



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

FMC Corporation

**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, 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 (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WATERMELON

"Charleston '76"

*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 15th day of November in
the year of our Lord one thousand nine
hundred and seventy-four*

Attest:

J. J. Rolfe
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl H. Butz
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

		FOR OFFICIAL USE ONLY	
1. VARIETY NAME OR TEMPORARY DESIGNATION NCX 760 Charleston '76	2. KIND NAME Watermelon	PVPO NUMBER 72146	
3. GENUS AND SPECIES NAME Citrullus vulgaris Schrad.	4. FAMILY NAME (Botanical) Cucurbitaceae	FILING DATE 6/19/72	TIME 2:00 P.M.
6. NAME OF APPLICANT(S) FMC Corp. Moran Seeds, Inc. Niagara Chemical Div. Seed Dept. 1155 Harkins Rd. Salinas, CA 93401	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 3091 Modesto, Calif. 95353	5. DATE OF DETERMINATION September, 1968	FEE RECEIVED \$ 750.00
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. STATE OF INCORPORATION Delaware	8. TELEPHONE AREA CODE AND NUMBER 209-529-7500	
		11. DATE OF INCORPORATION 8-10-28	

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

Tom V. Williams
FMC Corporation
Niagara Chemical Division
P. O. Box 3091
Modesto, Calif. 95353

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 12A. Exhibit A, Origin and Breeding History of the Variety (See Section 52, P.L. 91-577)
- 12B. Exhibit B, Botanical Description of the Variety
- 12C. Exhibit C, Objective Description of the Variety (will provide when forms are available)
- 12D. Exhibit D, Data Indicative of Novelty
- 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.) YES 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?

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).

June 9, 1972

(DATE)

June 9, 1972

(DATE)

FMC Corporation
Niagara Chemical Division
Seed Department

(SIGNATURE OF APPLICANT)

Tom V. Williams, Seed Dept

(SIGNATURE OF APPLICANT)

FMC Corporation

Agricultural Chemical Division
1524 McHenry Avenue
Modesto California 95353
(209) 529 7500



EXHIBIT A

ORIGIN AND BREEDING HISTORY OF THE VARIETY

^{Charleston 76}
~~NCX-760~~ originated as a Charleston Grey single plant selection (number 59-5505-7) from Cornelli Seed Co. in 1960. It was received as accession 87099.

The breeding history of the variety ^{Charleston 76}
~~NCX-760~~ is as follows:

<u>Year</u>	<u>Plot No.</u>	<u>Name</u>	<u>Location</u>
1960	8884-1	Charleston Grey-Cornelli	San Juan Bautista
1961	3278-2	Charleston Grey	Gridley
1962	7845	" "	Lyon's isolation
1964	6504-1	" "	Gridley
1966	5540	" "	Los Banos
1967	2778-2	" "	Tabata isolation
1968	2855-1	" "	San Juan Bautista
1969	M1236-bu	NCX 760	" " " Greenhouse
1970	5926	" "	Lake Road isolation near Hollister
1972		" "	Commercial production in Gridley area

Plot numbers having a hyphenated digit indicate a selfed single fruit selection. Plot numbers without the hyphen indicate a mass selected generation.

^{Charleston 76}
~~NCX-760~~ is true to type. There have been no variants found in the variety. ^{Charleston 76}
~~NCX-760~~ was selfed and selected for eight generations. Therefore variants are not present, nor are they expected to be present in future generations.

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EXHIBIT B

BOTANICAL DESCRIPTION OF THE VARIETY

Monoecious, annual vines with rounded, hirsute, vigorous runners, and soft, upright pubescence; tendrils branched; leaves ovate to obovate in outline, 4-7 inches long, the lobes pinnately divided or sometimes bipinnatifid; corolla about 1.5 inches across, rotate, five lobed, sulphur-yellow; fruits cylindrical with blunt blossom end. Rind glabrous, grey-green; hard but not durable; flesh is red. Seeds are mottled black on a tan to brown background. The black mottling covers 15-30% of the seed coat.

Plant type of ^{Charleston 76}~~NCX-760~~ most closely resembles Charleston Grey. Fruit of ^{Charleston 76}~~NCX-760~~ differ from Charleston Grey by being more blocky, i.e. having less taper to the ends of the fruit. The flesh color of ^{Charleston 76}~~NCX-760~~ is also a deeper red color than that of Charleston Grey.

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EXHIBIT D

DATA INDICATIVE OF NOVELTY

^{Charleston 76}
~~NCX 760~~ most closely resembles Charleston Grey in phenotype. It has been trialed to only a limited extent. The cultivar was entered in the 1971 Watermelon Variety and Breeding Line Observational Trial at Texas A & M University, Agricultural Research and Extension Center, Weslaco, Texas. In this trial ^{Charleston 76}~~NCX 760~~ had 62% marketable fruit as compared to 51% marketable fruit for Charleston Grey.

Seeds of NCX 760 are smaller than Charleston Grey. Seed counts per pound average 4280 and 3500 respectively. Seeds of ^{Charleston 76}~~NCX 760~~ have less mottling than Charleston Grey. ^{Charleston 76}~~NCX 760~~ seeds are mottled black on a tan to brown background. The black mottling covers 15-30% of the seed coat. Charleston Grey seed is mottled to the extent of 30-40%.

^{Charleston 76}
~~NCX 760~~ fruit have a higher length-diameter ratio than Charleston Grey; 2.2^{1/2} and 2.02 respectively.

^{Charleston 76}
~~NCX 760~~ was selected as being unique because of its blunt blossom end. Typically Charleston Grey tapers slightly to the blossom end. This characteristic makes stacking the melon a problem. Quantitative measurements can be furnished during this growing season.

Comparative photographs exhibiting NCX 760 and Charleston Grey will be supplied. *Attached* ^{H-F}

FMC CORPORATION



NIAGARA CHEMICAL DIVISION

SEED DEPARTMENT • BOX 3091, MODESTO, CALIFORNIA 95353 • TELEPHONE: (209) 529-7500
CABLE ADDRESS: RESEARCH MODESTO

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

The applicant is the employer of the plant breeding research personnel responsible for developing ^{Charleston 76} ~~NCX-760~~ WATERMELON.

A S S I G N M E N T

Whereas FMC CORPORATION, a corporation of the State of Delaware, having an office and place of business at 200 East Randolph Drive, Chicago, Illinois 60601, is the assignee of the entire right, title and interest in and to the United States Plant Variety Protection Certificates and Applications listed on the annexed Schedules A and B; and

Whereas MORAN SEEDS, INC., a corporation of the State of Delaware, having an office and place of business at 1155 Harkins Road, Salinas, California 93901, is desirous of acquiring the entire right, title and interest in and to said United States Plant Variety Protection Certificates and Applications;

Now therefore, for good and valuable consideration, receipt of which is hereby acknowledged, said FMC CORPORATION does hereby assign unto the said MORAN SEEDS, INC. all rights, title and interest in and to the said United States Plant Variety Protection Certificates and Applications listed on the annexed Schedules A and B.

FMC CORPORATION
By:

Daniel C. Smith
Vice-President

STATE OF Illinois)
) ss
COUNTY OF Cook)

On July 31, 1980, before me a Notary Public in and for the County and State aforesaid, appeared

DANIEL C. Smith, Vice President

to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act, and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

Barbara J. Neal
Notary Public

SCHEDULE A

PLANT VARIETY PROTECTION CERTIFICATES

<u>Certificate No.</u>	<u>Name of Kind</u>	<u>Issued DATE</u>	<u>Name of Variety</u>
7200145	Bean	741030 ^{1st}	Gem
7200146	Watermelon	741115 ^{EMB}	Charleston '76
7600032	Lettuce	770915 ^{EMB}	Vanagara
8 RJS 7600028	Muskmelon	790531 RJS	Valley Gold

SCHEDULE B

PLANT VARIETY PROTECTION CERTIFICATE APPLICATIONS

<u>Application No.</u>	<u>Name of Kind</u>	<u>Filing date</u>	<u>Name of Variety</u>
7900038	Bean	790112 ^{set}	Blue Duet
7900039	Bean	790110 ^{set}	Score

ASSIGNMENT

WHEREAS, Moran Seeds, Inc. ("Moran"), a corporation duly organized and existing under the laws of the State of Delaware is the owner of United States Plant Variety Protection Certificates (the "Certificates"), listed in Exhibit A hereto and Pending United States Plant Variety Protection Applications (the "Applications"), listed in Exhibit B hereto; and

WHEREAS, in accordance with a Technology Transfer Agreement (the "Transfer Agreement") among Celanese Corporation ("Celanese"), Moran Seeds, Inc., Joseph Harris Company, Inc., CelPril Industries, Inc., Harris Moran International B.V. ("Sellers"), Virginia Chemicals, Inc., Les Produits Organiques du Santerre-Orsan S.A. ("Orsan"), HMS Acquisition Inc., CP Acquisition Inc., and Exploitiemaatschappij Wolwevershaven B.V., dated January 10, 1985, and a Purchase Agreement dated December 7, 1985, as amended, among Celanese, Sellers and Orsan, Orsan has purchased from Moran said Certificates and Applications.

NOW, THEREFORE, in accordance with said Transfer Agreement and Purchase Agreement, Moran assigns to Orsan all of its rights, title and interest in and to said Certificates and Applications.

Moran hereby authorizes Orsan to apply for and obtain the recordation of this Assignment. Moran agrees that it shall, without further consideration, promptly and duly cause to be performed such lawful acts and execution of any other documents as Orsan may reasonably request in order for Orsan to obtain the full benefits of this Assignment and to permit Orsan to be duly recorded in each office, bureau and tribunal in the appropriate jurisdiction as the registered owner or proprietor of each of the rights hereby assigned. Such instruments and documents shall include, without limitation, such applications, affidavits and other documents for filing in such jurisdictions as Orsan may from time to time reasonably request.

By these presents Orsan does hereby accept this Assignment and authorize the recording thereof with the appropriate authorities aforesaid.

IN WITNESS WHEREOF, the parties have caused this Assignment to be executed by its proper officers thereunto duly authorized this 10th day of January, 1985.

MORAN SEEDS, INC.,
Assignor

By: David A. Jenkins
David A. Jenkins
Vice President

LES PRODUITS ORGANIQUES DU
SANTERRE-ORSAN S.A.
Assignee

By: [Signature]
Title: Attorney-in-fact

STATE OF New York
COUNTY OF New York

Before me, a Notary Public, in and for said County, personally appeared David Jenkins who acknowledged that he is Vice President of Moran Seeds, Inc., the corporation which executed the foregoing instrument and who acknowledged he signed said instrument on behalf of said corporation by authority of its Board of Directors; and that said instrument is the free corporate act and deed of said Moran Seeds, Inc.

Sworn before me at New York this 10th day
of January, 1985

Alex C. Lengyel
NOTARY PUBLIC

(Notary Public)

My Commission Expires:

ALEX C. LENGYEL
Notary Public, State of New York
City of New York, New York County
Commission Expires March 30, 1986

STATE OF New York
COUNTY OF New York

Before me, a Notary Public, in and for said County, personally appeared Patrice LeHody who acknowledged that he is ~~Patrice LeHody~~ of Les Produits Organiques du Santerre-Orsan S.A., the corporation which executed the foregoing instrument and who acknowledged he signed said instrument on behalf of said corporation by authority of its Board of Directors; and that said instrument is the free corporate act and deed of said Les Produits Organiques du Santerre-Orsan S.A.

Sworn before me at New York this 10th
day of January, 1985.

Alex C. Lengyel
NOTARY PUBLIC

(Notary Public)

My Commission Expires:

ALEX C. LENGYEL
Notary Public, State of New York
No. 103,101
Qualified in New York County
Commission Expires October 10, 1986

United States Plant Variety Protection Certificates

<u>Cert. No.</u>	<u>Date Issued</u>	<u>Kind</u>	<u>Variety Name</u>	<u>Owner</u>
7200145	10/30/74	Garden Bean	Gem	Moran Seeds, Inc.
7200146	11/15/74	Watermelon	Charleston 76	Moran Seeds, Inc.
7400013	5/9/74	Lettuce	Calmaria	Moran Seeds, Inc.
7400014	6/19/74	Lettuce	Cal K-60	Moran Seeds, Inc.
7400071	6/19/74	Lettuce	Cabrillo	Moran Seeds, Inc.
7600032	9/15/77	Lettuce	Vanagara	Moran Seeds, Inc.
7600039	12/8/77	Lettuce	Morangold	Moran Seeds, Inc.
7800028	5/31/79	Muskmelon	Valley Gold	Moran Seeds, Inc.
7900038	1/14/82	Garden Bean	Blue Duet	Moran Seeds, Inc.
7900039	7/15/82	Snapbean	Score	Moran Seeds, Inc.
7900066	11/27/79	Cauliflower	Snowball 123	Moran Seeds, Inc.
8000020	7/31/80	Muskmelon	Top Net	Moran Seeds, Inc.
8000082	12/10/81	Lettuce	Delmar	Moran Seeds, Inc.
8200019	10/28/82	Onion	OMO M	Moran Seeds, Inc. Oshita, Inc.
8200061	3/24/83	Watermelon	Sun Gold	Moran Seeds, Inc.
8200104	10/28/82	Tomato	Advantage	Moran Seeds, Inc.
8200105	11/26/82	Tomato	Moran 3053	Moran Seeds, Inc.
8200027	4/23/83	Lettuce	El Toro	Moran Seeds, Inc.
8100172	9/29/83	Lettuce	Van Mor	Moran Seeds, Inc.
8300113	8/31/84	Muskmelon	Top Net SR	Moran Seeds, Inc.

Pending United States Plant Variety Protection Applications

<u>Application No.</u>	<u>Filing Date</u>	<u>Kind</u>	<u>Variety Name</u>	<u>Owner</u>
8100167	9/9/81	Lettuce	Yuma	Moran Seeds, Inc.
8300155	7/18/83	Celery	Bishop	Moran Seeds, Inc.
8300156	7/18/83	Celery	Deacon	Moran Seeds, Inc.
8300172	9/1/83	Tomato	Diego	Moran Seeds, Inc.
8400013	12/1/83	Lettuce	Greenfield	Moran Seeds, Inc.

per phone by T.V. Williams

10. MATURE FRUIT:

1 = ROUND 2 = OVAL 3 = CYLINDRICAL CM. LONG CM. DIAMETER AT MIDSECTION

KG. AVERAGE WEIGHT INDEX = LENGTH ÷ DIAMETER X 10

1 = SMOOTH 2 = SLIGHTLY GROOVED 3 = DEEPLY GROOVED

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

Primary Color: } 1 = YELLOW GREEN (Desert King) 2 = LIGHT GREEN (Charleston Grey) 3 = MEDIUM GREEN (Sugar Baby)

Secondary Color: } 4 = DARK GREEN (Florida Giant) 5 = OTHER (Specify) _____

11. RIND:

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

THICKNESS MM. SIDES

12. FLESH:

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

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

REFRACTOMETER % SOLUBLE SOLIDS OF JUICE (Center of fruit) % CHECK VARIETY (Specify) Charleston Grey

% HOLLOW HEART % PLACENTAL SEPARATION % TRANSVERSE CRACK

13. SEED:

MM. LONG MM. WIDE MM. THICK

INDEX ÷ LENGTH ÷ WIDTH X 10 GM. PER 1000 SEED NO. SEED PER FRUIT

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)

ANTHRACNOSE (Race) DOWNY MILDEW FUSARIUM WILT GUMMY STEM BLIGHT

SQUASH MOSAIC WATERMELON MOSAIC POWDERY MILDEW CUCUMBER MOSAIC

OTHER (Specify) _____

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

SUNBURN ROOT KNOT OTHER (Specify) _____

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

Days maturity	Charleston Grey	Fruit shape	Calhoun Grey
Plant vigor	Charleston Grey	Rind color	Charleston Grey
Fruit Size	Calhoun Grey	Flesh quality	Charleston Grey

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.