No.

200800052

# ANHIER UNNIGHTED STRANDERS OLFANNIERRICA

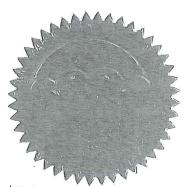
# n.v. BINST BREEDING & SELECTION s.a.

## 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 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.)



Attest:

Commissioner Plant Variety Protection Office Agricultural Marketing Service

POTATO

'Tebina'

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 sixth day of February, in the year two thousand and thirteen.

Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all rep	RODUCE LOCALLY. Include form number and date on all reproductions			Form Approved - CMB No. 0581-0055			
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE			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 (211) S.C. 2420. Information is the following with certificate is issued (211) S.C. 2420.				
APPLICATION FOR PLANT VARIETY PROT (Instructions and Information collection burden			(7 U.S.C, 2421). Information is held confidential until confificate is issued (7 U.S.C. 2426).				
1. NAME OF OWNER N.V. BINST BREEDING & SELECTI			DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME Tebina			
4. ADDRESS (Street and No.; or R.F.D. No.; City, State, and Z.	P Code, and Country	32 2 251	(hiclude area code)	POR OFFICIAL USE ONLY			
Cokeriestraat 20 1850 Grimbergen, Belgium				#200800052			
			2 04 62	FILING DATE			
7. 1F THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)	OF ORGANIZATION (corporation, partnership, STATE OF INCORPORATION			December 17,2007			
Corporation	Doigion		#	· •			
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S	) TO SERVE IN THIS APPLICATION. (First porso	vn listed will receive all p	apers	FILING AND EXAMINATION FEES: E E $I_1 \cdot 3 \not\in I_2$			
n.v. BINST BREEDING & SELECTI Cokeriestraat 20 1850 Grimbergen, Belgium	ON s.a.			E \$ 14, 382 R OATE (2-13-2007 C OUNTINGTIONT CL. E D ATE D DATE D DATE			
11. TELEPHONE (include area code)	12. FAX (Include area code)		13. E-MAIL francis@binst.be	- <b>L</b> I			
32 2 251 90 25	32 2 251 04 62						
14. CROP KIND (Common Name) Potato	16. FAMILY NAME (Bolenkoel) Solanaceae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL)				
15 GENUS AND SPECIES NAME OF CROP	17. 15 THE VARIELY A FIRST GENERATION P	TORIO?	IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS APPROVED PETITION TO DEREGULATE THE GEN	REFERENCE NUMBER FOR THE ETICALLY MODIFIED PLANT FOR			
Solanum tuberosum	U YFS U NO						
<ul> <li>19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT I (Follow Instructions on reverse)</li> <li>Exhibit A. Origin and Breeding History of the Value</li> <li>Exhibit B. Statement of Distinctness</li> <li>Exhibit C. Objective Description of Variety</li> <li>Exhibit D. Additional Description of Variety</li> <li>Exhibit E. Statement of the Basis of the Variety f</li> <li>Exhibit E. Statement of the Basis of the Variety f</li> <li>Exhibit E. Statement of the Basis of the Owner's</li> <li>Exhibit F. Declaration Regarding Deposit</li> <li>Voucher Sample (3,000 viable untreated seeds that tissue culture will be doposited and maintail</li> <li>Filling and Examination Fee (\$4,382), made pays States' (Mail to the Plant Variety Protection Offic</li> </ul>	riety Optionel) • Ownership or, for luber propagated varieties, verification red in an approved public repository) Hible to "Treasurer of the United		20. DOES THE OWNER SPECIFY THAT SEED OF T OF CERTIFIED SEED? (Soe Soction 83(a) of U YES (II' 'yes', answer kems 21 and 22 NO (II' 'no'', go to kem 23) UNDECIDED  21. DOES THE OWNER SPECIFY THAT SEED OF T NUMBER OF CLASSES? YES NO IF YES, WHICH CLASSES? FOUNDATION 22. DOES THE OWNER SPECIFY THAT SEED OF T NUMBER OF GENERATIONS? YES NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOI FOUNDATION REGISTERED (II additional explanation is necessary, please usi	RE Plant Variely Profection Act) Deriow)  HIS VARIETY BE LIMITED AS TO  REGISTERED CERTIFIED  REGISTERED CERTIFIED  REACH CLASS.  CERTIFIED			
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? YES NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE			24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? YES VES NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED				
FOR EACH COUNTRY AND THE CIRCUMSTANCES. (A 25. The owners declare thet a visible sample of basic seed of t		will be rentanished uso	REFERENCE NUMBER. (Please use space indic				
25. The owners accure the watche sample or casic seed of t for a tuber propagated variety a tissue culture will be dep The undersigned owner(s) is(are) the owner of this sexual	sited in a public repository and maintained for the	e duration of the certifica	10.				
entitled to protection under the provisions of Section 42 of the Pl Owner(s) is (are) informed that faise representation herein	ant Variety Protection Act.						
SIGNATURE OF OWNER N.V. BINST BREITHE	VELACTION S.).		IRE OF OWNER				
Traucis	BINST						
SAVESE MARKETING M	GR DATE 15 12 20	ю7 арастт	Y OR TITLE				
S1-470 (UZ-08) designed by the Plant Vanety Protection Office Us	ng Word 2003.						

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**GENERAL INSTRUCTIONS:** 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, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (*See Section 97.6 of the Regulations and Rules of Practice*). **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Battimore Avenue, Beltsville, MD 20705-2351. <u>Retain one copy for your files</u>. 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 payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**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 or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name 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 the Regulations and Rules of Practice.)

 Plant Variety Protection Office

 Telephone: (301) 504-5518
 FAX: (301) 504-5291

 General E-mail: PVPOmail@usda.gov

 Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

#### SPECIFIC INSTRUCTIONS:

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, Seed Regulatory and Testing Branch, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

#### ITEM 19a. 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

- 19b. 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 replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kInd. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. 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.* 

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

- 20. 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 labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the vanety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

#### Belgium, March 23, 2005

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right. (Plant Breeder's Right or Patent).)

#### Grant of Rights in Belgium, May 24, 2002

According to the Paperwork reduction Act of 1995, an agency may not conduct of sponsor, and a person is not required to respond to a contection or imformation unless it displays a valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours 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 all its programs and activitias on the basis of race, color, national origin, age, disability, and whare applicable, sex, marital status, familial status, parential status, raigion, sexual orientation, genetic information, political balas, eripisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Canter at (202) 720-2600 (volce and TDD).

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# **PVP APPLICATION 'Tebina'**

# 17. A ORIGIN AND BREEDING HISTORY OF THE VARIETY

'Tebina' originated from the cross of '86-26-02' x 'Agria' made in the Netherlands in 1993.

'Tebina' was selected in the field as a seedling in 1994 at Wieringermeer, the Netherlands. It is derived from the hybridization of the two parents, and a phenotypic recurrent selection technique was utilized in its development.

After the cross combination an intensive selection process of more than 6 years was used to identify the variety. Over 10 characters were evaluated at up to 5 different locations within the breeding process. Among the characters defined were: maturity, yield, resistance, processing traits, morphological traits, and storage characters.

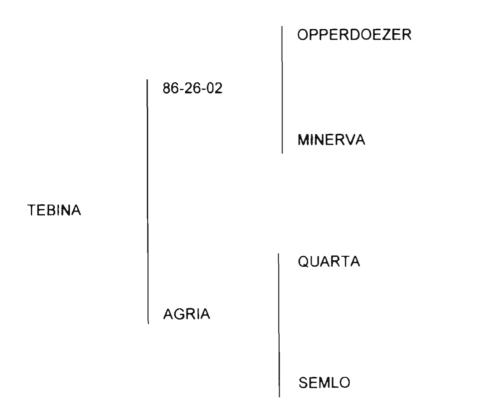
The genetic structure is highly uniform due to the vegetative propagation of the potato plants. The phenotypic expression can vary in function of the interaction between genotype and environment and therefore the following statements are made.

Since its selection, 'Tebina' was asexually-propagated via tubers, as well as micropropagated plantlets. During the 6 years of field evaluation and field observations, there is no report of variants arising from field and in-vitro multiplication of 'Tebina' indicating it is a stable genotype with uniform morphology.

There is no genetic variants observed or expected during reproduction and multiplication.

# **PVP APPLICATION 'Tebina'**

# PEDIGREE



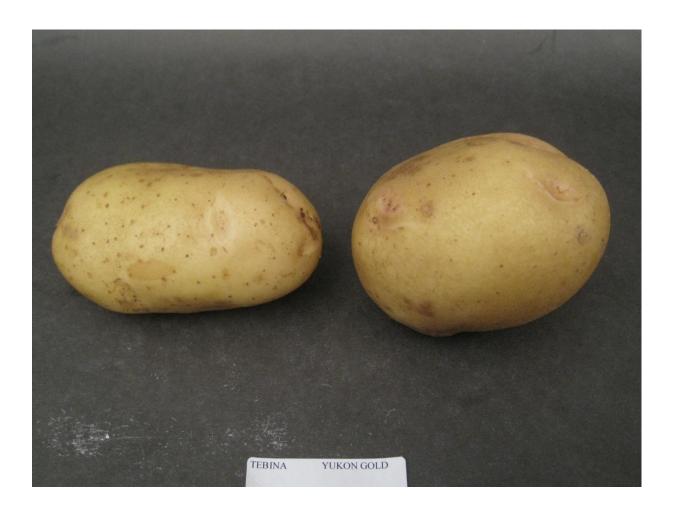
# **PVP APPLICATION 'Tebina'**

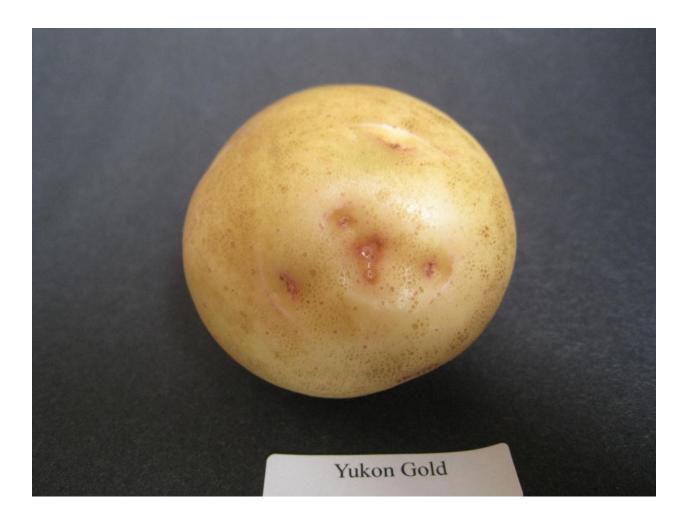
# 17. B STATEMENT OF DISTINCTNESS

Based on overall morphology 'Tebina' is most similar to 'Yukon Gold'.

'Tebina' most clearly differs from 'Yukon Gold' in the following traits: tuber secondary skin color of 'Tebina' is absent but present for the 'Yukon Gold' (red color around the eyes of the 'Yukon Gold' tuber, 62A RHS).







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

Form Approved OMB NO 058 10055

Exhibit C

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 8.5 hours per response, including the time for review 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 all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familian status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibits bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center and (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD)

#### U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

# OBJECTIVE DESCRIPTION OF VARIETY Potato (Solanum tuberosum L.)

# INSTRUCTIONS

# The Objective Description Form:

The objective description form lists characteristics to be used as the basis for developing the description of potato varieties. It is designed to guide the applicant in describing a variety in detail so a meaningful comparison with other potato varieties can be accomplished. It is recommended that this form be completed in as much detail as possible to ensure an accurate description. Please fill in the requested data and place the appropriate number that describes the varietal characters typical of this potato variety and the reference varieties in the respective boxes.

# Test Guidelines:

Any statistical and trial (field test) data that may be necessary to support the variety description should be attached to this form. Please include for trial data the plot size, number of replications, number of plants, plant spacing, trial locations and growing periods. Trials should normally be conducted at one place, in the region that the variety has been adapted for, with a minimum of one growing period in the United States. All comparative data should be determined from varieties entered in the same trials. The size of the plots should be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made at the end of the growing period. As a minimum, each test should include a total of 60 plants which should be divided between two or more replicates. Separate plots for observation and measuring can only be used if they have been subject to similar environmental conditions. To determine color for a plant or plant parts a recognized standard color chart must be used such as the Royal Horticultural Society (RHS) Color Chart or Munsell Color Chart (MCC).

# **Reference Varieties:**

The application variety should be compared to at least one reference variety preferably a set of reference varieties. The reference varieties should be market class standard varieties currently grown in the United States and or the variety (ies) most similar. The following varieties are recommended as market class standards to be used as reference varieties:

Yellow-flesh table-stock	. Yukon Gold
Round-white table-stock	. Superior
Chip-processing	Atlantic, Snowden, Norchip
Frozen-processing	. Russet Burbank
Russet table-stock	. Russet Burbank, Russet Norkotah, Goldrush
Red table-stock	. Red Pontiac, Red Norland, Red Lasoda

If the applicant does not use one of the recommended reference varieties by the PVP office, a complete description of the reference variety should be submitted by the applicant (Exhibit C).

# Characteristics:

**Characteristics**: Light sprout characteristics are supplied in **Figure 1**. The plant type and growth habit characteristics are collected at early first bloom. **Figure 2** is supplied to help visualize the growth habit. For this descriptor, look at the stems rather than the stems and foliage. Plant maturity is measured at natural vine senescence. ы

Stem characteristics are also collected at early bloom. Stem anthocyanin coloration is divided into two descriptors Location and intensity. **Figure 3** is supplied to give an example of stem wings.

Leaf characteristics are observed at early first bloom. Fully-developed leaves located on the middle third of the plant should be used. Leaf pubescence refers to general trichomes. Figure 4 is supplied for examples of leaf silhouette. Leaf stipules are shown in Figure 5 for visual definition. Figure 6 is supplied to define leaf characteristics. Figure 7 should be used to describe terminal and primary leaflet shape. Figures 8 and 9 are used to describe the terminal and primary leaflet shape of tip and base, respectively. To measure the total number of primary leaflets pairs, collect 10 fully developed petioles (with leaves attached from each replication) and take the average number of secondary and tertiary leaflets. Glandular trichomes should be described in the Additional Comments and Characteristics (Descriptor 15).

Inflorescence characteristics should be measured at early first bloom. Figures 10, 11 and 12 are supplied to describe anther and stigma shape, respectively. Corolla, calyx, anther, stigma, and pollen should be observed on newly opened flowers. Berry production should be based on field-grown plants rather than greenhouse plants.

Tuber characteristics should be observed following harvest. Figures 13 and 14 are available to describe distribution of secondary color and tuber shape, respectively.

Disease and pest reactions should be based upon specific tests or statistical analysis rather than just field observations, rating 1 as Highly Resistance and 9 as Highly Susceptible, please follow the scale on each descriptor. Other diseases or pests reactions not requested can be described if it is felt that it would be helpful to determine novelty of the variety.

Quality characteristics should be described according to the market use.

If the plant is transgenic, this gene insertion(s) should be described.

Chemical identification and any other characteristics can be described if they are helpful in distinguishing the varietv.

Legend:

**V** = Application Variety

#### **R1-R4** = Reference Varieties

\* = Both the reference variety (ies) and application variety must be described for characteristics designated with an asterisk.

			Exhibit C (Potato)
NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME	
			2
			g
			<u> </u>
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country)		FOR OFFICIAL USE ONLY	0
		PVPO NUMBER	ŏ
			U U
		200800052	10
DECEDENCE VARIETIES: Enter the reference variety pa	no in the environments have		

#### REFERENCE VARIETIES: Enter the reference variety name in the appropriate box.

Application Variety (V)	Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)

#### PLEASE READ ALL INSTRUCTIONS CAREFULLY: 1. MARKET CHARACTERISTICS: MARKET CLASS: 1 = Yellow-flesh Tablestock 2 = Round-white Tablestock 3 = Chip-processing 4 = Frozen-processing 5 = Russet Tablestock 6 = Other **R**2 **R**3 V **R**1 **R**4 2. LIGHT SPROUT CHARACTERISTICS: (See Figure 1) LIGHT SPROUT: GENERAL SHAPE 1 = Spherical 2 = Ovoid 3 = Conica 4 = Broad cylindrica 5 = Narrow cylindrical 6 = Other **R3 R**1 V **R**2 **R**4 LIGHT SPROUT BASE: PUBESCENCE OF BASE 4 = Strong 5 = Very Strong 1 = Absent 2 = Weak 3 = Medium V **R**1 **R**2 **R**3 **R**4 LIGHT SPROUT BASE: ANTHOCYANIN COLORATION 2 = Red-violet 4 = Other(describe) 1 = Green 3 = Blue-violet V **R**1 **R**2 **R**3 **R**4 LIGHT SPROUT BASE: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT) 5 = Very Strong 1 = Absent 3 = Medium 4 = Strong 2 = Weak V **R**2 **R**3 **R**1 **R**4 LIGHT SPROUT TIP: HABIT 1 = Closed 2 = Intermediate 3 = Open

**R**3

**R**4

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**R**1

V

**R**2

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	TIP: PUBESCENCE 2 = Weak 3 = Medium	4 = Strong	5 = Very Strong		
V	R1	R2	R3	R4	
	T TIP ANTHOCYANIN COLO         2 = Red-violet       3 = Blue-'		er(describe)		_
V	R1	R2	R3	R4	
LIGHT SPROUT 1 = Absent	TIP: INTENSITY OF ANTHO2 = Weak3 = Medium	OCANIN COLORAT 4 = Strong	TON (IF PRESENT) 5 = Very Strong		
V	R1	R2	R3	R4	
	<b>ROOT INITIALS: FREQUEI</b> 2 = Some 3 = Abundant	NCY			
V	R1	R2	R3	R4	
	e open, stems clearly visible)	2 = Intermediate	e 3 = Leaf (Foliage c	losed, stems hardly visible)	
TYPE:					
V	R1	R2	R3	R4	
MATURITY: Da	ys after planting (DAP) at vi	ne senescence			
V	R1	R2	R3	R4	
PLANTING DAT	E:				
V	R1	R	2	R3	R4
* <b>REGIONAL AR</b>	EA: West (WA, OR, ID, CO, CA) Erect (VI, NC, SC, South NJ,   8 = England	2 = North C FL) 5 = South (I 9 = Latin America	entral (ND, WI, MI, MN, ( _A, TX, AZ, NE) 10 = Brazil	OH) 3 = North East (ME, I 6 = Canada 11 = Other	NY, PA, NJ, MD, MA, R
4 = Mid-Atlantic E	0 <u></u>				
4 = Mid-Atlantic E	R1	R	2	R3	R4
4 = Mid-Atlantic E 7 = Europe	Inss:			= Late (121-130 DAP) 5 = V0	

2.

3.

I CHARACTERIST	ICS: Measure at early fir	rst bloom			20
		= Strong 9 = Very Strong	9		800
V	R1	R2	R3	R4	200800052
		= Strong 9 = Very Stror	ng		Ñ
V	<b>R</b> 1	R2	R3	R4	
CHARACTERIST	ICS:				
				green 6 = Other	
V	R1	R2	R3	R4	
V	<b>R</b> 1	R2	R3	R4	
		4 = Thick 5 = Hea	аvу		
V	R1	R2	R3	R4	
		4 = Long 5 = Very L	ong		
V	R1	R2	R3	R4	
(Note Descriptor a	#15 can be used to descr	ibe the type and length of	the glandular trichomes	observed.)	
V	R1	R2	R3	R4	
			ry Strong		
V	R1	R2	R3	R4	
		7 = Large			
V	R1	R2	R3	R4	
			Lanceolate 5 = Elliptica	ıl 6 = Obovate 7 = Oblong 8 = Ot	her
V	R1	R2	R3	R4	
	* STEM ANTHOO 1 = Absent 3 = 1 V STEM WINGS: ( 1 = Absent 3 = V CHARACTERIST LEAF COLOR: ( 1 = Yellowing-gree V LEAF COLOR CI (Observe fully de V LEAF PUBESCE 1 = Absent 2 V LEAF PUBESCE 1 = Absent 2 V LEAF SILHOU 1 = Closed 3 V PETIOLES ANTH 1 = Absent 3 V LEAF STIPULES 1 = Absent 3 1 =	* STEM ANTHOCYANIN COLORATION: 1 = Absent 3 = Weak 5 = Medium 7 = V R1 STEM WINGS: (See Figure 3) 1 = Absent 3 = Weak 5 = Medium 7 V R1 CHARACTERISTICS: LEAF COLOR: (Observe fully developed 1 = Yellowing-green 2 = Olive-green 3 V R1 LEAF COLOR CHART VALUE: Royal He (Observe fully developed leaves located of V R1 LEAF PUBESCENCE DENSITY: 1 = Absent 2 = Sparse 3 = Medium V R1 LEAF PUBESCENCE LENGTH: 1 = None 2 = Short 3 = Medium V R1 (Note Descriptor #15 can be used to descriptor * LEAF SILHOUETTE: (See Figure 4) 1 = Closed 3 = Medium 5 = Open V R1 PETIOLES ANTHOCYANIN COLORATION 1 = Absent 3 = Weak 5 = Medium V R1 TERMINAL LEAFLET SHAPE (See Figure 5) 1 = Absent 3 = Small 5 = Medium V R1	* STEM ANTHOCYANIN COLORATION: 1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong V R1 R2 STEM WINGS: (See Figure 3) 1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong V R1 R2 CHARACTERISTICS: LEAF COLOR: ( <i>Observe fully developed leaves located on middle</i> 1 = Yellowing-green 2 = Olive-green 3 = Medium Green 4 = 1 V R1 R2 LEAF COLOR CHART VALUE: Royal Horticulture Society Color C ( <i>Observe fully developed leaves located on middle</i> 1 = Yellowing-green 2 = Olive-green 3 = Medium Green 4 = 1 V R1 R2 LEAF COLOR CHART VALUE: Royal Horticulture Society Color C ( <i>Observe fully developed leaves located on middle</i> 1 = Xellowing-green 2 = Olive-green 3 = Medium 4 = Thick 5 = Heat V R1 R2 LEAF PUBESCENCE DENSITY: 1 = Absent 2 = Sparse 3 = Medium 4 = Long 5 = Very L V R1 R2 ( <i>Note Descriptor #15 can be used to describe the type and length of</i> * LEAF SILHOUETTE: (See Figure 4) 1 = Closed 3 = Medium 5 = Open V R1 R2 ( <i>Note Descriptor #15 can be used to describe the type and length of</i> * LEAF SILHOUETTE: (See Figure 4) 1 = Closed 3 = Medium 7 = Strong 9 = Ver V R1 R2 LEAF SILHOUETTE: (See Figure 5) 1 = Absent 3 = Small 5 = Medium 7 = Large V R1 R2 LEAF SILPULES SIZE: (Se Figure 5) 1 = Absent 3 = Small 5 = Medium 7 = Large V R1 R2 LEAF SILPULES SIZE (See Figure 5 6 and 7) 1 = Narrowily ovate 2 = Medium Ovate 3 = Broadyl Ovate 4 = 1 TERMINAL LEAFLET SHAPE (See Figures 6 and 7) 1 = Narrowily ovate 2 = Medium Ovate 3 = Broadyl Ovate 4 = 1 C M R1 R2 C M R1 R2	* STEM ANTHOCYANIN COLORATION: 1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong V R1 R2 R3 STEM WINGS: (See Figure 3) 1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong V R1 R2 R3 CHARACTERISTICS: LEAF COLOR: (Observe fully developed leaves located on middle 1/3 of plant) 1 = Yellowing green 2 = Olive-green 3 = Medium Green 4 = Dark Green 5 = Grey-{ V R1 R2 R3 LEAF COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Ch (Observe fully developed leaves located on middle 1/3 of plant) LEAF COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Ch (Observe fully developed leaves located on middle 1/3 of plant and circle the appropriate color V R1 R2 R3 LEAF PUBESCENCE DENSITY: 1 = Absent 2 = Sparse 3 = Medium 4 = Thick 5 = Heavy V R1 R2 R3 LEAF PUBESCENCE LENGTH: 1 = None 2 = Short 3 = Medium 4 = Long 5 = Very Long V R1 R2 R3 (Note Descriptor #15 can be used to describe the type and length of the glandular trichomes * LEAF SILHOUETTE: (See Figure 4) 1 = Closed 3 = Medium 5 = Open V R1 R2 R3 PETIOLES ANTHOCYANIN COLORATION: 1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong V R1 R2 R3 LEAF STIPULES SIZE: (Se Figure 5) 1 = Absent 3 = Small 5 = Medium 7 = Large V R1 R2 R3 LEAF STIPULES SIZE: (Se Figure 5) 1 = Absent 3 = Small 5 = Medium 7 = Large V R1 R2 R3 LEAF STIPULES SIZE: (Se Figure 5) 1 = Absent 3 = Small 5 = Medium 7 = Large V R1 R2 R3	STEM ANTHOCYANN COLORATION:     1 = Absent     3 = Weak     5 = Medium     7 = Strong     9 = Very Strong     V     R1     R2     R3     R4      STEM WINGS:     (See Figure 3)     1 = Absent     3 = Weak     5 = Medium     7 = Strong     9 = Very Strong     V     R1     R2     R3     R4      CHARACTERISTICS:     LEAF COLOR:     (Observe fully developed leaves located on middle 1/3 of plant)     1 = Yellowing green     2 = Olive-green     3 = Medium     7 = Strong     V     R1     R2     R3     R4      CHARACTERISTICS:     LEAF COLOR:     (Observe fully developed leaves located on middle 1/3 of plant)     1 = Yellowing green     2 = Olive-green     3 = Medium     Green     7 = Olive-green     3 = Medium     Green     4 = Dark Green     5 = Grey-green     6 = Other     V     R1     R2     R3     R4      LEAF COLOR CHART VALUE:     Royal Horticulture Society Color Chart or Munsell Color Chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves located on middle 1/3 of plant     (Dearwe fully developed leaves     (Dearw

<b></b>				
V	R1	R2	R3 R4	
	EAFLET BASE SHAPE: ( 2 = Acute 3 = Obtuse	See Figure 9) 4 = Cordate 5 = Trui	ncate 6 = Lobed 7 = Other	
V	<b>R</b> 1	R2	R3 R4	
	AFLET MARGIN WAVINE = Slight 3 = Weak 4	<b>SS</b> : = Medium 5 = Strong		
V	R1	R2	R3 R4	
NUMBER OF PR	IMARY LEAFLET PAIRS	(See Figure 6)		
AVERAGE:	[]			[]
V <sup>5.4</sup>	R1	R2	R3 R4	
RANGE:				
V	R1	R2	R3	R4
	LET TIP SHAPE: (See Fig Cuspidate 3 = Acumina	gures 6 and 8) the 4 = Obtuse 5 = Of R2	R3 R4	_
1 = Acute 2 =	Cuspidate 3 = Acumina	$\begin{array}{c c} 4 = Obtuse & 5 = Ot\\ \hline R2 \end{array}$	R3 R4	
1 = Acute 2 =	Cuspidate 3 = Acumina	$\begin{array}{c c} 4 = Obtuse & 5 = Ot\\ \hline R2 \end{array}$	R3 R4	  
1 = Acute 2 = V PRIMARY LEA 1 = Very Small V PRIMARY LEAF	Cuspidate 3 = Acumina R1 FLET SIZE: 2 = Small 3 = Medium R1 LET SHAPE: (See Figure	the 4 = Obtuse 5 = Of R2 $n 4 = Large 5 = Very$ $R2$ $s 6 and 7)$	R3 R4	
1 = Acute 2 = V PRIMARY LEA 1 = Very Small V PRIMARY LEAF 1 = Narrowly ova	Cuspidate 3 = Acumina R1 SFLET SIZE: 2 = Small 3 = Medium R1 LET SHAPE: (See Figure te 2 = Medium ovate 3	the 4 = Obtuse 5 = Of R2 h 4 = Large 5 = Very R2 R2 R2 R2 R2 R2	R3  R4    Large    R3    xeolate    5 = Elliptical    6 = Ovate	
1 = Acute 2 = V PRIMARY LEA 1 = Very Small V PRIMARY LEAF	Cuspidate 3 = Acumina R1 FLET SIZE: 2 = Small 3 = Medium R1 LET SHAPE: (See Figure	the 4 = Obtuse 5 = Of R2 $n 4 = Large 5 = Very$ $R2$ $s 6 and 7)$	R3 R4	
1 = Acute 2 = V PRIMARY LEA 1 = Very Small V PRIMARY LEAF 1 = Narrowly ova V PRIMARY LEAF	Cuspidate 3 = Acumina R1 SFLET SIZE: 2 = Small 3 = Medium R1 LET SHAPE: (See Figure te 2 = Medium ovate 3	ite $4 = Obtuse 5 = Oto R2 A = Large 5 = VeryR2S = 6 and 7)B = Broadly ovate 4 = LanceR2Figures 6 and 9)$	R3  R4    Large    R3    xeolate    5 = Elliptical    6 = Ovate	7 = Oblong 8 = Other
1 = Acute 2 = V PRIMARY LEA 1 = Very Small V PRIMARY LEAF 1 = Narrowly ova V PRIMARY LEAF	Cuspidate 3 = Acumina R1 SFLET SIZE: 2 = Small 3 = Medium R1 LET SHAPE: (See Figure te 2 = Medium ovate 3 R1 LET BASE SHAPE: (See	ite $4 = Obtuse 5 = Oto R2 A = Large 5 = VeryR2S = 6 and 7)B = Broadly ovate 4 = LanceR2Figures 6 and 9)$	R3       R4 $r_{Large}$ R3         recolate $5 = Elliptical$ $6 = Ovate$ R3       R4	7 = Oblong 8 = Other
1 = Acute     2 =       V     PRIMARY LEAF       1 = Very Small     V       PRIMARY LEAF     1 = Narrowly ova       V     PRIMARY LEAF       1 = Cuneate     2       V     V	Cuspidate       3 = Acumina         R1         FLET SIZE:         2 = Small       3 = Medium         R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET BASE SHAPE:       (See         2 = Acute       3 = Obtuse         R1       R1	inte $4 = Obtuse 5 = Oto R2 n 4 = Large 5 = VeryR2s 6 and 7)= Broadly ovate 4 = LanceR2Figures 6 and 9)4 = Cordate 5 = Trunca$	R3       R4 $r$ Large       R3 $r$ Large       R3 $r$ coolate $5 = Elliptical$ $6 = Ovate$ $R3$ $R4$ $rackarrow = 6 = Lobed$ $7 = Other$ $R3$ $R4$	7 = Oblong 8 = Other
1 = Acute     2 =       V     PRIMARY LEAF       1 = Very Small     V       PRIMARY LEAF     1 = Narrowly ova       V     PRIMARY LEAF       1 = Cuneate     2       V     V	Cuspidate       3 = Acumina         R1         FLET SIZE:         2 = Small       3 = Medium         R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET BASE SHAPE:       (See         2 = Acute       3 = Obtuse         R1       R1	inte $4 = Obtuse 5 = Oten R2 (R2) (R2) (R2) (R2) (R2) (R2) Figures 6 and 9) 4 = Cordate 5 = Trunca(R2)$	R3       R4 $r$ Large       R3 $r$ Large       R3 $r$ coolate $5 = Elliptical$ $6 = Ovate$ $R3$ $R4$ $rackarrow = 6 = Lobed$ $7 = Other$ $R3$ $R4$	7 = Oblong 8 = Other
1 = Acute     2 =       V     PRIMARY LEAF       1 = Very Small     V       PRIMARY LEAF     1 = Narrowly ova       V     PRIMARY LEAF       1 = Cuneate     2       V     V	Cuspidate       3 = Acumina         R1         FLET SIZE:         2 = Small       3 = Medium         R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET SHAPE:       (See Figure         te       2 = Medium ovate       3         R1       R1         LET BASE SHAPE:       (See         2 = Acute       3 = Obtuse         R1       R1	inte $4 = Obtuse 5 = Oten R2 (R2) (R2) (R2) (R2) (R2) (R2) Figures 6 and 9) 4 = Cordate 5 = Trunca(R2)$	R3       R4 $r_{Large}$ R3 $r_{Large}$ R3 $r_{R3}$ $r_{R3}$ $r_{R3}$ $r_{R4}$ $r_{R3}$ $r_{R4}$ $r_{R3}$ $r_{R4}$	7 = Oblong 8 = Other

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## 5. L

		SUENC	E/PLAN	1.						
AVERAGE	<u>:</u>	D1				Da				
V		<b>R</b> 1		R2		R3		R4		
RANGE:										
			1		D2		D2		<b>D</b> 4	
V		R	1		R2		R3		R4	
NUMBER	OF FLORET	S/INFLC	DRESCE	NCE:						
AVERAGE	<u>:</u>			_						
V		<b>R</b> 1		R2		R3		R4		
RANGE:										
v		R	81		R2		R3		R4	
					IE: Roval H	orticulture Societ	v Color Char	or Munsell C	olor Chart (Measure prec	omir
				appropriate col					Sion Chart (measure prec	UTI
V			<b>R</b> 1		R	,	R	3	R4	
•			<b>N</b> 1					5		
						Horticulture Socie	ety Color Cha	rt or Munsell (	Color Chart (Measure pre	edom
color of ne	wly open flow	/er and o	circle the	appropriate col	lor chart)	1				
V			<b>R</b> 1		R	2	R.	3	R4	
LI								·		
* COROLL 1 = White	2 = Red-vio	olet 3 :	= Blue-vi	olet 4 = Crear	n 5 = Red	-purple 6 = Blue	e 7 = Pink	8 = Pink-whi	olor please use the ratio te 9 = Purple 10 = V	iolet
			-White 1	4 44 - \/; ala	t-White 1:3	15 - 1/i old $1/h$	ito 2.1 16	= Violet-White	Halo 17 = Pink-White	1.1
11 = Purpl Pink-White								RedViolet-Wh	ite 1:3 23 = RedViolet-	
Pink-White	e 1:3 19 = iolet-White H	Pink-Wh	nite 3:1	20 = Pink-Whit	e Halo 21	= RedViolet-Whi	te 1:1 22 =			Whit
Pink-White 24 = RedV 12 = Other	e 1:3 19 = iolet-White H	Pink-Wh alo 25	nite 3:1	20 = Pink-Whit iolet-White 1:1	e Halo 21 26 = Blue	= RedViolet-Whi Violet-White 1:3	te 1:1 22 =	iolet-White 3:1	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV	e 1:3 19 = liolet-White H	Pink-Wh alo 25	nite 3:1	20 = Pink-Whit	e Halo 21 26 = Blue	= RedViolet-Whi Violet-White 1:3	te 1:1 22 =		ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V	2 1:3 19 =   iolet-White H	Pink-Wr alo 25 R1	hite 3:1 5 = BlueV	20 = Pink-Whit iolet-White 1:1	e Halo 21 26 = Blue	= RedViolet-Whi Violet-White 1:3	te 1:1 22 =	iolet-White 3:1	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V	e 1:3 19 = liolet-White H	Pink-Wr alo 25 R1 ee Figui	nite 3:1 5 = BlueV  re 10)	20 = Pink-Whit iolet-White 1:1	e Halo 21 26 = Blue	= RedViolet-Whi Violet-White 1:3	te 1:1 22 =	iolet-White 3:1	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V	2 1:3 19 = 1 iolet-White H	Pink-Wr alo 25 R1 ee Figur otate	nite 3:1 5 = BlueV  re 10)	20 = Pink-Whit iolet-White 1:1 R2 agonal 4 = S	e Halo 21 26 = Blue	= RedViolet-Whit Violet-White 1:3 R3 5 = Stellate	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	White
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very ro	2 1:3 19 = 1 iolet-White H	Pink-Wr alo 25 R1 ee Figui	nite 3:1 5 = BlueV  re 10)	20 = Pink-Whit iolet-White 1:1	e Halo 21 26 = Blue	= RedViolet-Whi Violet-White 1:3	te 1:1 22 =	iolet-White 3:1	ite 1:3 23 = RedViolet-	White
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very ro	2 1:3 19 = 1 iolet-White H	Pink-Whalo 25 R1 ee Figur otate R1	nite 3:1 = BlueV  re 10) 3 = Pent	20 = Pink-Whit iolet-White 1:1 R2 agonal 4 = S	e Halo 21 26 = Blue	= RedViolet-Whit Violet-White 1:3 R3 5 = Stellate	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very rd RESCENC CALYX AI	2 1:3 19 = 1 iolet-White H Shape: (S otate 2 = Re E CHARACT	Pink-Whalo 25 R1 ee Figur otate R1 FERISTIN	nite 3:1 = BlueV  re 10) 3 = Pent CS: DRATION	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2	e Halo 21 26 = Blue emi-stellate	= RedViolet-White Violet-White 1:3 5 = Stellate R3	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very rd RESCENC	1:3 19 = 1     iolet-White H     SHAPE: (S     otate 2 = R     Charact     E CHARACT     NTHOCYANII	Pink-Whalo 25 R1 ee Figur otate R1 FERISTIN	nite 3:1 = BlueV  re 10) 3 = Pent CS:	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2	e Halo 21 26 = Blue	= RedViolet-White Violet-White 1:3 5 = Stellate R3	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very rd RESCENC CALYX AI	2 1:3 19 = 1 iolet-White H Shape: (S otate 2 = Re E CHARACT	Pink-Whalo 25 R1 ee Figur otate R1 FERISTIN	nite 3:1 = BlueV  re 10) 3 = Pent CS: DRATION	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2	e Halo 21 26 = Blue emi-stellate	= RedViolet-White Violet-White 1:3 5 = Stellate R3	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very ro RESCENC CALYX AI 1 = Absent	2 1:3 19 = 1 iolet-White H Shape: (S otate 2 = Re E CHARACT	Pink-Whalo 25 R1 ee Figurotate R1 FERISTIC S 5 =	nite 3:1 = BlueV  re 10) 3 = Pent CS: DRATION	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2 R2	e Halo 21 26 = Blue emi-stellate	= RedViolet-White 1:3	te 1:1 22 =	R4	ite 1:3 23 = RedViolet-	Whit
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very ro V RESCENC CALYX AI 1 = Absent V	1:3 19 = 1     iolet-White H     SHAPE: (S     otate 2 = Re     E CHARACT     NTHOCYANII     3 = Weak     COLOR CHA	Pink-Wr alo 25 R1 ee Figur otate R1 rERISTIC N COLC $\leq 5 =$ R1 RT VAL	nite 3:1         i = BlueV	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2 r = Strong r = Strong R2	e Halo 21 26 = Blue emi-stellate 9 = Very	= RedViolet-White 1:3 R3 5 = Stellate R3 strong R3	te 1:1 22 = 27 = BlueV	R4	ite 1:3 23 = RedViolet-	Whit Halo
Pink-White 24 = RedV 12 = Other V COROLLA 1 = Very ro V RESCENC CALYX AI 1 = Absent V	1:3       19 = 1         iolet-White H         SHAPE:       (S         A SHAPE:	Pink-Wr alo 25 R1 ee Figur otate R1 rERISTIC N COLC $\leq 5 =$ R1 RT VAL	nite 3:1         i = BlueV	20 = Pink-Whit iolet-White 1:1 agonal 4 = S R2 r = Strong r = Strong R2	e Halo 21 26 = Blue emi-stellate 9 = Very	= RedViolet-White 1:3 R3 5 = Stellate R3 strong R3	te 1:1 22 = 27 = BlueV	R4	ite 1:3 23 = RedViolet- 28 = BlueViolet-White	Whit

			רם		7
V	<b>R</b> 1	R2	R3	R4	
ORESCENCE CH	ARACTERISTICS: (conti	nued)			
POLLEN PROD 1 = None 3 =	<b>UCTION</b> : = Some 5 = Abundant				
V	] [		D2	D4	7
V	R1	R2	R3	R4	
	E: (See Figure 12) 2 = Clavate 3 Bi-lobe	d			
V	<b>R</b> 1	R2	R3	R4	7
STIGMA COLO	R CHART VALUE: Roya	al Horticulture Society	Color Chart or Munsel Co	olor Chart (Circle the appr	opriate color chart)
V	R1		R2	R3	R4
	JCTION: (Under field con	ditions)			
	3 = Low 5 = Moderate		= Very Heavy		_
V	R1	R2	R3	R4	
ER CHARACTERI					
10 = Durblo 1					9 = Purplish-red
10 = Purple 1	11 = Dark purple-black	12 = Other	R3	R4	
V		R2	ulture Society Color Chart	or Munsell Color Chart (	Circle the appropriate color
V		R2		or Munsell Color Chart (	
	SKIN COLOR CHART	R2	ulture Society Color Chart	or Munsell Color Chart (	Circle the appropriate color
V       PREDOMINANT       V       SECONDARY S	SKIN COLOR CHART	R2	ulture Society Color Chart	or Munsell Color Chart (	Circle the appropriate color
V       PREDOMINANT       V       SECONDARY S	R1 SKIN COLOR CHART V R1 SKIN COLOR:	R2 /ALUE: Royal Horticu	ulture Society Color Chart	or Munsell Color Chart (	Circle the appropriate color
V       PREDOMINANT       V       SECONDARY S       1 = Absent       V	R1 SKIN COLOR CHART V R1 SKIN COLOR: 2 = Present (please des R1	R2 /ALUE: Royal Horticu	Ilture Society Color Chart	R4   or Munsell Color Chart (0)   R3	Circle the appropriate color R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S	R1 SKIN COLOR CHART V R1 SKIN COLOR: 2 = Present (please des R1 SKIN COLOR CHART VA	R2 /ALUE: Royal Horticul	Ilture Society Color Chart R2 R2 Ure Society Color Chart o	R4   or Munsell Color Chart (0)   R3     R3     r Munsell Color Chart (Cing)	Circle the appropriate color R4
V       PREDOMINANT       V       SECONDARY S       1 = Absent       V	R1 SKIN COLOR CHART V R1 SKIN COLOR: 2 = Present (please des R1	R2 /ALUE: Royal Horticul	Ilture Society Color Chart	R4   or Munsell Color Chart (0)   R3	Circle the appropriate color R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S         V         SECONDARY S         V         SECONDARY S         V         SECONDARY S	R1 SKIN COLOR CHART V R1 SKIN COLOR: 2 = Present (please des R1 SKIN COLOR CHART VA R1 SKIN COLOR DISTRIBUT	R2 /ALUE: Royal Horticul scribe) LUE: Royal Horticult	Ilture Society Color Chart R2 Ure Society Color Chart o R2	R4   or Munsell Color Chart (0)   R3   R3   r Munsell Color Chart (Ci   R3	Circle the appropriate color of R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S         V         SECONDARY S         1 = Eyes         1 = Eyes         2 =	R1         r skin color chart v         R1         Skin color:         2 = Present (please des         R1         Skin color chart va         Skin color chart va         Skin color chart va         Skin color chart va	R2         /ALUE: Royal Horticulation         scribe)         LUE: Royal Horticult         LUE: Royal Horticult         CION: (See Figure 13) ed         4 = Scattered	Ilture Society Color Chart R2 Ure Society Color Chart o R2 5 = Spectacled 6 =	R4   or Munsell Color Chart (0)   R3   R3   r Munsell Color Chart (Ci   R3	Circle the appropriate color R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S         V         SECONDARY S         V         SECONDARY S         V         SECONDARY S	R1 SKIN COLOR CHART V R1 SKIN COLOR: 2 = Present (please des R1 SKIN COLOR CHART VA R1 SKIN COLOR DISTRIBUT	R2 /ALUE: Royal Horticul scribe) LUE: Royal Horticult	Ilture Society Color Chart R2 Ure Society Color Chart o R2	R4   or Munsell Color Chart (0)   R3   R3   r Munsell Color Chart (Ci   R3	Circle the appropriate color of R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S         V         SECONDARY S         1 = Eyes         2 =         V         SKIN TEXTURE	R1         SKIN COLOR CHART V         R1         SKIN COLOR:         2 = Present (please des         R1         SKIN COLOR CHART VA         R1         SKIN COLOR DISTRIBUT         Eyebrows       3 = Splash         R1	R2         /ALUE: Royal Horticulation         scribe)         LUE: Royal Horticult         TION: (See Figure 13))         ed       4 = Scattered         R2	Ilture Society Color Chart R2 R2 Ure Society Color Chart o R2 5 = Spectacled 6 = R3	R4   or Munsell Color Chart (0)   R3   R3   r Munsell Color Chart (Ci   R3   Stippled 7 = Other _   R4	Circle the appropriate color of R4
V         PREDOMINANT         V         SECONDARY S         1 = Absent         V         SECONDARY S         V         SECONDARY S         1 = Eyes         2 =         V         SKIN TEXTURE	R1         SKIN COLOR CHART V         R1         SKIN COLOR:         2 = Present (please des         R1         SKIN COLOR CHART VA         R1         SKIN COLOR DISTRIBUT         Eyebrows       3 = Splash         R1	R2         /ALUE: Royal Horticulation         scribe)         LUE: Royal Horticult         LUE: Royal Horticult         CION: (See Figure 13) ed         4 = Scattered	Ilture Society Color Chart R2 R2 Ure Society Color Chart o R2 5 = Spectacled 6 = R3	R4   or Munsell Color Chart (0)   R3   R3   r Munsell Color Chart (Ci   R3   Stippled 7 = Other _   R4	Circle the appropriate color of R4

7.	TUBER CHARACTERISTICS: (continued)	

R CHARACTERISTICS: (continued)			N
* <b>TUBER SHAPE</b> : (See Figure 14) 1 = Compressed 2 = Round 3 = Ova	al 4 = Oblong 5 = Long	6 = Other	
V R1	R2	3 R4	
<b>TUBER THICKNESS</b> :1 = Round2 = Medium thick3 = Slig	htly flattened 4 = Flattened	5 = Other	
V R1	R2	3 R4	
TUBER LENGTH (mm):			
AVERAGE:			
V R1	R2 R	.3 R4	
RANGE:			
v R1	R2	R3	R4
V KI			
STANDARD DEVIATION:			
V R1	R2	R3	R4
AVERAGE WEIGHT OF SAMPLE TAKEN			
V R1	R2	R3	R4
TUBER WIDTH (mm)			
AVERAGE:			
V R1	R2 R	3 R4	
RANGE:			
v   R1	R2	R3	R4
STANDARD DEVIATION:			
V R1	R2	R3	R4
AVERAGE WEIGHT OF SAMPLE TAKEN	(g):		
V R1	R2	R3	R4

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## 7. TUB

BER CHARACTERISTICS: (continued)			20
TUBER THICKNESS (mm): AVERAGE:			008
V R1	R2	3 R4	200800052
RANGE:			
V R1	R2	R3	R4
STANDARD DEVIATION:			
V R1	R2	R3	R4
AVERAGE WEIGHT OF SAMPLE TAKEN (	g):		
V R1	R2	3 R4	
TUBER EYE DEPTH:			
1 = Protruding 3 = Shallow 5 = Inter	mediate 7 = Deep 9 = V	/ery deep	
V         R1	R2 R	3 R4	
TUBER LATERAL EYES:			
1 = Protruding 3 = Shallow 5 = Inter	mediate 7 = Deep 9 = V	ery deep	
<b>V R</b> 1	R2 R	3 R4	
NUMBER EYE/TUBER:			
AVERAGE:			7
V R1	R2	3 R4	
RANGE:			
V         R1	R2	R3	R4
DISTRIBUTION OF TUBER EYES:			
1 = Predominantly apical 2 = Evenly c	listributed		
V         R1	R2 R	3 R4	
PROMINENCE OF TUBER EYEBROWS:			
1= Absent 2 = Slight prominence 3	= Medium prominence 4 =	Very prominent 5 = Other	
V R1	R2 R	3 R4	

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V	R1	R2	R3	R4
PRIMARY TUBER chart)	FLESH COLOR CHART VAL	UE: Royal Horticulture Soci	ety Color Chart or Munsell Color C	hart (Circle the appropriate
V	R1	R2	R3	R4
1 = Absent	2 = Present, please describe: _	R2 R2	3 R4	
			3 R4	
V	R1	R2	B R4	or Chart (Circle the approp

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#### 8. DISEASES CHARACTERISTICS:

#### DISEASES REACTION: 0 = Not Tested 1 = Highly Resistant 2 = Resistant Few Symptoms 3 = Resistance Few Lessions in Number and Size 4 = Moderately Resistance 5 = Intermedia Susceptible 6 = Moderate Susceptible 7 = Susceptible 9 = Highly Susceptible

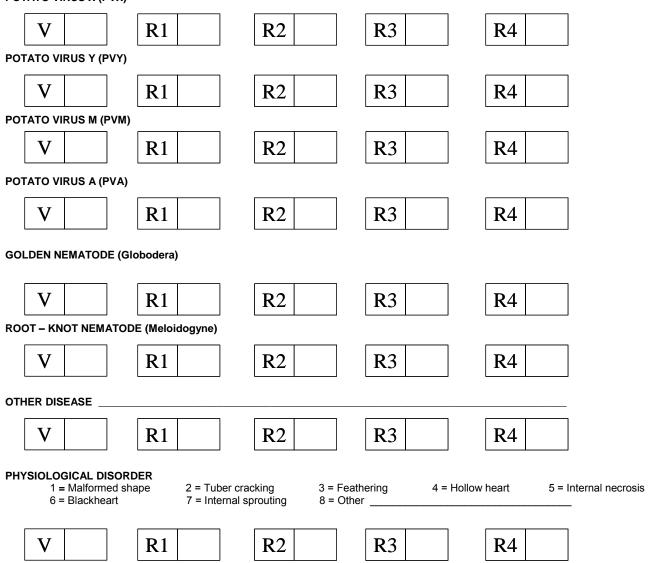
LATE BLIGHT: (Phytophthora) **R3** V **R**2 **R**4 **R**1 EARLY BLIGHT: (Alternaria) **R**2 V **R**1 **R**3 **R**4 SOFT ROT (Erwinia) V **R**1 **R**2 **R**3 **R**4 **COMMON SCAB (Streptomyces) R3** V **R**2 **R**4 **R**1 **POWDERY SCAB (Spongospora) R**2 **R**3 V **R**1 **R**4 **DRY ROT (Fusarium)** V **R**2 **R**3 **R**1 **R**4 POTATO LEAF ROLL VIRUS (PLRV) R2 **R3** V **R**1 **R**4

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8. DISEASES CHARACTERISTICS: (continued)

POTATO VIRUS X (PVX)



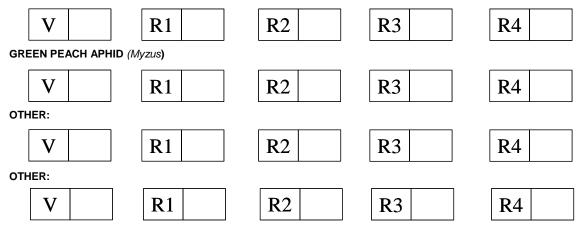
#### 9. PESTS CHARACTERISTICS:

**PEST REACTION:** 0 = Not Tested
 1 = Highly Resistant
 2 = Resistant Few Symptoms
 3 = Resistance Few Lessions in Number and Size

 4 = Moderately Resistance
 5 = Intermedia Susceptible
 6 = Moderate Susceptible

 7 = Susceptible
 9 = Highly Susceptible





10.	GENE TRAITS:	N
	INSERTION OF GENES: 1 = YES 2 = NO	00
	IF YES, describe the gene(s) introduced or attach information:	200800052
11.		052
	CHIEF MARKET:	
	SPECIFIC GRAVITY (wt. air/wt. air – wt. water) 1 = <1.060 2 = 1.060-1.069 3 = 1.070-1.079 4 = 1.080-1.089 5 = >1.090	
	V         R1         R2         R3         R4	
	TOTAL GLYCOALKALOID CONTENT (mg./100 g. fresh tuber)	
	V         R1         R2         R3         R4	

**OTHER QUALITY CHARACTERISTICS**: Describe any other quality characteristics that may aid in identification, (e.g., chip-processing, french fry processing, baking, boiling, after-cooking darkening). Please attach data and corresponding protocol.

#### 12. CHEMICAL IDENTIFICATION:

Describe chemical traits of the candidate variety that aid in its identification (e.g., protien or DSN electrophoresis). Please attach data and the corresponding protocol.

13. FINGER PRINTING MARKERS:

**ISOZYMES** 1 = YES 2 IF YES, attach information

**14. DNA PROFILE:** 1 = YES 2 = NO

IF YES, attach information

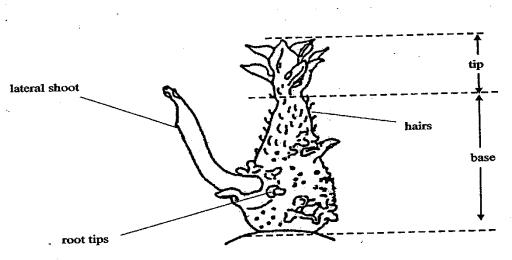
# 15. ADDDITIONAL COMMENTS AND CHARACTERISTICS:

Include any additional descriptors that would be useful in distringuishing the candidate variety.

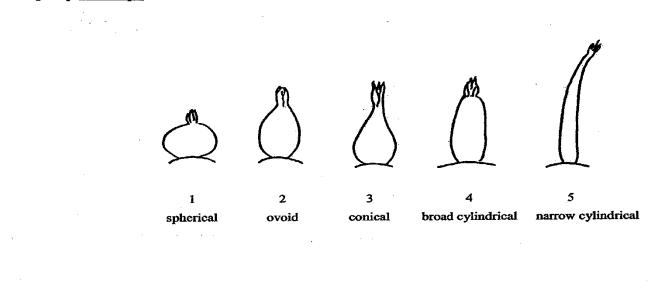
2 = NO

## Figure 1: Light sprout

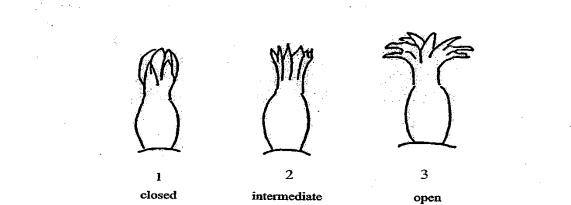
# Light sprout dissection



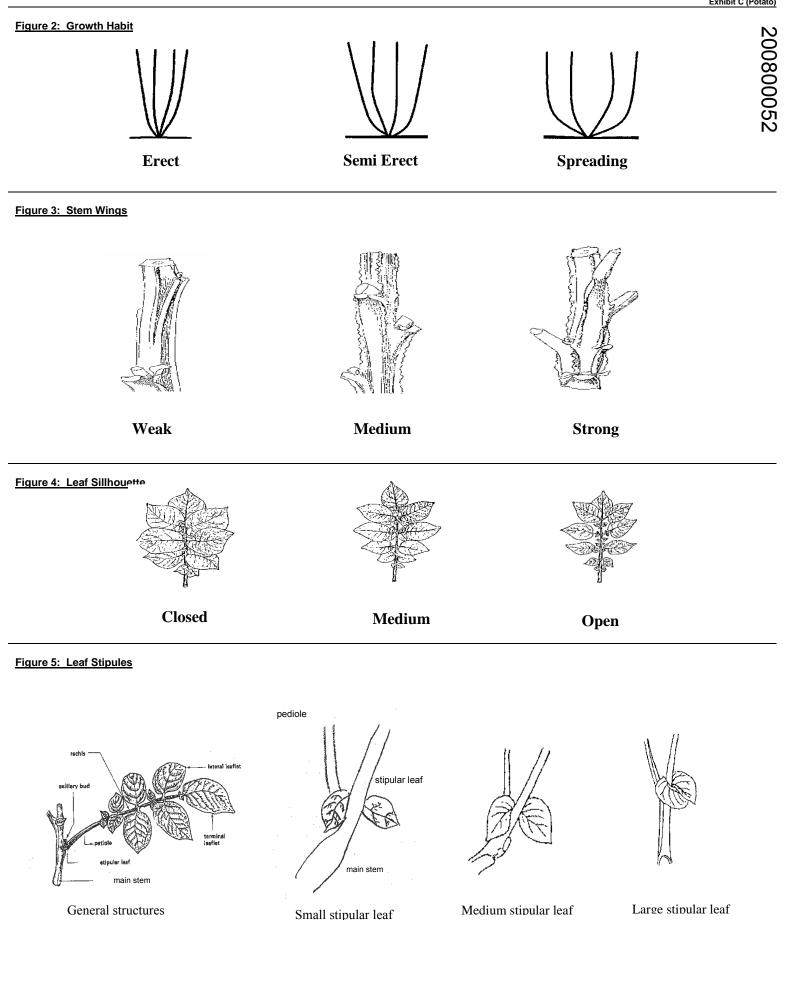
# Light sprout shape



# Light sprout tip habit

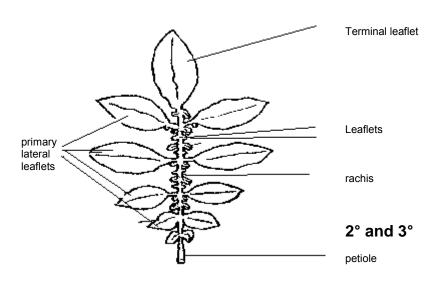


The characteristic should be observed after about 10 weeks to obtain a good differentiation in the collection.

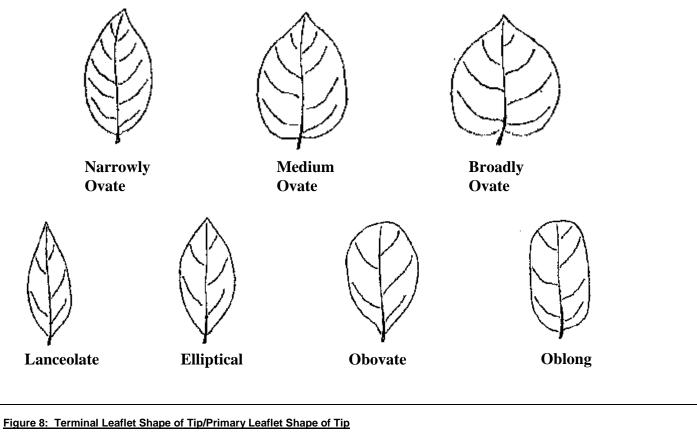


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#### Figure 6: Leaf Dissection



# Figure 7: Terminal Leaflet Shape/Primary Leaflet Shape



Acute Cuspidate Acuminate Obtuse

Exhibit C (Potato)

200800052

Figure 9: Terminal Leaflet Shape of Base/Primary Leafelet Shape of Base

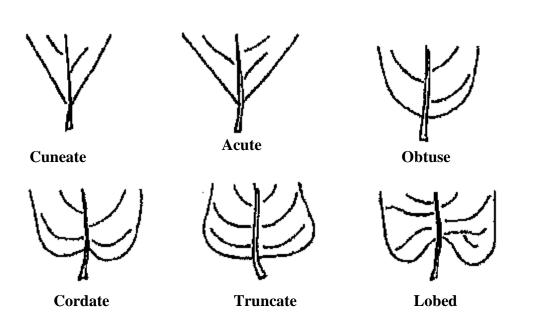
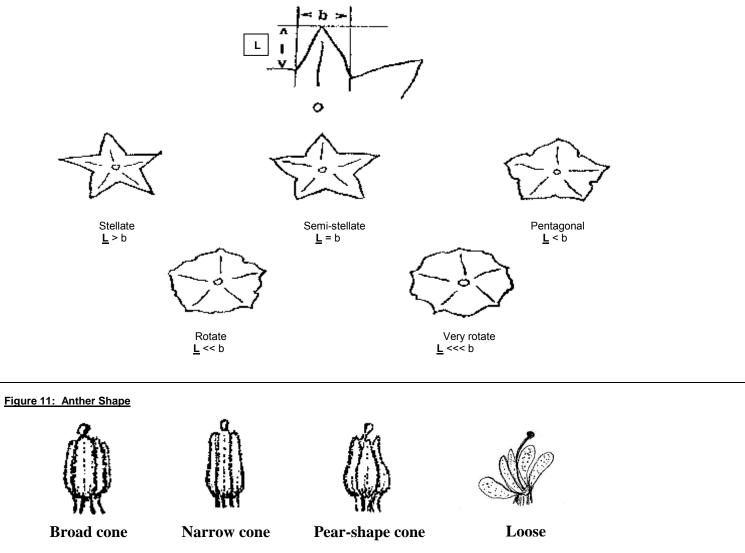
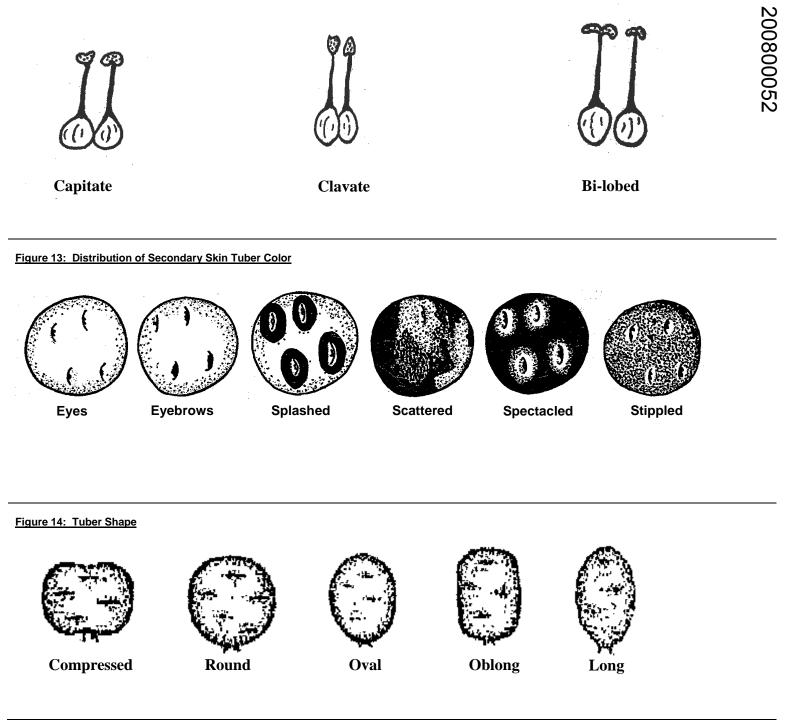


Figure 10: Corolla Shape



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References:

Huaman, Z. 1986. Systematic botany and morphology of the potato. Technical information Bulletin 6. International Potato Center, Lima, Peru.

Huaman, Z., Williams, J.T., Salhuana, W. and Vincent, L. Descriptors for the cultivated potato and the maintenance and distribution of germplasm collections. 1977. International Board for Plant Genetic Resources. Rome, Italy.

Potato (*Solanum tuberosum* L.) Guidelines for the conduct of tests for distinctness, uniformity and stability. International union for the protection of new varieties of plants (UPOV). 2004-03-31.



TEBINA





#200800052

REPRODUCE LOCALLY. Include form number and edition date on all reproduct	tions. F	ORM APPROVED - OMB No. 0581-0055	
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to determin certificate is to be issued (7 U.S.C. 2421). confidential until the certificate is issued (7	The information is held V.S.C. 2426).	
n.v. BINST BREEDING & SELECTION s.a.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME Tebina	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Cokeriestraat 20 1850 Grimbergen, Belgium)	5. TELEPHONE (include area code) 32 2 251 90 25	6. FAX (Include area code) 32 2 252 04 62	
8. Does the applicant own all rights to the variety? Mark an "X" in the appropri	7. PVPO NUMBER # 2 0 0 8 0 0 0 5 2 appropriate block. If no, please explain.		
9. Is the applicant (individual or company) a U.S. national or a U.S. based com Belgium	npany? If no, give name of country.	YES YES NO	
10. Is the applicant the original owner?	NO If no, please answer One	of the following:	
a. If the original rights to variety were owned by Individual(s), is (are) the YES	original owner(s) a U.S. National(s)? NO If no, give name of country Netherlands		
<ul> <li>b. If the original rights to variety were owned by a company(ies), is (are)</li> <li>YES</li> </ul>	the original owner(s) a U.S. based company?	,	

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space If needed):

#### PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet 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 national 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.

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 the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

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To file a complaint of discrimination, write USDA, Director, Office of Chvil Righta, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-0410 or cell (202) 720-5964 (volce and TDD). USDA is an equal opportunity provide and employer.

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U.S. DEPARTMENT OF AGRICULTURE	
AGRICULTURAL MARKETING SERVICE	
SCIENCE AND TECHNOLOGY	
PLANT VARIETY PROTECTION OFFICE	
BELTSVILLE, MD 20705	
-	

	EXHIBIT F DECLARATION REGARDING DEPOSIT			
NAME OF OWNER (8) n.v. BINST BREEDING & SELECTION s.a.	ADDREBS (Street and No. or RD No., City, State, and Zip Code and Country) Cokeriestraat 20 1850 Grimbergen, Belgium	TEMPORARY OR EXPERIMENTAL DESIGNATION		
		VARIETY NAME Tebina		
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	FOR OFFICIAL USIR DNLY		
HA BINGT BREEDING & SELECTION S.d.	Cokeriestraat 20 1850 Grimbergen, Belglum	руро лимвер #200800052		

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

SELECTION S.A. N. GRIMBERGEN COKERIE Signature