

No.

9200047



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Del 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, 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 (AT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'DMC 04-59'



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 H. 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 04-59
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	<b>FOR OFFICIAL USE ONLY</b>  VPPO NUMBER  9200047  F I L I N G Date December 19, 1991 Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.  F E E S Filing and Examination Fee: \$ 2150. <sup>00</sup> Date December 19, 1991  R E C E I V E D Certificate Fee: \$ 250. <sup>00</sup> Date July 6, 1992
6. GENUS AND SPECIES NAME  Phaseolus vulgaris L.	7. FAMILY NAME (Botanical)  Leguminosae		
8. CROP KIND NAME (Common Name)  Garden Bean	9. DATE OF DETERMINATION  2-14-86		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)  Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION  New York	12. DATE OF INCORPORATION  1978		
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

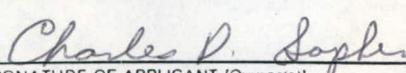
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?  
 YES (If "YES," through  Plant Variety Protection Act       Patent Act. Give date: \_\_\_\_\_ )  
 NO

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) declare(s) 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)]  	CAPACITY OR TITLE Director, Agricultural Research and Seed Operations	DATE 12/10/91
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

ORIGIN AND BREEDING HISTORY

The pedigree trace of 'DMC 04-59' is shown in Figure 1.

The single pod descent method of breeding was used. A single plant selection was made in the F<sub>4</sub>. All subsequent increases of 'DMC 04-59' can be traced to 83CH0694.

Observations indicate 'DMC 04-59' 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.

Figure 1. The pedigree trace of 'DMC 04-59'.

9200047

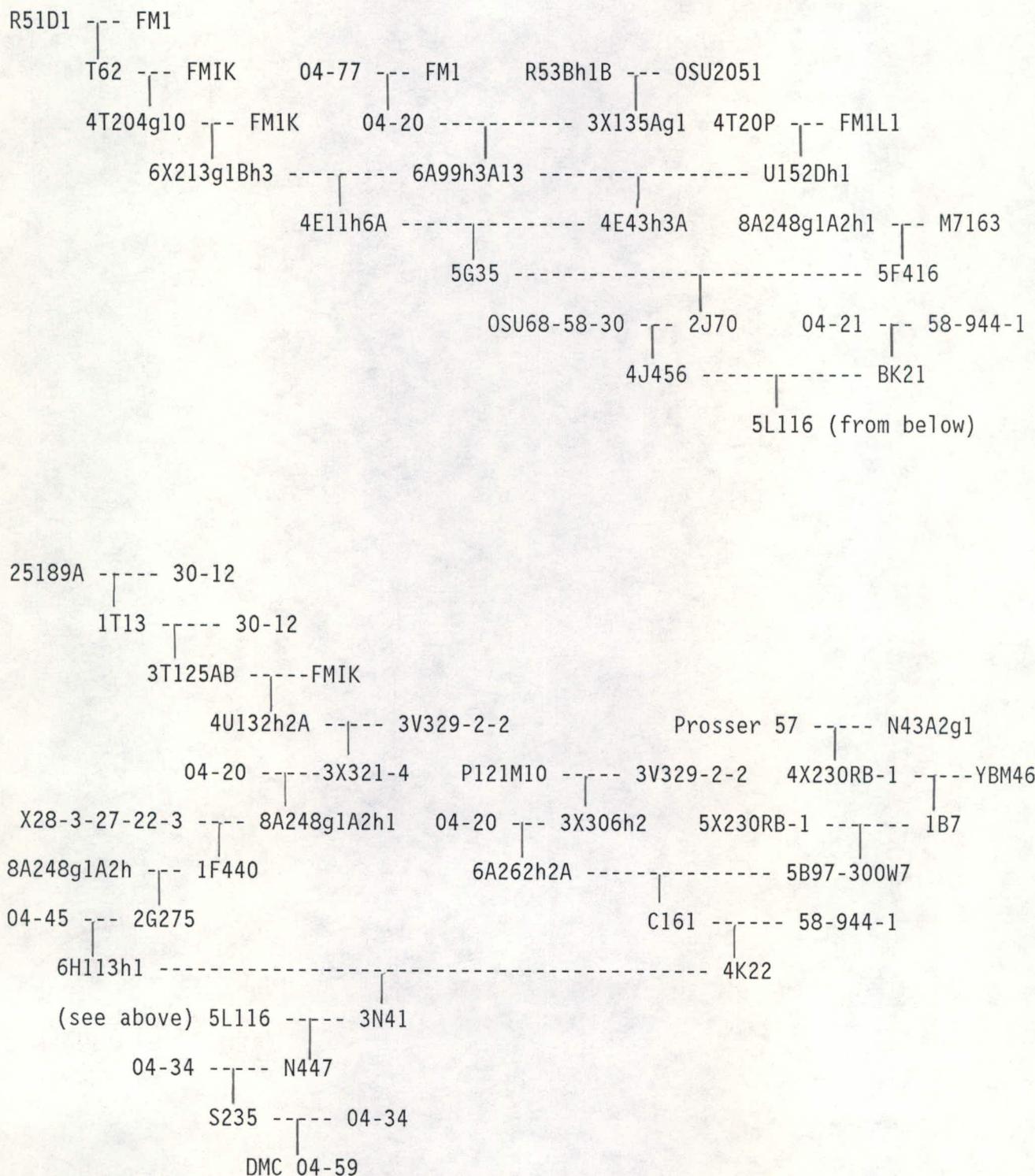


EXHIBIT B

## NOVELTY STATEMENT

'DMC 04-59' is classified as a Blue Lake type and is most similar to 'DMC 04-88'. However, there are four main traits that distinguish the two varieties.

- o 'DMC 04-59' has better emergence vigor under cool soil temperatures than 'DMC 04-88'.
- o 'DMC 04-88' has blooms concentrated above the canopy at the initiation of bloom compared to 'DMC 04-59' which blooms under the canopy.
- o 'DMC 04-59' is one day earlier maturing than 'DMC 04-88'.
- o 'DMC 04-88' has better resistance to brown spot than 'DMC 04-59'.



3. PLANT: (Cont'd)

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

4 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:

2 1 = smooth 2 = wrinkled

1 1 = dull 2 = glossy

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

3 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:

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

3  8 Days to 50% bloom

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

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

1	2	3	4	5	6
1.0	2.0	19.0	22.0	40.0	16.0

3 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 0 <input type="checkbox"/> 8	cm length	<input type="checkbox"/> 8 <input type="checkbox"/> 5	mm width	<input type="checkbox"/> 7 <input type="checkbox"/> 7	mm thickness
4 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 1	cm length	<input type="checkbox"/> 9 <input type="checkbox"/> 0	mm width	<input type="checkbox"/> 8 <input type="checkbox"/> 5	mm thickness
5 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 4 <input type="checkbox"/> 6	cm length	<input type="checkbox"/> 9 <input type="checkbox"/> 4	mm width	<input type="checkbox"/> 1 <input type="checkbox"/> 0 <input type="checkbox"/> 1	mm thickness
6 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 2	cm length	<input type="checkbox"/> 9 <input type="checkbox"/> 3	mm width	<input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1	mm thickness

6. FRESH PODS: (Cont'd)

9200047

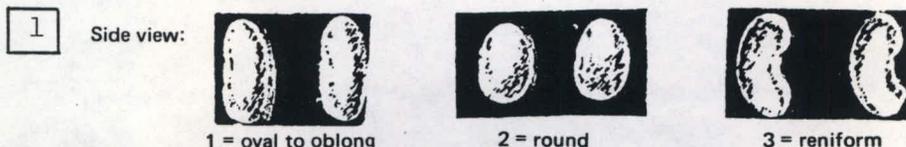
- 3 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 2 Creaseback: 1 = present 2 = absent
- 3 Pubescence: 1 = none 2 = sparse 3 = considerable
- 1 Spur: 1 = straight 2 = slightly curved 3 = curved
- 1 Constrictions: 1 = none 2 = slight 3 = deep
- 3 Pod flesh: 1 = light 2 = medium 3 = dark
- 1  1 mm spur length
- 1 Fiber: 1 = none 2 = sparse 3 = considerable
- 7 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



7

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

9200047

2 1 = truncate ends 2 = rounded ends

2  5 gm/100 seed

3  0 gm/100 seed lighter than .....  9

gm/100 seed same as ....  0

comparison variety from page one

0  4 gm/100 seed heavier than .....  7

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 Fuscous blight

0 Rust (specify race below) \_\_\_\_\_

0 Red node virus

0 Powdery mildew

0 Pod mottle virus

00 Fusarium root rot

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

0 Pythium root rot

2 Mosaic mottle

00 Rhizoctonia root rot

1 Black root

0 Pythium wilt

0 Bean yellow mosaic virus

0 Angular leaf spot

0 Curly top

0 Bacterial wilt

2 Other (specify below)  
Aphanomyces root rot

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

0 Other (specify below) \_\_\_\_\_

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

1 Heat

2 Cold

0 Drought

0 Air pollution

13. COMMENTS:

EXHIBIT E

## STATEMENT OF OWNERSHIP

'DMC 04-59' was developed in the Del Monte bean variety development 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 employee 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.