

No.

8300065



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Wilbur-Ellis Company
Seed Division**

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

PEA

'Opal'



*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 29th day of June in
the year of our Lord one thousand nine
hundred and eighty-four.*

Attest:

Rennet D. Hill
Commissioner
Plant Variety Protection Office
Livestock, Meat, Grain & Seed Division
Agricultural Marketing Service

John R. Block
Secretary of Agriculture



6301

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S) WILBUR - ELLIS COMPANY SEED DIVISION		2. TEMPORARY DESIGNATION PS 1301		3. VARIETY NAME TINA OPAL	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) EAST 12001 EMPIRE WAY SPOKANE, WASHINGTON 99206 USA		5. PHONE (Include area code) 509-922-1774		FOR OFFICIAL USE ONLY PVPO NUMBER 8300065	
6. GENUS AND SPECIES NAME LEGUMINOSAE		7. FAMILY NAME (Botanical) PISUM sativum		FILING DATE 2/23/83 TIME 2:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	
8. KIND NAME Garden Pea		9. DATE OF DETERMINATION 12-20-81		FEES RECEIVED AMOUNT FOR FILING \$ 1,000 DATE 2/23/83 AMOUNT FOR CERTIFICATE \$ 500.00 DATE 5/21/84	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) CORPORATION				12. DATE OF INCORPORATION 1924	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION CALIFORNIA					
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Floyd A. Weems Research Director Wilbur - Ellis Company Seed Division East 12001 Empire Way Spokane, Washington 99206 USA					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)		c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)			
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement		d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of the Variety			
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.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified			
18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES? United Kingdom France 1-10-83 1-10-83 <input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input type="checkbox"/> No					
19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES? None to date <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> 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 Floyd A. Weems For and on behalf Wilbur-Ellis Company Seed Division				DATE 1-10-83	
SIGNATURE OF APPLICANT				DATE	

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area required

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~~TINA~~ OPAL
(Canner)

RJS 9/16/83 8300065

OPAL

~~TINA~~ was derived from the following crosses:

[(Wando x Earliest Perfection) x₂ (Dark Skin Perfection x Horal)] /
(Multipod x Surprise) x^{*} PI 132193

WANDO is a very determinate, freezer type. Matures in 66 days. Plants are 26 inches in height having heat and moisture stress tolerance, consistent double podding, Fusarium Wilt Race 1 resistance and good quality when processed. The pods are 3½ inches in length, with 6-8 seeds per pod. The dry seeds are medium green, semi-wrinkled and approximately 2,900 per pound. When processed, the peas are similar to medium sieved Dark Skin Perfection type.

EARLIEST PERFECTION is a semi-indeterminate plant, medium-sieved, very vigorous, medium maturity, canner perfection type and single-double podding, Fusarium Wilt Race 1 resistant. Dry seeds are bluish-green, wrinkled and 1,950 seeds per pound. The processed product is of medium quality and beautiful canner appearance. Origin unknown.

DARK SKIN PERFECTION is a widely used, full season, freezer type, with very vigorous, large stemmed plant, medium to large sieved and quite widely used commercially in green pea production areas of the USA and Europe. The plants are resistant to Fusarium Wilt Race 1 and medium level of tolerance to the root rot complexes found in all growing areas. The dry seeds are normally very wrinkled, medium-dark green and 1,850-1,900 per pound. When processed, the product is of good quality and widely used as a standard of comparison for new developments in the freezer perfection class and maturity. The variety was developed by Canner's Seed Corporation.

MULTIPOD is a determinate, freezer type, small-medium sieved, very concentrated pod set, normally consistent, triple to quadrupled podded. Multipod carries resistance to Fusarium Wilt Race 1, medium level of tolerance to Fusarium root rot. The dry seeds are medium-dark green, well wrinkled and 2,050 per pound. The processed product is good quality. Multipod is a breeding line whose origin was the Bozeman Canning Company.

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SURPRISE is a very early, determinate, small sieved, high quality, sweet canner type. A widely used canner type in the late 1930's and 40's. Pod set normally begins with the 10th node, with singles and doubles. Normally pods will contain 5-6 seeds. The dry seeds are very uniform, bluish-green and 2,500 per pound. The processed peas are similar in appearance to Alaska or Alsweet. The plants are resistant to Fusarium Wilt Race 1 and only a low level of resistance to Fusarium root rot.

HORAL is a determinate, small, wirey plant, medium-early, small sieved, average quality, sweet, canner type. A widely used canner type in the late 1930's and 40's in the midwest USA. Flowering normally begins at the 11-12 node. Pods are straight with 5-6 seeds. The plants are very tolerant to moisture and temperature stresses. Resistant to Fusarium Wilt Race 1, but only a low level of tolerance to Fusarium root rot. When dry, seeds are bluish-green, 2,700 per pound, uniform and semi-wrinkled. When processed, the product is of average quality.

PI132193 is a small sieved, bluish green, canner type, segregating early and late maturity, double and triple podded. Plants are normally 20 inches in height. Plants resistant to Powdery Mildew and Fusarium Wilt Race 1, but only a medium level of tolerance to Fusarium root rot.

Wando was crossed with Earliest Perfection. Dark Skin Perfection was crossed with Horal. Multipod was crossed with Surprise. The resulting F_1 progenies from each of the crosses - (Wando x Earliest Perfection) and (Dark Skin Perfection x Horal) were crossed. The resulting F_1 progenies [(Wando x Earliest Perfection) x (Dark Skin Perfection x Horal)] were crossed with the F_1 progeny from (Multipod x Surprise). The resulting progenies from this complex combination were advanced to the F_4 generation, at which time superior performing plants were crossed with PI 132193. The resulting F_1 was back-crossed one time to PI 132193, to further our goal of obtaining triple podding and Powdery mildew resistance. The resulting progenies were advanced to the F_4 generation, at which time single plants were selected that exhibited outstanding horticultural characteristics - determinate plant type, uprightness, multipodding quality, powdery mildew resistance, Fusarium Wilt Race 1 resistance, number of pods per peduncle and productive potential. Each were advanced to the F_7 generation, where they were found to exhibit very good genetic stability. An increase program on outstanding selections was initiated to our present quantities. During the last three multiplications, we have not observed any variants. Therefore, at this time, we feel uniformity and stability have been attained.

OPAL

~~TINA~~

14 B EXHIBIT B

Wilbur-Ellis Company, Seed Division, believes we are the original and only breeder of the variety TINA and base novelty upon the following:

OPAL

~~TINA~~ plant type is 55 centimeters in height, as compared to 71 centimeters for Alsweet and significantly more husky, upright and outstanding seedling vigor.

OPAL

~~TINA~~ pods are borne consistently triples, as compared to Alsweet, which are single, with occasional double.

OPAL

~~TINA~~ maturity is 60-61 days as compared to Alsweet with 58-59.

OPAL

~~TINA~~ is completely resistant to Powdery Mildew, whereas Alsweet is completely susceptible.

OPAL

~~TINA~~ is most similar to the variety Alsweet.

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~~TINA~~ average sieve size is 2.74, whereas Alsweets are 2.83.

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MAY - 5 1983

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705
OBJECTIVE DESCRIPTION OF VARIETY
PEA (PISUM SATIVUM)

EXHIBIT C
(Pea)

NAME OF APPLICANT(S) WILBUR - ELLIS COMPANY SEED DIVISION	VARIETY NAME OR TEMPORARY DESIGNATION TINA OPAL (PS 1301)
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) EAST 12001 EMPIRE WAY SPOKANE, WASHINGTON 99206 USA	FOR OFFICIAL USE ONLY PVPO NUMBER 8300065

Place the appropriate number that describes the varietal character in the boxes below.
Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. TYPE:

1 = GARDEN 2 = FIELD 3 = EDIBLE-PODDED

2. MATURITY:

Node number of first bloom: No. of days to processing Heat Units

No. of days Earlier than } 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

No. of days Later than } 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER 7 = DSP

3. PLANT HEIGHT:

= Sprite

CM. HIGH

Cm. Shorter than } 1 = ALASKA WR 2 = THOMAS LAXTON WR 3 = LITTLE MARVEL

Cm. Taller than } 4 = WANDO 5 = ALDERMAN WR 6 = AUSTRIAN WINTER 7 = DSP

4. VINE:

= Sprite

Habit: 1 = DETERMINATE 2 = INDETERMINATE Stockiness: 1 = SLIM (Alaska) 3 = HEAVY (Alderman)
2 = MEDIUM (Thomas Laxton WR)

Branching: 1 = NONE (Alaska) 2 - 1-2 BRANCHES (Little Marvel) 3 = MORE THAN 2 BRANCHES (Dwarf Gray Sugar)

Internodes: 1 = STRAIGHT 2 = ZIG ZAG NUMBER OF NODES

5. LEAFLETS:

Color: 1 = LIGHT GREEN (Alaska WR) 2 = MED. GREEN (Thomas Laxton WR) 3 = DARK GREEN (Alderman)
4 = OTHER (Specify)

Wax: 1 = NONE 2 = LIGHT 3 = MEDIUM 1 = NOT MARBLED 2 = MARBLED (Alaska)
4 = HEAVY

Number of leaflet pairs: 1 = NOT PAIRED 2 = ONE 3 = TWO 4 = THREE OR MORE

6. STIPULES:

1 = LACKING 2 = PRESENT 1 = NOT CLASPING 2 = CLASPING

1 = NOT MARBLED 2 = MARBLED Size (Compared with leaflets): 1 = SMALLER 2 = SAME
3 = LARGER

Color (Compared with leaflets): 1 = LIGHTER 2 = SAME 3 = DARKER

7. FLOWER COLOR:

VENATION STANDARD WING KEEL 1 = WHITE 2 = GREENISH 3 = LAVENDER
4 = PURPLE 5 = RED

6 = OTHER (Specify) _____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



OPAL
~~TINA~~

(Canner)

14 D EXHIBIT D

See attached detailed sheets.....

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PS 177-79-05 Variety Name Designation TINA PS1301-82-04 Variety Number

TYPE OF SAMPLE 0 = na (no answer); 1 = cross; 2 = single plant selection; 3 = bulk selection

Origin Female WANDO Origin Male EARLIEST PERFECTION

Origin Short (WANDO x EARLIEST PERFECTION) x (DARK SKIN PERFECTION) / (MULTIPOD x SURPRISE) x HI 132193 GENERATION

HISTORY (FOR PREVIOUS YEAR)

PS1301-81-04 Variety Name Designation OPAL TINA PS1301-80-05 Variety Number

DISPOSITION 0 = na; 1 = discard; 2 = hold; 3 = increase; 4 = increase and reselect; 5 = increase and retest; 6 = test for disease reaction; 7 = sample to research station; 8 = sample to customer

USE 0 = na; 1 = canner; 2 = canner-freezer; 3 = dry edible; 4 = edible pod; 5 = feed grain

GENERAL TYPE 0 = na; 1 = garden; 2 = field; 3 = edible pod

INTERNODE TYPE 0 = na; 1 = internodes straight; 2 = internodes zigzag

SEASON: NODE NUMBER OF FIRST BLOOM 0 = na; 1 = early (8th - 12th node); 2 = midseason (13th-15th node); 3 = late (16th-24th node)

MATURITY

number of days earlier than 6 number of days later than 7

1 = Alaska WR; 2 = Thomas Laxton WR; 3 = Little Marvel; 4 = Wando; 5 = Alderman WR @ DSP @ SS ALASKA

COMPARATIVE PLANT HEIGHT 16 cm. shorter than 6 25 cm. taller than 2 ACTUAL PLANT HEIGHT

1 = Alaska WR; 2 = Thomas Laxton WR; 3 = Little Marvel; 4 = Wando; 5 = Alderman WR @ DSP @ 255 cm. high

VINE

Habit 0 = na; 1 = determinate; 2 = undecided; 3 = indeterminate. 1 Node Color 0 = na; 1 = green; 2 = red blotch.

Stockiness 0 = na; 1 = slim (Alaska); 2 = medium (Thomas Laxton WR); 3 = heavy (Alderman)

Branching 0 = na; 1 = none; 2 = one to two branches (Little Marvel); 3 = more than two branches (Dwarf Grey Sugar)

Number of Nodes to First Bloom 05 cm. Internode Length (just below first flowering node)

Color (Royal Society Color Chart)

LEAFLETS

Color 2 Wax 0 = na; 1 = none; 2 = light; 3 = medium; 4 = heavy 1 Marbling 0 = na; 1 = none; 2 = marbled

Number of Pairs 0 = na; 1 = one; 2 = two; 3 = three or more; 4 = not paired; 5 = none

STIPULES

Presence 0 = na; 1 = lacking; 2 = present 1 Marbling 0 = na; 1 = not marbled; 2 = marbled

Color Compared with Leaflets 0 = na; 1 = lighter; 2 = same; 3 = darker 1 Claspings 0 = na; 1 = not cls.; 2 = cls.

Size Compared with Leaflets 0 = na; 1 = smaller; 2 = same; 3 = larger

FLOWER COLOR

Venation 1 Standard 1 Wing 1 Keel 0 = na; 1 = white; 2 = greenish; 3 = lavender; 4 = purple; 5 = red

Monocolor or Bicolor 0 = na; 1 = monocolor; 2 = bicolor

PODS

Shape 0 = na; 1 = straight; 2 = slightly curved; 3 = curved 2 End 0 = na; 1 = pointed; 2 = blunt (Alaska)

Color 2 Surface 0 = na; 1 = smooth; 2 = rough 6 cm. length 10 mm. Width (between sutures)

Number of Pods/Peduncle 4 5 6 7 8 9 3 10 3 11 3 12 3 13 2 14 15 16 17

18 19 20 21 22 23 24 67 Seeds per Pod

YIELD AND EFFICIENCY

Eco. Yield gms. Harvest index (%) Biological Yield in grams

NODULATION

Presence 0 = na; 1 = not present; 2 = present mm. Size if Present Color

Insect Damage 0 = na; 1 = nematode; 2 = citona larva; 3 = nematode and citona larva

Lateral Roots: # of nodules at a depth less than 15 cm. # of nodules at a depth greater than 15 cm.

Primary Roots: # of nodules at a depth less than 15 cm. # of nodules at a depth greater than 15 cm.

light green

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95-100 TENDEROMETER SEEDS

Light green *Light green*

Shape 0 = na; 1 = flattened; 2 = angular; 3 = oval; 4 = rounded Surface Color Coty Color

Surface 0 = na; 1 = shiny; 2 = dull. English-Sieve Seed Distribution (%): Sieve Waste

#1: #2: #3: #4: #5:

#6: #7: #8: Metric-Sieve Seed Distrib. (%): waste smaller than 7.10 mm;

useable larger than 7.90; ditto than 8.71; than 9.51; than 10.30; than 11.10

MATURE, DRY SEEDS

Light green

Mono or Bicolor 0 = na; 1 = monocolour; 2 = bicolor. Primary Color Secondary Color

Color Pattern 0 = na; 1 = splashed; 2 = mottled; 3 = striped; 4 = flecked; 5 = dotted; 6 = uniform color

Hilum Floor Color 0 = na; 1 = white; 2 = tan; 3 = black *yellow* Coty Color gm/100 seeds size in 64ths"

Shape 0 = na; 1 = flattened; 2 = angular; 3 = oval; 4 = rounded Surface 1 = wrinkled; 10 = smooth

PLANT REACTION TO ELEMENTS

Drought Cold Heat 0 = not tested; 1 = most susceptible; 10 = most resistant

Quantity of Seeds Planted Weight of Seeds Planted in grams

LOCATION

Range #(1-50) Row #(1-200) Wire #(1-500) Field #(1-50)

Range Axis Wire Axis 0 = na; 1 = E to W; 2 = W to E; 3 = N to S; 4 = S to N

DATES

Planting Date (month, day, year) Up (month, day) Bloom *46 days*

Canning Cut Harvest *60 days - 1275 HU*

STAND

Emergence (up to 400) Plants per square yard (up to 500)

WEIGHT

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Field Run (up to 40,000 lb)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(up to 1,000,000 gm)	INVENTORY up to 40,000 lb
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Mill Run (ditto)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(ditto)	up to 1,000,000 gm
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Hand Picked (ditto)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(ditto)	

	Date	Percent	Date	Percent
1st Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2nd Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3rd Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4th Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5th Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6th Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7th Bloom Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

DISEASE: 0 = not tested; 1 = most susceptible; 10 = most resistant

Root Rot Complex: ascochyta aphanomyces rhizotonia pythium fusarium solani

sclerotinia. Fus. Wilt: 1 2 3 4 5 6 7

DISEASE: 0 = not tested; 1 = absolutely susceptible; 2 = segregating for resistance; 3 = absolutely resistant.

pea enation mosaic yellow bean mosaic pea-seed borne mosaic bacterial blight. Insects: aphid

citona or leaf weevil common pea weevil nematodes wire worms

MILDEW: 0 = not tested; 1 = susceptible; 2 = segregating for resistance; 3 = absolutely resistant

powdery mildew downy mildew

ROOT STRUCTURE TYPE

very good

QUALITY OF PEAS

% of defective peas color of processed peas

Bitterness: 0 = no test; 1 = most bitter; 10 = least bitter

Unprocessed Processed

Starchiness: 0 = no test; 1 = most starchy; 10 = most sweet

Unprocessed Processed

Small quantity bleached

ADDITIONAL NOTES

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UNIVERSITY OF WISCONSIN-MADISON

DEPARTMENT OF AGRONOMY

1575 Linden Drive
Madison, Wisconsin 53706
608-262-1390



December 29, 1982

Mr. Floyd Weems
Seed Division
Wilbur-Ellis Company
12001 Empire Way
Spokane, WA 99206

Dear Floyd:

I am enclosing summaries of the performance of your lines which I grew last summer. None of the plots was replicated so you should keep this in mind in reviewing the data.

The wire trellises were planted with the indicated number of seeds divided between rows on either side of the wire. As noted, four entries were planted along 20 feet each, and three along 10 feet each. They were planted by hand on May 1. At or soon after the canning stage, 20 plants were pulled from each plot and detailed measurements and counts made from 15 plants each. Dry seed was harvested from all remaining plants.

Where there was enough seed, one plot each was planted in drilled plots. Because the settings on the planter were not changed, different seeding rates were obtained. Your entries were not replicated. Plots were seeded April 29. Although the yield of Dark Skin Perfection in an adjacent plot was only 942 lbs/A after adjustment, nearby plots of DSP averaged about 2600 lbs/acre after adjustment to 100 TDR.

I hope these observations are of some value to you.

Sincerely,

Earl T. Gritton
Professor of Agronomy

enc.

cjj

PEA WIRES EXPERIMENT
Arlington Wisconsin - 1982
Individual Plant Data

Designation	Dry seed yld (g)	No. plants	\bar{X} plnt. ht.	\bar{X} total node	\bar{X} 1st prod. node	Total num. pods	\bar{X} No. pods node	\bar{X} No. pods plant	Total num. peas	\bar{X} peas/pod	\bar{X} peas/plant
Proto IV	1680	15	88.5	20.8	16.9	106	2.07	7.07	461	4.35	23.05
PS 235-81-4	1523	15	73.9	17.7	11.9	139	2.07	9.27	642	4.62	42.80
PS 1301-81-4 'OPML'	1730	15	68.1	16.3	9.7	178	2.02	11.87	764	4.34	50.93
PS 1302-81-4	2129	15	84.3	19.1	14.2	138	2.12	9.20	761	5.47	50.73
PS 1535-81-4	864	15	25.5	18.0	13.9	106	2.36	7.07	514	4.85	34.27
PS 1536-81-4	619	15	76.5	20.2	15.7	129	2.35	8.6	551	4.27	36.73
PS 1540-81-4	851	15	68.9	19.9	16.1	114	2.32	7.6	482	4.27	32.13

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FEB 28 1983

DATE	DESCRIPTION	AMOUNT	CHECK NO.	INITIALS	REMARKS
1/15/83
1/22/83
1/29/83
2/5/83
2/12/83
2/19/83
2/26/83
3/5/83
3/12/83
3/19/83
3/26/83
4/2/83
4/9/83
4/16/83
4/23/83
4/30/83
5/7/83
5/14/83
5/21/83
5/28/83
6/4/83
6/11/83
6/18/83
6/25/83
7/2/83
7/9/83
7/16/83
7/23/83
7/30/83
8/6/83
8/13/83
8/20/83
8/27/83
9/3/83
9/10/83
9/17/83
9/24/83
10/1/83
10/8/83
10/15/83
10/22/83
10/29/83
11/5/83
11/12/83
11/19/83
11/26/83
12/3/83
12/10/83
12/17/83
12/24/83
12/31/83

COMMUNITY DEVELOPMENT
1500 15th St
San Francisco, CA 94103
Tel: 415-398-1886

JAN 3 1983

Wire Trials - Arlington, Wisconsin - 1982

Designation	No. seeds planted	No. ft. of row	Bloom date	Notes
Pronto IV	180	20	6-23	3 flowers, pm susc
PS 235-81-4	180	20	6-18	3-4 flowers, pm susc
PS 1301-81-4 'OPAL'	180	20	6-14	3 flowers, pm res
PS 1302-81-4	180	20	6-22	3 flowers, pm res
PS 1535-81-4	102	10	6-21	4 flowers, pm susc
PS 1536-81-4	104	10	6-28	3-4 flowers, pm susc
PS 1540-81-4	100	10	6-24	3-4 flowers, pm susc

Drill Trials - Arlington, Wisconsin - 1982

Designation	Bloom date	Canopy 6-16 (cm)	Ht 7-13 (cm)	Harv. date	Plant population plts/A	Total fresh wt lbs/A	Shelled pea wt. lbs/A	TDR	Adj. shelled wt. lbs/A
DSP	6-25	46	40	7-19	477,258	10502	1277	112	942
PS 235-81-4	6-17	42	24	7-14	890,337	22170	1331	80	1889
PS 1301-81-4 'OPAL'	6-13	55		7-12	470,257	33256	4246	125	3548
PS 1302-81-4	6-21	52	20	7-14	935,846	16336	1306	90	1585

Item	Quantity	Unit Price	Total Price	Notes
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	
1-1 flowers, per bunch	10	100	1000	

3000

Designation	Room	Quantity	Unit Price	Total Price	Notes
1-1 flowers, per bunch	100	10	100	1000	
1-1 flowers, per bunch	100	10	100	1000	
1-1 flowers, per bunch	100	10	100	1000	
1-1 flowers, per bunch	100	10	100	1000	

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