No. 9900254

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Enza Zaden Beheer B.V.

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 RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR MULTIPLYING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , 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, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Silverado'

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

RAD 5/19/05

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).

RAD 6/12/00

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Enza Zaden Beheer B.V.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
Exp. 3x614

3. VARIETY NAME
Silverado

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
1352 Burton Avenue
Salinas, California 93901

5. TELEPHONE *(include area code)*
(831) 754-2300

6. FAX *(include area code)*
(831) 754-2975

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9900254

FILING DATE: 4-6-99

FEES RECEIVED
FILING AND EXAMINATION FEE: $ 2450.00
DATE: 4-6-99
CERTIFICATION FEE: $ 682.00
DATE: 7-6-05

7. GENUS AND SPECIES NAME
Lactuca sativa

8. FAMILY NAME *(Botanical)*
Compositae

9. CROP KIND NAME *(Common name)*
Lettuce - Iceberg

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
July 3, 1986

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Mel Holland
COASTAL SEEDS, INC.
P.O. Box 866
San Juan Bautista, California 95045

14. TELEPHONE *(include area code)*
(831) 623-4644

15. FAX *(include area code)*
(831) 623-1746

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(s) 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
U.S. - 04/08/98

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))*	
NAME *(Please print or type)* David W. Duke		NAME *(Please print or type)*	
CAPACITY OR TITLE President	DATE 4/2/99	CAPACITY OR TITLE	DATE

9900254

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A, B, C, E; (3) at least 2,500 viable untreated seeds, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in a public repository prior to issuance of a certificate; (4) check drawn on a U.S. bank for $2,450 ($300 filing fee and $2,150 examination fee), payable to "Treasurer of the United States" *(See Section 97.175 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 30 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $300 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518

ITEM

16a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.

16b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

16c. Exhibit C forms are available from the PVPO for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

16d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

16e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employee of the breeder, the owner through purchase or inheritance, etc.

17. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant may **NOT** reverse this affirmative decision after the variety has been sold and so labelled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See P.L. 103-349 for additional information.)*

20. See Sections 41, 42, and 43 of the Act and Section 97.175 of the regulations for eligibility requirements.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 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. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Washington, DC 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 0581-0055), Washington, DC 20503.

Exhibit A

Origin and Breeding History of the Variety

Lettuce: "Silverado"

Silverado originated from a cross made in 1993 between Exp. 11A (female parent) and El Dorado (male parent). Exp. 11A was the temporary designation of the variety Diamond.

Exp. 11A (Diamond) is a brown seeded, crisphead variety that is widely adapted in the lettuce growing areas of the Southwestern United States but lacks the downy mildew (Bremia lactucae) resistance gene R18. El Dorado is a black seeded, early maturing, crisphead variety with the downy mildew resistant gene R18 and a tendency to produce smaller frame and head size than Diamond. The objective of the cross was to develop a variety having the horticultural characteristics and larger size of Diamond and the downy mildew resistant gene R18.

The pedigree method of plant breeding employing single plant and mass selection was used in the development of Silverado. Screening for downy mildew resistant gene R18 was used in combination with the selection process. Screening for gene R18 was accomplished by inoculating seedlings with an isolate of Bremia lactucae that is virulent on all presently known downy mildew genes except R18. The isolate was obtained from the Pathology Department of the University of California, Davis.

Stages of selection, downy mildew screening and seed multiplication involved in the development of Silverado were as follows:

1. Cross made and F_1 seed screened for downy mildew resistance. Resistant plants saved for seed increase in greenhouse.
2. Single plant selections made in F_2 generation grown on trial grounds in San Juan Bautista, California area. Selection was based on heading ability, larger size and tipburn tolerance. The selections made were variable for black and brown seed color.
3. F_3 seed was screened for downy mildew resistance. A single plant selection and a mass of 5 plants were selected from the resistant plants. The single plant selection was a darker green, more vigorous seedling in the test and was brown seeded.
4. F_4 seed from the single plant made in the prior generation was grown on the trial grounds. Single plant selections were made based on larger frame and head size in comparison to El Dorado, darker green color and tipburn tolerance. The selections were screened for downy mildew resistance. Two selections tested 100% resistant and were

labeled 614ms1B1A and 614ms1B1E. The selections were brown seeded.

5. The F_5 selections, 614one1B1A and E were grown on the trial grounds. Seventeen single plant selections were made in 614ms1B1A based on larger frame, head size, tipburn tolerance and heading ability. The seventeen selections were screened for downy mildew resistance and all were 100% resistant. The selections were also uniform for the brown seed character.
6. F_6 generation grown in trials located in the Griffith areas of Australia. One selection, 614ms1B1A6 was relatively uniform for type and two single plants with the best heading ability and larger frame and head size were selected. Subsequent testing for downy mildew showed that the single plant selections were resistant.
7. The F_7 selections, 614ms1B1A6A and B, were grown on the San Juan Bautista trial grounds. 614ms1B1A6A was very uniform and stable for type. A mass selection was made for use as foundation seed and designated Exp.614.
8. Exp.614 (F_8 generation) was screened for downy mildew and was uniform and stable for downy mildew resistant gene R18. Extensive trials in the lettuce growing areas of California showed that Exp. 614 was uniform and stable. A variant resembling a non-heading wild type was observed in Exp. 614 at a frequency of <0.1%.
9. A commercial seed increase using Exp.614 for stock seed was made in Australia during the 1997-98 production season. Exp.614 was given the varietal name Silverado. Trial and commercial field plantings of the seed increases demonstrated that the variety continued to be uniform and stable for type with the variant, a non-heading type plant, occurring at a frequency of <0.1%. The increase was also stable for downy mildew resistant gene R18 in the screening program.
10. A commercial seed increase was grown in California in 1998 from the Australian production seed. Trial and field plantings confirmed that Silverado was uniform and stable. The non-heading variant occurred at a frequency of <0.1%. Screening for downy mildew resistance showed that Silverado was uniform and stable for gene R18.

Silverado can be distinguished from the parent lines as follows:

1. Diamond (Exp.11A). Silverado has the downy mildew resistant gene R18. Diamond does not have gene R18.
2. El Dorado. Silverado is brown seeded. El Dorado is black seeded. Silverado has larger frame and head size, a longer core and is later in maturity than El Dorado.

Silverado has maintained a high degree of stability and uniformity for type from the F_7 through three generations of seed increases. A variant has been observed in Silverado at a frequency of <0.1%. The variant resembles a non-heading wild type. Silverado has been uniform and stable for downy mildew resistant gene R18 from the F_5 generation through two subsequent stages of selection and three generations of seed increases.

Exhibit B: Silverado

Statement of Distinctness

'Silverado' is a brown seeded Salinas-type iceberg lettuce. Silverado can be distinguished from 'Diamond', a brown seeded iceberg which does not have the downy mildew resistance gene R18. 'Silverado' is distinctly different than 'El Dorado' which has the downy mildew gene R18, but is black seeded and has a smaller frame width (42.3,41.0 vs. 45.3, 44.9 cm.), head weight (837, 676 vs. 880, 751 g.) and head diameter (15.7, 14.3 vs. 16.3, 15.7 cm).

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Exhibit B: Addendum

'Silverado' is most similar to 'Diamond', PVP # 9500051 but is distinct in having resistance to CAI through CAVI races of Bremia lactucae (downy mildew) where 'Diamond' is resistant to CAI, CAIIa, CAIII, CAIV races of downy mildew. The variety 'Silverado' carries the resistance factor R18 to lettuce downy mildew where 'Diamond' does not have R18 resistance factor. The variety 'Silverado' is most similar to 'El Dorado', PVP #9300014 but differs in having brown (tan) seed color where 'El Dorado' has black seed color.

9900254

January 26, 2004

Mark Hermeling
Plant Variety Protection Office
NAL Building, Room 401
10301 Baltimore Avenue
Beltsville, MD. 20705-2351

Re: Addendum to Exhibit B: Silverado, PVP # 9900254

Silverado most closely resembles Diamond but differs by having resistance factor R18 to *Bremia lactucae*. Silverado is most similar to El Dorado but differs by having brown seed color.

Sincerely Yours,

Mel Holland

Mel Holland

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT C

RAD 5/9/05

OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

NAME OF APPLICANT (S)
~~COASTAL SEEDS, INC.~~ Enza Zaden Beheer B.V.

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

1352 Burton Avenue
Salinas, California 93901

FOR OFFICIAL USE ONLY
PVPO NUMBER 9900254
VARIETY NAME
EXPERIMENTAL DESIGNATION

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: Salinas and San Juan Bautista, CA

Color System Used: RHS 147B

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

[0 6]

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:

[3] COLOR: 1=White (Silver Gray) 2=Black (Gray Brown) 3=Brown (Amber)

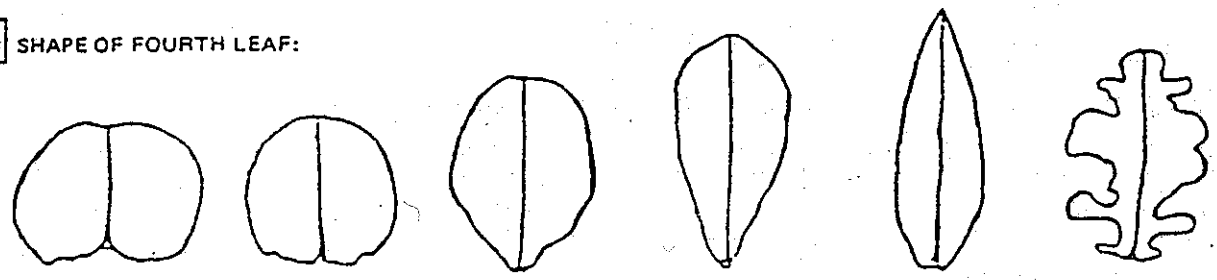
[2] LIGHT DORMANCY: 1=Light Required 2=Light Not Required

[2] HEAT DORMANCY: 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

[4] SHAPE OF FOURTH LEAF:



1 2 3 4 5 6

[1 5] LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10

[1] 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)*

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

[4] 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)*

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

[1] ROLLING: 1=Absent 2=Present

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

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

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

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

MARGIN:

2	INCISION DEPTH: *(deepest penetration of the margin)*	1=Absent/Shallow (Dark Green Boston)	2=Moderate (Vanguard)	3=Deep (Great Lakes 659)
4	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)* _____
2	UNDULATION OF THE APICAL MARGIN:	1=Absent/Slight (Dark Green Boston)	2=Moderate (Vanguard)	3=Strong (Great Lakes 659)
4	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)* _____
/	CONCENTRATION:	1=Light (Iceberg)	2=Moderate (Prize Head)	3=Intense (Ruby)
2	SIZE:	1=Small	2=Medium	3=Large
2	GLOSSINESS:	1=Dull (Vanguard)	2=Moderate (Salinas)	3=Glossy (Great Lakes)
2	BLISTERING:	1=Absent/Slight (Salinas)	2=Moderate (Vanguard)	3=Strong (Prize Head)
2	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.)*:

45	SPREAD OF FRAME LEAVES: cm This Variety	42 cm	El Dorado	*(specify comparison variety)*
16	HEAD DIAMETER *(market trimmed with single cap leaf)*: cm This Variety	15 cm	El Dorado	*(specify comparison variety)*
3	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			
815	HEAD WEIGHT: g This Variety	757 g	El Dorado	*(specify comparison variety)*
3	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
1	MIDRIB:	1=Flattened (Salinas)	2=Moderately Raised	3=Prominently Raised (Great Lakes 659)

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

33	mm Diameter at base of head
4.8	Ratio of head diameter/core diameter
39	Core height from base of head to apex: mm This Variety 44 mm El Dorado *(specify comparison variety)*

8.* BOLTING *(Give First Water Date* 04/25/98 *)*: NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date. * See Comments.

58	Number of days from First Water Date to seed stalk emergence *(summer conditions)*: This Variety	61	Alpha DMR	*(specify comparison variety)*
3	BOLTING CLASS:	1=Very Slow 2=Slow	3=Medium 4=Rapid	5=Very Rapid
134	Height of mature seed stalk: cm This Variety	123 cm	Alpha DMR	*(specify comparison variety)*

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BOLTING cont'd. on next page.

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

[4 1] cm This Variety [4 6] cm Alpha DMR *(specify comparison variety)*

[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	
[2]	LATERAL SHOOTS: *(above head)*	1=Absent	2=Present	
[1]	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	120	115	Alpha DMR
Summer	79	75	Alpha DMR
Fall	73	69	Alpha DMR
Winter			

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

Spring January 10 - Salinas, California

Summer April 28 - Salinas, California

Fall July 10 - Salinas, California

Winter

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	[/]	OTHER

SEASON:

[2] Spring (area Salinas & Santa Maria, CA) [2] Fall (area Salinas & Santa Maria, CA)

[2] Summer (area Salinas & Santa Maria, CA) [0] Winter (area)

[0]	GREENHOUSE:	0=Not tested	1=Not Adapted	2=Adapted
[1]	SOIL TYPE:	1=Mineral	2=Organic	3=Both

11. DISEASES AND STRESS REACTIONS (0=Not tested; 1=Susceptible; 2=Intermediate; 3=Resistant; 4=Highly resistant; 5=Tolerant): 9900254

VIRUS

- [5] 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

- [1] Corky Root Rot (Pythium Root Rot)
- [3] Downy Mildew (Races CA I, IIa, IIb, III)
- [0] Powdery Mildew
- [0] Sclerotinia Rot
- [0] Bacterial Soft Rot (Pseudomonas spp. & others)
- [0] Botrytis (Gray Mold)
- [ ] OTHER _____

INSECTS

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

PHYSIOLOGICAL/STRESS

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

POST HARVEST

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

12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

13. COMMENTS:

Section 8: Data was collected in seed production fields at Lost Hills, CA, 1998.

'99 APR -6 A9:35

USDA-AMS-PVPO

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

9900254

Silverado
4th True Leaf from 20 day Old Seedling

9900254

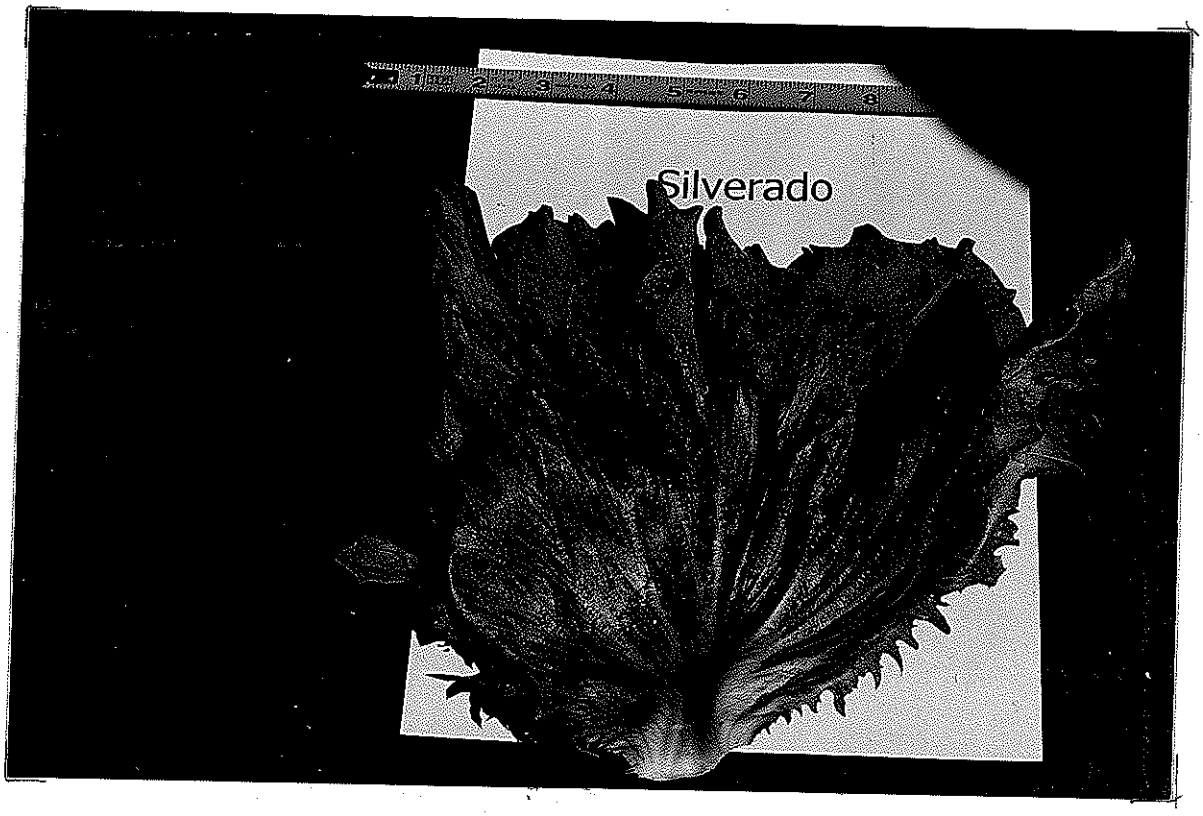

Exhibit 16D: Silverado

Mature Wrapper Leaf

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9900254

Exhibit D: Silverado

Frame Width Data (cm)

Location: Chualar, California 09/15/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	44.0	45.0	44.0	44.0	44.0	44.0
2	44.0	44.0	43.0	45.0	40.0	45.0
3	43.0	45.0	43.0	45.0	40.0	48.0
4	44.0	43.0	44.0	47.0	44.0	48.0
5	44.0	44.0	43.0	44.0	40.0	46.0
6	42.0	46.0	44.0	45.0	42.0	45.0
7	42.0	44.0	42.0	47.0	44.0	47.0
8	43.0	45.0	42.0	45.0	43.0	49.0
9	42.0	44.0	41.0	45.0	44.0	47.0
10	44.0	45.0	44.0	45.0	41.0	44.0
11	43.0	46.0	43.0	44.0	42.0	44.0
12	44.0	44.0	44.0	46.0	44.0	46.0
13	44.0	44.0	42.0	45.0	41.0	44.0
14	42.0	45.0	43.0	45.0	40.0	45.0
15	44.0	45.0	41.0	46.0	41.0	45.0
16	42.0	45.0	40.0	46.0	40.0	45.0
17	42.0	46.0	41.0	46.0	43.0	48.0
18	44.0	45.0	39.0	45.0	44.0	46.0
19	41.0	47.0	41.0	45.0	39.0	45.0
20	42.0	44.0	40.0	44.0	40.0	45.0
Means (cm)	43.0	44.8	42.2	45.2	41.8	45.8

ANOVA

Source Of Variation	SS	df	MS	F
Reps	0.8	2	0.4	0.223529
Variety	258.1333	1	258.1333	144.251
R x V	24.26667	2	12.13333	6.780392
Error	204	114	1.789474	
Total	487.2	119		

Alpha = 0.05

Randomized Complete Block Design

Exhibit D: Silverado

Frame Width Data (cm)

Location: Salinas, California 10/01/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	41.0	46.0	40.0	45.0	42.0	44.0
2	45.0	48.0	38.0	45.0	40.0	45.0
3	44.0	48.0	38.0	42.0	41.0	44.0
4	45.0	48.0	40.0	44.0	41.0	45.0
5	41.0	46.0	40.0	44.0	42.0	44.0
6	45.0	45.0	38.0	44.0	41.0	43.0
7	44.0	46.0	40.0	45.0	42.0	44.0
8	44.0	47.0	39.0	45.0	42.0	44.0
9	44.0	46.0	40.0	43.0	41.0	44.0
10	42.0	47.0	41.0	44.0	42.0	43.0
11	44.0	45.0	38.0	45.0	41.0	44.0
12	44.0	44.0	38.0	45.0	41.0	44.0
13	44.0	45.0	40.0	46.0	42.0	43.0
14	44.0	45.0	39.0	44.0	39.0	43.0
15	40.0	46.0	40.0	45.0	40.0	43.0
16	41.0	46.0	40.0	43.0	41.0	44.0
17	40.0	47.0	40.0	44.0	39.0	44.0
18	42.0	45.0	39.0	46.0	40.0	45.0
19	41.0	45.0	40.0	44.0	41.0	46.0
20	41.0	47.0	41.0	45.0	40.0	45.0
Means (cm)	42.8	46.1	39.5	44.4	40.9	44.1

ANOVA

Source 0f Variation	SS	df	MS	F
Reps	141.05	2	70.525	52.37687
Variety	433.2	1	433.2	321.7251
R x V	19.95	2	9.975	7.408143
Error	153.5	114	1.346491	
Total	747.7	119		

Alpha = 0.05

Randomized Complete Block Design

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Exhibit D: Silverado

9900254

Head Weight Data (g)

Location: Chualar, California 09/15/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	748.0	912.0	845.0	829.0	870.0	791.0
2	846.0	867.0	819.0	911.0	895.0	876.0
3	874.0	883.0	811.0	875.0	784.0	901.0
4	894.0	895.0	882.0	850.0	806.0	888.0
5	1,012.0	988.0	892.0	846.0	836.0	782.0
6	851.0	903.0	910.0	851.0	907.0	914.0
7	898.0	888.0	727.0	862.0	800.0	813.0
8	969.0	970.0	820.0	797.0	745.0	772.0
9	910.0	916.0	688.0	990.0	628.0	784.0
10	960.0	988.0	832.0	780.0	887.0	812.0
11	880.0	904.0	710.0	815.0	790.0	890.0
12	883.0	900.0	717.0	808.0	799.0	923.0
13	708.0	888.0	712.0	878.0	738.0	778.0
14	1,030.0	829.0	874.0	1,036.0	918.0	910.0
15	876.0	996.0	795.0	891.0	898.0	807.0
16	1,020.0	881.0	673.0	816.0	925.0	864.0
17	948.0	1,040.0	814.0	809.0	727.0	860.0
18	857.0	1,045.0	743.0	804.0	806.0	902.0
19	841.0	960.0	780.0	795.0	711.0	866.0
20	890.0	952.0	915.0	937.0	897.0	870.0
Means (g)	894.8	930.3	798.0	859.0	818.4	850.2

ANOVA

Source Of Variation	SS	df	MS	F
Reps	176221.52	2	88110.758	17.722594
Variety	54912.408	1	54912.408	11.045079
R x V	5073.5167	2	2536.7583	0.5102434
Error	566769.55	114	4971.6627	
Total	802976.99	119		

Alpha = 0.05

Randomized Complete Block Design

9900254

Exhibit D: Silverado

Head Weight Data (g)

Location: Salinas, California 10/01/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	752.0	691.0	760.0	649.0	693.0	622.0
2	681.0	764.0	596.0	846.0	500.0	685.0
3	507.0	688.0	737.0	757.0	732.0	874.0
4	763.0	651.0	782.0	754.0	776.0	877.0
5	757.0	726.0	610.0	719.0	565.0	758.0
6	742.0	766.0	644.0	811.0	705.0	741.0
7	827.0	669.0	604.0	970.0	614.0	808.0
8	761.0	640.0	654.0	947.0	408.0	626.0
9	828.0	838.0	728.0	627.0	608.0	776.0
10	812.0	677.0	734.0	666.0	723.0	828.0
11	641.0	616.0	539.0	956.0	630.0	702.0
12	731.0	665.0	609.0	605.0	661.0	694.0
13	690.0	830.0	654.0	747.0	593.0	660.0
14	664.0	642.0	774.0	853.0	680.0	715.0
15	663.0	822.0	658.0	799.0	601.0	900.0
16	740.0	663.0	758.0	682.0	699.0	691.0
17	582.0	734.0	804.0	729.0	629.0	729.0
18	620.0	959.0	714.0	664.0	601.0	890.0
19	779.0	948.0	687.0	775.0	611.0	822.0
20	736.0	682.0	601.0	703.0	635.0	716.0
Means (g)	713.8	733.6	682.4	763.0	633.2	755.7

ANOVA

Source Of Variation	SS	df	MS	F
Reps	22005.22	2	11002.61	1.35359
Variety	165540.4	1	165540.4	20.36552
R x V	53386.32	2	26693.16	3.283911
Error	926645	114	8128.465	
Total	1167577	119		

Alpha = 0.05

Randomized Complete Block Design

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Exhibit D: Silverado

Head Diameter Data (cm)

Location: Chualar, California 09/15/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	16.0	17.0	17.0	17.0	16.0	15.0
2	17.0	16.0	16.0	16.0	16.0	16.0
3	16.0	16.0	15.0	17.0	17.0	15.0
4	16.0	17.0	15.0	16.0	17.0	15.0
5	17.0	18.0	15.0	16.0	15.0	17.0
6	15.0	16.0	14.0	17.0	17.0	15.0
7	16.0	17.0	14.0	16.0	17.0	16.0
8	17.0	17.0	15.0	15.0	14.0	16.0
9	17.0	17.0	15.0	17.0	16.0	16.0
10	16.0	15.0	14.0	15.0	15.0	17.0
11	16.0	16.0	16.0	16.0	16.0	17.0
12	17.0	18.0	15.0	17.0	16.0	15.0
13	15.0	16.0	15.0	17.0	14.0	16.0
14	16.0	17.0	15.0	16.0	16.0	14.0
15	17.0	17.0	16.0	17.0	16.0	15.0
16	17.0	16.0	15.0	16.0	17.0	17.0
17	17.0	18.0	15.0	17.0	15.0	16.0
18	15.0	16.0	16.0	15.0	15.0	17.0
19	15.0	17.0	15.0	15.0	15.0	15.0
20	15.0	17.0	14.0	16.0	14.0	15.0
Means (cm)	16.2	16.7	15.1	16.2	15.7	15.8

ANOVA

Source Of Variation	SS	df	MS	F
Reps	12.716667	2	6.3583333	9.1869455
Variety	13.333333	1	13.333333	19.264892
R x V	3.0166667	2	1.5083333	2.1793409
Error	78.9	114	0.6921053	
Total	107.96667	119		

Alpha = 0.05

Randomized Complete Block Design

Exhibit D: Silverado

Head Diameter Data (cm)

Location: Salinas, California 10/01/98

	Rep 1		Rep 2		Rep 3	
	El Dorado	Silverado	El Dorado	Silverado	El Dorado	Silverado
1	15.0	16.0	15.0	15.0	14.0	15.0
2	15.0	15.0	15.0	16.0	15.0	16.0
3	13.0	15.0	15.0	17.0	13.0	15.0
4	15.0	16.0	15.0	16.0	15.0	15.0
5	14.0	16.0	15.0	16.0	13.0	17.0
6	15.0	16.0	14.0	15.0	15.0	15.0
7	16.0	16.0	14.0	16.0	15.0	16.0
8	14.0	15.0	15.0	16.0	13.0	16.0
9	14.0	16.0	14.0	15.0	14.0	16.0
10	15.0	15.0	14.0	16.0	15.0	17.0
11	15.0	17.0	15.0	16.0	14.0	17.0
12	15.0	15.0	16.0	15.0	13.0	15.0
13	13.0	15.0	13.0	15.0	13.0	16.0
14	15.0	16.0	14.0	16.0	14.0	14.0
15	15.0	16.0	12.0	15.0	13.0	15.0
16	15.0	15.0	14.0	17.0	15.0	17.0
17	13.0	16.0	14.0	16.0	14.0	16.0
18	13.0	16.0	14.0	15.0	14.0	17.0
19	14.0	15.0	14.0	16.0	13.0	15.0
20	14.0	16.0	16.0	16.0	14.0	15.0
Means (cm)	14.4	15.7	14.4	15.8	14.0	15.8

ANOVA

Source Of Variation	SS	df	MS	F
Reps	1.1166667	2	0.5583333	0.8532172
Variety	64.533333	1	64.533333	98.616622
R x V	1.7166667	2	0.8583333	1.3116622
Error	74.6	114	0.654386	
Total	141.96667	119		

Alpha = 0.05

Randomized Complete Block Design

Exhibit D: Silverado

Results of Downy Mildew Test - [1]
Bremia lactucae with Isolate B1096 [2]

Cultivar	Resistant	Susceptible
Cobham Green	0	50
Rachael	0	13
Mariska	26	0
Silverado	51	0

[1] Tests conducted at Horticulture Research International, Wellesbourne, U.K.

[2] B1096 is virulent on all Dm genes except R18.

Exhibit D: Silverado

9900254

Results of Downy Mildew Tests [a]

Bremia lactucae Isolate 91D36 [b]

	Resistant	Susceptible
DMR Test No. 1 - 1999		
Diamond	0	48
El Dorado	48	0
Silverado[1]	48	0
Silverado[2]	48	0
DMR Test No. 2 - 1999		
Diamond	0	48
El Dorado	48	0
Silverado[1]	48	0
Silverado[2]	48	0
DMR test No. 8 - 1997		
Diamond	0	48
El Dorado	48	0
3x614ms1B1A6A-1[3]	24	0

[1] Second Multiplication of Silverado.

[2] First Multiplication of Silverado.

[3] Stock Seed used to produce Silverado.

[a] Tests conducted at Coastal Seeds, Inc. research facility San Juan Bautista, CA.

[b] Isolate 91D36 test for CA IIB pathotype avirulent on DM R4, R15, R16, R18; virulent on all others.

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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)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Enza Zaden Beheer B.V. ~~COASTAL SEEDS, INC.~~	Exp.3x614	Silverado

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
1352 Burton Avenue Salinas, California 93901	(831) 754-2300	(831) 754-2975
	7. PVPO NUMBER	

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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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

9900254

EXHIBIT "A"

ASSIGNMENT PLANT VARIETY
APPLIED PROTECTION CERTIFICATES

1. PONDEROSA - Application No.: 9900259
2. SILVERADO - Application No.: 9900254
3. MARGARITA – Application No.: 9700075
4. MARDI GRAS – Application No.: 9800210
5. GLADIATOR – Application No.: 9800119
6. HEARTS DELIGHT – Application 9900066
7. MEDALLION – Application 9800120

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ASSIGNMENT OF U.S. PLANT VARIETY PROTECTION CERTIFICATE APPLICATIONS

Effective March 30, 2000, COASTAL SEEDS, INC., A CALIFORNIA CORPORATION, for good and valuable consideration, receipt of which is hereby acknowledged, does hereby transfer, assign and deliver to ENZA ZADEN DE ENKHUIZER ZAADHANDEL B.V., A DUTCH CORPORATION, the Plant Variety Protection Certificate Applications listed on Exhibit "A" attached hereto and incorporated by reference.

Dated: May 10, 2000

Coastal Seeds, Inc.,
A California Corporation

By: David W. Duke, President

State of California)
)ss.
County of Monterey)

On this 10th day of May, in the year 2000, before me, the undersigned Notary Public in and for the State of California, personally appeared David w. Duke, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

VRS2 GREGORY M. CHILTON
COMM. #1178366
Notary Public-California
Monterey County
My Comm. Exp. April 3, 2002 VRS2

ENZA ZADEN

ENZA ZADEN RESEARCH USA, INC.

Commercial Office:
7 Harris Place
Salinas, CA 93901

Tel: 831.754.2300
Fax: 831.754.2975

Research Office:
525 Lucy Brown Lane, PO Box 866
San Juan Bautista, CA 95045

Tel: 831.623.4644
Fax: 831.6231746

To: Robin Davis
PVP Office
NAL Building, Room 400
10301 Baltimore Avenue
Beltsville, MD 20705

Date: May 4, 2005

Subject: payments

Dear Robin Davis,

I've enclosed two checks:

Check #6618, $190,- (5x$38,-)
To change applicants name from Enza Zaden De Enkhuizer Zaadhandel B.V. to Enza Zaden Beheer B.V. for the following numbers:

1) PVP# 9900259 (Ponderosa)
2) PVP#200100226 (Coastal Star)
3) PVP#200200046 (Durango)
4) PVP#200300168 (Telluride)
5) Added: PVP#9900254 (Silverado)

Addresses, etc. remain the same.

Check #6577, $432,-
payment certificate pvp# 9900259. I thought that we already sent this check but that was not the case.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Aernoudt Aardse
Enza Zaden Research USA

Office: 831-623-4644
Fax: 831-623-1746
Mobile: 831-710-0605
Email: a.aardse@coastalseeds.com

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