

No.

9700112



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

H. Z. H. C. Holland B. U.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

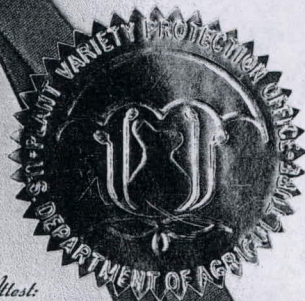
AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS 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 IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

POTATO, IRISH

'Adora'

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 eighteenth day of September, in the year of our Lord two thousand.



Attest:

Ann
Commissioner
Plant Variety Protection
Agricultural Marketing

Plot
Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all reproductions.

FORM APPROVED - OMB NO. 0581-001

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

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).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) <i>(as it is to appear on the Certificate)</i> Hettema Zonen Kweekbedrijf B.V. H2PC Holland B.V. <i>03/05/00 Jmp PER LETTER</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME ADORA
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) P.O. Box 99-385 8300 AB EMMELOORD 8901 BD LEEUWARDEN The Netherlands		5. TELEPHONE (include area code) (0) 527-635000	FOR OFFICIAL USE ONLY PVPO NUMBER 9700112 FILING AND EXAMINATION FEE \$ 2,450.00 DATE FEB 12, 1997 CERTIFICATION FEE \$ 300 DATE 8/28/00
7. GENUS AND SPECIES NAME Solanum Tuberosum		6. FAX (include area code) (0) 527-635303	
8. FAMILY NAME (Botanical) Solanum Tuberosum		13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS GLOBAL AGRIC SERVICES INC. 376 NEW MARYLAND HIGHWAY NEW MARYLAND, N.B. E3C 1E5 <i>03/05/00 Jmp PER LETTER</i>	
9. CROP KIND NAME (Common name) Potato		14. TELEPHONE (include area code) JMP 03/05/00 PER LETTER 506-458-8765 506-454-0567	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name) Company, representing the breeder by contract		15. FAX (include area code)	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION The Netherlands		12. DATE OF INCORPORATION 1985	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> 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. <input type="checkbox"/> 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 82(a) of the Plant Variety Protection Act?) <input type="checkbox"/> YES <i>if "yes," answer items 18 and 19 below</i> <input checked="" type="checkbox"/> NO <i>if "no," go to item 20</i>			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> 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? <input type="checkbox"/> YES <i>if "yes," give names of countries and dates</i> <input checked="" type="checkbox"/> NO			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned applicant(s) 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)) <i>J.P. van Loon</i>		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type) Ir. J.P. van Loon		NAME (Please print or type)	
CAPACITY OR TITLE Managing Director	DATE Sept. 1996	CAPACITY OR TITLE	DATE

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, 1030 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 218, 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. 0561-0066), Washington, DC 20503.

ADORA

100 years

16A Revised Exhibit A: Origin and Breeding History of the Variety

The breeding of ADORA was conducted in Groningen, The Netherlands, the region where the trial field of the breeder A.D. Mulder was situated. The variety originates from the sexual crossing Primura * Alcmaria.

The pedigree of ADORA is as follows:

PRIMUMA * ALCMARIA

ADORA is derived from a conventional crossing of the potato variety Alcmaria (father) and Primura (mother) (see attached description). Like all potato varieties, ADORA has been multiplied vegetatively by clonal selection.

We have been testing the potato variety ADORA 10 years within the company and 2 years officially (DUS-testing) in the Netherlands.

Since the seedling tuber, the variety is stable, at the moment 22 annual generations.

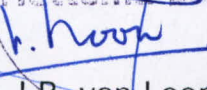
In the variety ADORA the frequency of variants and off-types is very low and in the Dutch system of inspection of seed potatoes, variants and off-types are not accepted. Multiplication of the variety must be according the original description. In our system of clonal selection, we select according the original description, which means variants and off-types are not present.

The selection criteria for the subject variety was a very early table potato with resistance to the golden nematode and of course a range of agricultural characteristics as stated in the annex.

The breeding method is first to make an artificial cross Primura * Alcmaria. The true seed derived from artificial cross Primura * Alcmaria are shown in the greenhouse and transformed in seedling tubers. In the population is started clonal selection during a period of about 8 years to select the variety. Then clonal selection is continued for multiplication of healthy basic seed to introduce the variety in the market.

Emmeloord, 1st October 1998

HETTEMA B.V.


Ir. J.P. van Loon,
Managing Director Research & Development

Hettema bv

Randweg 25
8304 AS Emmeloord (Holland)
P.O. Box 99
8300 AB Emmeloord (Holland)

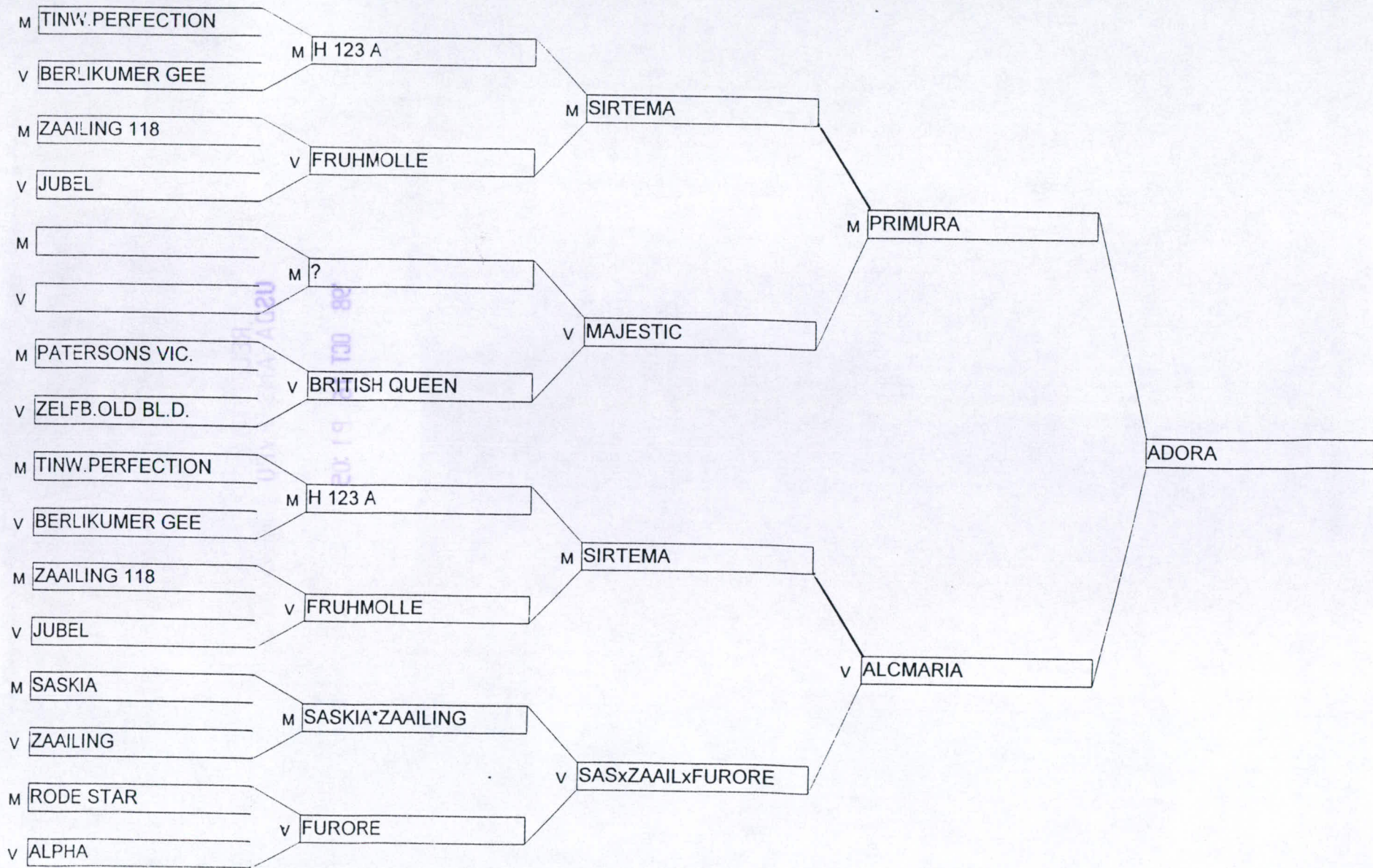
Telephone (0)527 635000
Fax (0)527 635350/635234
Cables Hettema Emmeloord
Telex 42108 hzeo nl

Bankers ABN-Amro Emmeloord
nr. 47.12.29.547
HRG Lelystad nr. 39041060

* M = MOTHER
V = FATHER

PEDIGREE

ADORA



3

100 years

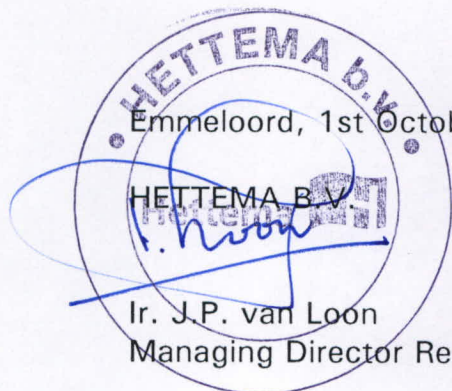
ADORA

16B Revised Exhibit B: Statement of Distinctness

ADORA is most similar to Yukon Gold. ADORA differs from Yukon Gold in being an earlier variety. Also ADORA is resistant to golden nematode (*Globodera Rostochiensis*) Ro1 + Ro4. ADORA has a better resistance to tuber blight, PCN and virus diseases. ADORA has a better grading and a higher yield. ADORA has a smooth pale- yellow skin and a creamy flesh color.

Date
Subject
Your reference
Our reference
Telephone number

Cooking type A-B



Emmeloord, 1st October 1998

HETTEMA B.V.

Ir. J.P. van Loon

Managing Director Research & Development

1997 POTATO VARIETY DESCRIPTION TRIAL
EXETER, MAINE - USA

Conducted for:

*Hetteema Canada, Inc.
P.O. Box 32133
Moncton, New Brunswick
CANADA E1A 6S8*

Conducted by:

*Bio-Ag Research, Inc.
47 Beech Grove Avenue
Glenburn, Maine 04401 - USA
Ed Plissey, Research Director*

Phone (207) 947-0417 Fax: (207) 945-4803

**1997 POTATO VARIETY DESCRIPTION TRIAL
EXETER, MAINE - USA**

Cooperators: Gerard Basten, Area Manager
Hetteema Canada, Inc.
P.O. Box 32133
Moncton, New Brunswick
CANADA E1A 6S8
506-858-8009

Edwin S. Plissey, Res. Director
Bio-Ag Research, Inc.
47 Beech Grove Avenue
Glenburn, ME 04401
207-947-0417

Grower Cooperator: Vernon & Neal Crane
Crane Brothers
RFD #1, Box 2840
East Corinth, ME 04427
207-379-2641

Plot Location: Rockwell Farm
East Corinth, Maine

Trial Data:

Soil: Bangor silt loam
pH: 5.8
Previous Crop: Field Corn (Fall Chisel Plowed)
Planting Date: May 27, 1997
Fertilization: In furrow and broadcast
Tillage: Normal Grower program
Pest Control: Normal grower program & Fungicide applications
Vine Kill: September 8, 1997
Harvest: September 27, 1997
Grading: October 21 & 22, 1997
Spec. Gravity: SFA Hydrometer method

1997 POTATO VARIETY DESCRIPTION TRIAL EXETER, MAINE - USA

OBJECTIVE:

The objective of this trial was to grow potato plants and tubers to for use in preparing potato variety descriptions for examination by the Plant Variety Protection Office of the USDA/AMS.

MATERIALS & METHODS:

Trial Design:

The trial site was laid out in a randomized complete block design with four replications. Varieties were hand planted in twenty hill, single row plots at 9 inch spacing in 36 inch spaced rows.

Planting:

Trial was planted May 27, 1997.

Fertilization:

A combination of in furrow application, pre and post planting broadcast treatments delivered 160# N - 180# P and 140# K per acre to the trial site.

Harvest:

The trial site was vine desiccated on September 8 with Diquat applied at 1.0 pt./Ac. and harvested on September 27 th.

Growing Season:

The growing season started off with adequate heat and soil moisture. However, it became very dry in July and early August and all varieties were drought stressed and produced lower yield than normal for the standards. No problems with foliar disease or insect pressure was noted during the growing season. Foliage and inflorescence evaluations were recorded on August 6 - 8, 1997.

Table 1. Plant Vigor, Tuber Data, Total and Marketable Yield, Specific Gravity and Tuber Defects of Potato Variety Description Clones Grown at Exeter, Maine - 1997.

Clone	Percent stand	Plant Vigor at Vine Kill	Tubers per Plant	Average Tuber Wt. Gm./Tuber	Total Yield (Cwt./Ac.)	Marketable Yield 1-7/8 - 4.0" (Cwt./Ac.)	Specific Gravity	Percentage Tuber Defects
Adora	100	4.0	6.0	103.2	261.7	177.9	1.069	23% Common scab
Erntestolz	100	4.0	7.3	74.7	230.8	205.5	1.076	2% Sunburn
Felsina	100	3.5	5.9	90.5	226.1	205.8	1.068	2% Bruise
Liseta	100	3.5	5.7	84.9	204.9	188.5	1.075	1% Common scab
Mondial	100	4.0	6.0	95.8	245.4	225.8	1.074	1% Bruise
Morene	100	3.5	5.9	84.9	212.8	191.5	1.075	3% Sunburn
Vital	96	3.0	6.2	70.4	191.6	159.0	1.069	5% Bruise
Atlantic	100	4.0	3.8	141.0	202.9	192.8	1.089	5% Common scab
Kennebec	92	4.0	4.5	113.9	215.1	191.4	1.082	3% Common scab
Shepody	96	3.5	4.4	109.4	220.3	202.7	1.079	4% Common scab
Superior	88	3.0	4.5	127.7	250.5	232.9	1.077	2% Sunburn
Yukon Gold	96	3.5	3.8	124.8	213.4	189.9	1.076	5% Common scab

Vigor at vine kill: 1=Very weak; 2=Weak; 3=Moderate; 4=Strong; 5=Very strong

OBJECTIVE DESCRIPTION OF VARIETY

POTATO (*Solanum tuberosum* L.)

NAME OF APPLICANT(S) FOR OFFICIAL USE ONLY
 Hettema PVPO NUMBER

ADDRESS VARIETY NAME
 P.O. Box 99 **Adora**
 8300 AB Emmeloord, the Netherlands

TEMPORARY OR EXPERIMENTAL DESIGNATION

REFERENCE VARIETY 1 (R1) REFERENCE VARIETY 2 (R2)
 Yukon Gold Superior

1. MARKET CHARACTERISTICS:

MARKET CLASS:

1 = Yellow-flesh tablestock; 2 = Round-white tablestock; 3 = Chip-processing; 4 = Frozen-processing
 5 = Russet tablestock; 6 = Other _____

VARIETY	R1	R2
1	1	2

2. PLANT CHARACTERISTICS:

GROWTH HABIT:

1 = Erect (>45° with ground); 5 = Semi-erect (30-45° with ground); 7 = Spreading.

VARIETY	R1	R2
3	6	6

TYPE:

1 = Stem (foliage open, stems clearly visible); 2 = Intermediate; 3 = Leaf (foliage closed, stems hardly visible)

VARIETY	R1	R2
2	2	2

MATURITY: Days after planting (DAP) at vine senescence.

VARIETY	R1	R2
NA	115	NA

PLANTING DATE:

VARIETY	R1	R2
May 27, 1997	May 27, 1997	May 27, 1997

REGION/AREA:

VARIETY	R1	R2
Exeter, Maine	Exeter, Maine	Exeter, Maine

MATURITY CLASS:

1 = Very Early (<100 DAP); 2 = Early (100-110 DAP); 3 = Mid-season (111-120 DAP); 4 = Late (121-130 DAP); 5 = Very Late (> 130 DAP).

VARIETY	R1	R2
2	3	3

3. STEM CHARACTERISTICS: Measure at early first bloom

STEM ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

VARIETY	R1	R2
1	2	3

STEM WINGS

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

VARIETY	R1	R2
4	4	5

4. LEAF CHARACTERISTICS:

LEAF COLOR: Observe fully developed leaves located on middle \odot of plant

1 = Yellowish-green; 2 = Olive-green; 3 = Medium green; 4 = Dark green; 5 = Grey-green; 6 = other

VARIETY	R1	R2
3	3	3

LEAF COLOR: Observe fully developed leaves located on middle \odot of plant

Royal Horticulture Society Color Chart

VARIETY	R1	R2
137B	137A	147A

LEAF PUBESCENCE DENSITY:

1 = Absent; 2 = Sparse; 3 = Medium; 4 = Thick; 5 = Heavy

VARIETY	R1	R2
1	2	2

LEAF PUBESCENCE LENGTH:

1 = None; 2 = Short; 3 = Medium; 4 = Long; 5 = Very long

VARIETY	R1	R2
1	2	2

LEAF SILHOUETTE

1 = Closed; 3 = Medium; 5 = Open

VARIETY	R1	R2
4	4	3

PETIOLES ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

VARIETY	R1	R2
1	1	1

LEAF STIPULES SIZE

1 = Absent; 3 = Small; 5 = Medium; 7 = Large

VARIETY	R1	R2
3	3	3

TERMINAL LEAFLET SHAPE:

1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Obovate; 7 = Oblong; 8 = other

VARIETY	R1	R2
3	3	3

TERMINAL LEAFLET TIP SHAPE:

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = other

VARIETY	R1	R2
3	3	3

TERMINAL LEAFLET BASE SHAPE:

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other

VARIETY	R1	R2
3	4	4

TERMINAL LEAFLET MARGIN WAVINESS:

1 = Absent; 2 = Slight; 3 = Weak; 4 = Medium; 5 = Strong

VARIETY	R1	R2
2	2	2

NUMBER OF PRIMARY LEAFLET PAIRS:

AVERAGE:

VARIETY	R1	R2
5	5	5

RANGE:

VARIETY	R1	R2
3-4	4-6	3-6

PRIMARY LEAFLET TIP SHAPE:

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = Other

VARIETY	R1	R2
3	3	3

PRIMARY LEAFLET SHAPE:

1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Obovate; 7 = Oblong; 8 = Other

VARIETY	R1	R2
2	2	2

PRIMARY LEAFLET BASE SHAPE:

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other

VARIETY	R1	R2
3	4	4

NUMBER OF SECONDARY AND TERTIARY LEAFLET PAIRS:

AVERAGE:

VARIETY	R1	R2
6	7.2	8

RANGE:

VARIETY	R1	R2
3-9	4-11	3-12

5. INFLORESCENCE CHARACTERISTICS:

NUMBER OF INFLORESCENCE / PLANT

AVERAGE

VARIETY	R1	R2
4	3.7	3.6

RANGE:

VARIETY	R1	R2
1-6	1-7	3-4

NUMBER OF FLORETS / INFLORESCENCE:

AVERAGE:

VARIETY	R1	R2
11	18.5	15.3

RANGE:

VARIETY	R1	R2
6-17	10-34	7-30

COROLLA INNER SURFACE COLOR: Measure predominant color of newly open flower RHSCC.

VARIETY	R1	R2
155C	76B	76C

COROLLA OUTER SURFACE COLOR: RHSCC

VARIETY	R1	R2
1	2	2

COROLLA SHAPE:

1 = Very rotate; 2 = Rotate; 3 = Pentagonal; 4 = Semi-stellate; 5 = Stellate

VARIETY	R1	R2
2	2	3

CALYX ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very strong

VARIETY	R1	R2
1	1	1

ANTHER COLOR: Measure when newly opened flower is fully expanded RHSCC

VARIETY	R1	R2
14A	17B	17B

ANTHER SHAPE:

1 = Broad cone; 2 = Narrow cone; 3 = Pear shape cone; 4 = Loose; 5 = Other

VARIETY	R1	R2
3	3	3

POLLEN PRODUCTION:

1 = None; 3 = Some; 5 = Abundant

VARIETY	R1	R2
1	1	1

STIGMA SHAPE:

1 = Capitata; 2 = Clavate; 3 = Bi-lobed

VARIETY	R1	R2
1	1	1

STIGMA COLOR: RHSCC

VARIETY	R1	R2
144B	152A	146B

BERRY PRODUCTION: UNDER FIELD CONDITIONS:

1 = None; 3 = low; 5 = Moderate; 7 = Heavy; 9 = Very heavy

VARIETY	R1	R2
1	1	2

03 19 10 08

020V-AM2-6V50
BEE

6. TUBER CHARACTERISTICS:

PREDOMINANT SKIN COLOR:

1 = White; 2 = Light Yellow; 3 = Yellow; 4 = Buff; 5 = Tan; 6 = Brown; 7 = Pink; 8 = red;
9 = Purplish-red; 10 = Purple; 11 = Dark purple-black; 12 = Other

VARIETY	R1	R2
2	3	5

RHSCC:

VARIETY	R1	R2
162B	162B	161B

SECONDARY SKIN COLOR:

1 = Absent; 2 = Present, please describe

VARIETY	R1	R2
1	2	1

RHSCC:

VARIETY	R1	R2
NA	39B	NA

SECONDARY SKIN COLOR DISTRIBUTION:

1 = Eyes; 2 = Eyebrows; 3 = Splashed; 4 = Scattered; 5 = Spectacled; 6 = Stippled; 7 = Other

VARIETY	R1	R2
NA	1	NA

SKIN TEXTURE:

1 = Smooth; 2 = Rough (flaky); 3 = Netted; 4 = Russetted; 5 = Heavily russetted; 6 = Other

VARIETY	R1	R2
1	1	2

TUBER SHAPE:

1 = Compressed; 2 = Round; 3 = Oval; 4 = Oblong; 5 = Long; 6 = Other

VARIETY	R1	R2
4	2	2

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TUBER THICKNESS:

1 = Round; 2 = Medium thick; 3 = Slightly flatted; 4 = Flatted; 5 = Other

VARIETY	R1	R2
3	2	2

TUBER LENGTH (mm):

AVERAGE:

VARIETY	R1	R2
77.8	65.8	66.5

RANGE:

VARIETY	R1	R2
50-105	45-110	40-100

STANDARD DEVIATION:

VARIETY	R1	R2
25.5	6.5	3.5

AVERAGE WEIGHT OF SAMPLE TAKEN:

VARIETY	R1	R2
27.2#	20.3#	15.5#

TUBER WIDTH (mm):

AVERAGE:

VARIETY	R1	R2
59.4	60.6	58.6

RANGE:

VARIETY	R1	R2
45-75	40-80	35-80

STANDARD DEVIATION:

VARIETY	R1	R2
4.4	3.4	4.4

AVERAGE WEIGHT OF SAMPLE TAKEN:

VARIETY	R1	R2
27.2#	20.3#	15.5#

TUBER THICKNESS (mm):

AVERAGE:

VARIETY	R1	R2
44.1	47.8	46.1

RANGE:

VARIETY	R1	R2
35-55	35-70	30-65

STANDARD DEVIATION:

VARIETY	R1	R2
3.3	3.2	2.4

AVERAGE WEIGHT OF SAMPLE TAKEN:

VARIETY	R1	R2
27.2#	20.3#	15.5#

TUBER EYE DEPTH:

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 = Very Deep

VARIETY	R1	R2
2	3	2

TUBER LATERAL EYES:

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 Very deep

VARIETY	R1	R2
2	2	2

NUMBER EYE / TUBER:

AVERAGE:

VARIETY	R1	R2
9.5	8.75	11

RANGE:

VARIETY	R1	R2
6-11	6-11	9-13

DISTRIBUTION OF TUBER EYES:

1 = Predominantly apical; 2 = Evenly distributed

VARIETY	R1	R2
1	1	2

PROMINENCE OF TUBER EYEBROWS:

1 = Not prominent; 2 = Slight prominence; 3 = Medium prominence; 4 = very prominenece; 5 Other

VARIETY	R1	R2
1	1	1

PRIMARY TUBER FLESH COLOR: RHSCC

VARIETY	R1	R2
4D	4C	155A

SECONDARY TUBER FLESH COLOR:

1 = Absent; 2 = Present, please describe

VARIETY	R1	R2
1	1	1

RHSCC:

VARIETY	R1	R2
NA	NA	NA

NUMBER OF TUBER / PLANT:
 1 = Low (<8); 2 = Medium (8-15); 3 = High(>15)

VARIETY	R1	R2
1	1	1

7. DISEASES CHARACTERISTICS:

DISEASES REACTION:

0 = Not tested; 1 = Resistant; 3 = Moderately resistant; 5 = Moderately susceptible; 7 = Susceptible;

9 = Highly susceptible

BACTERIAL RING ROT: Foliar reaction

VARIETY	R1	R2
0	0	0

BACTERIAL RING ROT: Tuber reaction

VARIETY	R1	R2
0	0	0

LATE BLIGHT

VARIETY	R1	R2
0 7	0	0

PLRV

VARIETY	R1	R2
0 3	0	0

PVX

VARIETY	R1	R2
0 2	0	0

PVY

VARIETY	R1	R2
0 3	0	0

OTHER A VIRUS P.V.A.

VARIETY	R1	R2
2		0

OTHER

VARIETY	R1	R2

8. PESTS CHARACTERISTICS:

PEST REACTION:

0 = Not tested; 1 = Resistant; 3 = Moderately resistant; 5 = Moderately susceptible; 7 = Susceptible;

9 = Highly susceptible

GOLDEN NEMATODE *R01 + R04*

VARIETY	R1	R2
<i>0 1</i>	0	0

OTHER

VARIETY	R1	R2
		0

9. GENE TRAITS:

INSERTION OF GENES:

YES NO

IF YES, DESCRIBE

10. QUALITY CHARACTERISTICS:

CHIEF MARKET: *TABLE STOCK*

SPECIFIC GRAVITY:

1 < 1.060; 2 = 1.060-1.069; 3 = 1.070-1.079; 4 = 1.080-1.089; 5 > 1.090

VARIETY	R1	R2
2	3	3

TOTAL GLYCOALKALOID CONTENT (mg./100g. fresh tuber):

VARIETY	R1	R2
<i>NA 9</i>	NA	NA

OTHER QUALITY CHARACTERISTICS:

12. CHEMICAL IDENTIFICATION:

13. ADDITIONAL COMMENTS AND CHARACTERISTICS:

*NO DISCOLOURATION AFTER COOKING.
COOKING TYPE A-B.*

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EXHIBIT D

Requesting authority	: GEVES, Guyancourt, F	Application No. :	60822
Reporting authority	: Raad voor het Kwekersrecht, Wageningen, NL	Reference No. :	ARD 866

Species	: Potato
Breeder's reference	: Mulder c 108
Denomination	: ADORA

A. Characteristics mentioned in the UPOV-guideline TG/23/5 dd 21-11-1986 are numbered correspondingly.

Lightsprout

1 Size	: medium to large	6
2 Shape	: broad cylindrical	4
3 Anthocyanin coloration base	: red-violet	1
4 Intensity anthocyanin coloration base	: weak to medium	4
5 Pubescence base	: weak to medium	4
6 Size tip	: small to medium	4
7 Habit tip	: closed to medium	4
8 Intensity anthocyanin coloration tip	: very weak	1
9 Pubescence tip	: weak	3
10 Number root tips	: few to medium	4
11 Protrusion lenticells	: medium to strong	6
12 Length lateral shoots	: long	7

Plant

13 Height	: medium to tall	6
14 Type	: stem-type	1
15 Growth habit	: semi-erect to spreading	6

Stem

16 Thickness main stem	: thick	7
17 Extension anthocyanin coloration	: weak to medium	4

Leaf

18 Size	: very large	9
19 Silhouette	: closed to medium	4
20 Intensity green color	: light to medium	4
21 Extension anthocyanin coloration midrib	: weak	3

Leaflet

22 Size	: large	7
23 Width	: medium	5
24 Frequency coalescence	: low to medium	4
25 Waviness margin	: weak to medium	4
26 Depth veins	: shallow to medium	4
27 Anthocyanin pigmentation apical rosette	: absent	1
28 Glossiness upperside	: glossy	7
29 Frequency secondary leaflets on midrib	: medium to high	6
30 Frequency secondary leaflets on terminal leaflet	: very low to low	2
31 Frequency secondary leaflets on lateral leaflet	: low	3
32 Size secondary leaflets on lateral leaflet	: large	7

Inflorescence

33 Size	: large	7
34 Anthocyanin coloration peduncle	: strong	7
35 Frequency of flowers	: high	7
36 Anthocyanin coloration flower bud	: very strong	9
37 Corolla size	: large	7

DESCRIPTION Application no. 60822

38	Color innerside corolla	: red-violet	2
39	Intensity anth. coloration in- ner side corolla in col flower	: medium	5
41	Size white tips in colored flowers	: medium	5
42	Frequency fruits	: medium to many	6

Plant

43	Maturity	: very early	1
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Tuber

44	Shape	: oval	3
45	Depth eyes	: shallow to medium	4
46	Smoothness skin	: smooth to medium	4
47	Color skin	: yellow	1
48	Color of base of eye	: yellow	1
49	Color of flesh	: cream	2
50	Anthocyanin coloration skin in: reaction to light	: weak	3

B. Difference with other varieties:

The description given above characterizes the variety.

C. Additional data

Adora originates from the cross Primura x Alcmaria.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Private Plant Variety Protection Act (7 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Hetteema B.V. Randweg 25, P.O. Box 99 8300 AB EMMELOORD The Netherlands	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER -	3. VARIETY NAME ADORA
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) P.O. BOX 385 8901 BOLEEUWARDEN THE NETHERLANDS	5. TELEPHONE (include area code) -	6. FAX (include area code) -

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PER
LETTER

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LETTER

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. YES NO
see annex (question 11)

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

10. Is the applicant the original owner? YES NO If no, please answer 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 The Netherlands

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

11. Additional explanation on ownership (If needed, use reverse for extra space):
The variety for which Plant Variety Protection is hereby sought was developed by Mr. A.D. MULDER, Weerestein 199, 2182 GW HILLEGOM, The Netherlands. Mr. A.D. Mulder is a private breeder, associated with Hetteema B.V., Randweg 25, P.O. Box 99, 8300 AB EMMELOORD, The Netherlands. By agreement between Mr. A.D. Mulder and Hetteema B.V., Hetteema B.V. has the exclusive, world-wide representation for the potato variety ADORA.

PLEASE NOTE:

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

- 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 of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 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.
- 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 control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete 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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who need alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD). To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

Date
Subject
Your reference
Our reference
Telephone number

POWER OF ATTORNEY

The undersigned Mr. A.D. Mulder
Weerestein 199
2182 GW HILLEGOM


breeder of the potato variety **ADORA** herewith declares that

Hettingema Zonen Kweekbedrijf B.V.
Randweg 25
P.O. Box 99
8300 AB EMMELOORD
The Netherlands

is his representative and is authorized to act on his behalf for the application and registration of plant breeders' rights of the above mentioned potato variety in the United States of America.

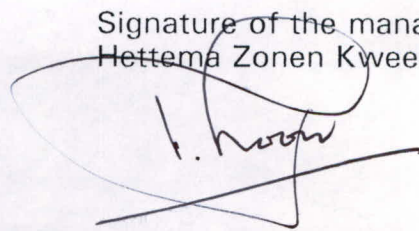
Hillegom, September 1996

Signature of the breeder
of Adora



A.D. Mulder

Signature of the manager of
Hettingema Zonen Kweekbedrijf B.V.



Ir. J.P. van Loon

Hettingema Zonen
Kweekbedrijf bv

Randweg 25
8304 AS Emmeloord (Holland)
P.O. Box 99
8300 AB Emmeloord (Holland)

Telephone (0)527 635000
Telefax (0)527 635350/635234
Cables Hettema Emmeloord
Telex 42108 hzeo nl

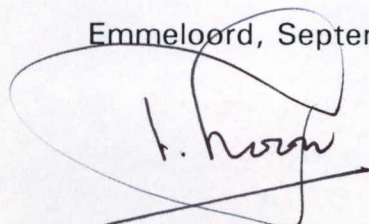
Bankers ABN-Amro Emmeloord
nr. 47.12.29.547
HRG Lelystad nr. 39041061

Exhibit "F"

Upon the request of the Commissioner of the Plant Variety Protection Office, Hettema Zonen Kweekbedrijf B.V. agrees to deposit at the U.S. National Seed Storage Laboratory (NSSL) a viable tissue culture sample for the variety **ADORA**.

Hettema Zonen Kweekbedrijf B.V. further agrees to replenish the sample if viability does not meet or falls below NSSL standards.

Emmeloord, September 1996



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Ir. J.P. van Loon