJVCB in March 2004, and commercialized as Acala NemX HY	

Exhibit B. Statement of Distinctness – ~~C101~~ 'ACALA NEMX HY' LAW PER EMAIL 4/21/05 4/27/05

C101 was compared to cotton varieties Acala NemX and Acala Maxxa (the SJVCB Standard) in 28 test locations over 6 years. Maxxa was included in Exhibit C. because it is the San Joaquin Valley Cotton Standard. C101 is a root-knot nematode resistant cotton variety developed for nematode infested SJV soils, and the only other available Acala cotton variety with root-knot nematode tolerance is Acala NemX. C101 is most similar to Acala NemX.

C101 is similar to Maxxa in gin turn-out, micronaire, yarn strength and plant height, however C101 differs from Maxxa for lint yield, weighted nematode rating (WNR), fiber length and fiber strength (Table 1). C101 is similar to NemX for weighted nematode rating, but C101 differs from NemX for gin turn-out, fiber strength, micronaire, yarn strength and plant height. C101 is different from both Maxxa and NemX for lint yield and fiber length.

In summary, C101 is a novel cotton variety because of its significantly longer fiber length, and increased lint yield.

Table 1. Statement of Distinctness - C101

Variety	Lint Yield (lbs/A)	WNR	Gin Turn Out (%)	2.5% length (in)	T1 (g/tex)	Mic	Yarn Str. (g/tex)	Plant Height (in)
Maxxa	1400	40.3	33.7	1.175	25.5	4.29	143	32.8
NemX	1338	7.5	31.1	1.174	27.3	3.99	154	37.3
C101	1547	9.0	33.1	1.206	24.2	4.29	139	34.2
LSD.05	86	3.1	0.6	0.005	0.5	0.22	6	1.4
CV%	12.9	85.0	4.9	1.900	6.2	7.6	5.4	19.4

EXHIBIT C
COTTON

U.S. DEPARTMENT OF AGRICULTURE
PLANT VARIETY PROTECTION OFFICE, AMS, USDA
NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 400
10301 BALTIMAORE Blvd.
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
COTTON *(Gossypium* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
California Planting Cotton Seed Distributors	**C101**	**Acala NemX HY**

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code

PO Box 80357
Bakersfield, CA 93380-0357

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PVPO NUMBER
2005 00113

Place the appropriate data that describes the varietal characteristic of this variety in the space provided. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characters marked with an asterisk * indicate necessary characters to be measured.

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

Variety 1. **Acala NemX** Variety 2. **Acala Maxxa** Variety 3. _____

*1. SPECIES:

X *G. hirsutum* L. ____ *G. barbadense* L.

*2. AREA(S) OF ADAPTATION: (A=Adapted, NA= Not Adapted, NT= Not Tested)

____ Eastern	____ Delta	____ Central	____ Blacklands
____ Plains	____ Western	____ Arizona	X San Joaquin
____ Other (Specify):____			

3. GENERAL: Characteristics which are known to be variable but are still useful for a meaninful description of the variety.

	C101 Application Variety	**NemX** Comparison Variety 1	**Maxxa** Comparison Variety 2	Comparison Variety 3
Plant Habit: Spreading, Intermediate, Compact	I	I	I	
Foliage: Sparse, Intermediate, Dense	I	I	I	
Stem Lodging: Lodging, Intermediate, Erect	I	I	I	
Fruiting Branch: Clustered, Short, Normal	N	N	N	
Growth: Determinate, Intermediate, Indeterminate	Intermed	Intermed	Intermed	
Leaf Color Greenish yellow, Light green, Medium green, Dark green	MG	MG	DG	

'ACALA NEMX HY' LAW PER EMAIL 3/21/05 4/27/05

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EXHIBIT C
COTTON

3. GENERAL:	~~C101~~	NemX	Maxxa	
Boll Shape: Length LESS than width, Length EQUAL to width, Length MORE than width	More	More	More	
Boll Breadth: Broadest at base, Broadest at middle	Middle	Middle	Middle	
*4. MATURITY: (Days for 50% Open bolls from sequential harvest dates.)				
Days for 50% Open Bolls	150	149	150	
5. PLANT: **Cm to 1st Fruiting Branch:** (from cotyledonary node)	23.1	21.5	22.2	
No. of Nodes to 1st Fruiting Branch: (excluding cotyledonary node)	5.55	5.35	4.70	
Mature Plant Height cm: (from cotyledonary node to terminal)	85.6	92.9	81.9	
*6. LEAF **Type:** Normal Sub Okra, Okra, Super Okra	N	N	N	
Pubescence: Absent, Sparse, Medium, Dense **OR** Trichomes/cm2 (Bottom surface excluding veins)	M	M	M	
Nectaries: Present or Absent	P	P	P	
*7. STEM PUBESCENCE: Glabrous, Intermediate, Hairy	I	I	I	
*8. GLANDS: (Gossypol) Absent, Sparse, Normal, More Than Normal				
Leaf:	N	N	N	
Stem:	N	N	N	
Caly% Lobe: (normal is absent)	A	A	A	
*9. FLOWER				
Petals: Cream, Yellow	C	C	C	
Pollen: Cream, Yellow	C	C	C	
Petal Spot: Present, Absent	A	A	A	
*10. SEED				
Seed Index: (g/100 seed, fuzzy basis)	14.9	13.9	13.4	
Lint Index: (g lint/100 seeds)	9.9	8.2	8.9	

200500113

EXHIBIT C
COTTON

*11. BOLL

'ACALA NEMX HY' LALI PEREMAIL 3/21/05 4/27/05

	~~C101~~	NemX	Maxxa	
Lint Percent: X Picked ___ Pulled	39.8	37.4	39.7	
OR				
Gin Turnout: X Picked ___ Stripped	33.1	31.6	39.7	
Number of Seeds per Boll	25.9	26.5	27.3	
Grams Seed per Boll	5.8	5.7	5.7	
Number Locules per Boll	4-5	4-5	4-5	
Boll Type: (Stormproof, Storm Resistant, Open)	Open	Open	Open	

12. FIBER PROPERTIES

Specify Method (HVI or other): Individual Instruments

* **Length:** (inches, 2.5% SL)	1.221	1.19	1.175	
* **Uniformity:** (%)	51.6	51.3	51.5	
* **Strength,** T1 (g/tex) stelometer	26.2	29.7	26.4	
* **Elongation,** E1 (%)	9.0	8.0	8.8	
* **Micronaire:**	4.18	4.15	4.16	
Fineness (Source ____)				
Yarn Tenacity: (cN/tex, 27 tex)				
Yarn Strength (lbs. 22's)	135	141	137	

13. DISEASES: (NT=Not Tested, S= Susceptible, MS=Moderately Susceptible, MR=Moderately Resistant, R=Resistant)

NT	*Alternaria macrospora*	NT	Fusarium Wilt
NT	Anthracnose	NT	Phymatotrichum Root Rot
NT	Ascochyta Blight	NT	*Pythium* (specify species)
NT	Bacterial Blight (Race 1)	NT	*Rhizoctonia solani*
NT	Bacterial Blight (Race 2)	NT	Southwestern Cotton Rust
NT	Bacterial Blight (Race ___)	NT	Thielaviopsis basicola
NT	Diplodia Boll Rot	R	Verticillium Wilt
NT	Other (specify) ___		

14. NEMATODES, INSECTS AND PESTS: (NT=Not tested, S=Susceptible, MS= Moderately Susceptible, MR=Moderately Resistant, R= Resistant

R	Root-Knot Nematode	NT	Reniform Nematode
NT	Boll Weevil	NT	Grasshopper (specify species):
NT	Bollworm	NT	Lygus (specify species):
NT	Cotton Aphid	NT	Pink Bollworm
NT	Cotton Fleahopper	NT	Spider Mite (specify species): _____
NT	Cotton Leafworm	NT	Stink Bug
NT	Cutworm (specify species): _____	NT	Thrips (specify species): _____
NT	Fall Armyworm	NT	Tobacco Bud Worm
NT	Other (specify): _____		

15. COMMENTS: Present any additional information that cannot adequately be described in 1 through 13 which significantly distinguishes your variety.

Exhibit D. Additional Description of ~~C101~~ 'ACALA NEMX HY' LAW PER EMAIL 3/21/05 4/27/05

Table 2. 2001-03 CPCSD Nematode AST - Over Years

Variety	Lint Yield (lbs/A)	Nematode Galling (WNR)	Gin Turn Out (%)	2.5% length (in)	Unif. Ratio	T1 (g/tex)	E1	Mic	Yarn Str. (g/tex)	SCF Rating 1=none	Meats Rating 1=none	Plant Height (in)
Maxxa	1400	40.3	33.7	1.175	49.4	25.5	7.7	4.29	143	2.9	3.6	32.8
NemX	1338	7.5	31.1	1.174	49.9	27.3	7.9	3.99	154	2.3	1.9	37.3
C101	1547	9.0	33.1	1.206	48.5	24.2	8.3	4.29	139	1.7	1.8	34.2
LSD.05	86	3.1	0.6	0.005	0.6	0.5	0.6	0.22	6	1.3	1.3	1.4
CV%	12.9	85.0	4.9	1.900	73.9	6.2	8.7	7.6	5.4	28.1	35.7	19.4

Table 3. 2003 CPCSD Nematode AST - Four Locations

	2003 Lint Yield							2003 Fiber Properties (across locations)								
Variety	Button-willow (lbs/A)	Shafter (lbs/A)	Tulare (lbs/A)	Riverdale (lbs/A)	Average (lbs/A)	Nematode Galling (WNR)	Gin Turn Out (%)	2.5% length (in)	Unif. Ratio	T1 (g/tex)	E1	Mic	Yarn Str. (g/tex)	SCF Rating 1=none	Meats Rating 1=none	Plant Height (in)
Maxxa	1459	1260	1371	1057	1287	37.9	32.5	1.163	49.5	26.8	8.1	4.21	138	2.0	4.7	38.9
NemX	1338	1143	1158	1360	1250	7.0	29.8	1.161	49.9	28.3	8.7	3.95	148	1.2	2.5	43.7
C101	1508	1591	1282	1361	1436	7.5	31.9	1.191	48.4	25.3	9.2	4.16	137	1.1	2.6	41.4
LSD.05	28	82	74	186	113	7.2	0.8	0.015	1.0	1.2	0.6	0.27	29	0.6	0.5	2.6
CV%	1.4	5.0	4.7	11.7	6.9	89.6	1.8	1.063	1.7	3.8	5.7	5.6	2.0	22.5	9.8	2

Table 4. 2002 CPCSD Nematode AST - Three Locations

	2002 Lint Yield						2002 Fiber Properties (across locations)								
Variety	Shafter (lbs/A)	Tulare (lbs/A)	River-dale (lbs/A)	Average (lbs/A)	Nematode Galling (WNR)	Gin Turn Out (%)	2.5% length (in)	Unif. Ratio	T1 (g/tex)	E1	Mic	Yarn Str. (g/tex)	SCF Rating 1=none	Meats Rating 1=none	Plant Height (in)
Maxxa	1528	1662	1656	1615	43.1	33.6	1.198	50.0	25.3	8.0	4.04	147	3.8	2.5	25.3
NemX	1504	1438	1574	1505	8.7	31.3	1.195	50.1	26.8	7.7	3.60	156	3.4	1.1	28.9
C101	1783	1905	1706	1798	9.2	32.7	1.226	48.7	23.9	8.2	4.12	142	2.4	1.1	26.0
LSD.05	151	110	141	155	4.7	0.9	0.020	0.9	0.7	0.5	0.57	7	1.0	0.4	4.0
CV%	7.5	5.7	6.8	6.6	16.7	1.6	1.5	1.8	3.7	4.3	15.0	2.4	15.3	13.4	9

Table 5. 2001 CPCSD Nematode AST - Three Locations

	2001 Lint Yield						2001 Fiber Properties (across locations)						
Variety	Shafter (lbs/A)	Strath-more (lbs/A)	Riverdale (lbs/A)	Average (lbs/A)	Nematode Galling (WNR)	Gin Turn Out (%)	2.5% length (in)	Unif. index	T1 (g/tex)	E1	Mic	Yarn Str. (g/tex)	Plant Height (in)
Maxxa	1279	1098	1516	1298	40.0	35.1	1.164	0.49	24.4	7.1	4.61	143	34.2
NemX	1414	769	1595	1259	6.8	32.1	1.166	0.50	26.7	7.2	4.42	157	39.2
C101	1433	985	1805	1408	10.4	34.4	1.200	0.48	23.5	7.4	4.58	136	35.1
LSD.05	128	127	115	149	15.6	0.7	0.017	0.01	1.6	0.3	0.27	7.9	5.5
CV	7.9	11.1	5.8	8.0	18.3	1.7	1.0	1.7	4.7	3.4	4.4	3.0	12

2005 0112

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

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)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
California Planting Cotton Seed Distributors	C101	Acala NemX HY
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(Include area code)*	6. FAX *(Include area code)*
PO Box 80357 Bakersfield, CA 93380-0357	(661) 399-1400	(661) 399-3169
	7. PVPO NUMBER 2005 00113	

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

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

10. Is the applicant the original owner? [X] YES [ ] NO **If no, please answer one of the following:**

a. If the 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 the 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 *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

The applicant is the original breeder and current owner of the variety. No ownership trace is necessary.

The variety was developed from germplasm and seedstocks owned by the applicant, by individuals employed by the applicant, at facilities owned by the applicant, or through contractual arrangements made by the applicant.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet 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 the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not 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 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.