

No.

9200118



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Bel Monte 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 *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.)

BEAN

'DMC 04-94'



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 July in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

Kenneth Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madison
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

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 APPLICANT(S) (as it is to appear on the Certificate) DEL MONTE CORPORATION		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.	3. VARIETY NAME DMC 04-94
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) One Market Plaza San Francisco, CA 94105		5. PHONE (include area code) 415-442-4000	FOR OFFICIAL USE ONLY PVPO NUMBER 9200118
6. GENUS AND SPECIES NAME Phaseolus vulgaris L.	7. FAMILY NAME (Botanical) Leguminosae	FILING DATE Date: <u>March 9, 1992</u> Time: <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. CROP KIND NAME (Common Name) Garden Bean	9. DATE OF DETERMINATION 1-23-89	FILING FEES Filing and Examination Fee: \$ <u>2150</u> Date: <u>March 9, 1992</u> Certificate Fee: \$ <u>250.00</u> Date: <u>July 6, 1992</u>	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		12. DATE OF INCORPORATION 1978	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION New York			

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
David J. Brezner, Esq.
Flehr, Hohbach, Test, Albritton and Herbert
Four Embarcadero Center #3400
San Francisco, CA 94111 - 4187
PHONE (include area code): 415-781-1989

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a. Exhibit A. Origin and Breeding History of the Variety
- b. Exhibit B. Novelty Statement.
- c. Exhibit C. Objective Description of Variety
- d. Exhibit D. Additional Description of Variety.
- e. Exhibit E. Statement of the Basis of Applicant's Ownership.
- f. Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____
- g. Filing and Examination Fee (\$2.150) made payable to "Treasurer of the United States."

15. 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) of the Plant Variety Protection Act)
 YES (If "YES," answer items 16 and 17 below) NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
 YES NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
 FOUNDATION REGISTERED CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
 YES (If "YES," through Plant Variety Protection Act Patent Act Give date: _____)
 NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
 YES (If "YES," give names of countries and dates)
 NO

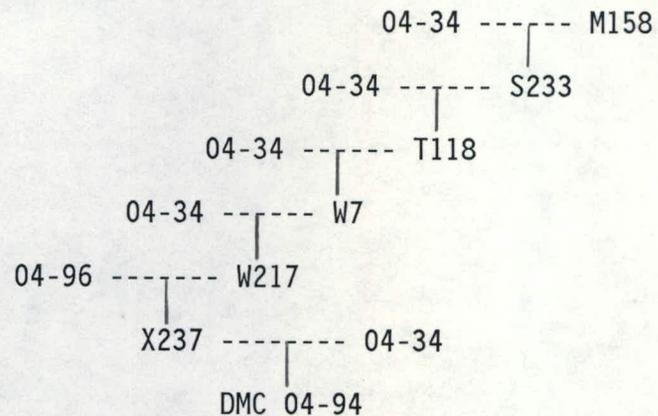
20. The applicant(s) declares that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel 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 Protection Act.
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)) <u>Charles D. Sopher</u>	CAPACITY OR TITLE Director, Agricultural Research and Seed Operations	DATE 12/23/91
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

EXHIBIT A

ORIGIN AND BREEDING HISTORY

The following is a pedigree trace of 'DMC 04-94':



The single pod descent method of breeding was used. A single plant selection was made in the F_5 . All subsequent increases of 'DMC 04-94' trace to 85GH3334.

Observations indicate 'DMC 04-94' is uniform and stable within commercially acceptable limits. As is true with other garden bean varieties, a small percentage of variants or off types can occur within commercially acceptable limits for almost any characteristic during the course of repeated multiplications.

EXHIBIT B

NOVELTY STATEMENT

'DMC 04-94' is a Blue Lake type most similar to 'DMC 04-88' and 'DMC 04-59'. There are six main traits that distinguish the three varieties.

- o 'DMC 04-88' has blossoms concentrated above the canopy at the initiation of bloom compared to 'DMC 04-94' which blooms under the canopy.
- o 'DMC 04-94' has better emergence vigor under cool soil temperatures than 'DMC 04-88'.
- o 'DMC 04-94' has an upright bush habit compared to 'DMC 04-88' and 'DMC 04-59'.
- o 'DMC 04-59' is one day earlier maturing than 'DMC 04-94'.
- o 'DMC 04-94' is more resistant to brown spot than 'DMC 04-59'.
- o 'DMC 04-59' has slower seed development than 'DMC 04-94'.

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

EXHIBIT C
 (Bean)

OBJECTIVE DESCRIPTION OF VARIETY
 BEAN (*Phaseolus vulgaris* L.)

NAME OF APPLICANT(S) DEL MONTE CORPORATION	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) One Market Plaza San Francisco, CA 94105	PVPO NUMBER 9200118
	VARIETY NAME OR TEMPORARY DESIGNATION DMC 04-94

Place numbers in the boxes (e.g.) for the characters that best describe this variety. Measured data should be for SPACED PLANTS. Ranges may also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ . The location of test area is Plover, WI
 _____ . Please answer questions appropriate for your variety if the information is available.

1. TYPE:

1 = Field (dry-edible) 2 = Garden

2. MARKET MATURITY:

Days to edible pods Days to green shells

Days to dry seeds

Heat units to edible pods Heat units to green shells

Heat units to dry seeds

<input type="text" value="0"/> <input type="text" value="3"/> No. days earlier than	<input type="text" value="7"/>	} 1 = Tendercrop 3 = Kinghorn Wax 5 = Michelite 62 7 = Bush Blue Lake 290	2 = Kentucky Wonder 4 = White Kidney 6 = Dwarf Horticultural 8 = Other (specify below) <u>Venture</u>
..... Same as	<input type="text" value="9"/>		
<input type="text" value="0"/> <input type="text" value="3"/> No. days later than	<input type="text" value="8"/>		

9- Bountiful

3. PLANT:

1 = Determinate 2 = Indeterminate

cm height

<input type="text" value="0"/> <input type="text" value="4"/> cm shorter than	<input type="text" value="7"/>	} comparison variety from above	
..... Same as	<input type="text" value="0"/>		
<input type="text" value="0"/> <input type="text" value="0"/> cm taller than	<input type="text" value="0"/>		

cm taller than

cm spread Number primary branches near base

<input type="text" value="0"/> <input type="text" value="5"/> cm narrower than	<input type="text" value="7"/>	} comparison variety from above	<input type="text" value="1"/> Branching habit: 1 = compact 2 = open
..... width same as	<input type="text" value="0"/>		
<input type="text" value="0"/> <input type="text" value="0"/> cm wider than	<input type="text" value="0"/>		

Main stalk: 1 = brittle 2 = wirev 1 = stout 2 = thin

3. PLANT: (Cont'd)

Pod position: 1 = low 2 = high 3 = scattered

Bush form (illustrated below):



1 = spherical bush form

2 = stem bush form

3 = wide bush form

4 = high bush form

5 = other (specify) _____

4. LEAVES:

1 = smooth 2 = wrinkled

1 = dull 2 = glossy

Size: 1 = small (Earliwax) 2 = medium 3 = large (Tendercrop)

Color: 1 = light green (as light or lighter than Bountiful) 2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)

5. FLOWERS:

Color: 1 = white 2 = cream 3 = pink 4 = lilac 5 = purple 6 = Other (specify) _____

Days to 50% bloom

6. FRESH PODS: (Edible maturity, average for 20 pods)

Exterior color: 1 = light green (as light or lighter than Bountiful)
2 = medium green
3 = dark green (as dark or darker than Bush Blue Lake 290)
4 = light yellow (Brittlewax)
5 = golden yellow (Cherokee Wax)
6 = green-red variegated (Horticultural)
7 = other (specify)

% Sieve size distribution at optimum maturity for non-flat pods

Note:

1 = 4.76 mm to 5.76 mm 4 = 8.34 mm to 9.53 mm
2 = 5.76 mm to 7.34 mm 5 = 9.53 mm to 10.72 mm
3 = 7.34 mm to 8.34 mm 6 = 10.72 mm or larger

1	2	3	4	5	6
1.5	2.5	16.0	20.0	36.0	24.0

3 sieve cm length mm width mm thickness

4 sieve cm length mm width mm thickness

5 sieve cm length mm width mm thickness

6 sieve cm length mm width mm thickness

6. FRESH PODS: (Cont'd)

- 3 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 2 Creaseback: 1 = present 2 = absent
- 2 Pubescence: 1 = none 2 = sparse 3 = considerable
- 2 Spur: 1 = straight 2 = slightly curved 3 = curved
- 1 Constrictions: 1 = none 2 = slight 3 = deep
- 3 Pod flesh: 1 = light 2 = medium 3 = dark
- 7. 9 mm spur length
- 1 Fiber: 1 = none 2 = sparse 3 = considerable
- 6. 8 Number of seeds per pod
- 1 Surface: 1 = smooth 2 = rough
- 2 Suture string: 1 = present 2 = absent
- 2 Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast
- 1 Machine harvest: 1 = adapted 2 = not adapted
- 3 Pod flavor: (1) Standard (Tendercrop)
 (2) Mild Blue Lake (BBL 274)
 (3) Strong Blue Lake (Pole FM1)
 (4) Mild Romano (Roma)
 (5) Strong Romano (Pole Romano)
 (6) Other (specify) _____

7. SEED COAT COLOR:

- 1 1 = Monochrome 2 = Polychrome 2 1 = shiny 2 = dull
- 1 Primary color: } 1 = white 2 = yellow 3 = buff 4 = tan
- 0 Secondary color: } 5 = brown 6 = pink 7 = red 8 = purple
 9 = blue 10 = black 11 = other (specify) _____
- 1 Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted
- 0 Secondary color location: 1 = hilar ring 2 = ventral surface
 3 = sides 4 = dorsal surface
 5 = not restricted to any area 6 = combination of location (specify below) _____
- 0 Hilar ring on colored seeds: 1 = absent 2 = narrow 3 = butterfly shaped

8. SEED SHAPE AND SIZE:

- 1 Hilum view: 1 = elliptical 2 = oval 3 = round 2 Cross section: 1 = elliptical 2 = oval 3 = cordate 4 = round

1 Side view:



1 = oval to oblong



2 = round



3 = reniform

6

8. SEED SHAPE AND SIZE: (Cont'd)

9200118

2 1 = truncate ends 2 = rounded ends

2 1 gm/100 seed

1 3 gm/100 seed lighter than 1

gm/100 seed same as 7

0 0 gm/100 seed heavier than 0

comparison variety from page one

9. ANTHOCYANIN: (1 = absent 2 = present)

1 Flowers

1 Stems

1 Pods

1 Seeds

1 Leaves

10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

0 Anthracnose (specify race below) _____

0 Fuscos blight

0 Rust (specify race below) _____

0 Red node virus

0 Powdery mildew

0 Pod mottle virus

0 Fusarium root rot

2 Bean common mosaic virus (specify strain below)
New York - 15

0 Pythium root rot

2 Mosaic mottle

0 Rhizoctonia root rot

1 Black root

0 Pythium wilt

0 Bean yellow mosaic virus

0 Angular leaf spot

1 Curly top

0 Bacterial wilt

2 Other (specify below)
Aphanomyces

0 Halo blight (specify race below) _____

2 Bacterial Brown Spot

11. INSECT RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0 Aphids

0 Root knot nematode

0 Leaf hopper

0 Seed corn maggot

0 Lygus

0 Thrips

0 Pod borer

0 Weavils

Other (specify below) _____

12. PHYSIOLOGICAL RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

0 Heat

2 Cold

0 Drought

0 Air pollution

13. COMMENTS:

EXHIBIT E

STATEMENT OF OWNERSHIP

'DMC 04-94' was developed in the Del Monte bean breeding program. The following Del Monte employees were contributors to the development of this variety: Roger A. Schmitt, Donald T. Caine, Lloyd G. Cruger and Vicki J. Pierce. By agreement between employees and Del Monte Corporation, all rights to any invention, discovery, or development made by an employee while employed by Del Monte Corporation are assigned to Del Monte. No rights to such invention, discovery, or development are retained by the employee.