No. 9900223

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Paragon Seed, 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 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 TWENTY 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 [illegible]HT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR [illegible]TING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE [illegible]URPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE [illegible]OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PRO[illegible] THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Ventana'

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 twenty-fifth day of August, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

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)*: Paragon Seed, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER: Exp. 54

3. VARIETY NAME: Ventana

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*: 507 Abbott Street, Salinas, California 93901

5. TELEPHONE *(include area code)*: 831-753-2100

6. FAX *(include area code)*: 831-753-1470

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9900223

FILING: DATE: March 22, 1999

FEES RECEIVED: FILING AND EXAMINATION FEE: $ 2450.00 DATE: 3-22-99

CERTIFICATION FEE: $ 682.00 DATE: 7/25/2005

7. GENUS AND SPECIES NAME: Lactuca sativa L.

8. FAMILY NAME *(Botanical)*: Compositae

9. CROP KIND NAME *(Common name)*: Lettuce

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: California

12. DATE OF INCORPORATION: March 7, 1994

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:
Victor Heintzberger
P.O. Box 1906
Salinas, California 93902

14. TELEPHONE *(include area code)*: 831-753-2100

15. FAX *(include area code)*: 831-753-1470

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 *(2,500 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 ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

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 *(If "yes," answer items 18 and 19 below)* ☒ NO *(If "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 *(If "yes," give names of countries and dates)* ☐ NO
California U.S.A Date of first sale : May 10, 1998

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) is(are) 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) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
Victor Heintzberger			
NAME *(Please print or type)* Victor Heintzberger		NAME *(Please print or type)*	
CAPACITY OR TITLE President	DATE 02/19/99	CAPACITY OR TITLE	DATE

SD-470 (04-95) *(Previous editions are to be destroyed)* *(See reverse for instructions and information collection burden statement)*

Exhibit A

Origin and Breeding

The objective of this lettuce development project was to create a green leaf lettuce with Corky Root Rot resistance (cor cor) gene. Corky Root is caused by the bacterium *Rhizomonas suberifaciens* (gen.nov.,sp.nov.)(van Bruggen et al., 1990) HortScience 29(4):335-336. 1994. The disease is an economically important lettuce disease in California coastal lettuce districts and in the muck-soil districts in eastern and midwestern states and Florida.

To achieve this goal, the leaf lettuce P.I. 171669 was selected as the pollen parent. P.I. 171669 is a Corky Root Rot resistant leaf accession from Turkey, as identified by Dr. Luis Sequeira in "Resistance to Corky Root Rot in Lettuce". The Plant Disease Reporter, September, 1970, Vol 54, No. 9, pp 754-758.

The green leaf variety Waldmann's Green was selected as the (female) receptor plant. Waldmann's Green has long been the industry standard for green leaf lettuce, however, Waldmann's Green is susceptible to early bolting, tipburn, and is susceptible to Corky Root Rot.

A sample of P.I. 171669 (acc. # 011 Paragon) and Waldmann's Green (acc.# 030 Paragon) were obtained from the U.S.D.A. seed storage facility in Salinas, California in April, 1994. Seeds were sown near Corcoran, California in April, 1994, and plants were grown to flower stage for cross pollination. Before crossing, all plants were carefully screened for slow bolting characteristics, darkest green color, and frilled leaf type. Plants noted with reflexed involucre, spined midribs, early bolting, tipburn, and yellowing were eliminated.

In July, 1994, crosses were made using the technique outlined by Ryder and Johnson in "Mist Depollination of Lettuce Flowers", published in HortScience, Vol. 9(6), 1974.

F1 seeds were removed from the maternal plants in August of 1994 and designated :

i.d	seed color
171669-1	bs
171669-5	bs
171669-6	bs

Exhibit A

Origin and Breeding History

In December, 1994, F1 seeds of three families were seeded in a four inch deep greenhouse flat filled with approximately 30 % "Blanco" field soil and 70 % sand. Flats were then grown in a greenhouse near Salinas, California and irrigated with the leachate of "Blanco" field soil to capture the *Rhizomonas* bacterium responsible for Corky Root of Lettuce. Soil from a lettuce field with known Corky Root Rot was saved in the fall of 1994 for this purpose. At approximately the five-leaf stage, plants were gently removed from the soil mixture and roots were evaluated for discoloration according to the index outlined by Sequeira. Plants with roots rated 1 (most resistant) were transplanted to two-gallon pots filled with a local field soil/hay mixture and grown to seed maturity. Seed was harvested from the following lines :

i.d.	Seed Color
171669-5-2-G1	BS
171669-5-4-G1	BS
171669-5-4-G2	BS
171669-5-4-G3	BS
171669-5-4-G4	BS
171669-5-4-G5	BS
171669-5-4-G6	BS
171669-5-5-G1	BS
171669-6-7-G1	BS
171669-6-8-G1	BS
171669-6-8-G2	BS
171669-6-8-G3	BS
171669-6-8-G4	BS
171669-6-9-G1	BS
171669-6-9-G2	BS
171669-6-9-G3	BS
171669-6-9-G4	BS
171669-6-9-G5	BS
171669-6-9-G6	BS

Exhibit A

Origin and Breeding History

F2 seed of these plants was planted near Corcoran, California in May of 1995.

Concurrent to this seed production, trials of these lines were planted and evaluated in the Salinas Valley of California for :

Corky Root Resistance
Slow bolting character
Tipburn resistance
Darker green color than Waldmann's Green

In these field trials were identified lines with a high level of Corky Root resistance. Segregation was also noted for leaf color, leaf thickness, and bolt tolerance.

At time of seed harvest in September, 1995, specific lines were highlighted for additional individual plant selections due to high ratings in the field trials. Prior to seed harvest, plants were screened for spined midribs, reflexed involucres, pale (yellow) color, early bolting and non-frilled leaf type. This plant type was eliminated from the breeding program.

Single plant selections and field trials in 1996 continued the search for desirable plant types and notable progress to uniformity to type. On April 28, 1997, two lines were identified in a field trial that met the objectives of the project.

The lines were designated Exp. 54 and Exp. 669.96 at that time with the intent to produce a small quantity of seed for advanced trials. Also, field trials in corky root infested soils verified that the two lines carry the single recessive (cor cor) gene that imparts resistance to Corky Root Rot.

A small, experimental lot of seed of Exp. 54 was produced in the summer of 1997 near Corcoran, California. An occasional smooth leaf type plant similar to the parental P.I. line was noted. At this early stage it is not possible to numerically quantify the frequency of occurrence of this plant type other that it did exist, and it was removed from production.

The two lines Exp. 54 and Exp. 669.96 are similar in leaf type; however, Exp. 669.96 is slightly larger in frame size, and slightly darker in leaf color. The two lines are similar in bolting tolerance, maturity, and level of Corky Root Resistance.

Exhibit A

Origin and Breeding History

In the summer of 1998, a second crop of Exp. 54 and Exp. 669.96 were produced near Corcoran, California. No off types were noted in this production. Growouts in Yuma, Arizona conducted in the late fall of 1998 indicated the lines were uniform to type and distinct from the parental lines Waldmann's Green and P.I. 171669.

Ventana, Exp. 54, was developed using traditional cross pollination techniques, and five generations of selfing to establish a stable, bolt tolerant, corky root resistant, tipburn resistant, dark green, thick leafed green leaf lettuce.

Seed production of Ventana in 1999, 2000, 2001, 2002, and 2003 have resulted in crops of a uniform and stable variety.

No variants have been observed in the past five years of seed production.

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Replaced by JRM 12/16/04

Exhibit B

Novelty Statement Ventana

Ventana is a unique and distinct variety of green leaf lettuce which combines the single recessive (*cor cor*) gene for Corky Root Rot resistance of the Plant Introduction PI 171669 and the leaf type of Waldmann's Green, an established standard green leaf lettuce variety.

Ventana most closely resembles the variety North Star, however, Ventana differs from North Star in the following characteristics:

1. Frame size is smaller than North Star (30.5 cm. vs. 31.4 cm)
2. Lighter head weight (378 grams vs. 403 grams)
3. Lighter green color based on paired comparisons at two or more localities and growing seasons (141B vs.141A) using the Royal Horticultural Society Colour Charts.
4. Slower stem elongation (1.4 inches vs. 1.6 inches)
5. Date of first flower (Ventana 82 days vs. North Star 79 days) under seed production conditions near Corcoran, California, 1997.
6. Both varieties contain the (*cor cor*) gene for Corky Root Rot resistance.

Ventana differs from Waldmann's Green in the following characteristics:

1. Waldmann's Green is susceptible to Corky Root Rot.
2. Ventana has a darker green leaf color, RHS 141B vs.143A based on paired comparisons at two or more localities and growing seasons.
3. Slower bolting (Waldmann's Green 51 days vs. 62 days to seed stem elongation.
4. Date of first flower (Waldmann's Green 66 days vs. Ventana 82 days
5. The root structure of Ventana is very fibrous, more similar to the P.I. parent vs. the dominant taproot structure of Waldmann's Green.

Ventana differs from PI 171669 in the following characteristics:

1. Ventana involucres are non-reflexed, whereas PI 171669 involucres are reflexed.
2. The midribs of PI 171669 are segregating for the *spiny* gene (*Sp*, Durst)
3. The leaf color of the PI line is segregating from light green to dark green
4. The PI line is extremely variable in days to bolt and days to first flower
5. The leaf margin of Ventana is incised and dentate, more similar to Waldmann's Green than PI 171669.

Note : Leaf color measurements were conducted as paired comparisons at two or more localities and under different growing conditions.

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PARAGON SEED COMPANY

P.O. Box 1905 Salinas, Ca. 93902 408-753-2100

Varieties 171669-54 vs 171669-69

Grown on Wildhorse Ranch, King City, Ca. Harvest date-: 08-25-98

	171669 54	171669 69	171669 54	171669 69	171669 54	171669 69	171669 54	171669 69
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	733.5	753.5	500.5	486.0	9,077.0	9,674.0	34.75	38.50
Mean	30.56	31.40	20.85	20.25	378.21	403.08	1.45	1.60
Maximum Value	34.0	33.0	23.0	22.0	463.0	457.0	2.00	2.00
Minimum Value	27.0	30.0	19.0	19.0	269.0	329.0	1.00	1.25
Variance	3.90	0.93	1.16	0.48	2,871.22	1,348.43	0.13	0.05
Std.Dev	1.97	0.97	1.08	0.69	53.58	36.72	0.36	0.23
Joint Variance	*****	2.42	*****	0.82	*****	2,109.82	*****	0.09
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	1.857	*****	2.311	*****	1.876	*****	1.78
Level of Significance	*****	0.0697	*****	0.0254	*****	0.0670	*****	0.0811
Confidence Level %	*****	93.030	*****	97.461	*****	93.299	*****	91.89
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	34.0	32.0	20.0	21.0	409	440	1.50	1.50
	29.0	31.0	20.5	22.0	269	390	1.00	1.50
	28.5	30.0	20.0	21.0	322	375	1.00	1.50
	28.0	31.0	20.0	21.0	320	346	1.00	1.50
Solidity measured on a scale of 1 to 5	29.0	33.0	21.0	20.0	335	445	1.25	1.50
	29.0	31.0	21.0	19.0	423	329	1.50	2.00
	29.0	33.0	22.0	21.0	363	354	1.50	2.00
	30.0	32.0	21.0	20.0	408	378	1.50	1.75
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	30.0	32.0	23.0	20.0	463	445	2.00	1.50
	30.0	31.0	20.0	20.0	410	457	1.50	1.75
	30.0	32.0	19.0	20.0	349	425	1.50	1.50
	31.0	30.0	21.0	21.0	433	430	2.00	1.50
	31.0	32.0	20.0	20.0	366	422	1.00	2.00
	33.0	31.5	22.0	20.0	440	400	2.00	1.50
	27.0	33.0	21.0	20.0	360	425	1.50	1.25
	32.0	30.0	21.0	20.0	410	435	1.50	2.00
	34.0	32.0	20.0	19.0	400	345	1.50	1.50
	30.0	31.0	23.0	20.0	405	385	2.00	1.50
	32.0	32.0	21.0	20.5	342	400	1.00	1.50
	30.0	31.0	20.0	21.0	303	389	1.00	1.50
	33.0	30.0	21.0	20.0	366	375	1.50	1.50
	34.0	32.0	23.0	19.5	448	450	1.50	2.00
	31.0	30.0	20.0	20.0	440	425	2.00	1.25
	29.0	31.0	20.0	20.0	293	409	1.00	1.50

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PARAGON SEED COMPANY

P.O. Box 1909 Salinas, Ca. 93902 408-753-2100

Varieties 171669-54 vs 191669-69

Grown on Costa Farms. Chualar, Ca. Harvest date-: 08-12-98

	171669 69	171669 54	171669 69	171669 54	171669 69	171669 54	171669 69	171669 54
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	800.5	774.5	541.5	529.5	11,687.0	10,736.0	71.75	66.00
Mean	33.35	32.27	22.56	22.06	486.96	447.33	2.99	2.75
Maximum Value	36.0	35.0	24.5	24.0	617.0	545.0	4.00	3.50
Minimum Value	30.5	29.5	21.0	19.0	299.0	349.0	2.00	2.00
Variance	1.51	2.22	0.96	1.25	4,644.22	3,667.01	0.13	0.20
Std.Dev	1.23	1.49	0.98	1.12	68.15	60.56	0.36	0.44
Joint Variance	*****	1.86	*****	1.10	*****	4,155.62	*****	0.16
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	2.749	*****	1.648	*****	2.129	*****	2.06
Level of Significance	*****	0.0085	*****	0.1062	*****	0.0386	*****	0.0446
Confidence Level %	*****	99.149	*****	89.383	*****	96.139	*****	95.54
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	33.0	33.0	24.5	23.0	458	472	4.00	2.25
	33.0	34.0	22.0	22.0	481	545	3.00	3.50
	33.0	33.0	22.5	22.5	544	540	3.00	2.50
	35.0	31.0	21.0	23.0	517	454	3.00	3.00
Solidity measured on a scale of 1 to 5	33.5	31.0	22.0	23.0	475	475	3.00	2.00
	33.0	31.0	23.0	23.0	494	422	3.00	3.00
	30.5	34.0	22.0	21.0	503	485	2.50	2.50
	34.5	32.0	21.5	24.0	460	417	3.00	3.00
Note: The Level of Significance is determined by using Excel's 2-tail-type 2 built in T-test function directly over the ranges of data.	33.0	35.0	23.0	22.0	617	508	3.25	3.00
	33.0	31.0	24.0	21.0	585	376	3.00	2.75
	34.0	33.0	23.0	22.0	540	422	3.00	3.00
	34.0	30.0	23.0	19.0	440	354	3.00	2.00
	36.0	31.0	24.0	22.5	499	425	3.00	3.00
	34.0	32.0	22.0	24.0	299	485	2.00	3.00
	33.0	32.0	24.0	22.0	508	508	3.00	3.00
	32.5	33.0	23.0	22.0	510	354	3.00	2.50
	34.0	32.5	21.0	23.0	394	363	3.00	2.00
	32.5	33.0	23.0	22.0	599	405	3.25	3.50
	32.0	34.0	22.0	22.0	395	499	3.00	2.50
	32.0	31.0	22.0	21.0	482	463	2.50	3.25
	33.5	34.0	23.0	21.0	454	499	3.50	3.00
	36.0	34.0	23.0	22.0	494	508	3.00	3.00
	32.5	29.5	21.0	22.0	494	349	3.00	2.50
	33.0	30.5	22.0	20.5	445	408	2.75	2.25

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Paragon Seed, Inc. **Wellton , Arizona** **October, 2003**

ROYAL HORTICULTURAL CHART MEASUREMENTS

North Star	141 A
Ventana	141 B
Tehama	143 B

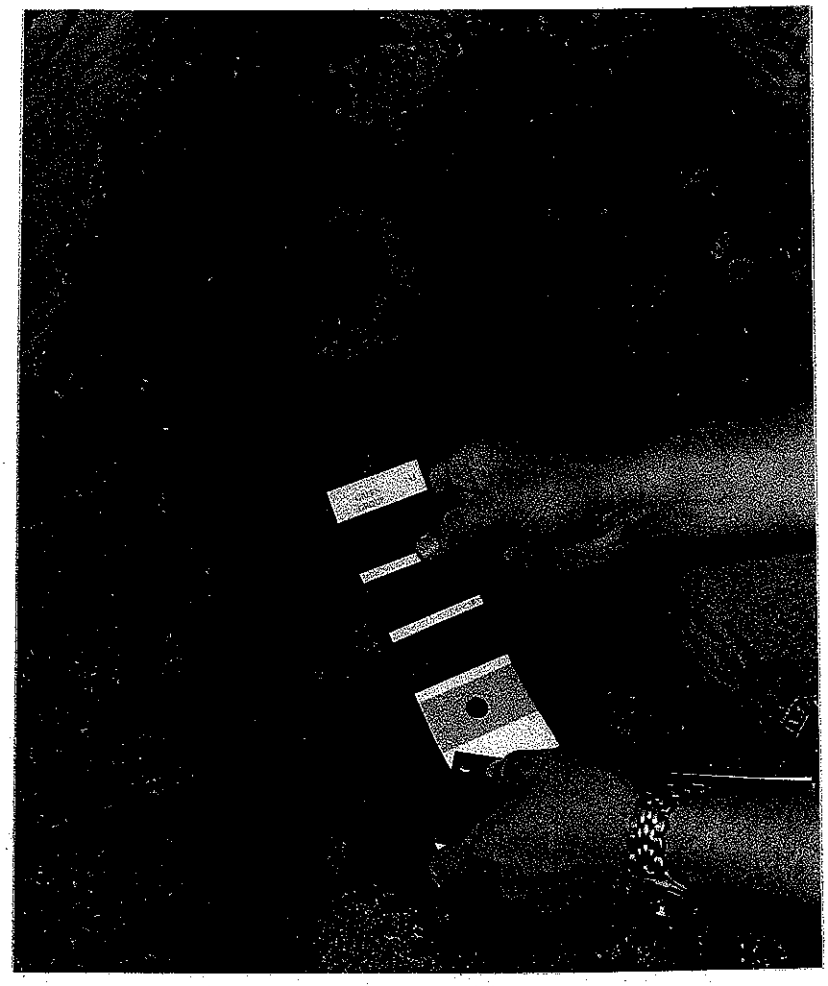
Color Measurements were evaluated during the summer and fall of 2003 in the Salinas Valley of California and Yuma, Arizona. In the following trials, we sampled, measured, and verified the claim of the above color chip readings for Ventana and North Star. Please note that some slight differences in color and reflectance can occur as a function of irrigation, fertility, and maturity.

Area : Salinas Valley

Ranch	Plant	Observation
Williams Ranch	January 28, 2003	May 01, 2003
Morosolli	May 19, 2003	July 22, 2003
Rio Farms	June 28, 2003	August 25, 2003

Area : Yuma, Arizona

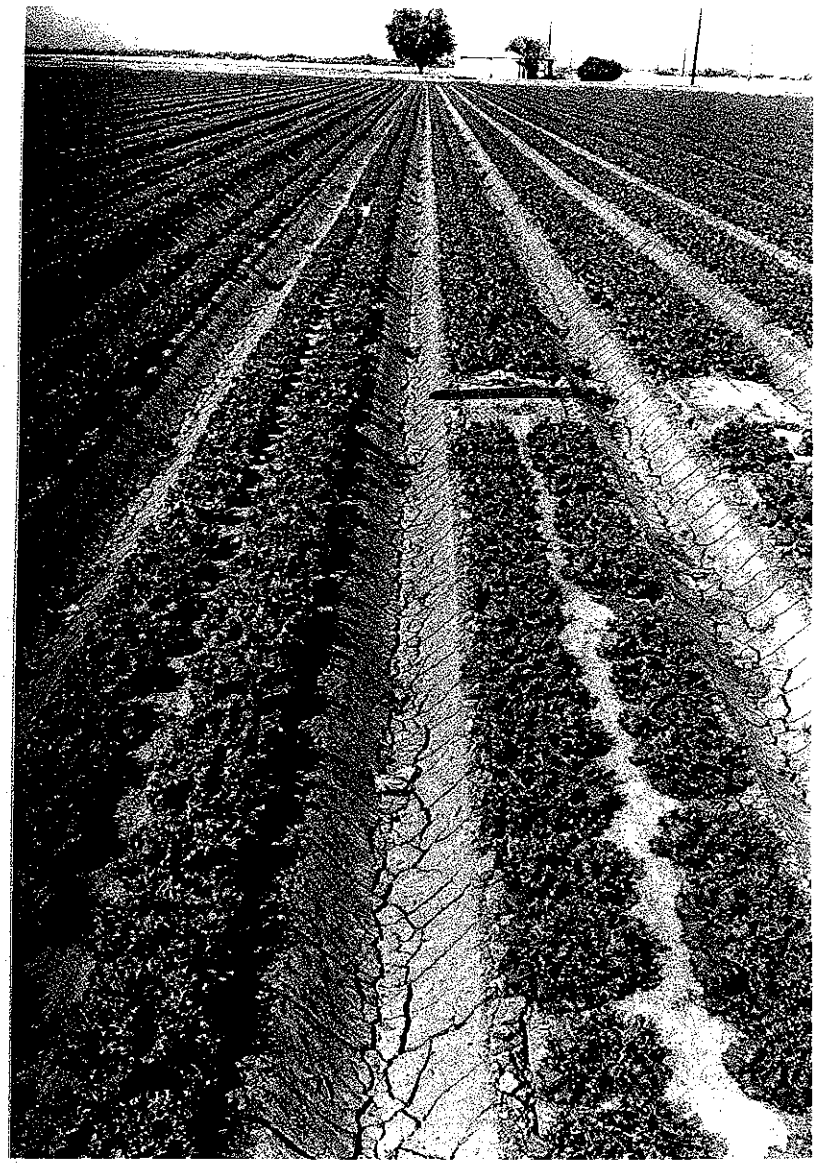
Ranch	Plant	Observation
Pasquinelli	September 23, 2003	October 27, 2003



Paragon Seed, Inc. **Yuma, Arizona** **October, 2003**

SPLIT FIELD PLANTING

NORTH STAR ON LONG BEDS
TEHAMA BEHIND TRIAL



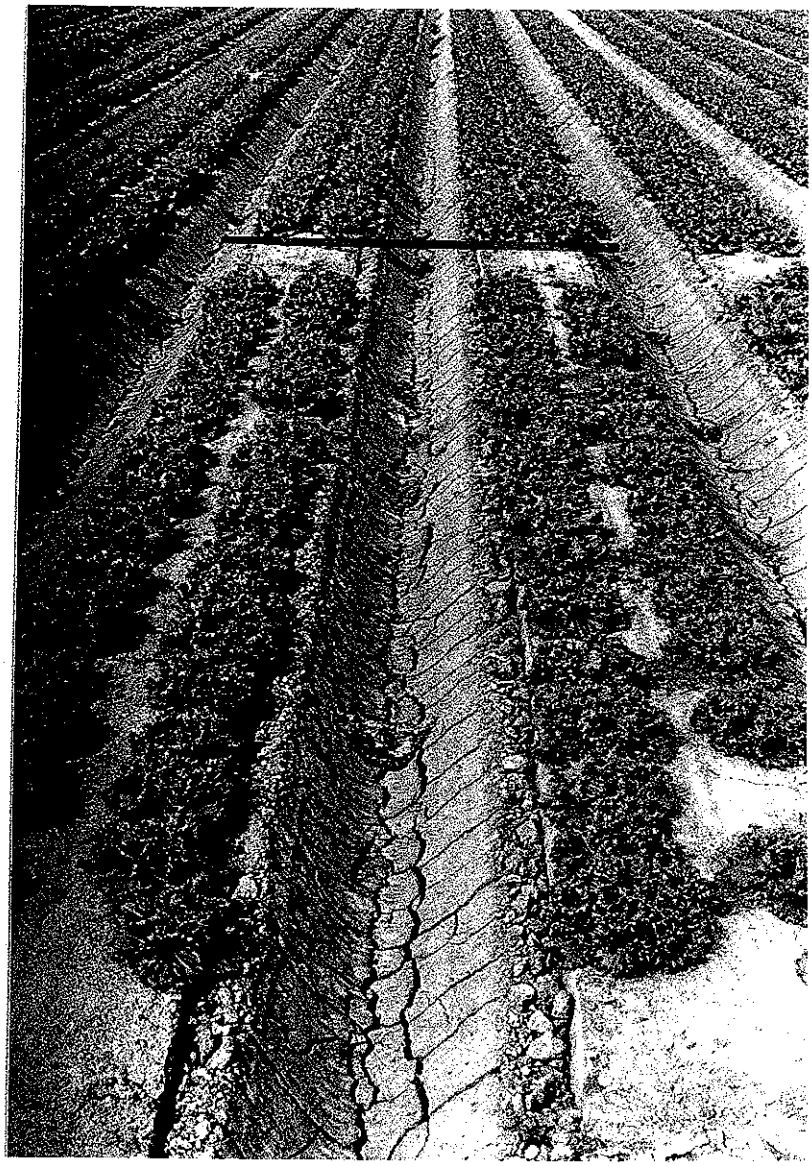
NORTH STAR

VENTANA

10

Paragon Seed, Inc. **Yuma, Arizona** **October, 2003**

TEHAMA FIELD PLANTING



VENTANA NORTH STAR

TWO STAR VENTANA

TEHAMA VENTANA

Exhibit B
Novelty Statement *Ventana*

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Ventana also can be readily differentiated from the following varieties by Corky Root Resistance (cor cor) gene :

Ventana	resistant
Waldmann's Green	susceptible
Glossy Green	susceptible
Two Star	susceptible
Desert Green	susceptible
Hacienda	susceptible
Shining Star	susceptible
Green Vision	susceptible
Genecorp Green	susceptible
Ultra Green	susceptible

At the time of this application, there is no other Corky Root resistant green leaf type lettuce commercially available.

Ventana and North Star are the first commercially acceptable green leaf type lettuce varieties to be released with the (cor,cor) gene.

PARAGON SEED COMPANY

P.O. Box 1906 Salinas, Ca. 93902 831-753-2100

171669-54 vs Exp. 669.96M vs Shining Star

9900223

Grown on Sargenti Ranch *Spread of Frame Leaves* Harvest Date 07/30/98

	171669 54	Exp 69	171669 54	Shining Star	Shining Star	Exp 69		
	Frame	Frame	Frame	Frame	Frame	Frame		
Count	24	24	24	24	24	24		
Sum	378.5	396.0	378.5	429.0	429.0	396.0		
Mean	15.77	16.50	15.77	17.88	17.88	16.50		
Maximum Value	17.0	17.5	17.0	18.5	18.5	17.5		
Minimum Value	15.0	15.5	15.0	16.5	16.5	15.5		
Variance	0.33	0.22	0.33	0.24	0.24	0.22		
Std.Dev	0.57	0.47	0.57	0.49	0.49	0.47		
Joint Variance	*****	0.27	*****	0.29	0.24	0.23		
Jt Deg of Freedom	*****	46	*****	46	46	46		
t-Test Parameter	*****	4.848	*****	13.651	0.000	9.911		
Level of Significance	*****	.0000	*****	.0000	1.0000	.0000		
Confidence Level %	*****	99.999	*****	100.000	0.000	100.000		
	1 to 5	1 to 5	1 to 5	CM'S	CM'S	1 to 5		
MEASUREMENTS FOR SAMPLES	16.0	16.5	16.0	18.0	18.0	16.5		
	16.5	16.0	16.5	17.5	17.5	16.0		
	15.0	16.5	15.0	18.0	18.0	16.5		
	15.5	17.0	15.5	18.5	18.5	17.0		
Solidity measured on a scale of 1 to 5	17.0	17.0	17.0	18.0	18.0	17.0		
	16.0	16.5	16.0	17.5	17.5	16.5		
	16.5	16.0	16.5	18.0	18.0	16.0		
	15.5	16.5	15.5	18.5	18.5	16.5		
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	16.0	15.5	16.0	18.0	18.0	15.5		
	16.0	17.0	16.0	17.5	17.5	17.0		
	15.5	16.5	15.5	16.5	16.5	16.5		
	16.0	16.5	16.0	18.0	18.0	16.5		
	16.0	16.5	16.0	18.5	18.5	16.5		
	16.0	17.0	16.0	18.0	18.0	17.0		
	15.0	16.0	15.0	18.5	18.5	16.0		
	15.5	16.0	15.5	18.0	18.0	16.0		
	15.0	16.5	15.0	17.5	17.5	16.5		
	16.0	17.0	16.0	18.0	18.0	17.0		
	16.5	16.0	16.5	18.5	18.5	16.0		
	15.0	16.5	15.0	18.0	18.0	16.5		
	16.0	17.0	16.0	17.0	17.0	17.0		
	16.0	16.5	16.0	17.5	17.5	16.5		
	15.0	17.5	15.0	17.5	17.5	17.5		
	15.0	16.0	15.0	18.0	18.0	16.0		

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9900225

PARAGON SEED COMPANY

P.O. Box 1906 Salinas, Ca. 93902 408-753-2100

Varieties 171669-54 vs Two Star

Grown on Steinbeck Ranch Salinas, Ca. **Harvest date-: 08-28-98**

	171669 54	Two Star	171669 54	Two Star	171669 54	Two Star	171669 54	Two Star
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	787.0	826.0	525.5	600.0	8,631.0	8,456.0	36.25	33.25
Mean	32.79	34.42	21.90	25.00	359.63	352.33	1.51	1.39
Maximum Value	38.0	39.0	24.0	29.0	454.0	477.0	2.00	2.00
Minimum Value	29.0	30.0	20.0	21.0	254.0	227.0	1.00	1.00
Variance	4.67	6.60	1.22	2.96	4,116.51	4,129.71	0.10	0.07
Std.Dev	2.16	2.57	1.10	1.72	64.16	64.26	0.32	0.27
Joint Variance	*****	5.64	*****	2.09	*****	4,123.11	*****	0.09
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	2.371	*****	7.444	*****	0.393	*****	1.48
Level of Significance	*****	0.0220	*****	0.0000	*****	0.6959	*****	0.1454
Confidence Level %	*****	97.801	*****	100.000	*****	30.414	*****	85.46
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	34.0	38.0	23.0	26.0	381	477	2.00	1.50
	33.0	39.0	23.0	25.0	399	400	1.50	1.25
	33.0	34.0	21.0	26.0	290	227	1.25	1.00
	31.0	38.0	21.0	26.0	258	400	1.00	1.50
Solidity measured on a scale of 1 to 5	29.0	32.0	22.0	26.0	334	405	1.00	1.50
	32.0	31.0	20.0	27.0	272	410	1.50	1.50
	34.0	30.0	22.0	26.0	450	227	2.00	1.00
	32.0	34.0	21.0	25.0	335	345	1.50	1.50
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	34.0	35.0	21.0	25.0	394	308	1.50	1.50
	34.0	36.0	21.0	25.0	368	354	1.50	1.50
	33.0	36.0	23.0	25.0	436	363	2.00	1.00
	31.5	35.0	23.0	29.0	386	427	1.50	1.50
	30.0	37.0	21.5	24.0	318	374	1.50	1.25
	32.0	37.0	21.0	27.0	254	467	1.00	1.50
	30.0	33.0	23.0	24.0	270	322	1.50	1.00
	30.0	31.0	24.0	22.0	336	320	1.50	1.75
	32.0	33.0	23.0	24.0	450	380	2.00	1.50
	35.0	34.0	21.0	25.0	399	345	1.50	2.00
	32.0	38.0	21.0	26.0	385	320	1.50	1.50
	33.0	35.0	22.0	25.0	300	350	1.50	1.50
	38.0	33.0	24.0	25.0	454	345	1.50	1.00
	33.0	34.0	21.0	22.0	336	270	1.50	1.00
	37.5	31.0	22.0	24.0	445	340	2.00	1.50
	34.0	32.0	21.0	21.0	381	280	1.00	1.50

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9900223

PARAGON SEED COMPANY

P.O. Box 1906, Salinas, Ca. 93902 408-753-2100

Varieties 17166954 vs Two Star

Grown on American Farms Chualar, Ca. Harvest date-: 07/30/98

	Two Star	171669 54	Two Star	171669 54	Two Star	171669 54	Two Star	171669 54
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	910.5	857.5	525.2	480.5	10,705.0	10,161.0	47.00	42.75
Mean	37.94	35.73	21.88	20.02	446.04	423.38	1.96	1.78
Maximum Value	42.5	39.0	24.2	46.5	635.0	517.0	2.50	2.00
Minimum Value	33.0	31.0	18.7	15.4	331.0	308.0	1.50	1.00
Variance	5.72	4.28	2.26	33.48	5,751.52	2,739.11	0.11	0.08
Std.Dev	2.39	2.07	1.50	5.79	75.84	52.34	0.33	0.28
Joint Variance	*****	5.00	*****	17.87	*****	4,245.32	*****	0.09
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	3.420	*****	1.528	*****	1.205	*****	2.02
Level of Significance	*****	0.0013	*****	0.1334	*****	0.2343	*****	0.0494
Confidence Level %	*****	99.868	*****	86.661	*****	76.567	*****	95.06
	CM's	CM's	CM's	CM's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	42.5	35.0	22.0	17.6	553	349	2.00	1.75
	37.0	31.0	23.1	15.4	435	394	2.50	1.00
	36.0	39.0	23.1	46.5	430	308	2.00	1.50
	42.0	33.0	18.7	20.4	367	430	1.50	2.00
Solidity measured on a scale of 1 to 5	39.0	34.0	24.2	19.8	408	450	2.00	2.00
	38.0	37.0	22.0	18.7	450	370	2.00	1.50
	38.0	37.0	20.9	18.7	417	460	1.75	2.00
	39.5	34.0	22.0	18.7	435	454	2.00	2.00
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	38.0	36.0	20.9	20.9	367	517	1.50	2.00
	37.0	35.0	22.0	19.8	481	408	2.25	1.75
	39.0	37.0	24.2	17.6	367	420	2.50	1.50
	35.0	39.0	23.1	17.6	481	490	2.50	2.00
	37.0	39.0	22.0	19.8	490	490	2.00	2.00
	41.0	36.0	23.1	18.7	454	420	2.00	2.00
	35.5	34.0	22.0	18.7	425	450	2.00	2.00
	33.0	37.0	20.9	18.7	370	390	2.00	2.00
	38.0	35.0	22.0	20.9	426	445	1.75	2.00
	40.0	37.0	22.0	19.8	460	470	1.75	2.00
	39.0	37.0	22.5	20.9	553	468	2.00	1.50
	34.0	37.0	18.7	17.6	331	440	1.50	1.75
	37.0	33.0	19.8	18.7	408	363	1.50	1.50
	38.0	33.5	23.1	17.6	590	340	2.50	1.50
	41.0	37.0	23.1	18.7	635	450	2.00	2.00
	36.0	35.0	19.8	18.7	372	385	1.50	1.50

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9900223

PARAGON SEED COMPANY

P.O. Box 1905 Salinas, Ca. 93902 408-753-2106

Varieties 171669-54 vs Desert Green

Grown on Rio Farms King City, Ca. Harvest date-: 08-12-98

	Desert Green	171669 54	Desert Green	171669 54	Desert Green	171669 54	Desert Green	171669 54
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	761.5	762.0	555.0	546.5	9,786.0	11,297.0	40.25	59.50
Mean	31.73	31.75	23.13	22.77	407.75	470.71	1.68	2.48
Maximum Value	39.0	35.0	26.0	25.0	560.0	599.0	2.25	3.00
Minimum Value	22.0	26.0	20.0	21.0	227.0	363.0	1.00	1.50
Variance	13.46	4.87	2.27	0.87	8,694.28	3,309.87	0.15	0.20
Std.Dev	3.67	2.21	1.51	0.93	93.24	57.53	0.39	0.45
Joint Variance	*****	9.16	*****	1.57	*****	6,002.08	*****	0.17
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	0.024	*****	0.980	*****	2.815	*****	6.64
Level of Significance	*****	0.9811	*****	0.3323	*****	0.0072	*****	0.0000
Confidence Level %	*****	1.892	*****	66.772	*****	99.285	*****	100.00
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	32.0	31.0	24.0	25.0	454	472	1.50	2.50
	30.0	33.0	21.0	23.5	299	544	1.25	1.50
	27.0	29.5	20.0	24.0	317	513	1.00	2.50
	34.0	28.0	24.0	23.0	376	485	1.75	2.00
Solidity measured on a scale of 1 to 5	35.0	32.5	24.0	23.5	399	450	1.50	2.00
	28.0	31.0	22.0	22.0	236	381	1.00	2.00
	30.0	30.5	22.0	22.5	408	454	1.50	2.25
	26.0	33.0	25.0	24.5	276	540	1.25	3.00
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data	32.0	33.0	21.0	21.5	376	499	1.00	3.00
	28.0	34.5	22.0	23.5	450	599	1.50	3.00
	33.0	31.0	23.5	22.0	544	390	2.25	2.50
	34.0	32.0	26.0	22.0	405	454	2.00	3.00
	22.0	35.0	21.0	22.5	227	454	1.25	3.00
	32.0	32.0	22.0	23.0	445	526	1.75	2.00
	36.0	31.0	24.0	21.0	544	363	2.00	2.50
	39.0	32.0	25.0	22.0	560	475	2.00	2.50
	33.0	32.0	24.0	22.5	460	426	2.00	2.25
	34.0	32.5	23.0	23.0	499	470	2.00	3.00
	34.5	28.5	23.0	23.0	470	485	2.00	2.50
	35.0	32.0	23.0	22.0	363	544	2.00	2.00
	31.0	35.0	25.0	23.0	455	445	2.00	3.00
	30.0	35.0	24.0	23.0	450	499	2.00	3.00
	33.0	32.0	23.0	22.0	460	435	1.75	2.50
	33.0	26.0	23.5	22.5	313	394	2.00	2.00

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9900223

PARAGON SEED COMPANY

P.O. Box 1906 Salinas, Ca. 93902 408-759-2100

Varieties 171669-54 vs Two Star

Grown on Wildhorse Ranch, King City, Ca. Harvest date-: 08-25-98

	171669 54	Two Star	171669 54	Two Star	171669 54	Two Star	171669 54	Two Star
	Spread	Spread	Height	Height	Weight	Weight	Core Ht	Core Ht
Count	24	24	24	24	24	24	24	24
Sum	733.5	783.0	500.5	585.0	9,077.0	7,775.0	34.75	31.50
Mean	30.56	32.63	20.85	24.38	378.21	323.96	1.45	1.31
Maximum Value	34.0	39.0	23.0	28.0	463.0	457.0	2.00	2.00
Minimum Value	27.0	24.0	19.0	18.0	269.0	131.0	1.00	1.00
Variance	3.90	9.31	1.16	4.94	2,871.22	6,635.00	0.13	0.09
Std.Dev	1.97	3.05	1.08	2.22	53.58	81.46	0.36	0.31
Joint Variance	*****	6.60	*****	3.05	*****	4,753.11	*****	0.11
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	2.780	*****	6.982	*****	2.726	*****	1.40
Level of Significance	*****	0.0078	*****	0.0000	*****	0.0090	*****	0.1678
Confidence Level %	*****	99.216	*****	100.000	*****	99.096	*****	83.22
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	34.0	31.0	20.0	25.0	409	298	1.50	1.50
	29.0	37.0	20.5	24.0	269	390	1.00	1.50
	28.5	32.0	20.0	23.0	322	289	1.00	1.00
	28.0	35.0	20.0	24.0	320	346	1.00	1.50
Solidity measured on a scale of 1 to 5	29.0	24.0	21.0	18.0	335	131	1.25	1.00
	29.0	33.5	21.0	25.0	423	298	1.50	1.00
	29.0	30.0	22.0	22.0	363	274	1.50	1.50
	30.0	34.5	21.0	22.0	408	346	1.50	1.75
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	30.0	33.0	23.0	27.0	463	322	2.00	1.50
	30.0	39.0	20.0	25.0	410	457	1.50	1.75
	30.0	30.0	19.0	25.0	349	289	1.50	1.00
	31.0	29.0	21.0	22.0	433	181	2.00	1.00
	31.0	36.0	20.0	24.0	366	422	1.00	1.50
	33.0	35.0	22.0	25.0	440	276	2.00	1.00
	27.0	29.0	21.0	22.0	360	325	1.50	1.25
	32.0	33.0	21.0	25.0	410	435	1.50	1.50
	34.0	33.0	20.0	26.0	400	263	1.50	1.00
	30.0	33.0	23.0	28.0	405	385	2.00	1.50
	32.0	31.0	21.0	28.0	342	281	1.00	1.00
	30.0	33.0	20.0	24.0	303	249	1.00	1.00
	33.0	33.0	21.0	23.0	366	289	1.50	1.00
	34.0	34.0	23.0	26.0	448	450	1.50	2.00
	31.0	31.0	20.0	26.0	440	370	2.00	1.25
	29.0	34.0	20.0	26.0	293	409	1.00	1.50

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PARAGON SEED COMPANY

P.O. Box 1906 Salinas, Ca. 93902 408-759-2100

Varieties 171669-69 vs Two Star

Grown on Wildhorse Ranch, King City, Ca. Harvest date-: 08-25-98

	Two Star Spread	171669 69 Spread	Two Star Height	171669 69 Height	Two Star Weight	171669 69 Weight	Two Star Core Ht	171669 69 Core Ht
Count	24	24	24	24	24	24	24	24
Sum	783.0	753.5	585.0	486.0	8,075.0	9,674.0	31.50	38.50
Mean	32.63	31.40	24.38	20.25	336.46	403.08	1.31	1.60
Maximum Value	39.0	33.0	28.0	22.0	622.0	457.0	2.00	2.00
Minimum Value	24.0	30.0	18.0	19.0	131.0	329.0	1.00	1.25
Variance	9.31	0.93	4.94	0.48	10,333.91	1,348.43	0.09	0.05
Std.Dev	3.05	0.97	2.22	0.69	101.66	36.72	0.31	0.23
Joint Variance	*****	5.12	*****	2.71	*****	5,841.17	*****	0.07
Jt Deg of Freedom	*****	46	*****	46	*****	46	*****	46.00
t-Test Parameter	*****	1.881	*****	8.681	*****	3.020	*****	3.72
Level of Significance	*****	0.0663	*****	0.0000	*****	0.0041	*****	0.0005
Confidence Level %	*****	93.374	*****	100.000	*****	99.588	*****	99.95
	cm's	cm's	cm's	cm's	Grams	Grams	Inches	Inches
MEASUREMENTS FOR SAMPLES	31.0	32.0	25.0	21.0	298	440	1.50	1.50
	37.0	31.0	24.0	22.0	390	390	1.50	1.50
	32.0	30.0	23.0	21.0	289	375	1.00	1.50
	35.0	31.0	24.0	21.0	346	346	1.50	1.50
Solidity measured on a scale of 1 to 5	24.0	33.0	18.0	20.0	131	445	1.00	1.50
	33.5	31.0	25.0	19.0	298	329	1.00	2.00
	30.0	33.0	22.0	21.0	274	354	1.50	2.00
	34.5	32.0	22.0	20.0	346	378	1.75	1.75
Note: The Level of Significance is determined by using Excel 5's 2-tail type 2 built in T-test function directly over the ranges of data.	33.0	32.0	27.0	20.0	622	445	1.50	1.50
	39.0	31.0	25.0	20.0	457	457	1.75	1.75
	30.0	32.0	25.0	20.0	289	425	1.00	1.50
	29.0	30.0	22.0	21.0	181	430	1.00	1.50
	36.0	32.0	24.0	20.0	422	422	1.50	2.00
	35.0	31.5	25.0	20.0	276	400	1.00	1.50
	29.0	33.0	22.0	20.0	325	425	1.25	1.25
	33.0	30.0	25.0	20.0	435	435	1.50	2.00
	33.0	32.0	26.0	19.0	263	345	1.00	1.50
	33.0	31.0	28.0	20.0	385	385	1.50	1.50
	31.0	32.0	28.0	20.5	281	400	1.00	1.50
	33.0	31.0	24.0	21.0	249	389	1.00	1.50
	33.0	30.0	23.0	20.0	289	375	1.00	1.50
	34.0	32.0	26.0	19.5	450	450	2.00	2.00
	31.0	30.0	26.0	20.0	370	425	1.25	1.25
	34.0	31.0	26.0	20.0	409	409	1.50	1.50

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

9900223

NAME OF APPLICANT (S)	FOR OFFICIAL USE ONLY
Paragon Seed, Inc.	PVPO NUMBER
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 507 Abbott Street Salinas, California 93901	VARIETY NAME Ventana
	EXPERIMENTAL DESIGNATION Exp. 54

Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of well spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is: King City, California

Color System Used: Royal Horticultural Society

1. PLANT TYPE: *(See list of suggested check varieties page 4.)*

[0 1]

01=Cutting/Leaf
02=Butterhead
03=Bibb
04=Cos or Romaine
05=Great Lakes Group
06=Vanguard Group
07=Imperial Group
08=Eastern (Ithaca) Group
09=Stem
10=Latin
11=OTHER

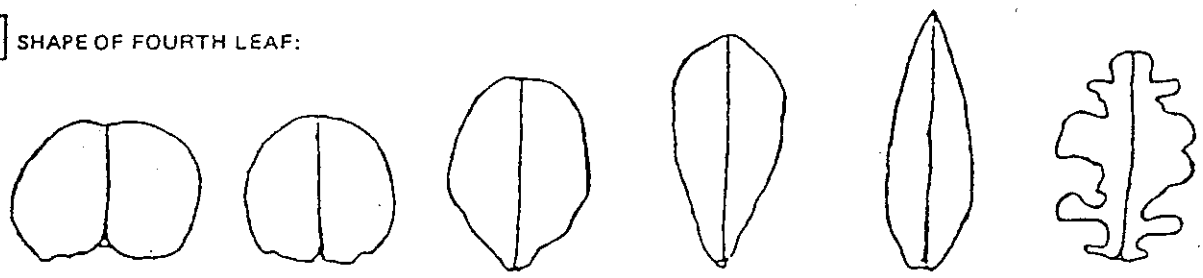
2. SEED:

COLOR	LIGHT DORMANCY	HEAT DORMANCY
[2] 1=White (Silver Gray) 2=Black (Gray Brown) 3=Brown (Amber)	[1] 1=Light Required 2=Light Not Required	[1] 1=Susceptible 2=Not Susceptible

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions.

[2] SHAPE OF COTYLEDONS: 1=Broad 2=Intermediate 3=Spatulate

[3] SHAPE OF FOURTH LEAF:



1 2 3 4 5 6

[1 8] LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10

[3] APICAL MARGIN: / [4] BASAL MARGIN:
1=Entire
2=Crenate/Gnawed
3=Finely Dentate
4=Moderately Dentate
5=Coarsely Dentate
6=Incised
7=Lobed
8=OTHER *(specify)*

[3] UNDULATION: 1=Flat 2=Slight 3=Medium 4=Marked

[3] GREEN COLOR: 1=Yellow Green 2=Light Green 3=Medium Green 4=Dark Green 5=Blue Green 6=Silver Green 7=Gray Green

ANTHOCYANIN:

[1] DISTRIBUTION: 1=Absent 2=Margin Only 3=Spotted 4=Throughout 5=OTHER *(specify)*

[0] CONCENTRATION: 1=Light 2=Moderate 3=Intense

[2] ROLLING: 1=Absent 2=Present

[2] CUPPING: 1=Uncupped 2=Slight 3=Markedly

[1] REFLEXING: 1=None 2=Apical Margin 3=Lateral Margins

20

4. MATURE LEAVES *(observe harvest-mature outer leaves)*:

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

9900223

MARGIN:

3	INCISION DEPTH: *(deepest penetration of the margin)*	1=Absent/Shallow (Dark Green Boston)	2=Moderate (Vanguard)	3=Deep (Great Lakes 659)
3	INDENTATION: *(finest divisions of the margin)*	1=Entire (Dark Green Boston) 2=Shallowly Dentate (Great Lakes 65)	3=Deeply Dentate (Great Lakes 659) 4=Crenate (Vanguard)	5=OTHER *(specify)*
3	UNDULATION OF THE APICAL MARGIN:	1=Absent/Slight (Dark Green Boston)	2=Moderate (Vanguard)	3=Strong (Great Lakes 659)
3	GREEN COLOR:	1=Very Light Green (Bibb) 2=Light Green (Minetto)	3=Medium Green (Great Lakes) 4=Dark Green (Vanguard)	5=Very Dark Green 6=OTHER

ANTHOCYANIN *(grown at or below 10 C)*:

1	DISTRIBUTION:	1=Absent 2=Margin Only (Big Boston)	3=Spotted (Calif. Cream Butter) 4=Throughout (Prize Head)	5=OTHER *(specify)*
0	CONCENTRATION:	1=Light (Iceberg)	2=Moderate (Prize Head)	3=Intense (Ruby)
2	SIZE:	1=Small	2=Medium	3=Large
3	GLOSSINESS:	1=Dull (Vanguard)	2=Moderate (Salinas)	3=Glossy (Great Lakes)
3	BLISTERING:	1=Absent/Slight (Salinas)	2=Moderate (Vanguard)	3=Strong (Prize Head)
3	LEAF THICKNESS:	1=Thin	2=Intermediate	3=Thick
1	TRICHOMES:	1=Absent (smooth)	2=Present (spiny)	

5. PLANT *(at market stage. Choose a comparison variety appropriate for this type.)*:

SPREAD OF FRAME LEAVES:
30 cm This Variety — 33 cm Two Star *(specify comparison variety)*

HEAD DIAMETER *(market trimmed with single cap leaf)*:
cm This Variety — cm _____ *(specify comparison variety)*

5	HEAD SHAPE:	1=Flattened 2=Slightly Flattened	3=Spherical 4=Elongate	5=Non-Heading 6=OTHER
2	HEAD SIZE CLASS:	1=Small	2=Medium	3=Large

24 HEAD COUNT PER CARTON

HEAD WEIGHT:
378 g This Variety — 323 g Two Star *(specify comparison variety)*

1	HEAD FIRMNESS:	1=Loose 2=Moderate	3=Firm 4=Very Firm

6. BUTT *(bottom of market-trimmed head)*:

2	SHAPE:	1=Slightly Concave	2=Flat	3=Rounded
2	MIDRIB:	1=Flattened (Salinas)	2=Moderately Raised	3=Prominently Raised (Great Lakes 659)

7. CORE *(stem of market-trimmed head)*:

35 mm Diameter at base of head

___.___ Ratio of head diameter/core diameter

42 Core height from base of head to apex:
mm This Variety — 54 mm Waldmann's Green *(specify comparison variety)*

8. BOLTING *(Give First Water Date 4/28/97)*: NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

Number of days from First Water Date to seed stalk emergence *(summer conditions)*:
62 This Variety — 51 Waldmanns Green *(specify comparison variety)*

2	BOLTING CLASS:	1=Very Slow 2=Slow	3=Medium 4=Rapid	5=Very Rapid

Height of mature seed stalk:
116 cm This Variety — 130 cm Waldmann's Green *(specify comparison variety)*

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BOLTING cont'd. on next page

Spread of Bolter Plant *(at widest point)*:

[3 0] cm This Variety [3 2] cm Waldmann's Green *(specify comparison variety)* 99102-3

[2] BOLTER LEAVES: 1=Straight 2=Curved

[2] MARGIN: 1=Entire 2=Dentate

[2] COLOR: 1=Light Green 2=Medium Green 3=Dark Green

BOLTER HABIT:

[2] TERMINAL INFLORESCENCE: 1=Absent 2=Present

[1] LATERAL SHOOTS: *(above head)* 1=Absent 2=Present

[2] BASAL SIDE SHOOTS: 1=Absent 2=Present

9. MATURITY *(earliness of harvest-mature head formation)*:

NOTE: Complete this section for at least one season.

SEASON	Applic. 1/ #of days	Check 1/ #of days	CHECK VARIETY 2/
Spring	76	73	Shining Star
Summer	62	59	504 Green
Fall	60	56	Two Star
Winter	95	88	Waldmann's Green (exp 54 too small)

Give planting date(s), and location(s):

Spring	02-14-97	04-28-97	Gonzales, California
Summer	05-20-98	07-17-98	King City, California
Fall	07-03-98	08-28-98	Chualar, California
Winter	09-31-96	12-27-96	Yuma, Arizona (too small/cold)

1/ First water date to harvest. 2/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTION *(tested and proven adapted)*: (0=Not tested 1=Not Adapted 2=Adapted)

[2] Southwest *(Calif., Ariz. desert)* [2] West Coast [0] Northeast

[0] Northcentral [0] Southeast [0] OTHER _____

SEASON:

[2] Spring (area Southwest) [2] Fall (area West Coast)

[2] Summer (area West Coast) [1] Winter (area _____)

[0] GREENHOUSE: 0=Not tested 1=Not Adapted 2=Adapted

[3] SOIL TYPE: 1=Mineral 2=Organic 3=Both

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11. DISEASES AND STRESS REACTIONS (0=Not tested; 1=Susceptible; 2=Intermediate; 3=Resistant; 4=Highly resistant; 5=Tolerant):

VIRUS

- [0] Big Vein
- [1] Lettuce Mosaic
- [0] Cucumber Mosaic
- [0] Broad Bean Wilt
- [0] Turnip Mosaic
- [0] Beet Western Yellows
- [0] Lett. Infectious Yellows
- [0] Other Virus _____

FUNGAL/BACTERIAL

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- [4] Corky Root Rot (Pythium Root Rot)
- [0] Downy Mildew (Races _____)
- [0] Powdery Mildew
- [1] Sclerotinia Rot
- [1] Bacterial Soft Rot (Pseudomonas spp. & others)
- [1] Botrytis (Gray Mold)
- [0] OTHER _____

INSECTS

- [0] Cabbage Loopers
- [0] Root Aphids
- [0] Green Peach Aphid
- [0] Other Insect _____

PHYSIOLOGICAL/STRESS

- [3] Tipburn
- [3] Heat
- [2] Drought
- [0] Cold
- [0] Salt
- [0] Brown Rib (Rib Discoloration, Rib Blight)
- [0] OTHER _____

POST HARVEST

- [0] Pink Rib
- [0] Russet Spotting
- [0] Rusty Brown Discoloration
- [0] Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
- [0] Brown Stain

12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

13. COMMENTS:

Ventana and North Star are the first Corky Root Resistant commercially available green leaf type lettuce on the market. To my knowledge, no other varieties of Green Leaf lettuce released to date have the (cor,cor) gene in a commercially acceptable form.

SUGGESTED CHECK VARIETIES

TYPE	CHECK VARIETY
1) CUTTING/LEAF	SALAD BOWL
2) BUTTERHEAD	DARK GREEN BOSTON
3) BIBB	BIBB
4) COS, OR ROMAINE	PARRIS ISLAND
5) GREAT LAKES GROUP	GREAT LAKES 659-700
6) VANGUARD GROUP	VANGUARD
7) IMPERIAL GROUP	VIVA
8) EASTERN GROUP	ITHACA
9) STEM	CELTUCE
10) LATIN	MATCHLESS

Leaf Margin 20 day old seedling

9900223

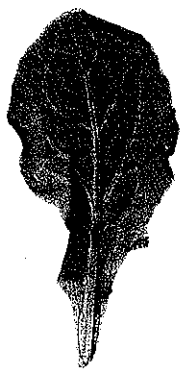
Paragon Seed, Inc.

Green Leaf Lettuce

Ventana

Waldmann's Green

North Star



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24

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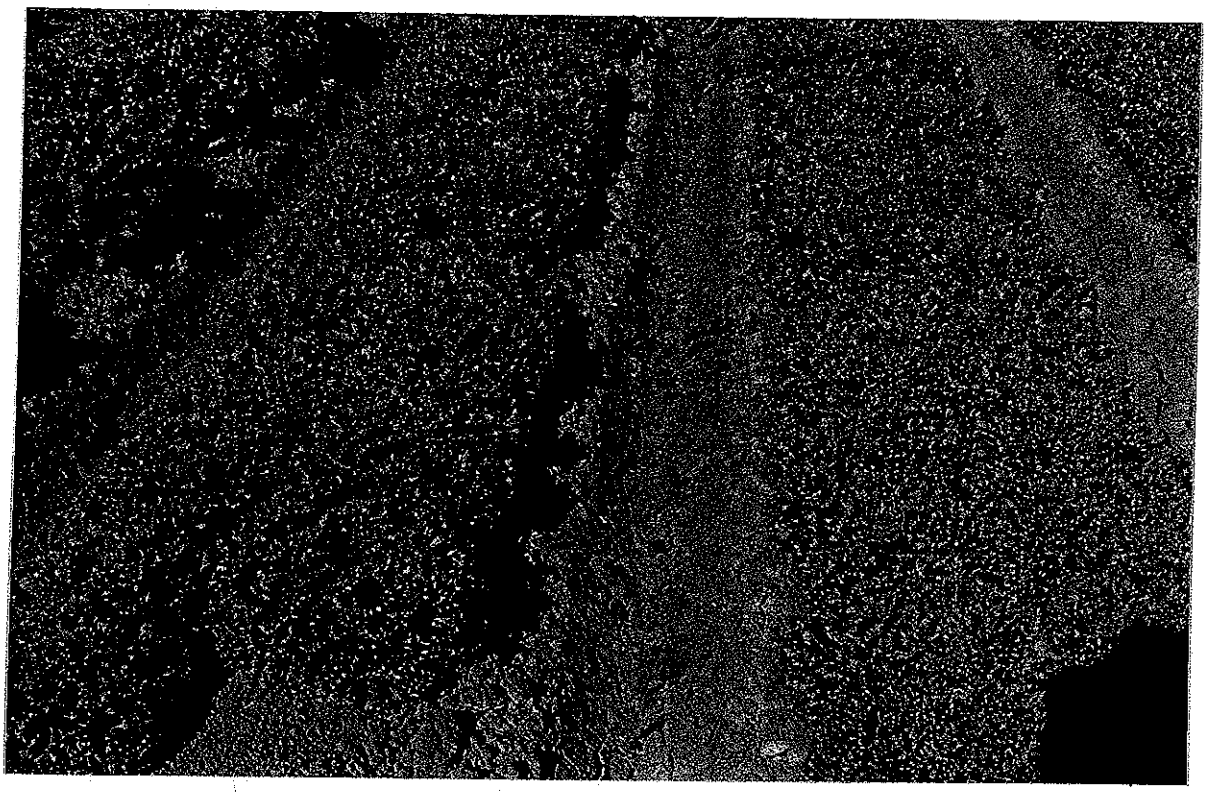
Paragon Seed, Inc. Somerton , Arizona December, 2003



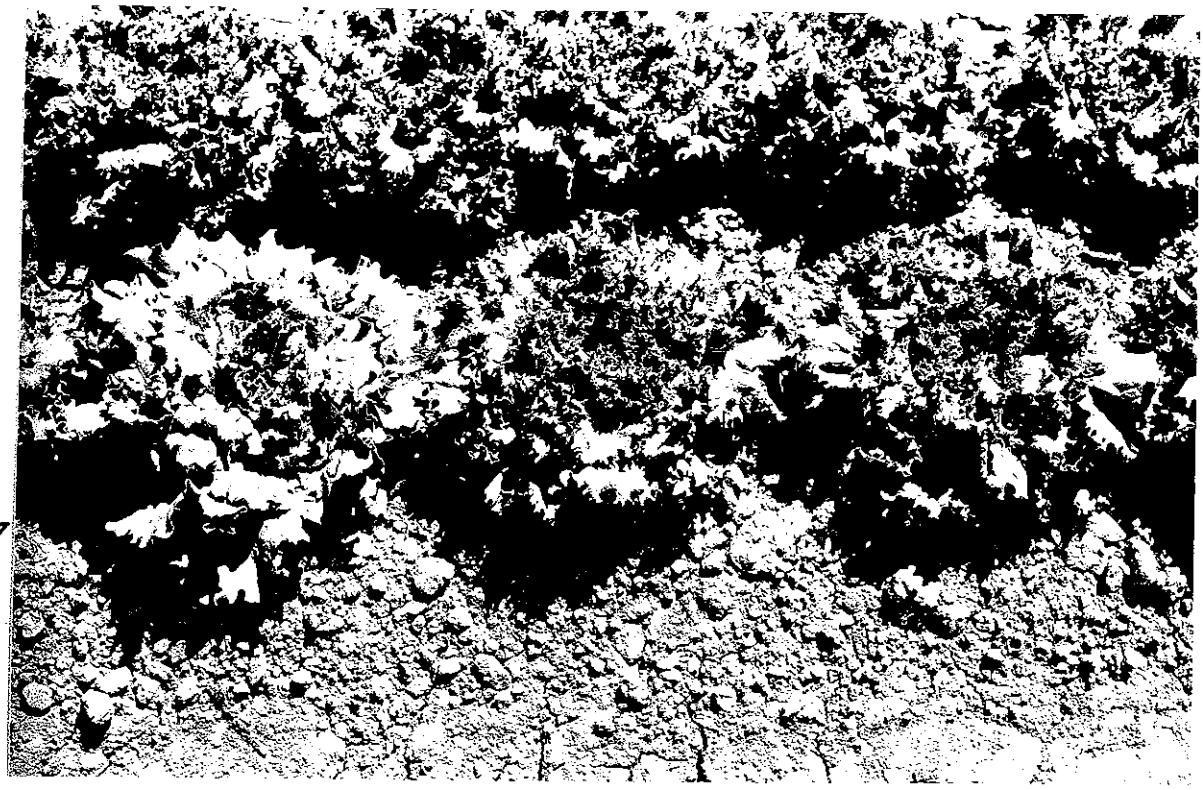
NORTH STAR VENTANA

26

171669-5-4

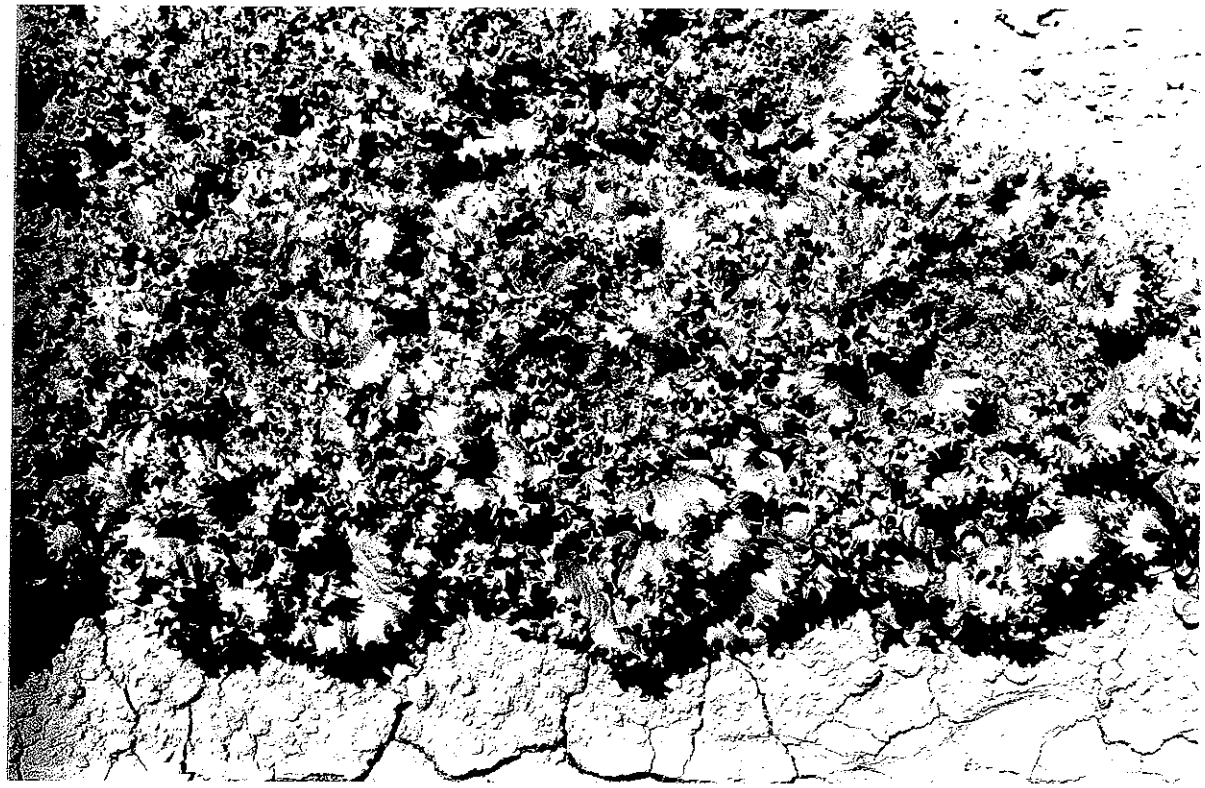
9000223

July 1997



Note : early generation segregation
"smooth" leaf

171669-5-4



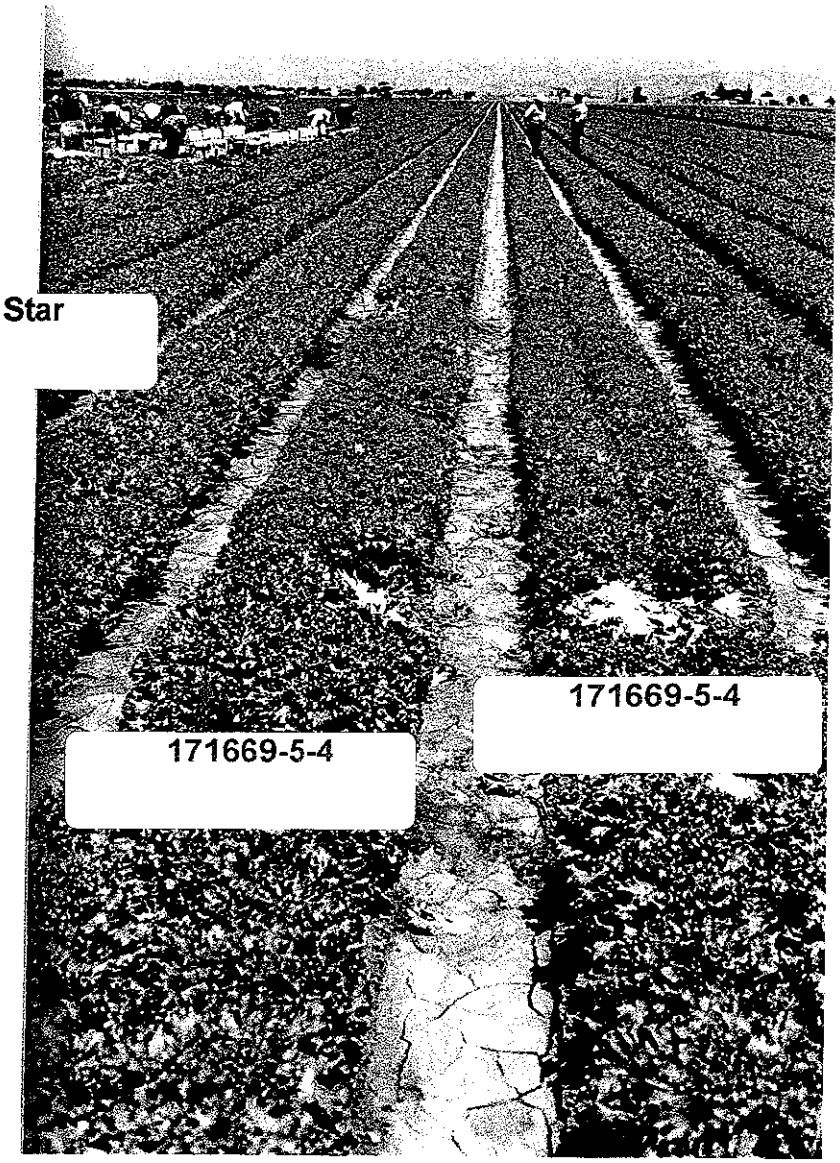
171669-5-4

Desert Green 171669-5-4

Two Star 171669-5-4

9900223

Two Star



Two Star

July 1997

Two Star

9900223

Desert Green

Desert Green

171669-5-4

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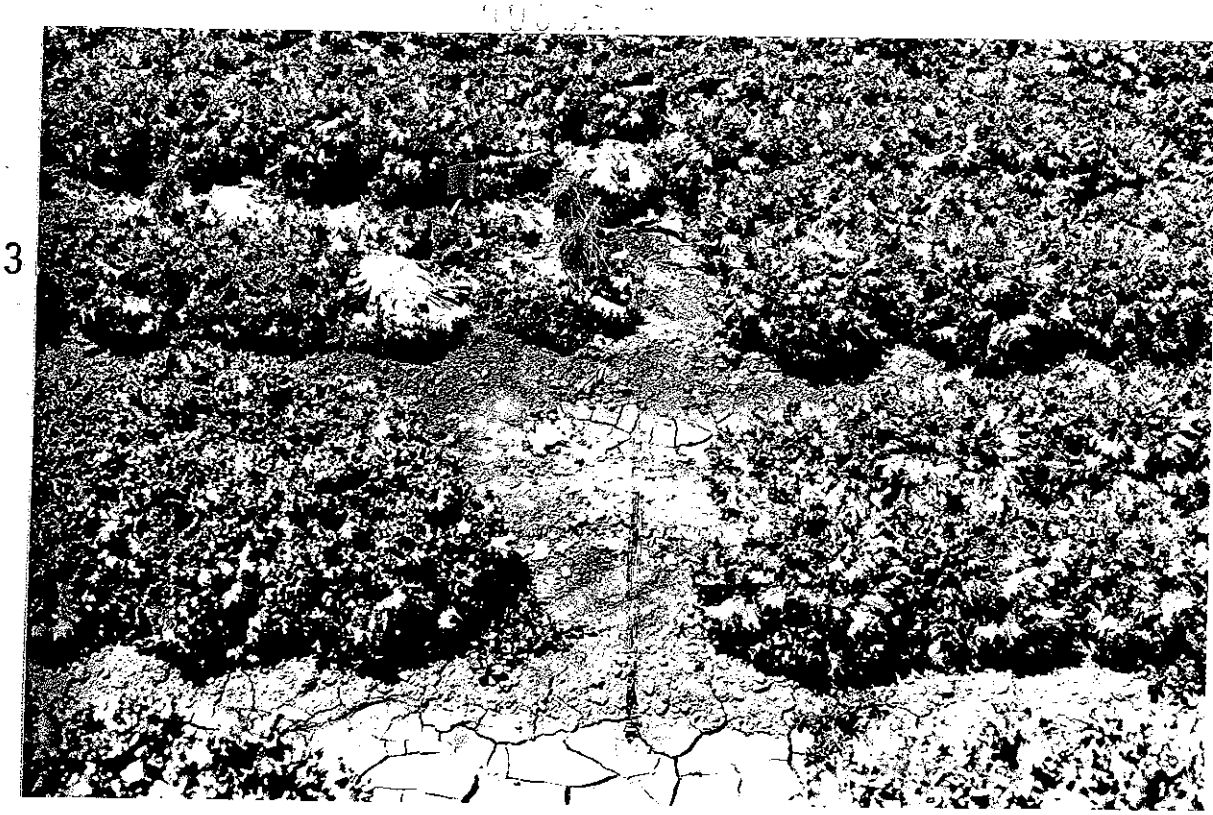


171669-5-4 Two Star

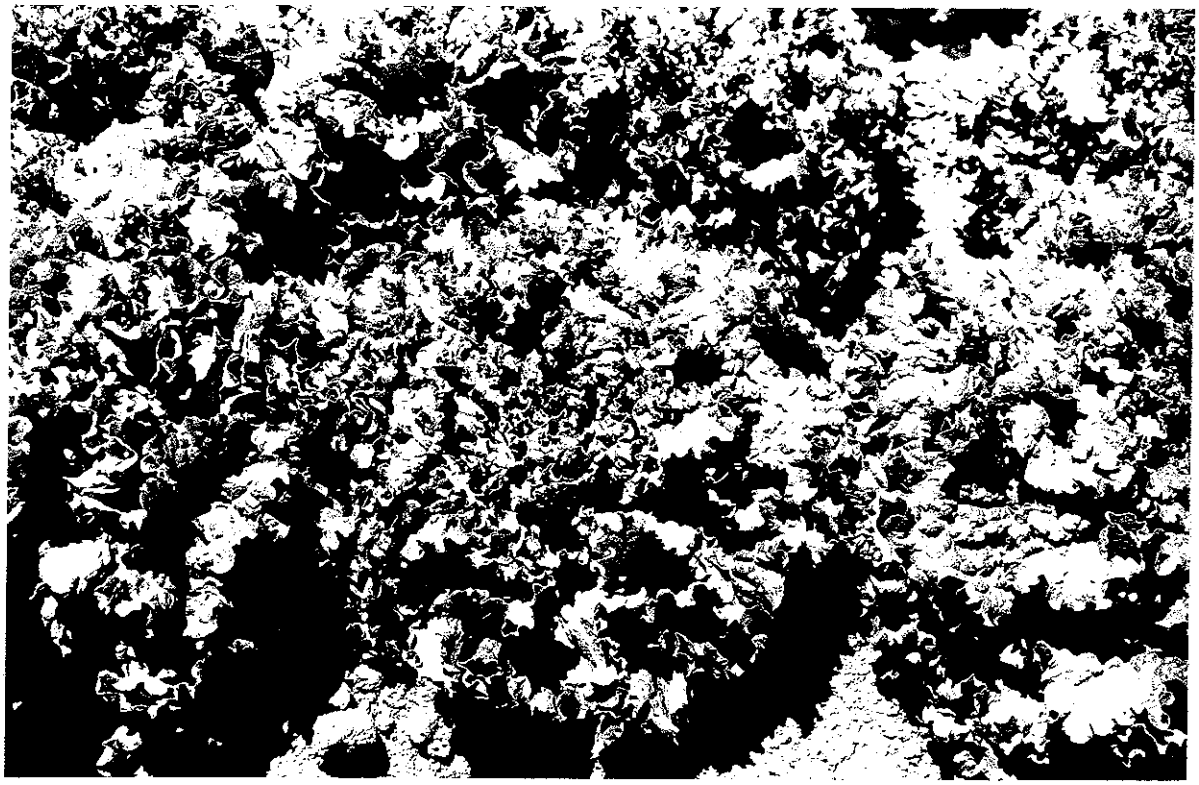
July 1997

Two Star

9900223

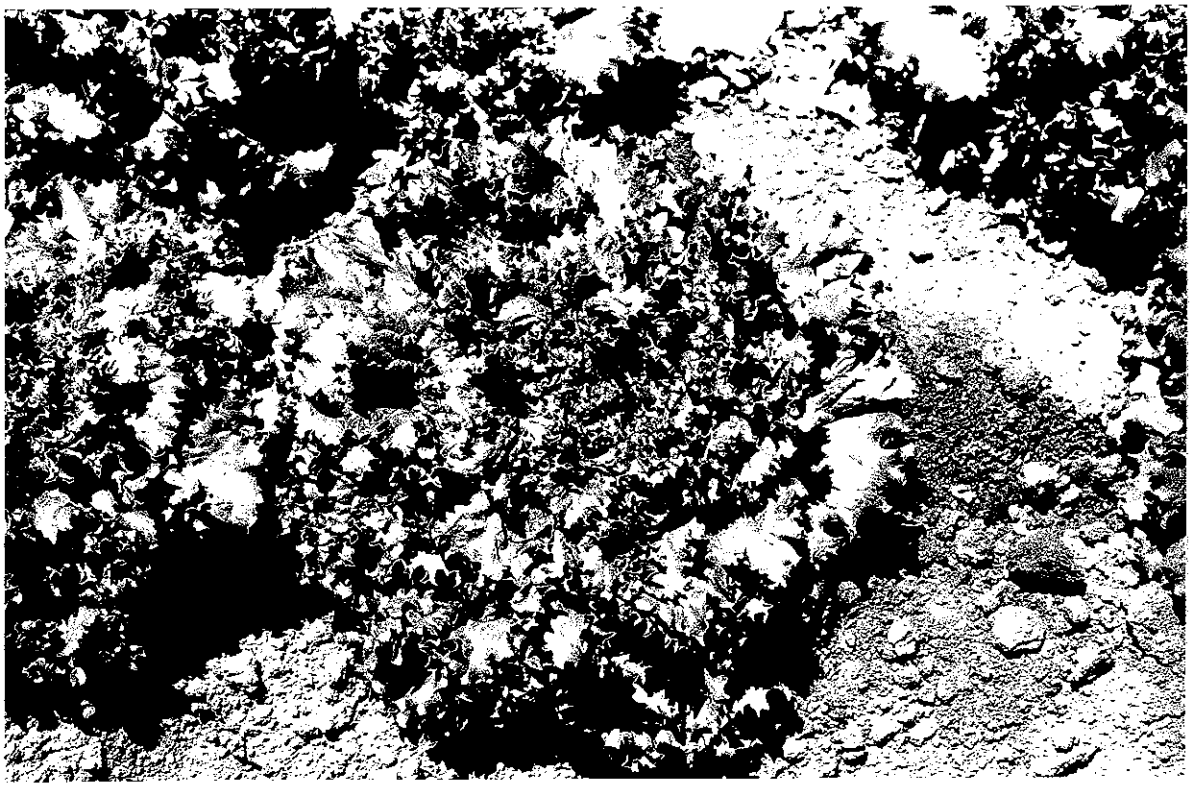
32

July 1997



Field planting Shining Star

Shining Star Corky root susceptible



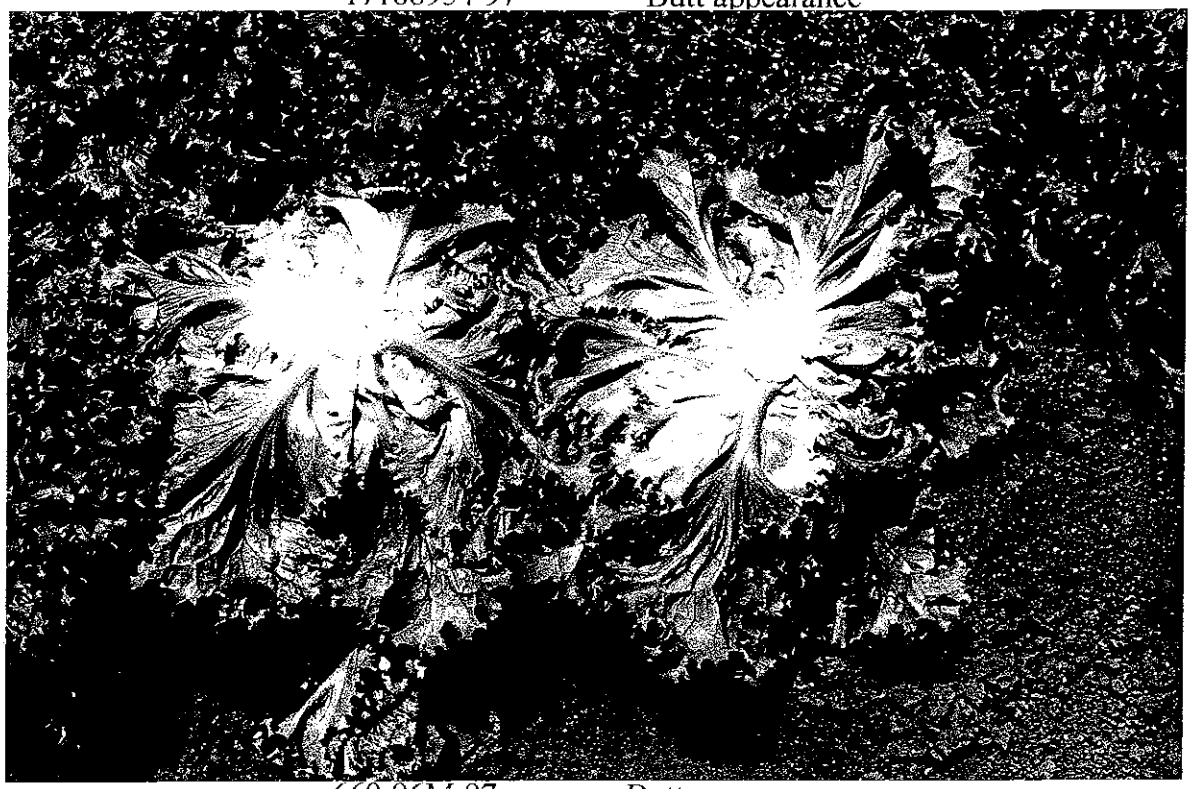
17166954-97

17166954-97 Corky root resistant roots

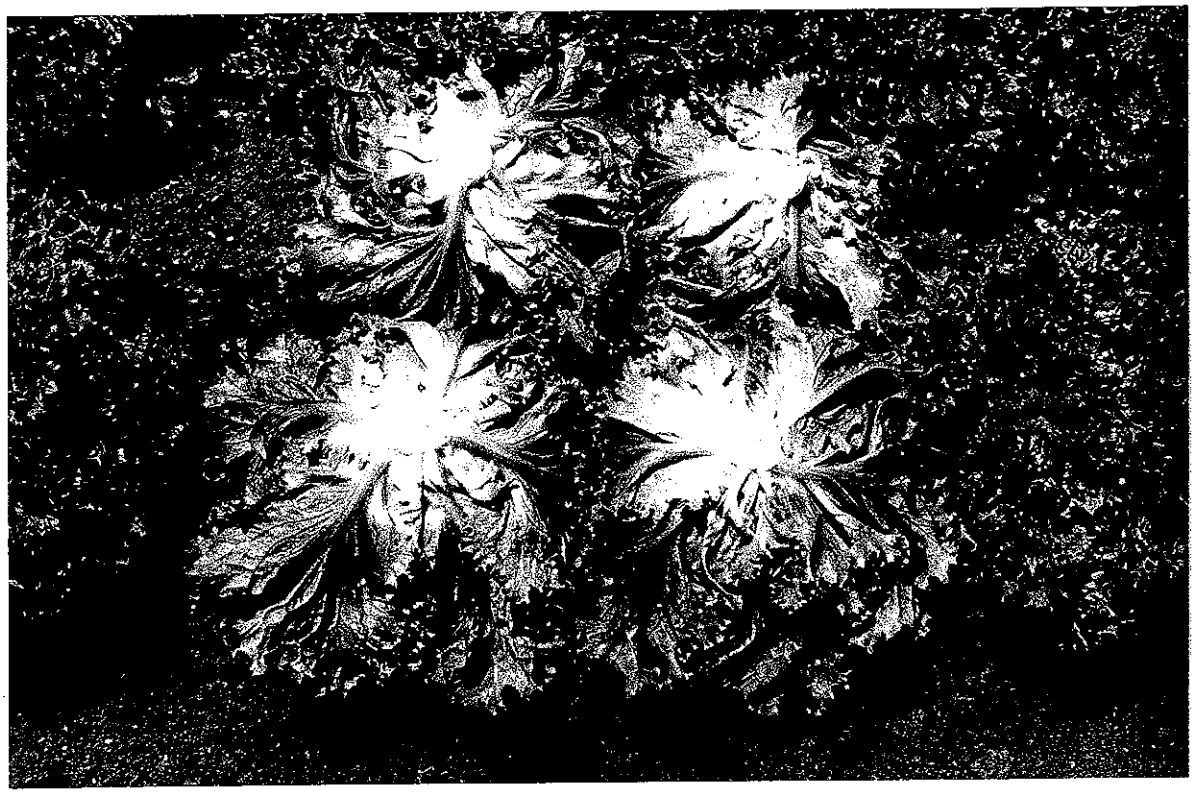
669-96M-97

669-96M-97 left-Corky root resistant Shining Star - right

17166954-97 Butt appearance



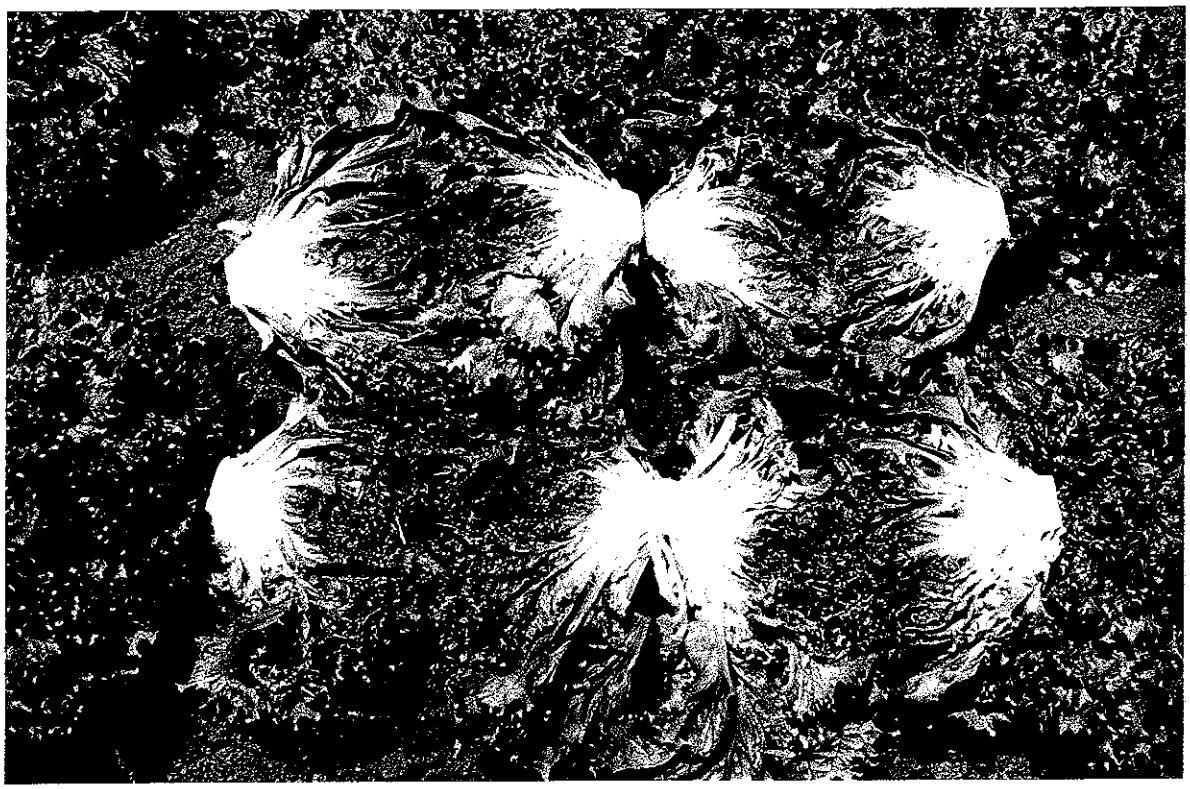
669-96M-97 Butt appearance



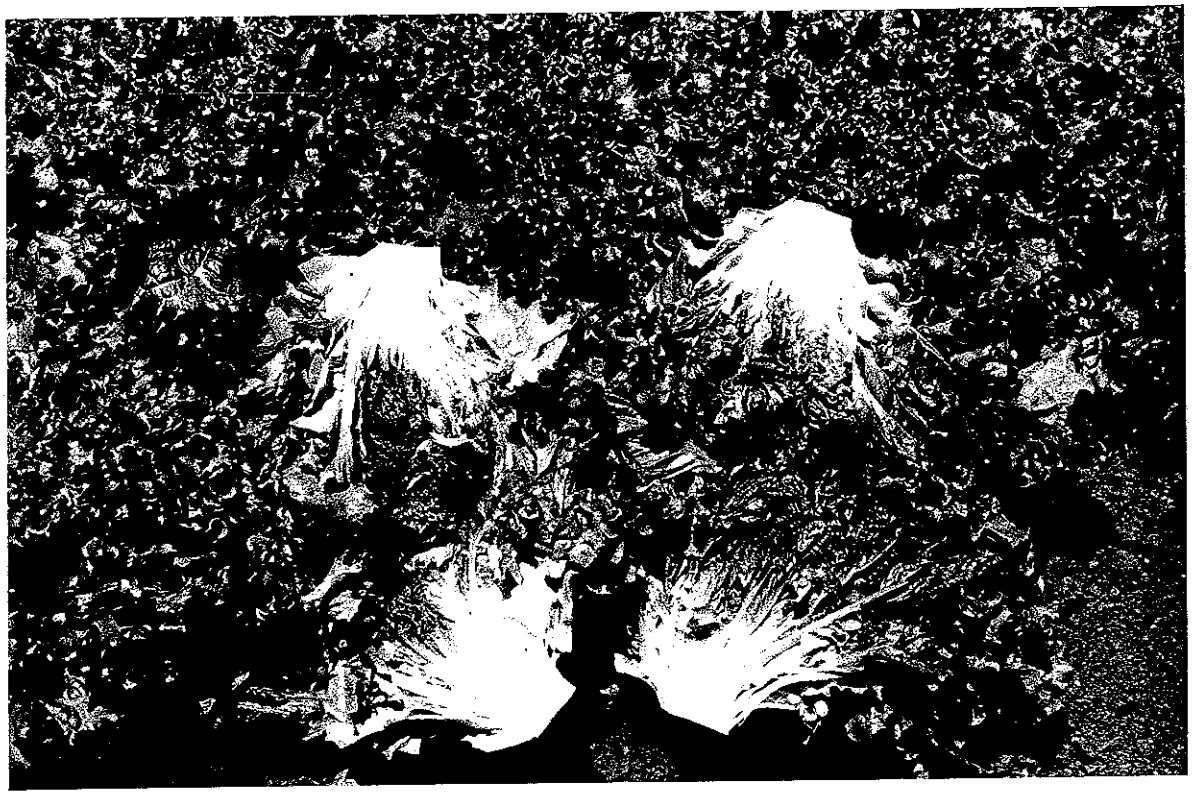
17166954-97 Top 669-96M-97 bottom

Shining Star Butt appearance

Paragon Seed, Inc. Sargenti Ranch, Chualar, Ca. 07/98



17166954-97 Top 669-96M-97 bottom



Shining Star

Paragon Seed, Inc. Sargenti Ranch, Chualar, Ca. 07/98

9900223

17166954-97 left Krypton right

Shining Star Corky root susceptible

Paragon Seed, Inc. Sargenti Ranch, Chualar, Ca. 07/98

Shining Star left 17166954-97 right

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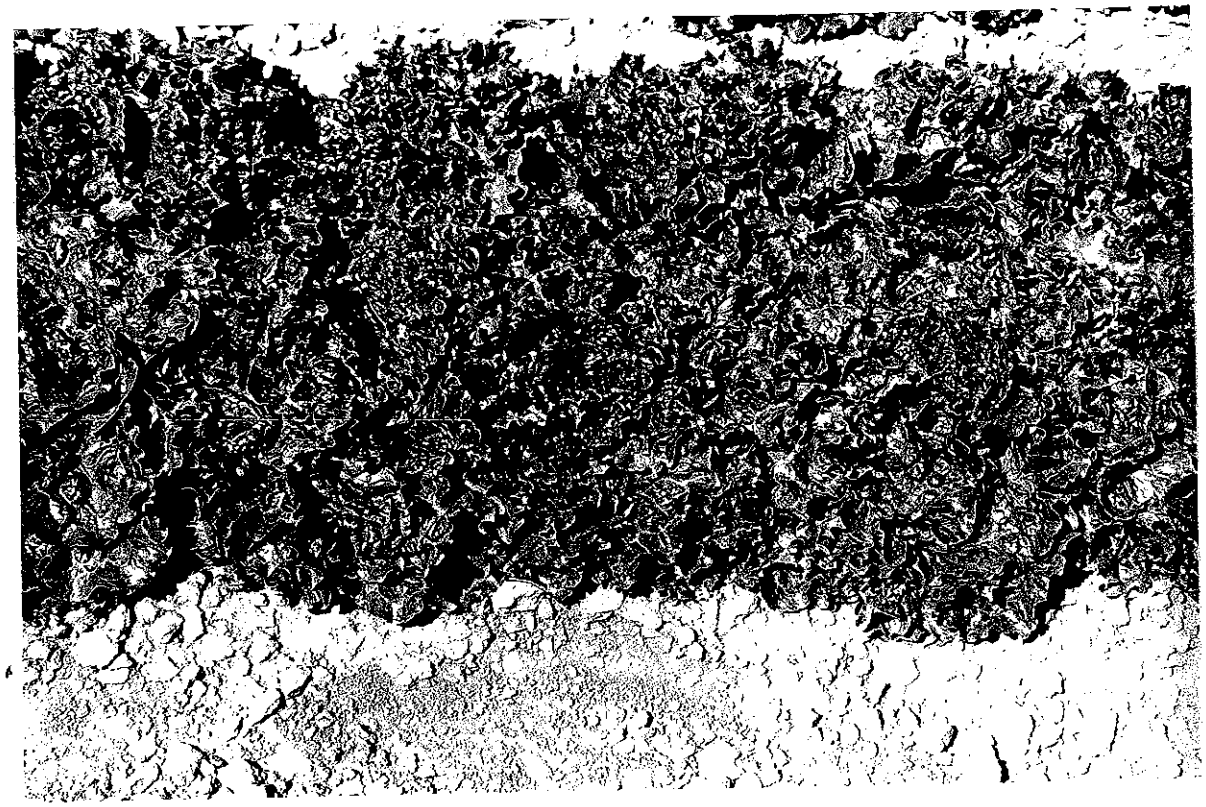
Paragon Seed, Inc. Steinbeck Ranch Salinas, Ca.. 07/98

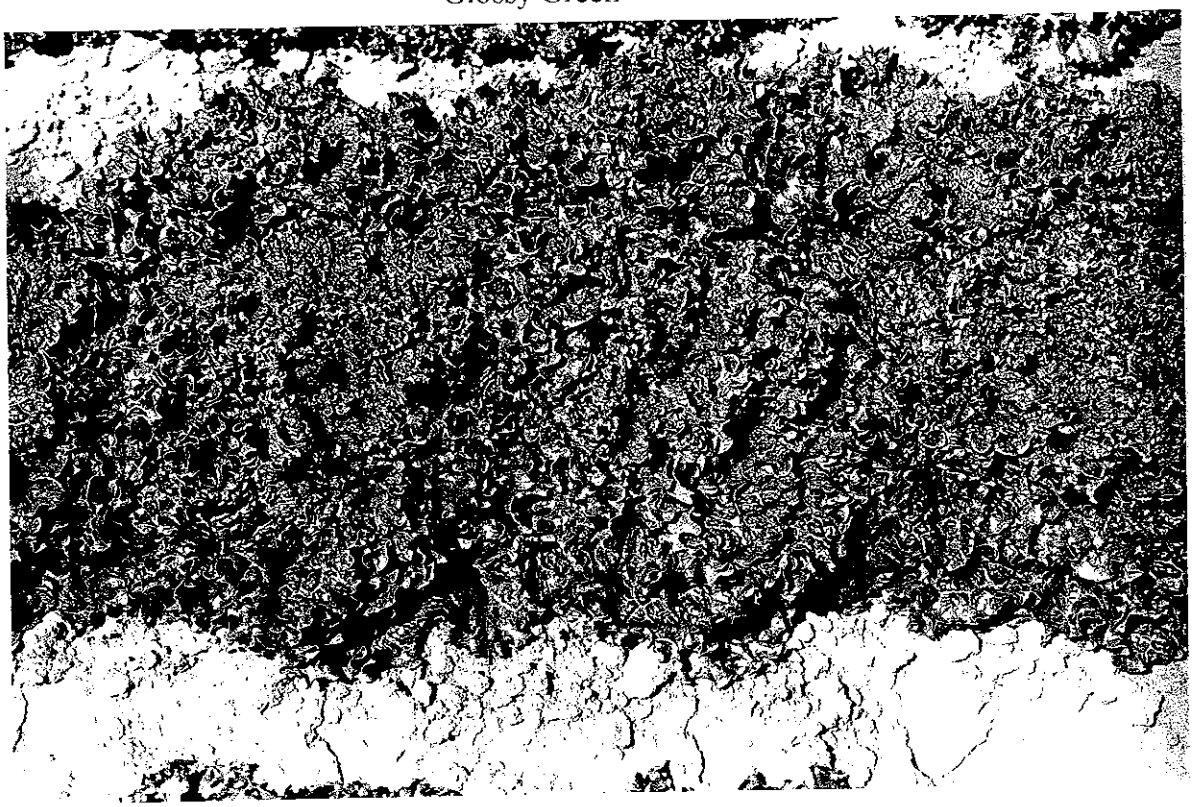
9900223

2	171669-54	669-96	Krypton	Pybus Green
1	Glossy Green	Green Vision	exp	exp

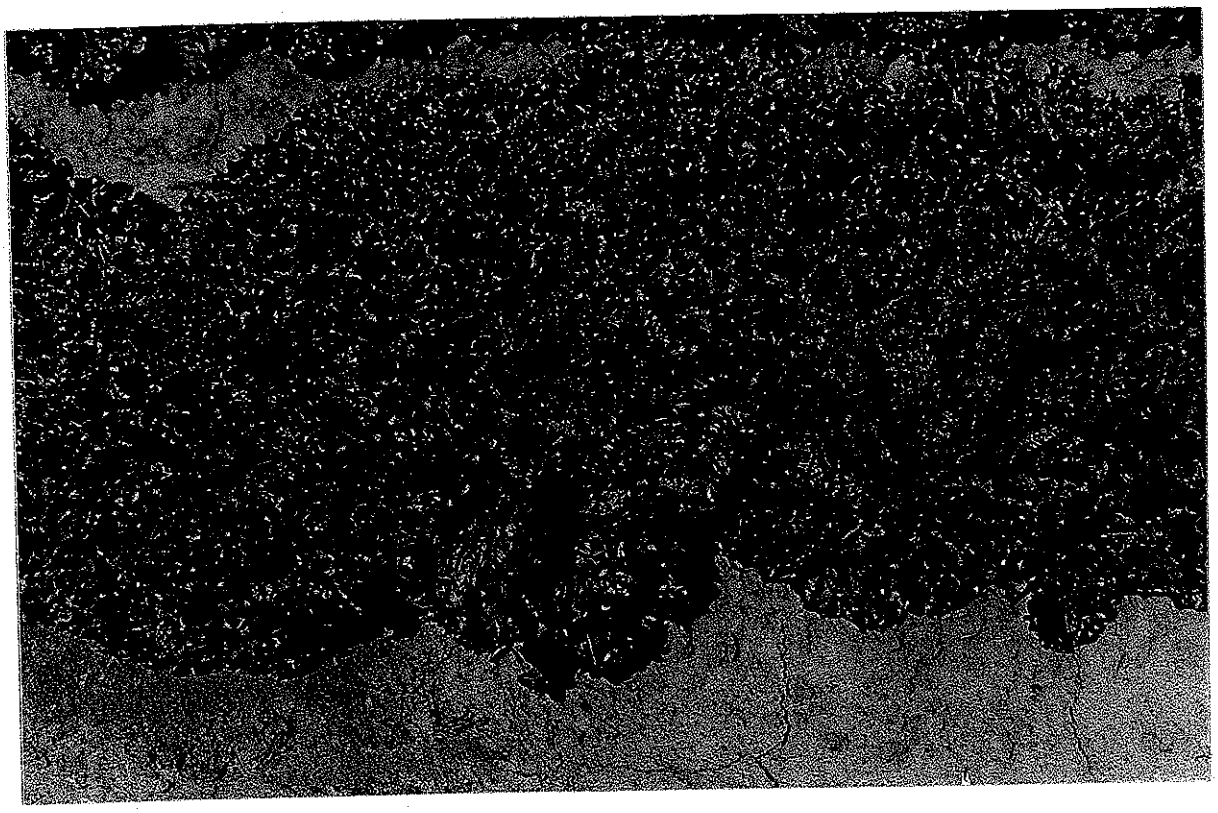
Paragon Seed, Inc. Steinbeck Ranch Salinas, Ca.. 07/98



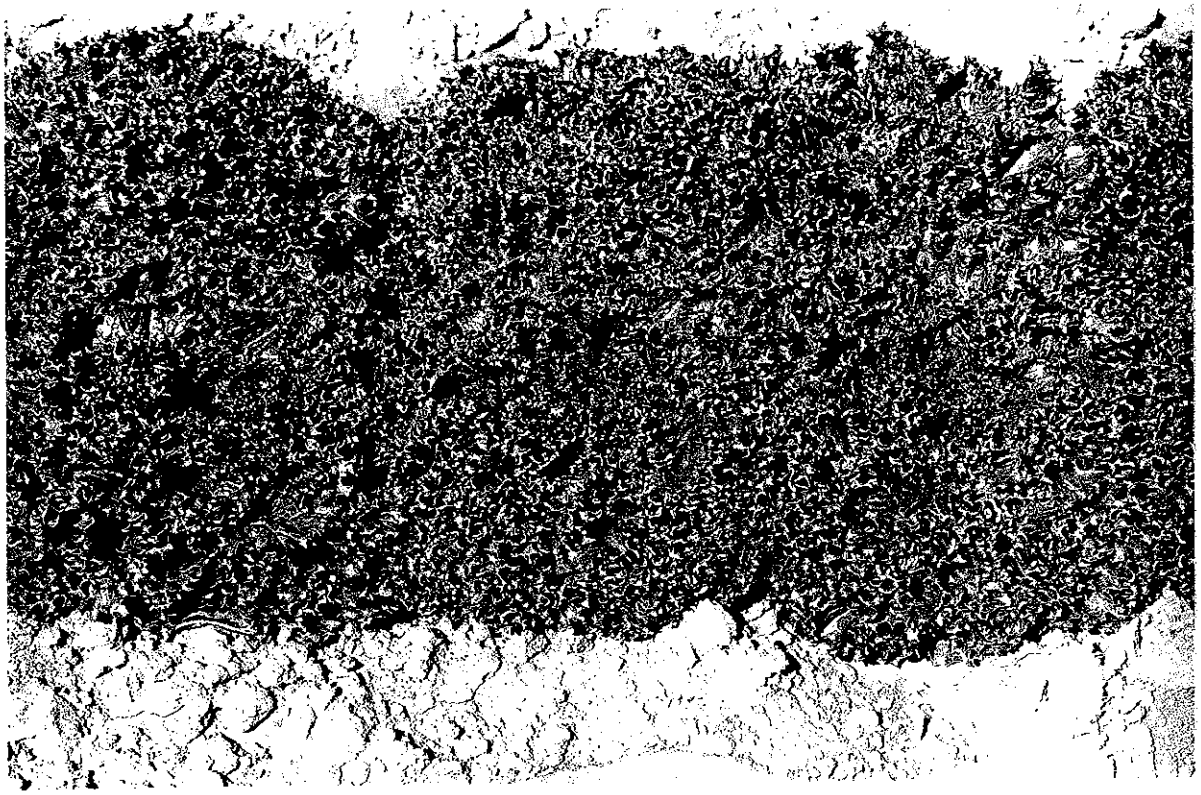
Glossy Green



Green Vision



Desert Green



171669-54

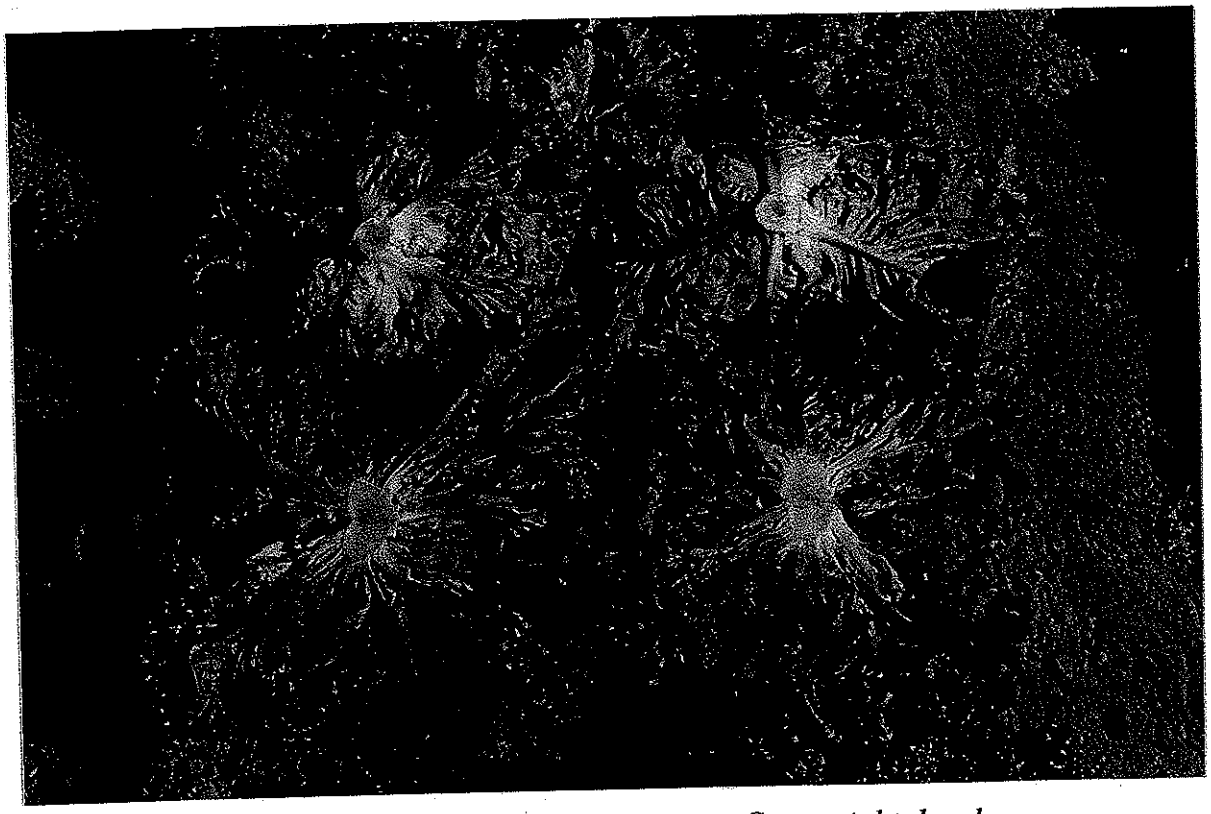
669-96M

Paragon Seed, Inc. Steinbeck Ranch Salinas, Ca.. 07/98 9999223

171669-54 *left 3 heads* Desert Green *right 2 heads*

669-96M *left 3 heads* 191669-54 *right 3 heads*

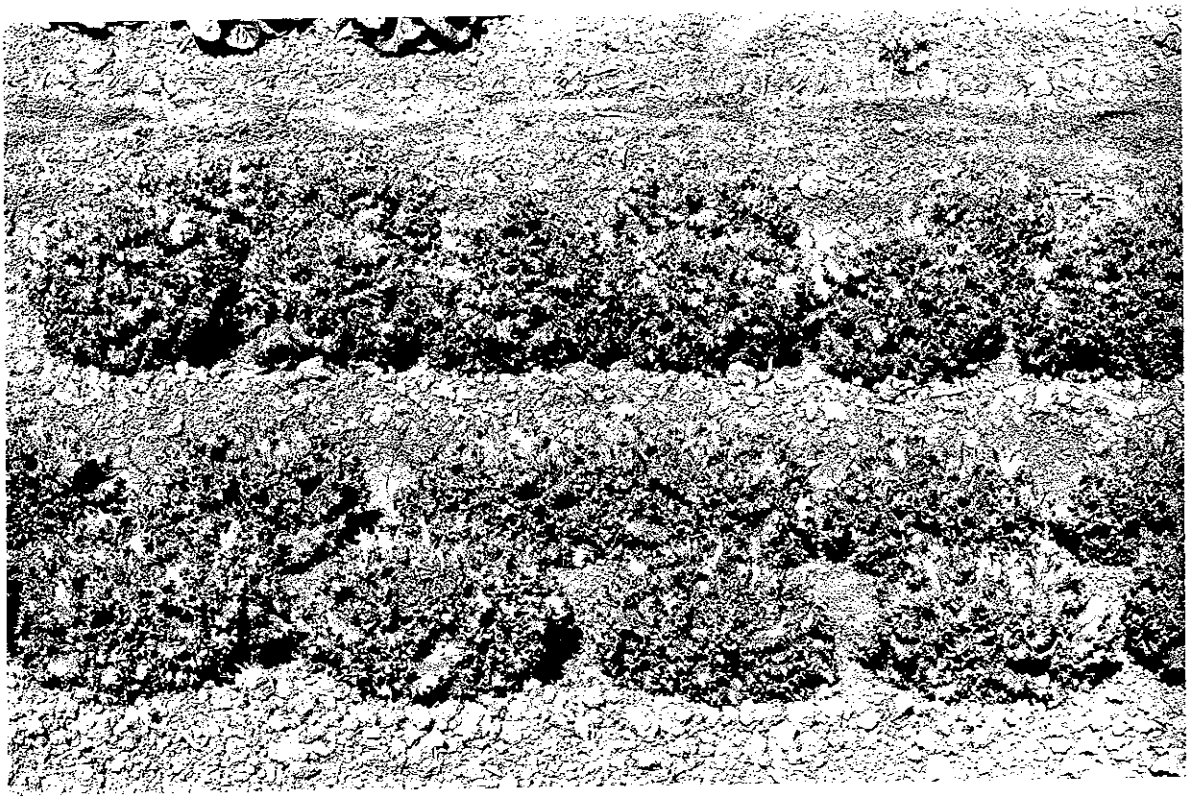
45



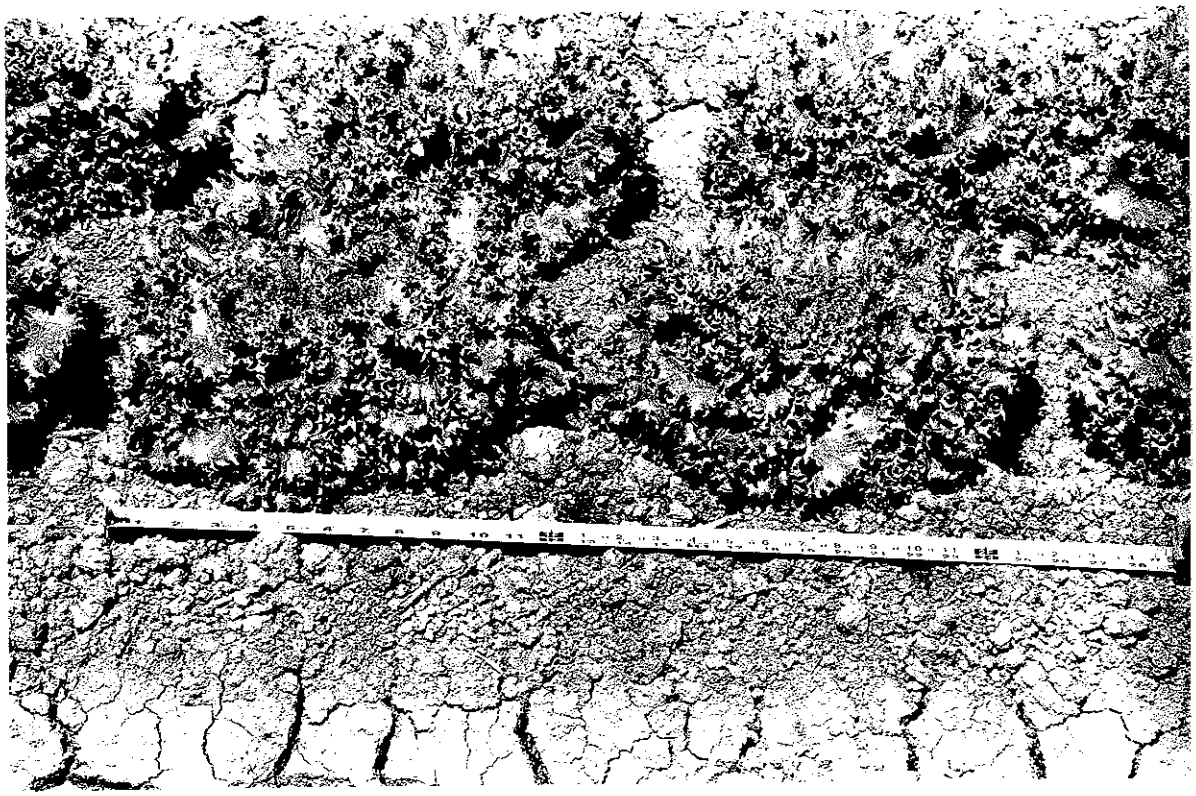
171669-54 *left head*
butt and split head

Desert Green *right head*
butt and split head

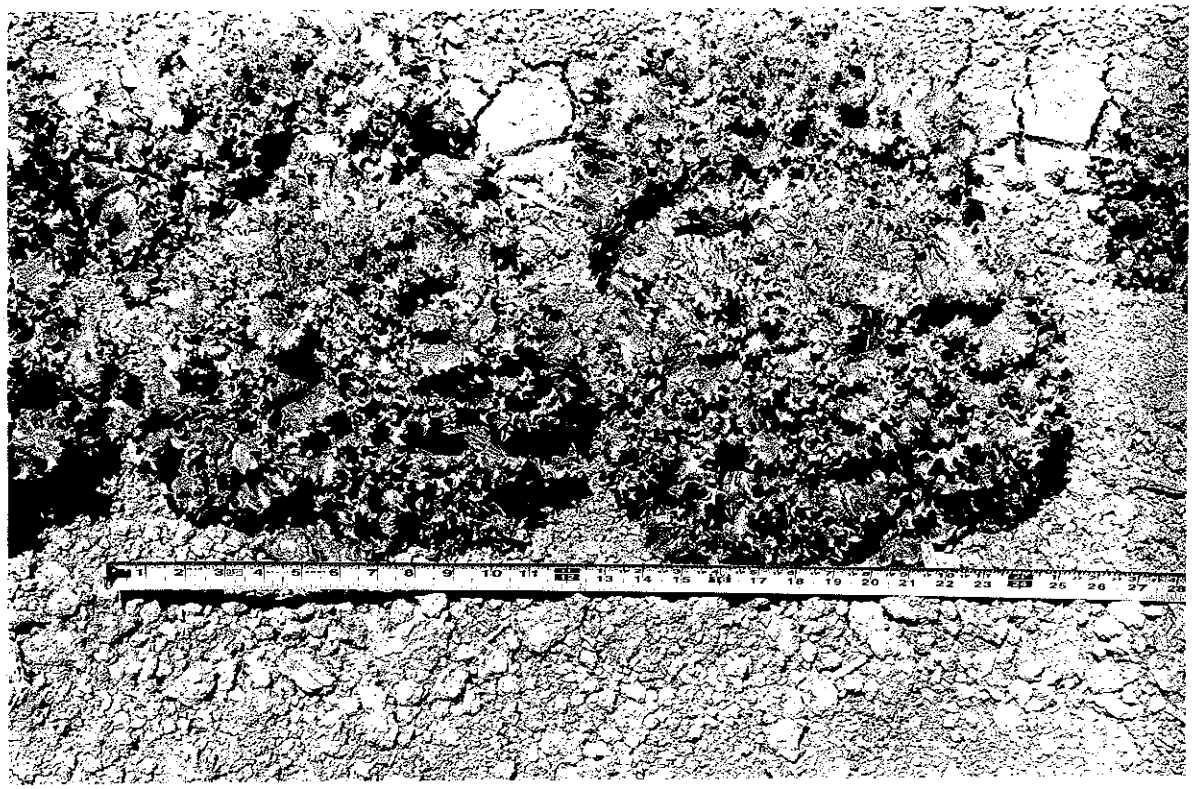
171669-5-4



Waldmanns Green *(top)* 171669-5-4 *(bottom)*



171669-5-4 *(spread of frame leaves in seed field)* 07-11-98



Waldmanns Green *(note seed stem elongation)*

Paragon Seed, Inc. Corcoran, Ca.. 07/98

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171669-5-4 *171669-96*

Paragon Seed, Inc. Corcoran, Ca.. 07/98

9900223

69-96M

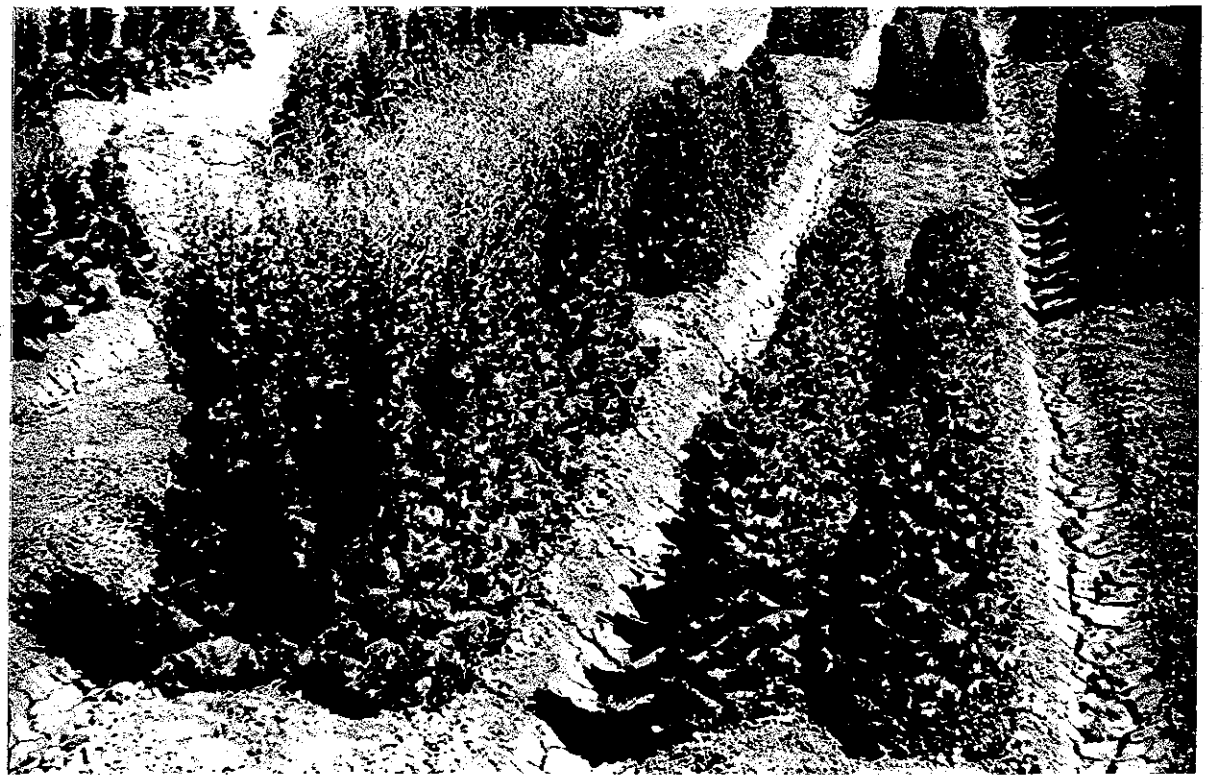
NORTHSTAR

171669-5-4

VENTANA

50

171669-54 (left) Waldmanns Green (right, 1st flower 07/25)



opposite direction 171669-54 right, Waldmanns Green left

51

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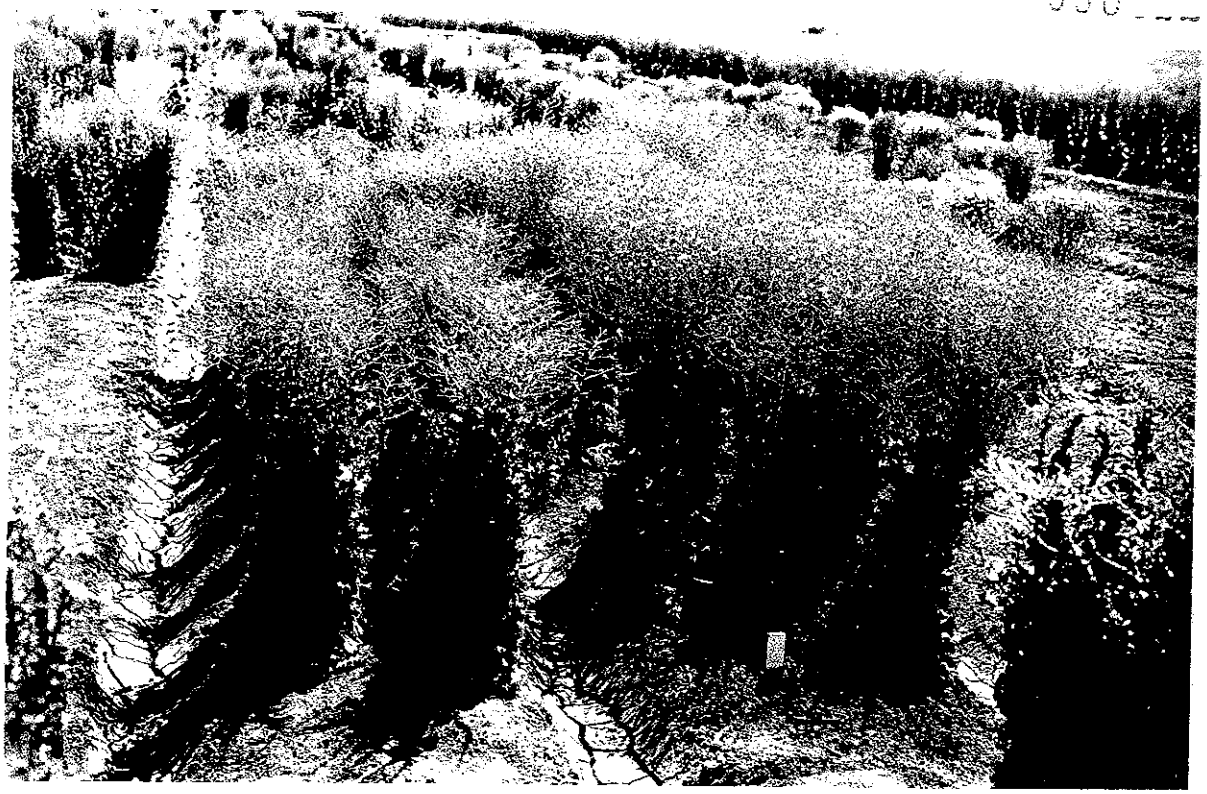
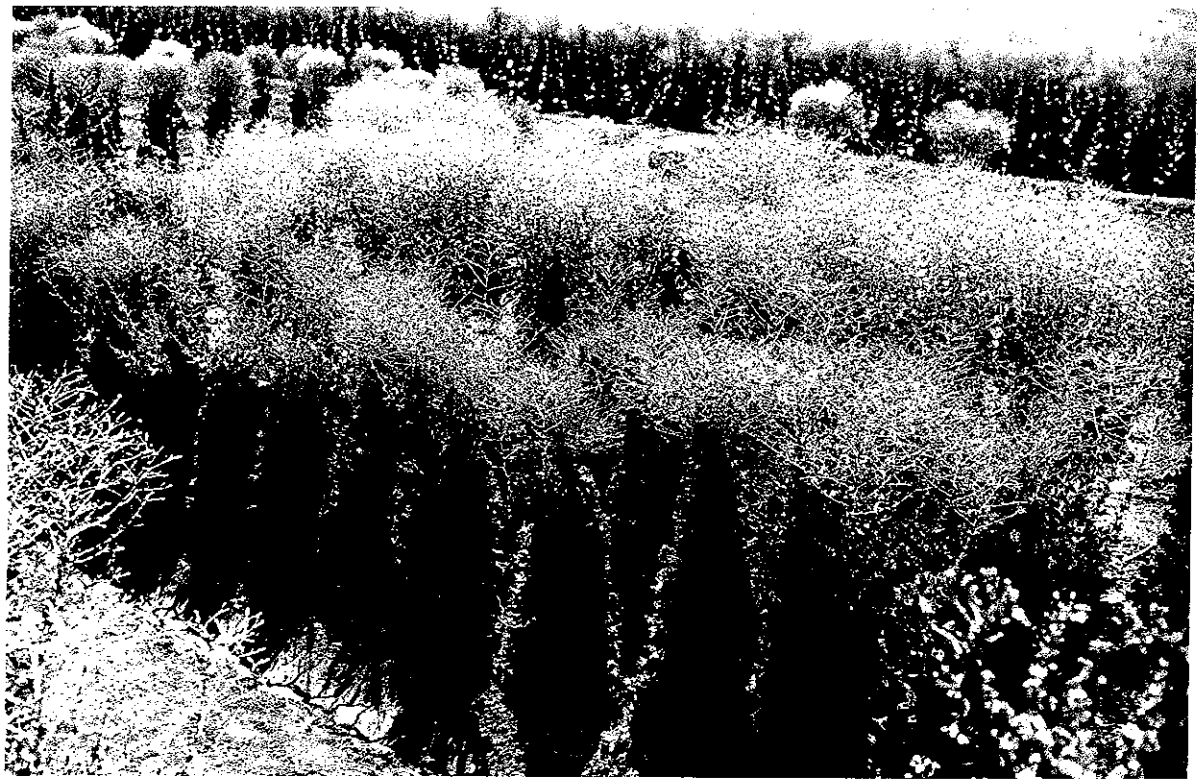
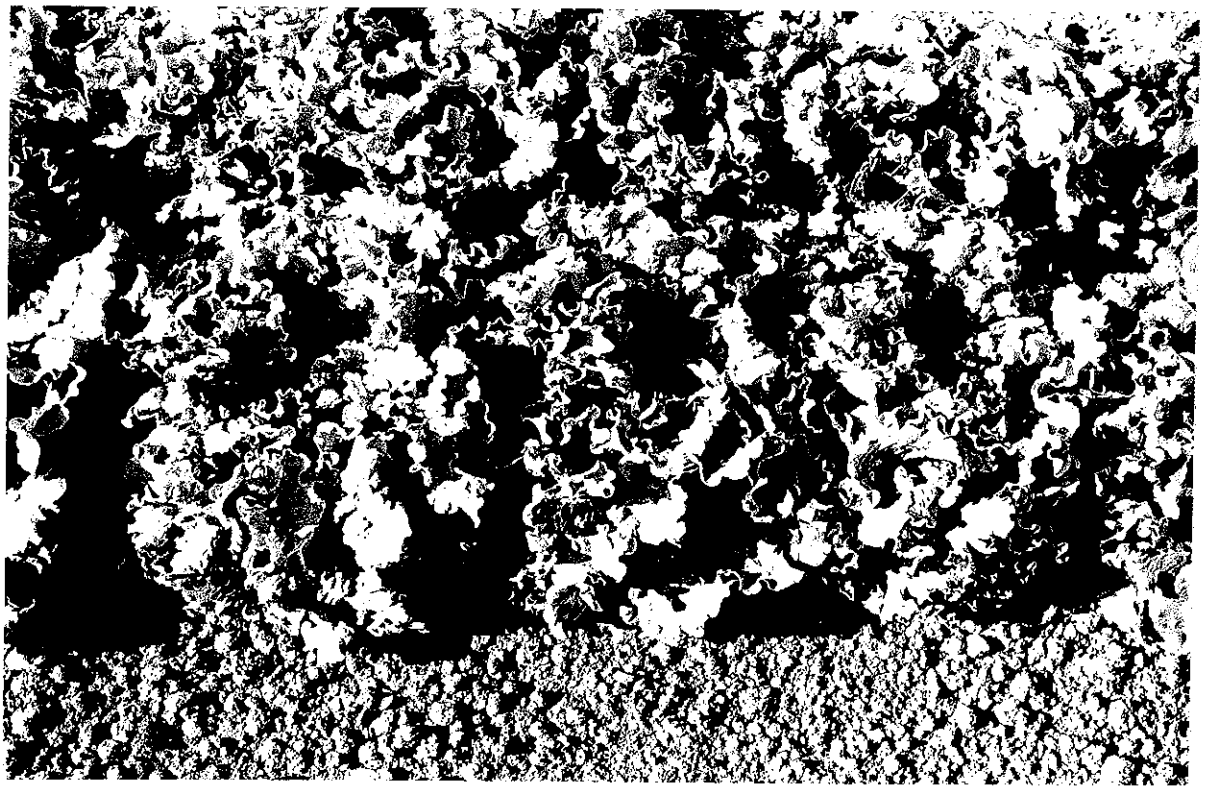


171669-54 (left, 1 st flower 08/10) Waldmanns Green (right, 1st flower 07/25)

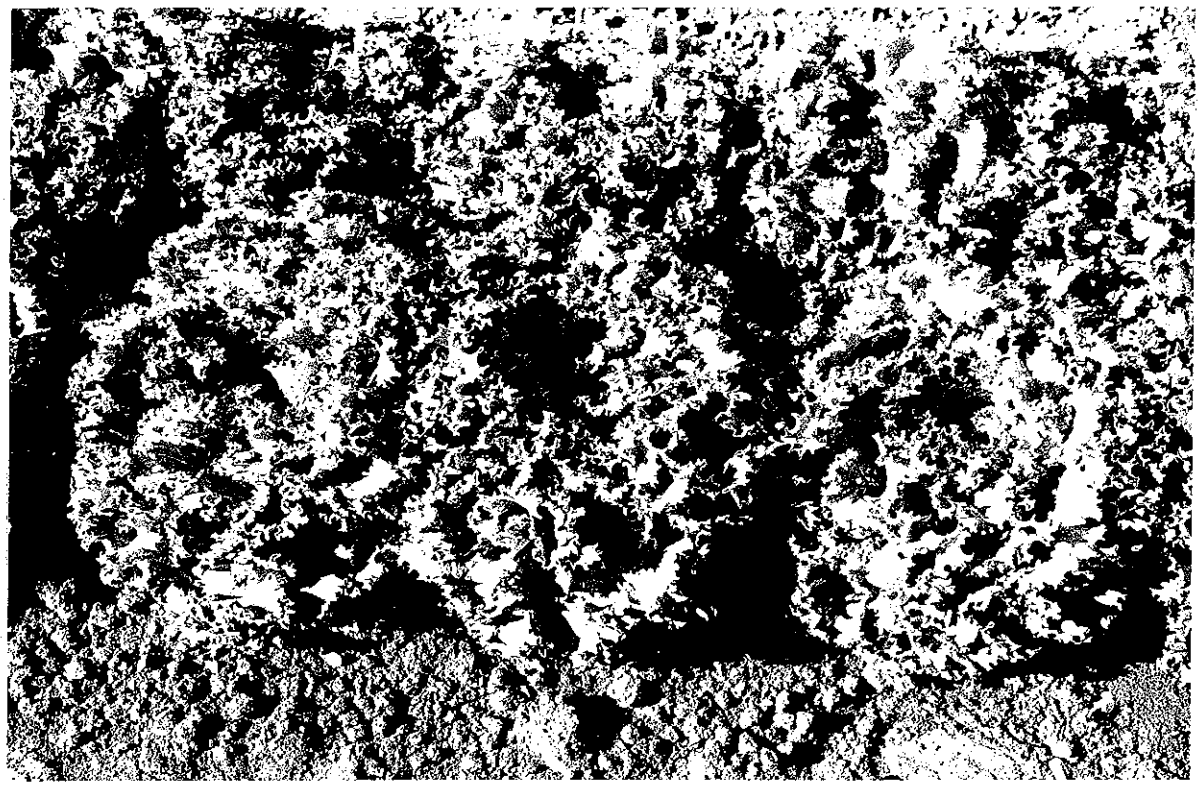


171669-54 foreground Waldmanns Green taller,branched,earlier flowering

52



Desert Green



171669-54

Paragon Seed, Inc. King City, Ca.. 08/12/98 9900223

(L to R) Tiara 171669-54 171669-54 (sprinkler) Desert Green (field)

opposite direction R to L Tiara, 2 beds 171669-54, Desert Green

54

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

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): Paragon Seed, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER: Exp. 54

3. VARIETY NAME: Ventana

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*: 507 Abbott Street, Salinas, California 93901

5. TELEPHONE *(include area code)*: 831-753-2100

6. FAX *(include area code)*: 831-753-1470

7. PVPO NUMBER: 9900223

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? [x] YES [ ] NO
If no, give name of country

10. Is the applicant the original owner? [x] YES [ ] NO *If no, please answer one of the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
[ ] YES [ ] NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?
[ ] YES [ ] NO If no, give name of country

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 owner, both the original owner and the applicant must meet one of the above criteria.

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

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to compete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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