No. 7600027

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

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 (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WATERMELON

'Sunshade'

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

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* 19th *day of* July *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

S. K. Rollin

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz

Secretary of Agriculture

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL 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 ~~XP 241~~ SUNSHADE	2. KIND NAME Watermelon	FOR OFFICIAL USE ONLY PV NUMBER 7600027
3. GENUS AND SPECIES NAME Citrullus lanatus	4. FAMILY NAME *(Botanical)* Cucurbitae	FILING DATE 1-5-76 / TIME 11:30 A.M. ~~P.M.~~
	5. DATE OF DETERMINATION August 1973	FEE RECEIVED $ 250 / $ 250 / $ 250 / BALANCE DUE $ — / $ — / $ —
6. NAME OF APPLICANT(S) Asgrow Seed Company	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)* Kalamazoo, Michigan 49001	8. TELEPHONE AREA CODE AND NUMBER (616) 385-6605
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)* Corporation	10. STATE OF INCORPORATION Delaware	11. DATE OF INCORPORATION March 22, 1968

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

~~Allen R. Trotter~~ John A. BATCHA
Asgrow Seed Company 9630-190-1
Kalamazoo, MI 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

[X] 13B. Exhibit B, Botanical Description of the Variety

[X] 13C. Exhibit C, Objective Description of the Variety

[X] 13D. Exhibit D, Data Indicative of Novelty

[X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

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 generations? [ ] YES [ ] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

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.

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.

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

12-31-75 (DATE) — Allen R. Trotter (SIGNATURE OF APPLICANT)

(DATE) — (SIGNATURE OF APPLICANT)

Exhibit A: ORIGIN AND BREEDING HISTORY OF "~~XP241~~ SUNSHADE" WATERMELON

~~XP241~~ Sunshade originated as a mutation for leaf type in the Watermelon variety Charleston Grey. The broadleaf mutant was discovered in 1971. Yearly evaluations and comparisons conducted since then showed that ~~XP241~~ Sunshade is a stable variety free of off-types and identical to Charleston Grey in most measurable characters except for leaf type.

Exhibit B: BOTANICAL DESCRIPTION OF ~~'XP 241'~~ SUNSHADE WATERMELON

~~XP 241~~ Sunshade watermelon is an oblong fruit type similar to Charleston Grey in all characteristics except leaf type. It is expected to be adapted to the same area as Charleston Grey, but because the broad leaf provides more shade, it should provide better protection against sunburn in areas of high light intensity.

~~XP 241~~ Sunshade is a diploid monoecious variety reaching anthesis in approximately 63 days after emergence and maturity in about 85 days in the San Joaquin Valley of California, or equal to Charleston Grey.

The seedling produces flat cotyledons. The plant produces approximately 47 staminate and 4 pistillate flowers at first fruit set. The stem is angular and about 13 mm in diameter at the second node. The stem is pubescent. The average number of stems at the crown is 6. The ratio of stem to nodes is 80.

The leaf is ovate and somewhat longer than wide. The dorsal surface is smooth and the ventral surface pubescent. Leaf color is medium green. The leaf is broad, with very shallow lobes and is distinct from the normally deeply lobed watermelon leaves. This broad leaf makes XP 241 easily distinguished from other watermelons and, especially, Charleston Grey.

The flowers are lemon yellow. The staminate flowers are 11 cm across and the pistillate 13 mm at first fruit set.

Mature fruit are cylindrical, averaging 42 cm long and 24 cm wide, with an index of 18. They are smooth, mottled, and similar to Charleston Grey. The primary color is light green with medium green overtones. The rind is thin, tough, averaging 14 mm at blossom end and 19 mm on the sides. The flesh is crisp, red, fine, with little fiber. Refractometer readings in California show 12% soluble solids, comparable to Charleston Grey. When grown under good conditions, the fruit is free from hollow heart, placental separation, and transverse cracking.

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a 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.

13b 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.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

JAN 5 1976

SUNSHADE
~~'XP 241'~~ Watermelon

FORM GR-470-19
(1-15-73)

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

EXHIBIT C
(Watermelon)

OBJECTIVE DESCRIPTION OF VARIETY
WATERMELON *(CITRULLUS LANATUS)*

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Asgrow Seed Company

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
Subsidiary of The Upjohn Company
Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER
7600027

VARIETY NAME OR TEMPORARY DESIGNATION
~~XP 241~~ SUNSHADE

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. TYPE:

[1] 1 = OBLONG 2 = ROUND LARGE 3 = ROUND SMALL *(icebox)*

2. AREA OF BEST ADAPTATION:

[4] 1 = SOUTH 2 = NORTHEAST/NORTHCENTRAL 3 = SOUTHWEST 4 = MOST AREAS

3. EMERGENCE TO ANTHESIS:

[0][0] NO. OF DAYS *EARLIER* THAN ..... [1] } 1 = CHARLESTON GREY
[0][7] NO. OF DAYS *LATER* THAN ..... [2] } 2 = OTHER *(Specify)* Crimson Sweet

4. POLLINATION TO MATURITY:

[0][0] NO. OF DAYS *EARLIER* THAN ..... [1] } 1 = CHARLESTON GREY
[0][3] NO. OF DAYS *LATER* THAN ..... [2] } 2 = OTHER *(Specify)* Crimson Sweet

5. PLOIDY:

[1] 1 = DIPLOID 2 = TETRAPLOID 3 = TRIPLOID

6. PLANT

[1] Cotyledon: 1 = FLAT 2 = FOLDED [1] 1 = MONOECIOUS 2 = ANDROMONOECIOUS

Number of flowers per plant at first fruit set:

[4][7] STAMINATE [0][4] PISTILLATE [0][0] PERFECT [6] NO. OF MAIN STEMS AT CROWN

7. STEM:

[2] 1 = ROUND 2 = ANGULAR [1][3] MM. DIAMETER AT SECOND NODE

[3] 1 = GLABROUS 2 = SCABROUS 3 = PUBESCENT 4 = BRISTLED

? [8][0] CM. VINE LENGTH ÷ NO. OF INTERNODES *(At last harvest)*

AB 2/86

8. LEAF:

[1] 1 = OVATE 2 = OBOVATE 3 = ROUND [1] 1 = LONGER THAN WIDE 2 = LENGTH-WIDTH EQUAL 3 = WIDER THAN LONG

[1] Dorsal Surface: } 1 = SMOOTH 2 = PUBESCENT
[2] Ventral Surface: } [3] Color: 1 = LIGHT GREEN 2 = GRAY GREEN 3 = MEDIUM GREEN 4 = DARK GREEN

9. FLOWER *(At first fruit set):*

? [1][1] Staminate: CM. ACROSS [1][3] ~~Perfect~~ mo: CM. ACROSS [1] Color: 1 = LEMON YELLOW 2 = YELLOW 3 = ORANGE

?

7600027

FORM GR-470-19 (REVERSE)

10. MATURE FRUIT:

[3] 1 = ROUND 2 = OVAL 3 = CYLINDRICAL [42] CM. LONG [24] CM. DIAMETER AT MIDSECTION

[09] KG. AVERAGE WEIGHT [18] INDEX = LENGTH ÷ DIAMETER X 10

[1] 1 = SMOOTH 2 = SLIGHTLY GROOVED 3 = DEEPLY GROOVED

[3] Color: 1 = SOLID *(One color)* 2 = STRIPE 3 = MOTTLE/NET

[2] Primary Color: [3] Secondary Color: } 1 = YELLOW GREEN *(Desert King)* 2 = LIGHT GREEN *(Charleston Grey)* 3 = MEDIUM GREEN *(Sugar Baby)* 4 = DARK GREEN *(Florida Giant)* 5 = OTHER *(Specify)* _____

11. RIND:

[3] 1 = TENDER 2 = BRITTLE 3 = TOUGH [14] THICKNESS MM. BLOSSOM END

[19] THICKNESS MM. SIDES

12. FLESH:

[1] 1 = CRISP 2 = SOFT [2] 1 = COARSE-FIBROUS 2 = FINE-LITTLE FIBER

[4] Color: 1 = YELLOW 2 = ORANGE 3 = PINK 4 = RED 5 = DARK RED

[12] REFRACTOMETER % SOLUBLE SOLIDS OF JUICE *(Center of fruit)* [117] % CHECK VARIETY *(Specify)* Charleston Grey

[000] % HOLLOW HEART [000] % PLACENTAL SEPARATION [000] % TRANSVERSE CRACK

13. SEED:

[11] MM. LONG [08] MM. WIDE [2.5] MM. THICK ✓2.5?

[14] INDEX ÷ LENGTH ÷ WIDTH X 10 [90] GM. PER 1000 SEED [743] NO. SEED PER FRUIT

[08] Color: 1 = WHITE 2 = WHITE-TAN TIPPED 3 = WHITE-PINK TIPPED 4 = TAN 5 = GREEN 6 = RED 7 = DARK BROWN 8 = DARK BROWN MOTTLED 9 = BLACK 10 = MOTTLED BLACK

14. DISEASE RESISTANCE: (0 = Untested, 1 = Susceptible, 2 = Resistant)

[0] ANTHRACNOSE *(Race_____)* [0] DOWNY MILDEW [2] FUSARIUM WILT [0] GUMMY STEM BLIGHT

[0] SQUASH MOSAIC [0] WATERMELON MOSAIC [0] POWDERY MILDEW [0] CUCUMBER MOSAIC

[0] OTHER *(Specify)* _____

15. OTHER RESISTANCE: (0 = Untested, 1 = Susceptible, 2 = Resistant)

[2] SUNBURN [ ] ROOT KNOT [ ] OTHER *(Specify)* _____

16. NAME A VARIETY THAT MOST CLOSELY RESEMBLES THAT SUBMITTED: Charleston Grey

Days maturity	85-90	Fruit shape	Oblong
Plant vigor	good	Rind color	Light green w/dark green backgroun
Fruit Size	9-10 kg	Flesh quality	good

REFERENCES:

1. Frey, K. J. 1966. Plant Breeding - Symposium. 1 ed. Iowa State University Press.
2. Ware, G. W. and McCollum, J. P. 1968. Producing Vegetable Crops. Interstate Printers & Publishers, Inc. Danville, Illinois.
3. Whitaker, T. W. and Davis, G. N. 1962. Cucurbits. Interscience Publishers, Inc. New York.
4. Nickerson's or any recognized color fan should be used to determine the plant colors of the described variety.

Exhibit D: PROOF OF NOVELTY - "~~XP241~~" SUNSHADE WATERMELON

~~XP241~~ Sunshade closely resembles Charleston Grey in most taxonomical features. However, it markedly differs from Charleston Grey in that the leaves are filled to the margins, that is, they do not lobe as typical watermelon leaves do.

Exhibit E: OWNERSHIP

Watermelon, ~~XP-247~~ Sunshade

This variety was developed by Dr. Theodore Rosario, an employee of Asgrow Seed Company. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee while employed by Asgrow Seed Company were assigned by the employee to Asgrow Seed Company, with no rights of any kind retained by the employee.