No. 7200092

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

J. H. Lambright

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 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 seventeen 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 USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS CERTIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Lambright GL-4'

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, DC *this* 10th *day of* June *in the year of our Lord one thousand nine hundred and* seventy-four

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(2-12-71)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION Lambright GL-4	2. KIND NAME Upland Cotton	FOR OFFICIAL USE ONLY PVPO NUMBER 72092
3. GENUS AND SPECIES NAME Genus Gossypium	4. FAMILY NAME *(Botanical)* Gossypium Hirsutum L.	FILING DATE 2.22.72 / TIME 3 A.M. (P.M.)
	5. DATE OF DETERMINATION Year 1969	FEE RECEIVED $ 750.00 / CHARGES
6. NAME OF APPLICANT(S) J.H. Lambright	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* Route 2, Slaton, Texas 79364	8. TELEPHONE AREA CODE AND NUMBER 806-996-2866
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [x] 12A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52, P.L. 91-577)*
- [x] 12B. Exhibit B, Botanical Description of the Variety
- [x] 12C. Exhibit C, Objective Description of the Variety
- [x] 12D. Exhibit D, Data Indicative of Novelty
- [x] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable. *(See Section 52, P.L. 91-577).*

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), P.L. 91-577) (If "Yes," answer 14B and 14C below.)* [x] YES [ ] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? [ ] YES [x] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes 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 Protection Act (P.L. 91-577).

February 18, 1972
(DATE)

J.H. Lambright
(SIGNATURE OF APPLICANT)

(DATE)

1
(SIGNATURE OF APPLICANT)

FORM GR-470 (REVERSE)

U.S. DEPARTMENT OF AGRICULTURE
RECEIVED
FEB 22 1972
CMS GRAIN DIVISION

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unles noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety.

12a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

12b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.

12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

Exhibit A, Origin and Breeding History of the Lambright GL-4 Cotton Variety

The Lambright GL-4 cotton is a glandless (Gossypol free) variety, that has been developed by use of a back cross breeding program, from a cross made in 1966, by J.H. Lambright, by using the Lambright X-15-4 normal glanded variety, and glandless pollen from the Texas Agricultural Experiment Station at Lubbock Texas, The Lambright X-15-4 was developed from a cross made in 1964,by J.H. Lambright, by using the Del Cerro and the Lambright 123 BR-1 cottons, the Lambright 123 BR-1 being an upland short staple stormproof, and the Del Cerro being a longer staple loose lock cotton.

The Lambright 123 BR-1 showed Bacterial Blight resistance to all 4 Races of a mixture of Race 1, Race 2, and Variant 5, Variant 6, of Xanthamonas Malvacearium, conducted at the Texas Agricultural Experiment Station at Lubbock Texas in 1965.

By using the facilities at Iguala Mexico for winter increase allowing two generations each year for selection and reproduction, with the 1968-69 winter increase when 5 units or 75 plants were individually harvested, and all plants were free of gossypol glands, with the 1969 increase is when I first determined I had a glandless (Gossypol free) plant.

Exhibit B, Botanical Description of the
Lambright GL-4 Cotton Variety

The special Botanical characteristics of the Lambright GL-4 variety, are the absence of the lysigenous, pigmented, gossypol bearing glands.Having only glandless bearing genes, the seed and plants are glandless, as they pass through the seedling, flowering, and fruiting stages, The Lambright GL-4 cotton are annual plants of intermediate height, with occasional vegetative branching, of the smooth leaf class, (glabrous), the flowers are medium in size, 5 petals, and borne singly, foliage light, the corolla and pollen are light cream, or creamy yellow in color, short jointed 1 to 5 boll fruiting branch, creating a cylindrical or conical form. The fruit is medium to large in size, 4 and 5 locks, The seed are medium to large in size, short ovate in shape, coated with a greenish brown linters, The Lambright GL-4 cotton being of the homozygous genotype, with only the recessive genes, $gl_2gl_2gl_3gl_3$genes present, which are glandless bearing genes only, the seed and all parts of the plant are free of gossypol glands, throughout the growing period, in comparison to, The parent plant the Lambright X-15-4 variety, being of a normal glanded genotype, with the $Gl_1Gl_1Gl_2Gl_2Gl_3Gl_3$ genes present which are the gossypol bearing genes. With the phenotype expression and the presence of the pigmented gossypol bearing glands in all parts of the plant, which are obvious and easily noticeable throughout the growing period.

Exhibit C, Objective Description of the
Lambright GL-4 Cotton Variety

The Lambright GL-4 is a glandless variety, of intermediate height, medium size main stem, incline to lean under heavy fruiting, with determinant type growth, an occasional basal vegetative branch, early maturity, of the smooth leaf class, (glabrous), foliage light, good root system, medium size 3 to 5 lobe leaves, lighter green in color, the flowers are medium in size, 5 petals, and are borne singly, the corolla and pollen are creamy or light creamy yellow in color, (as are most commercial varieties), short jointed 1 to 5 boll fruiting branches, creating a cylindrical or colical form, The fruit is medium to large in size, 4 and 5 locks, round to round ovate in shape, with a short beak, 60 to 65 bolls seed cotton per lb., stormproof, lint percent 38 to 40 percent, The typical range of fiber properties are, lint length, 1 1/16 to 1 5/32 inches, P.S.I. 90,000 to 100,000 lbs., and micronaire reading of 4.0 to 4.5, Medium to large seed, short ovate in shape, 3,400 to 3,600 to lb., coated with a greenish brown linters.

110 to 115 days to maturity.

The GL-4 cotton has been developed for once over stripper type harvest, not suitable for spindle picking.

Has minimum amount of tolerence to Verticillium and Fusarium wilt, with a high degree of tolerence to Bacterial Blight.

72092

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8
(10-2-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
J.H. Lambright

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
Route 2
Slaton, Texas 79364

FOR OFFICIAL USE ONLY

PVPO NUMBER
72092

VARIETY NAME OR TEMPORARY DESIGNATION
Lambright GL-4

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][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. SPECIES:

[1] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

[0] EASTERN [0] DELTA [0] CENTRAL [2] HIGH PLAINS [0] EL PASO AREA
[0] WESTERN LOW HOT VALLEYS [0] SAN JOAQUIN [ ] OTHER (*Specify*) ____

3. MATURITY (50% Open Boll):

[0][5] NO. OF DAYS *EARLIER* THAN ..... [7]
[0][0] NO. OF DAYS *LATER* THAN ..... [4]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) ____

4. PLANT HABIT:

[3] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[3] 1 = FOLIAGE SPARSE 2 = DENSE 3 = OTHER (*Specify*) Medium

5. PLANT HEIGHT:

[0][2"] CM. *SHORTER* THAN ..... [4]
[0][2"] CM. *TALLER* THAN ..... [7]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) ____

6. MAIN STEM:

[2] 1 = LAX 2 = ASCENDING 3 = ERECT

[2"] CM. TO FIRST FRUITING BRANCH

[0][3] NO. OF NODES TO FIRST FRUITING BRANC (*from cotyledonary node*)

7. LEAF:

[0][5"] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[2] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER (*Specify*) ____

9. LEAF COLOR:

[1] 1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (*Acala-442*) 4 = RED
5 = OTHER (*Specify*) ____

10. LEAF TYPE:

[1] 1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (*Specify*) ____

11. FLOWER:

[2] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW [1] Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

[2] 1 = CLUSTER 2 = SHORT 3 = NORMAL [1] 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

[1] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER (*Specify*) None

[4] 1 = NORMAL BUD GOSSYPOL
2 = HIGH BUD GOSSYPOL

14. SEEDS:

[1][3][0] ± [1.5][1] SEED INDEX (*Fuzzy seed basis*)

[2] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 3 = HEAVY (ACALA SJ-1) 4 = OTHER (*Specify*) ____

5

Exhibit D

Data Indicative of Novelty

Application No. 72092 cotton, 'Lambright GL-4'

Lambright GL-4' is most similiar to 'Lambright X-15-4', its glanded parent, including its fruiting habits, compact plant, short joints, and fiber properties, and in its resistance to bacterial blight, race 1 and 2, it starts blooming 5 to 7 days earlier, and has 1.5 higher lint percent. Lambright GL-4' is novel by differing from Lambright X-15-4, in that the plants and seed are free of gossypol, the plants are 4 inches shorter and are inclined to lean, in contrast to being erect in Lambright X-15-4 . Lambright GL-4, has virescent yellow leaves, wheras Lambright X-15-4 has dark green leaves.

J.H. Lambright

J.H. Lambright

Nov 16, 19

Exhibit E, Statement of the Basis of Applicants Ownership

I hereby declare that the foregoing statements, and information submitted, are true and correct to the best of my knowledge and belief.

And that I am the originator, breeder, and rightful owner, of the following varieties of cotton being submitted for plant protection at this time,

Lambright X-15-3-A variety

Lambright L-X-28 variety

Lambright GL-4 variety

Lambright X-15-4 variety

This Day, February 18, 1972 Signed, J. H. Lambright

COTT

PV No. 7200092
'Lambright GL-4'
(TREATED)

An excess seed sample of this variety was returned to the PVP Office by the National Seed Storage Laboratory. The excess seed was destroyed by PVPO personnel on JUL 18 1994.

FORM GR-470-8 (REVERSE)

15. BOLLS:

[2] Locules: 1 = 3-4, 2 = 4-5

[34] NO. SEEDS PER BOLL

[390] LINT PERCENT

[1 5/8] MM. DIAMETER

7.20 JJH letter 1/10/74

[1] Pitted: 1 = NONE, 2 = FINELY, 3 = COURSELY

[980] GRAMS SEED COTTON PER BOLL

[2] Breadth: 1 = BROADER AT BASE, 2 = BROADER AT MIDDLE

[2] Type: 1 = STORMPROOF (WESTBURN 70), 2 = STORM RESISTANT (LANKART 57), 3 = OPEN (DELTAPINE 16)

[2] Shape: 1 = LENGTH < WIDTH, 2 = LENGTH = WIDTH, 3 = LENGTH > WIDTH

16. BRACTEOLES:

[2] Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

[2] Teeth: 1 = FINE 2 = COURSE

[3] Teeth: 1 = 3-4 2 = 5-7 3 = 8-10 4 = OTHER *(Specify)* _____

17. YIELD: Compared to—

[050] PERCENT *LESS* THAN ..... [4]

[050] PERCENT *MORE* THAN ..... [7]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

[ ] SPAN LENGTH 50%

[108] SPAN LENGTH 2.5%

[ ] U.H.M. LENGTH

[ ] MEAN LENGTH

[35] STAPLE LENGTH 32nd INCHES

[ ] UNIFORMITY RATIO (MEAN/U.H.M.)

[48] UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

[094] 1,000 P.S.I.

[061] ELONGATION E_1

[268] STILOMETER T_0

[420] MICRONAIRE READING

[106] YARN STRENGTH *(Give test method)* lbs. 22 yarns

[ ] STILOMETER T_1

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

[1] VERTICILLIUM WILT

[1] FUSARIUM WILT

[0] ROOT KNOT NEMATODE

[2] BACTERIAL BLIGHT *(Race 1)*

[2] BACTERIAL BLIGHT *(Race 2)*

[2] ASCOCHYTA BLIGHT

[0] PHYMATOTRICHUM ROOT ROT

[0] RHIZOCTONIA

[2] ANTHRACNOSE

[0] RUST

[ ] OTHER *(Specify)* _____

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

[0] BOLL WEEVIL

[0] APHID

[0] FLEAHOPPER

[1] LEAFWORM

[0] FALL ARMYWORM

[0] GRASSHOPPER

[0] LYGUS

[0] PINK BOLLWORM

[0] STINKBUG

[0] THRIP

[0] CUTWORM

[0] SPIDERMITE

[ ] OTHER *(Specify)* _____

REFERENCES: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.

(2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.