THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Syngenta Seeds, Inc.

WHEREAS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HERETO 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 THEREOF 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 TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIALBE 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 CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, ASAMENDED, 7 U.S.C. 2321 ET SEQ).

PEA

'Sugar Sprint'

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 sixteenth day of September, in the year two thousand two.

ATTEST

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]

[Signature]

Commissioner
Agriculture
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

1. NAME OF APPLICANT(S) as it is to appear on the Certificate

Novartis Seeds, Inc.
Syngenta

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

SL3018
SP704-3-8-3-1-4

3. VARIETY NAME

Sugar Sprint

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)

600 N. Armstrong Pl.
Boise, Idaho 83704

5. TELEPHONE (Include area code)

(208) 322-7272
(208) 378-6625

6. FAX (Include area code)

FOR OFFICIAL USE ONLY

PVP0 NUMBER
9900210

FILING FEE
$245.00

DATE RECEIVED
6/14/02

DATE
2/26/99

CERTIFICATION FEE
$320.00

7. GENUS AND SPECIES NAME

Pisum sativum

8. FAMILY NAME (Botanical)

Leguminosae

9. CROP KIND NAME (Common name)

Snap Pea

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)

Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

Delaware

12. DATE OF INCORPORATION

2-25-75

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Charleen Orthel
600 N. Armstrong Pl.
Boise, Idaho 83704

14. TELEPHONE (Include area code)

(208) 322-7272

15. FAX (Include area code)

(208) 378-6625

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. Exhibit A. Origin and Breeding History of the Variety
b. Exhibit B. Statement of Distinctness
c. Exhibit C. Objective Description of the Variety
d. Exhibit D. Additional Description of the Variety
e. Exhibit E. Statement of the Basis of the Applicant's Ownership
f. Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)
g. Filing and Examination Fee ($245.00), made payable to "Treasurer of the United States" (Mail to PVPPO)

17. DOES THE APPLICANT 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 by "yes," answer Items 18 and 19 below
☐ NO by "no," go to Item 20

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ YES ☑ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ FOUNDATION ☐ REGISTERED ☑ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?

☐ YES by "yes," give names of countries and dates
☐ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) (either) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, 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) (either) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner/)
Charleen Orthel

SIGNATURE OF APPLICANT (Owner/)
Charleen Orthel

NAME (Please print or type)

DATE

CAPACITY OR TITLE
Customer Quality Mgmt Coord
2/24/99

DATE

CAPACITY OR TITLE

SD-470
PVP Application for Sugar Sprint Pea, Item # 23:  
Date of first sale, disposition, transfer, or use by country

<table>
<thead>
<tr>
<th>Variety</th>
<th>MONTH</th>
<th>YEAR</th>
<th>COUNTRY</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUGAR SPRINT</td>
<td>5</td>
<td>97</td>
<td>USA</td>
<td>Regional Trials</td>
</tr>
<tr>
<td>SUGAR SPRINT</td>
<td>11</td>
<td>98</td>
<td>France</td>
<td>Trials</td>
</tr>
</tbody>
</table>

First Commercial Releases:

<table>
<thead>
<tr>
<th>Variety</th>
<th>MONTH</th>
<th>YEAR</th>
<th>COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUGAR SPRINT</td>
<td>5</td>
<td>98</td>
<td>USA</td>
</tr>
<tr>
<td>SUGAR SPRINT</td>
<td>3</td>
<td>99</td>
<td>France</td>
</tr>
</tbody>
</table>
EXHIBIT 16A

Origin and Breeding History for **Sugar Sprint (SP704-3-8-3-1-4-1)**
SL3018

*Pedigree Chart for **Sugar Sprint (SP704-3-8-3-1-4-1)**
  - See separate Pedigree “package”*

**Breeding History**

*Sugar Sprint (SP704-3-8-3-1-4-1)* is the result of a hand pollinated cross between SP547-1 and SP404-5-1-1 in 1987. Both parents are Syngenta Seeds, Inc. snap pea varieties. *Sugar Sprint* was selected as a 12-13 node, standard vined, double podded “snap pea” variety in 1993. *Sugar Sprint* was first planted in 1994 and increased for the first time in 1995. All seed was delivered as:

- PVP Contemplated
- Unauthorized Seed Multiplication Prohibited
  - “For Testing Only”
SP268-1-4

SP166B-1

SP102-1-1**

**SEE ATTACHED PAGE 1a

H650

*B370-266

H559-2-1

Wis. 7104

H475

Dwarf Gray Sugar

RS87

Tight Pod D.S.P.

SP57-1**

**SEE ATTACHED PAGE 1b

H750-1-1**

**SEE ATTACHED PAGE 1c

*Line from Jerry Marx
SP57-1

H747-1

H629-1

H568-A-6

H560-1

P.I. 236493-A

Sugar Snap

Oregon Sugar Pod II

H560-1

Sugar Snap

Oregon Sugar Pod II

H566-A-1

*B568-185

Wis. 7104

H559-2-1

H475

Dwarf Gray Sugar

RS87

Tight Pod D.S.P.

XX169-1

Dwarf Stringless
from University
of Wisconsin.

*Line from Jerry Marx
*Line from Jerry Marx
SP243-2-1

SP110-1-4-1-1**

**SEE ATTACHED PAGE 2a

Trident

H507-2

*TN059-9

SP153-3

SP88-1**

**SEE ATTACHED PAGE 2b

*Line from Jerry Marx
SP110-1-4-1-1

XX169-1
Dwarf Stringless from University of Wisconsin

SP62-2

H759-1

H650
*B370-266
Wis. 7104
Dwarf Gray Sugar
RS87
Tight Pod D.S.P.

H559-2-1
H475

H629-1

H568-A-6

P.I. 236493-A
Sugar Snap
Oregon Sugar Pod II

H747-1

H560-1

H566-A-1
*B568-185
Wis. 7104
Dwarf Gray Sugar
RS87
Tight Pod D.S.P.

H629-1

H559-2-1
H475

*Line from Jerry Marx
XX169-1  
Dwarf Stringless  
from University of Wisconsin

H747-1

H750-1-1

H635-1

H565-B-3-1

*B265-1338

SP57-1

SP88-1

H747-1

H568-A-6

H629-1

H560-1

H566-A-1

*B568-185

H559-2-1

H560-1

H560-1

Sugar Snap

Sugar Snap

Oregon Sugar Pod II

Oregon Sugar Pod II

Wis. 7104

Wis. 7104

Dwarf Gray Sugar

Dwarf Gray Sugar

RS87

RS87

Tight Pod D.S.P.

Tight Pod D.S.P.

*Line from Jerry Marx
*Line from Jerry Marx

**SEE ATTACHED PAGE 3a
Stringless Sugar Snap (SP110-24-1)

XX169-1
Dwarf Stringless from University of Wisconsin

SP62-2

H759-1

H650

*H370-266

H559-2-1

Wis. 7104

H475

Dwarf Gray Sugar
RS87
Tight Pod D.S.P.

H629-1

P.I. 236493-A

Sugar Snap

H560-1

Oregon Sugar Pod II

H568-A-6

H568-A-1

H560-1

Sugar Snap

Oregon Sugar Pod II

H629-1

H559-2-1

Wis. 7104

H475

Dwarf Gray Sugar
RS87
Tight Pod D.S.P.

*Line from Jerry Marx
*Line from Jerry Marx
Line from Jerry Marx
SP88-1

- SP57-1
  - XX169-1
    - Dwarf Stringless 
      from University 
      of Wisconsin

- H747-1
  - H629-1
    - H566-A-1
      - H559-2-1
        - *B568-185
          - Wis. 7104
            - H475
              - RS87
                - Tight Pod D.S.P.

- H568-A-6
  - H560-1
    - Oregon Sugar Pod II

- P.I. 236493-A
  - Sugar Snap

- H560-1
  - Oregon Sugar Pod I

- *B568-185
  - Wis. 7104
    - H475
      - RS87
        - Tight Pod D.S.P.

*Line from Jerry Marx
SP102-1-1**

**SEE ATTACHED PAGE 7a

*B370-266

H650

H559-2-1

Wis. 7104

H475

Dwarf Gray Sugar

RS87

Tight Pod D.S.P.

*Line from Jerry Marx
*Line from Jerry Marx
Stringless Sugar Snap (SP110-24-1)

Dwarf Stringless from University of Wisconsin

P.I. 236493-A

Sugar Snap

Oregon Sugar Pod II

Sugar Snap

Oregon Sugar Pod II

*Dwarf Gray Sugar

Tight Pod D.S.P.

*Line from Jerry Marx
Type and frequency of variants during reproduction and multiplication:

"No variants were observed"

Evidence of uniformity and stability:

Sugar Sprint (SP704-3-8-3-1-4-1) has been observed for 5 successive generations and it has proven to be uniform and stable. These observations were production field increases.

Screening data:

Fusarium Wilt, Race 1

Sugar Sprint (SP704-3-8-3-1-4-1) was tested for resistance to Fusarium oxysporum f. sp. pisi (race 1) in greenhouse tests. Inoculum was increased in a shake culture of Kerr's Medium. Twelve seed of SP704-3-8-3-1-4-1 were spray inoculated with inoculum @ $3 \times 10^6$ spores/ml. Results were read after symptom development in 3-4 weeks. Resistance is inherited as a single dominant gene. Results were read as resistant, highly tolerant, segregating, or susceptible (dead).

Two separate tests were conducted in the greenhouse during 1998. Both tests gave the following results.

Early Sweet 9 --------------------- susceptible (check variety)
Bounty -------------------------- resistant (check variety)
Sugar Sprint --------------------- susceptible

Sugar Sprint does not have the FW1 gene for race 1, Fusarium Wilt resistance.
**Pea Enation Mosaic Virus**

*Sugar Sprint (SP704-3-8-3-1-4-1)* was tested for resistance to Pea Enation Mosaic virus during severe, natural field infections in 1997 and 1998. Mariner was the “highly tolerant” check, and Bounty was used as the susceptible check. Fifty seed of the varieties, being tested, were planted. Results were read in categories of highly tolerant, tolerant, segregating, or susceptible.

Results were:
- Mariner -------------------------- highly tolerant (check variety)
- Bounty --------------------------- susceptible (check variety)
- *Sugar Sprint* ------------------ highly tolerant

**Note**: Levels of Pea Enation Mosaic were high each season.

*Sugar Sprint* has the single dominant gene, for high tolerance to PEMV.

---

**Fusarium Wilt (Race 2)**

*Sugar Sprint (SP704-3-8-3-1-4-1)* was tested for resistance to *Fusarium oxysporum* f. sp. *pisum* (race 2) in greenhouse tests. Inoculum was increased in a liquid shake culture of Kerr’s Medium. Twelve plants were cut root-dip inoculated with an inoculum level of $1 \times 10^6$ spores/ml. Results were read after symptom development – 3 to 4 weeks after inoculation. Results were read as resistant, highly tolerant, segregating or susceptible. Test was conducted in 1999.

Test results:
- *Tasman* ------------------------- resistant (check variety)
- *Bolero* -------------------------- susceptible (check variety)
- *Sugar Sprint* ------------------- susceptible

*Sugar Sprint* does not have the Fw 2 dominate gene.
**Powdery Mildew**

*Sugar Sprint (SP704-3-8-3-1-4-1)* has been tested under severe, natural field infections from 1993. The susceptible check variety was Bolero, and the resistant variety was Bounty.

Results were:

- Bolero ----------------------------- susceptible (check variety)
- Bounty ----------------------------- resistant (check variety)
- *Sugar Sprint* --------------------- highly tolerant

Sugar Sprint has the single recessive gene, er.

**Common Pea Mosaic**

*Sugar Sprint (SP704-3-8-3-1-4-1)* was screened for resistance to Common Pea Mosaic (Bean Yellow Mosaic) in the greenhouse. Twelve plants were hand inoculated using carborundum and infective sap from diseased, inoculum source plants: Bounty was used as the resistant check, and Tasman was used as the susceptible check.

Results were:

- Tasman ----------------------------- susceptible (check variety)
- Bounty ----------------------------- resistant (check variety)
- *Sugar Sprint* --------------------- resistant

Sugar Sprint has the single recessive gene, mo.
EXHIBIT 16B

Novelty Statement

Sugar Sprint (SP704-3-8-3-1-4-1) is most similar to Sugar Sweet in that both are 12 - 13 node, standard vined, stringless snap pea varieties. Sugar Sprint differs from Sugar Sweet in that Sugar Sprint matures an average of 5 days earlier than Sugar Sweet when grown under short photoperiod days.

The following data collected by Bill Albers, President of Garden Valley, Inc., Boise, Idaho, shows this 5-day maturity difference.

Data is summarized below:

<table>
<thead>
<tr>
<th>Variety</th>
<th>Location</th>
<th>Planting Date</th>
<th>Bloom Date</th>
<th>Days to 1st Bloom</th>
<th>Days Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Sweet</td>
<td>Brawley, CA</td>
<td>21 Dec. 01</td>
<td>26 Feb. 02</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Sugar Sprint</td>
<td>&quot;</td>
<td>21 Dec. 01</td>
<td>20 Feb. 02</td>
<td>62</td>
<td>-6</td>
</tr>
<tr>
<td>Sugar Sweet</td>
<td>King City, CA</td>
<td>19 Dec. 01</td>
<td>14 Mar. 02</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Sugar Sprint</td>
<td>&quot;</td>
<td>19 Dec. 01</td>
<td>9 Mar. 02</td>
<td>81</td>
<td>-5</td>
</tr>
<tr>
<td>Sugar Sweet</td>
<td>Obregon, Mex</td>
<td>22 Dec. 01</td>
<td>22 Feb. 02</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Sugar Sprint</td>
<td>&quot;</td>
<td>22 Dec. 01</td>
<td>17 Feb. 02</td>
<td>58</td>
<td>-5</td>
</tr>
<tr>
<td>Sugar Sweet</td>
<td>Sonora, Mex.</td>
<td>22 Dec. 01</td>
<td>22 Feb. 02</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Sugar Sprint</td>
<td>&quot;</td>
<td>22 Dec. 01</td>
<td>17 Feb. 02</td>
<td>58</td>
<td>-5</td>
</tr>
</tbody>
</table>

The T-test supporting the maturity difference when grown under short photoperiod months of Dec. thru March in Calif. and Mexico is attached.
Data file: PEA-PVP
Title: SUGAR SPRINT VS. SP704-3-8-1 DAYS TO 1st BLOOM
Function: T-TEST

SAMPLE ONE: SUGAR SPRINT

--------
Variable 1: DAYS TO 1st BLOOM
Cases 1 through 4
Mean: 64.750
Variance: 120.917
Standard Deviation: 10.996

SAMPLE TWO: SP704-3-8-1

--------
Variable 1: DAYS TO 1st BLOOM
Cases 5 through 8
Mean: 70.000
Variance: 119.333
Standard Deviation: 10.924

F-TEST FOR THE HYPOTHESIS "VARIANCE 1 = VARIANCE 2"

---------------------------------------
F Value: 1.0133
Numerator degrees of freedom: 3
Denominator degrees of freedom: 3
Probability: 0.9916

Result: Non-Significant F - Accept the Hypothesis

T-TEST FOR THE HYPOTHESIS "MEAN 1 = MEAN 2"

---------------------------------------
Variance of the difference between the means: 0.0625
Standard Deviation of the difference: 0.2500
t Value: -21.0000
Effective degrees of freedom: 3
Probability of t: 0.0002

Result: Significant t - Reject the Hypothesis
Confidence limits for the difference of the means (for alpha=0.05):
5.250 plus or minus 0.796 (4.454 through 6.046)
March 11, 2002

Rogers Trial  
Dr. Mossier  

**Brawley, California**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA 0759</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Sprint</td>
<td>QA 0759</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 21, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: February 20, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA 8754</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP704-3-8-1</td>
<td>QA 8754</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 21, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: February 26, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**King City, California**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA 0759</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Sprint</td>
<td>QA 0759</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 19, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: March 9, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA 8754</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP704-3-8-1</td>
<td>QA 8754</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 19, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: March 14, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mexico**  
**Obregon, Sonora**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA0759</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Sprint</td>
<td>QA0759</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 22, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: Feb 17, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variety</th>
<th>Stock</th>
<th>QA 8754</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP704-3-8-1</td>
<td>QA 8754</td>
<td></td>
</tr>
<tr>
<td>Irrigation Date: December 22, 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Bloom Date: Feb 22, 2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Memorandum

To: Raul de la Garza, Juan Navarro, Jose Aranda

CC: Carlos Ochoa, Boise Office

From: Bill Albers

Date: 12/06/01

Re: Rogers 704 grow-outs

Dr. Paul Moser of Rogers research in Nampa is asking for our assistance in evaluating any differences between two Rogers varieties on which they are trying to obtain plant patents. The varieties are: 704-3-8-3-1-4-1 Sugar Sprint, 704-3-8-1 Sugar Sweet.

Rogers research is preparing four 500 seed samples of each of these varieties with appropriate phytos for California and Mexico. They ask that we plant these seeds as soon as possible in our major growing areas of Salinas, Maneadero, Errendira, and Brawley. The purpose of the trial is to record the difference in days to bloom between these varieties. It is anticipated that 704-3-8-3-1-4-1 (Sugar Sprint) variety will be three or four days earlier in maturity. This information, once confirmed, is a critical part of the plant description to be submitted to USDA.

These trials need to be planted in a head-to-head test in a protected area so that when they approach bloom, that detailed notes and even photographs may be taken to confirm the anticipated differences in bloom dates. We will allow the plants to mature to fresh harvest stage to see if any other differences might exist between the varieties. Any information that would show differences would be valuable to Dr. Moser and his staff.

These samples will probably be sent by Fed Ex or UPS to Juan for California plantings. Raul will be responsible for the small samples for Mexico.

Thanks,

Bill
**NAME OF APPLICANT:**

Syngenta Seeds, Inc.

**ADDRESS:**

600 N. Armstrong Place
Boise, Idaho 83704

**VARIETY NAME OR TEMPORARY DESIGNATION:**

Sugar Sprint

**SP704-3-8-3-1-4-1 SL3018**

**PVPO NUMBER:**

9900210

---

**1. TYPE:**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>GARDEN</td>
<td>FIELD</td>
<td>EDIBLE-PODDED</td>
</tr>
</tbody>
</table>

**2. MATURITY:**

<table>
<thead>
<tr>
<th>Node number of first bloom:</th>
<th>Long Day</th>
<th>No. of days to processing</th>
<th>Heat Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-13</td>
<td>0</td>
<td>6 2</td>
<td>1 3 4 0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of days Earlier than</th>
<th>0 2</th>
<th>4</th>
<th>ALASKA WR</th>
<th>THOMAS LAXTON WR</th>
<th>LITTLE MARVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of days Later than</td>
<td>0 2</td>
<td>4</td>
<td>WANDO</td>
<td>ALDERMAN WR</td>
<td>AUSTRIAN WINTER</td>
</tr>
</tbody>
</table>

**3. PLANT HEIGHT:**

<table>
<thead>
<tr>
<th>0 7 1 CM. HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 4 CM. SHORTER THAN</td>
</tr>
<tr>
<td>1 1 CM. TALLER THAN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 5 ALASKA WR</th>
<th>2 THOMAS LAXTON WR</th>
<th>3 LITTLE MARVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 WANDO</td>
<td>5 ALDERMAN WR</td>
<td>6 AUSTRIAN WINTER</td>
</tr>
</tbody>
</table>

**4. VINE:**

<table>
<thead>
<tr>
<th>Habit: 1 DETERMINATE</th>
<th>2 INDETERMINATE</th>
<th>Stockiness: 1 SLIM (Alaska)</th>
<th>3 HEAVY (Alderman)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branching: 1 NONE (Alaska)</td>
<td>2 1-2 BRANCHES (Little Marvel)</td>
<td>3 MORE THAN 2 BRANCHES (Dwarf Gt: Sugar)</td>
<td></td>
</tr>
<tr>
<td>Internodes: 1 STRAIGHT</td>
<td>2 ZIG ZAG</td>
<td>NUMBER OF NODES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 18 NUMBER OF NODES</th>
</tr>
</thead>
</table>

**5. LEAFLETS:**

<table>
<thead>
<tr>
<th>Color: 1 LIGHT GREEN (Alaska WR)</th>
<th>2 MEDIUM GREEN (Thomas Laxton WR)</th>
<th>3 DARK GREEN (Alderman)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wax: 1 NONE</td>
<td>2 LIGHT</td>
<td>3 MEDIUM</td>
</tr>
<tr>
<td>Number of leaflet pairs: 1 NOT PAIRED</td>
<td>2 ONE</td>
<td>3 TWU</td>
</tr>
</tbody>
</table>

**6. STIPULES:**

<table>
<thead>
<tr>
<th>1 LACKING</th>
<th>2 PRESENT</th>
<th>1 NOT CLASPING</th>
<th>2 CLASPING</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT MARBLED</td>
<td>2 MARBLED</td>
<td>Size (Compared with leaflets): 1 SMALLER</td>
<td>2 SAME</td>
</tr>
<tr>
<td>Color (Compared with leaflets):</td>
<td>1 LIGHTER</td>
<td>2 SAME</td>
<td>3 DARKER</td>
</tr>
</tbody>
</table>

**7. FLOWER COLOR:**

<table>
<thead>
<tr>
<th>VENATION</th>
<th>STANDARD</th>
<th>WING</th>
<th>KEEL</th>
<th>WHITE</th>
<th>GREENISH</th>
<th>LAVENDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>----------</td>
<td>----------</td>
<td>------</td>
<td>------</td>
<td>-------</td>
<td>----------</td>
<td>----------</td>
</tr>
</tbody>
</table>

**FORM LPGS-470-14 (8-80) (Formerly Form GR-470-14 (3-78) which may be used)**
**PODS:**

- **Shape:**
  - 1 = STRAIGHT
  - 2 = SLIGHTLY CURVED
  - 3 = CURVED

- **Color:**
  - 1 = LIGHT GREEN (Alaska WR)
  - 2 = MEDIUM GREEN
  - 3 = DARK GREEN (Alderan)
  - 4 = OTHER (Specify)

- **Surface:**
  - 1 = SMOOTH
  - 2 = ROUGH

- **Borne:**
  - 1 = SINGLE
  - 2 = DOUBLE
  - 3 = SINGLE AND DOUBLE
  - 4 = SINGLE, DOUBLE, & TRIPEE
  - 5 = DOUBLE & TRIPLE
  - 6 = TRIPLE
  - 7 = OTHER (Specify)

- **CM. LENGTH:**
  - 1
  - 3

- **MM. WIDTH (Between sutures):**
  - 0
  - 6

- **NO. SEEDS PER POD:**
  - 2

**SEEDS (95-100 Tenderometer):**

- **Color:**
  - 1 = LIGHT GREEN
  - 2 = GREEN
  - 3 = DARK GREEN
  - 4 = OTHER (Specify)

- **Seive:**
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8

**SEEDS (Dry, Mature):**

- **Shape:**
  - 1 = FLATTENED
  - 2 = ANGULAR
  - 3 = OVAL
  - 4 = ROUNDED

- **Surface:**
  - 1 = SMOOTH
  - 2 = DIMPLED
  - 3 = WRINKLED

- **Color Pattern:**
  - 1 = MONOCOLOR
  - 2 = MOTTLED
  - 3 = STRIPED
  - 4 = DOTTED

- **Primary Color:**
  - 1 = CREAMY-WHITE
  - 2 = CREAM & GREEN
  - 3 = LIGHT GREEN
  - 4 = MEDIUM GREEN
  - 5 = DARK GREEN
  - 6 = BLUE-GREEN
  - 7 = YELLOW
  - 8 = BROWN
  - 9 = RED

- **Secondary Color:**
  - 10 = GRAY
  - 11 = BLACK

- **Hilum Floor Color:**
  - 1 = WHITE
  - 2 = TAN
  - 3 = BLACK

  Cotyledon Color:
  - 1 = GREEN
  - 2 = YELLOW
  - 3 = ORANGE

- **GRAMS PER 100 SEEDS:**
  - 0
  - 5

**DISEASE:**

- 0 = Not Tested
- 1 = Susceptible
- 2 = Resistant

3-Tolerant
4-Highly Tolerant

- FUSARIUM WILT
- ASCOCHYTA BLIGHT
- MOSAIC

- NEAR-WILT
- POWDERY MILDEW
- BACTERIAL BLIGHT
- PEA ENATION MOSAIC
- YELLOW BEAN MOSAIC

**INSECT:**

- 0 = Not Tested
- 1 = Susceptible
- 2 = Resistant

**OTHER (Specify)**

**INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED**

**COMMENTS:**

Sugar Sprint differs from Sugar Sweet in that Sugar Sprint matures an average of 5 days earlier than Sugar Sweet when grown under short photoperiod days.
APPENDIX
OBJECTIVE DESCRIPTION OF VARIETY
PEA (Pisum sativum)

Variety Name or Temporary Designation: Sugar Sprint SP704-3-8-3-1-4-1 SL3018

LEAFLET CHARACTERISTICS:

3 Leaflet Type: 1=Leafless 2=Semi 3=Normal

STIPULE CHARACTERISTICS:

2 Color:
1=Light-Green 2=Medium-Green 3=Dark-Green 4=Blue-Green 5=Yellow-Green 6=Other

Please provide example varieties of similar specified color or check varieties and stipule color.

<table>
<thead>
<tr>
<th>Variety Name</th>
<th>Stipule Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>Lt. Green</td>
</tr>
<tr>
<td>Thomas Laxton</td>
<td>Med. Grn</td>
</tr>
<tr>
<td>Alderman</td>
<td>Dk. Green</td>
</tr>
</tbody>
</table>

2 Size: 1=Small 2=Medium 3=Large

Please provide example varieties of similar specified size or check varieties and stipule size.

<table>
<thead>
<tr>
<th>Variety Name</th>
<th>Stipule Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little Marvel</td>
<td>Small</td>
</tr>
<tr>
<td>Thomas Laxton</td>
<td>Med.</td>
</tr>
<tr>
<td>Alderman</td>
<td>Large</td>
</tr>
</tbody>
</table>

OTHER CHARACTERISTICS: Describe other characteristics that may aid in identification.

12-13 node, II podded, standard leafed, stringless, Snap Pea
EXHIBIT 16D

Additional Description of the variety

Sugar Sprint (SP704-3-8-3-1-4-1) is a determinate, 12-13 node, double podded, standard leafed, snap pea variety. The pods average 7.2 cm in length and 13 mm in width (suture up). It's pods are stringless when daytime temperatures average 70°F and above. Sugar Sprint has high tolerance to Powdery Mildew, resistance to Common Pea Mosaic and high tolerance to Pea Enation Mosaic.
<table>
<thead>
<tr>
<th>1. NAME OF APPLICANT(S)</th>
<th>Syngenta Seeds, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER</td>
<td>SL3018</td>
</tr>
<tr>
<td>3. VARIETY NAME</td>
<td>Sugar Sprint</td>
</tr>
<tr>
<td>4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</td>
<td>600 N. Armstrong Pl. Boise, Idaho 83704</td>
</tr>
<tr>
<td>5. TELEPHONE (Include area code)</td>
<td>(208) 322-7272</td>
</tr>
<tr>
<td>6. FAX (Include area code)</td>
<td>(208) 378-6625</td>
</tr>
<tr>
<td>7. PVPO NUMBER</td>
<td>9900210</td>
</tr>
</tbody>
</table>

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country [X] YES [ ] NO

10. Is the applicant the original breeder? If no, please answer the following:
   a. If original rights to variety were owned by individual(s):
      Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country [ ] YES [X] NO

   b. If original rights to variety were owned by a company:
      Is the original breeder(s) U.S. based company? If no, give name of country [X] YES [ ] NO

11. Additional explanation on ownership (if needed, use reverse for extra space):

**PLEASE NOTE:**

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

---

STD-470-E (03-96)
EXHIBIT 16E

Statement of the Basis of Application Ownership

The variety, Sugar Sprint (SP704-3-8-3-1-4-1), is the result of a hand pollinated cross between SP547-1 and SP404-5-1-1 in 1987. This variety was selected as an F8 in 1993. Dr. Calvin Lamborn, then an employee of Novartis Seeds, Inc. (now Syngenta), developed the variety, Sugar Sprint, for which Plant Variety Protection is hereby sought. By agreement between the employee and Novartis Seeds, Inc., all rights to any invention, discovery, or development made by the employee while employed by Novartis Seeds, Inc. were assigned to Novartis Seeds, Inc. with no rights of any kind retained by the employee.