

No.



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Ball Horticultural Company

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.)

WALLFLOWER

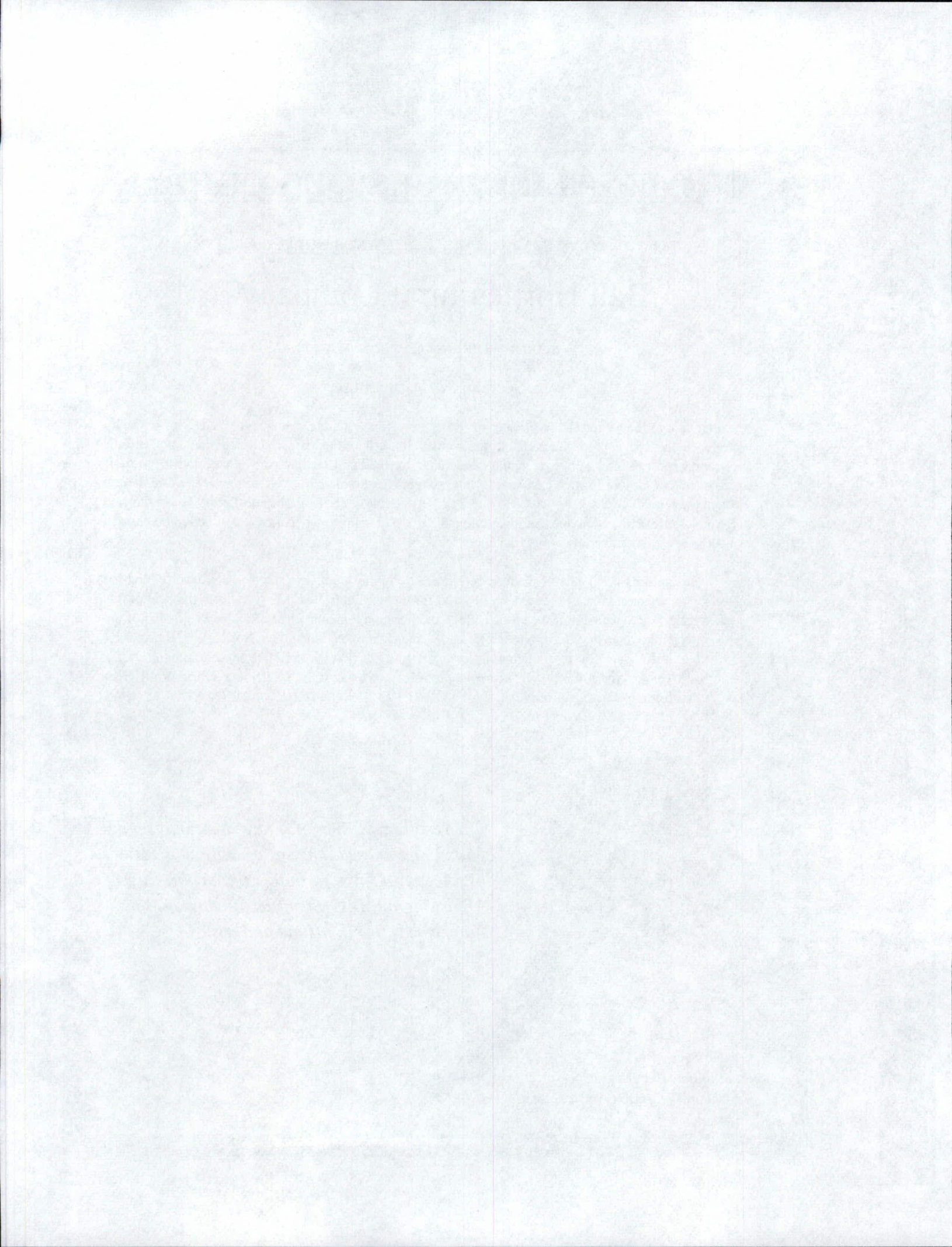
'PAS415015'

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 fifteenth day of March, in the year two thousand and ten.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture



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

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

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

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
 (Instructions and information collection burden statement on reverse)

1. NAME OF OWNER PanAmerican Seed, a division of Ball Horticultural Co. Company		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME 'PAS415015'
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 622 Town Road West Chicago, IL 60185 USA		5. TELEPHONE (include area code) (630) 231-3600	FOR OFFICIAL USE ONLY PVPO NUMBER 200600167 FILING DATE March 29, 2006
		6. FAX (include area code) (630) 231-2590	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation (Ball Horticultural)	8. IF INCORPORATED, GIVE STATE OF INCORPORATION IL	9. DATE OF INCORPORATION July 27, 1995	

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)
 Audrey Charles
 622 Town Road
 West Chicago, IL 60185
 USA

F E S R E C E I V E D	FILING AND EXAMINATION FEES: \$ 4382.00
	DATE 3/29/06
	CERTIFICATION FEE: \$ 768.00
	DATE 10/6/09

11. TELEPHONE (Include area code) (630) 588-3118	12. FAX (Include area code) (630) 231-2590	13. E-MAIL acharles@ballhelix.com
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14. CROP KIND (Common Name) wallflower	16. FAMILY NAME (Botanical) Cruciferae	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.
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15. GENUS AND SPECIES NAME OF CROP Erysimum hieraciifolium	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. Exhibit A. Origin and Breeding History of the Variety
- b. Exhibit B. Statement of Distinctness
- c. Exhibit C. Objective Description of Variety
- d. Exhibit D. Additional Description of the Variety (Optional)
- e. Exhibit E. Statement of the Basis of the Owner's Ownership
- f. Exhibit F. Declaration Regarding Deposit
- g. Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)
- g. Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)
 YES (if "yes", answer items 21 and 22 below) NO (if "no", go to item 23)

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
 YES NO
 IF YES, WHICH CLASSES? FOUNDATION REGISTERED CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
 YES NO
 IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
 FOUNDATION REGISTERED CERTIFIED
 (If additional explanation is necessary, please use the space indicated on the reverse.)

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? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)
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25. The owners declare that a viable sample of basic seed of the variety has been 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 owner(s) is(are) the owner 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 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.
 Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER <i>Audrey Charles</i>		SIGNATURE OF OWNER	
NAME (Please print or type) Audrey Charles		NAME (Please print or type)	
CAPACITY OR TITLE Patent Agent	DATE March 27, 2006	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

Handwritten text, possibly a signature or name, located at the top center of the page.

Handwritten text, possibly a date or reference number, located on the left side of the page.

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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 Baltimore Avenue, 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 initiated 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 variety (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.)

Sale May 1, 2005 to Ball Seed Company for resale

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).)

European PBR EU2005/1173 filed July 20, 2005

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. The 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 activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (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 Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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EXHIBIT A*Origin and Breeding History of the Variety 'PAS415015'*

'PAS415015' was developed by crossing genetically dissimilar individuals, followed by recurrent selection thereafter. Selections were based on early flowering without vernalization, and good basal branching.

Initial crosses were made in 1997 between 'Orange Monarch' x 'Apricot Delight'. In addition, selections were made from 'New Bedder' and massed.

In 1998, one selection from 'Orange Monarch' x 'Apricot Delight' was crossed with a selection from the 'New Bedder' mass.

In 1999 three selections were made based on the above criteria and massed. This cycle was repeated in 2000, 2001, and 2002.

An F₄ family was selected in 2002 and used to create stock seed. The seed resulting from the stock seed increase was used to produce the first commercial crop.

No variants or off types have been observed in either the stock seed increase generation or the subsequent crops.

'PAS415015' has been stable and uniform after 4 generations of seed increase which includes the stock seed increase and commercial crops.

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EXHIBIT B*Statement of Distinctness of the Variety*

Erysimum 'PAS415015' is most similar to 'Golden Bedder'. However, 'PAS415015' is an annual and 'Golden Bedder' is a biennial. Typically, *Erysimum hieraciifolium* varieties, such as 'Golden Bedder', must be vernalized in order to flower. Vernalization is the exposure of seed or plants to low temperature to induce or accelerate the development of the ability to form flowers. Without a vernalization period, *Erysimum* varieties will not flower in the first year. They only flower in the second year, thus making them biennials.

'PAS415015' is one of the CITRONA series marketed for well-branched habit and earliness to flower without a vernalization requirement. This is the only marketed *Erysimum hieraciifolium* series without a vernalization requirement. 'PAS415015' has an orange-colored flower color that is distinct from other varieties in the series.

To evaluate its ability to flower without a vernalization requirement, a greenhouse trial was conducted at the Ball Horticultural Company research facility located in Elburn, Illinois throughout the winter and spring of 2008 to 2009. In the trial, 15 plants of each variety were greenhouse grown in 4 ½-inch pots. All 'PAS415015' plants flowered without vernalization. Since no vernalization treatment was provided, only one 'Golden Bedder' plant flowered, and as can be seen in the attached Exhibit C photo this was an abnormal flower without full inflorescence development. At the end of the trial, no additional flower buds were observed on the remaining comparison plants. Results are summarized in the table below.

Comparison of Days to First Flower from Transplant
for 'PAS415015' and 'Golden Bedder'

Trial	Variety	Sample Size	Average Days to First Flower from Transplant
Winter/Spring 2009	'PAS415015'	15	95.3 +/- 4.9
	'Golden Bedder'	15	One plant flowered at 147 days. Trial concluded at 175 days

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DRAFT FORM (12-97)	United States Department of Agriculture, Agricultural Marketing Service Science and Technology, Plant Variety Protection Office National Agricultural Library Building, Room 400 Beltsville, MD 20705 OBJECTIVE DESCRIPTION OF VARIETY General Form for Any Species	EXHIBIT C (General)
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Name of Applicant(s) Ball Horticultural Company	Variety Seed Source PanAmerican Seed	Variety Name or Temporary Designation 'PAS415015'
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Address (Street & No., or R.F.D. No., City, State, Zip Code and Country) 622 Town Road West Chicago, IL 60185 USA	FOR OFFICIAL USE	
	PVPO Number 200600167	

This is a general form for use when a form for a specific genus and species is not available. Applications of this type are made in species in which few varieties, if any, are commonly known. For that reason, a form cannot be drafted as the span of the variation of most characteristics is not known. In this case, the varieties are described according to the classical Linnaean way. **Using a dictionary of botanical terms and this form**, describe the characteristics of the application variety on the left side of the form **and** describe the most similar comparison variety on the right side of the form. Be as specific as possible. Include photographic prints of the varieties.

1. QUALITATIVE TRAITS:

Crop Kind (Common Name): <u>Erysimum</u> Genus and Species: <u>Erysimum hieraciifolium</u> Location Where Developed: <u>Guadalupe, California</u>	Name of Comparison <u>Cheiranthus allionii (Siberian Wallflower)</u> <u>Synonymous with Erysimum hieraciifolium 'Golden Bedder'</u> Source of Comparison <u>Thompson & Morgan</u>
Preferred Growing Conditions (light, moisture, soil type, pot/bedding/ground cover, etc.) Moderate water, grows in normal to slightly alkaline soils, can tolerate poor soils, grown as bedding plant	Growing Conditions Same
Propagation Method (seed/tuber/cuttings/etc.; inbred/hybrid/open pollinated/etc.; annual/perennial/etc.): Seed propagated; open pollinated; 1 st year flowering biennial (annual), no vernalization required	Propagation Method Seed propagated; open pollinated; biennial, vernalization required
WHOLE PLANT HABIT (herbaceous/woody; upright/prostrate; thorns; tendrils; etc.): Herbaceous; upright	Plant Habit Same
LEAF SHAPE (simple/compound; arrangement on stem; whole leaf shape; leaf margin; leaf base; leaf apex; leaf attachment; leaf venation; pubescence; waxiness; glands; fragrance; etc.) Simple; alternate arrangement on stem; lanceolate leaf shape; serrate margin; attenuate leaf base; acute leaf apex; alternate leaf attachment; palmate venation; no waxiness, no pubescence	Leaf Shape Same
FLOWERS (inflorescence type; floret shape; bud; sepals; petals; stigma; stamen; pollen; etc.) Determinate (cymose) inflorescence; actinomorphic symmetry; four lobed overlapping petals; four sepals; style slender, cylindrical, stigma capitate, anthers oblong	Flowers: Same
FRUITS (type; surface features; attachment; seeds; etc.) Fruit linear, 4-angled, somewhat torulose; seeds oblong	Fruits and Seeds: Same

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2. QUANTITATIVE TRAITS:

	Trait	Average (Mean)	Standard Deviation	Sample Size	Trait	Average (Mean)	Standard Deviation	Sample Size	
	Number of Chromosomes (1N)	----			Number of Chromosomes (1N)	----			
M A T U R I T Y	FROM DIRECT SEEDING	Days from emergence sowing to first flower	130.3	4.9	15	Days from emergence sowing to first flower	157.3 with 5 week vernalization	3.5	15
		Days from emergence sowing to 50% of plants in flower	131.0	0	15	Days from emergence sowing to 50% of plants in flower	157.0 with 5 week vernalization	0	15
		Days from first flower to last flower	----			Days from first flower to last flower	----		
	FROM TRANS- PLANTING	Days from transplant to first flower	95.3	4.9	15	Days from transplant to first flower	122.3 with 5 week vernalization	3.5	15
		Days from transplant to 50% of plants in flower	96.0	0	15	Days from transplant to 50% of plants in flower	122.0 with 5 week vernalization	0	15
		Days from first flower to last flower	----			Days from first flower to last flower	----		
	FROM PACK TRIALS	Days from emergence to first flower	----			Days from emergence to first flower	----		
		Days from emergence to 50% of plants in flower	----			Days from emergence to 50% of plants in flower	----		
		Days from first flower to last flower	----			Days from first flower to last flower	----		
P L A N T	mm Plant Height at Maturity	365.3	66.6	15	mm Plant Height at Maturity	482.7	47.4	15	
	mm Plant Width (Spread) at Maturity	235.7	15.7	15	mm Plant Width (Spread) at Maturity	247.0	19	15	
	Number of Stems Arising from Base of Plant	10.1	0.4	15	Number of Stems Arising from Base of Plant	7.3	1.8	15	
	mm Main Stem Length	365.3	66.6	15	mm Main Stem Length	482.7	47.4	15	
	mm Main Stem Diameter at Mid-point	4.0	0	15	mm Main Stem Diameter at Mid-point	4.0	0	15	
	Number of Branches (arising from lower half of main stem)	12.5	0.6	15	Number of Branches (arising from lower half of main stem)	10.1	2.1	15	
	Branch Angle from Main Stem	≈ 45°	0	15	Branch Angle from Main Stem	≈ 45°	0	15	
L E A V E S	Leaf Angle from Main Stem	≈ 30°	0	15	Leaf Angle From Main Stem	≈ 30°	0	15	
	mm Width of Leaf	13.6	1.2	15	mm Width of Leaf	15.4	1.6	15	
	mm Length of Leaf Including Petiole	107.5	8.5	15	mm Length of Leaf Including Petiole	126.9	9.5	15	
	mm Thickness of Leaf	Less than 1	0	15	mm Thickness of Leaf	Less than 1	0	15	
	mm Length of Petiole	21.7	6.6	15	mm Length of Petiole	20.1	2.9	15	
	mm Width of Leaflet	----			mm Width of Leaflet	----			
	mm Length of Leaflet	----			mm Length of Leaflet	----			
I N F L O R E S C E N C E	mm Inflorescence Height From Ground	365.3	66.6	15	mm Inflorescence Height From Ground	482.7	47.4	15	
	mm Inflorescence Width (Diameter)	53.4	1.6	15	mm Inflorescence Width (Diameter)	61.1	2.9	15	
	mm Depth of Head or Inflorescence	----			mm Depth of Head or Inflorescence	----			
	Number of Florets Per Inflorescence	21	2.5	15	Number of Florets Per Inflorescence	18	2.3	15	
	mm Length of Peduncle	139.7	29.6	15	mm Length of Peduncle	209.3	32.4	15	

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INDIVIDUAL FLORET	Number of Sepals per Floret	4	0	15	Number of Sepals per Floret	4	0	15
	Number of Petals per Floret	4	0	15	Number of Petals per Floret	4	0	15
	Number of Anthers per Floret	4	0	15	Number of Anthers per Floret	4	0	15
	Number of Stigmas per Floret	1	0	15	Number of Stigmas per Floret	1	0	15
	mm Floret Diameter	25.2	1.1	15	mm Floret Diameter	26.1	0.9	15
	mm Eye Diameter	2.5	0.5	15	mm Eye Diameter	2.5	0.5	15
	mm Petal Length (ray flower if Compositae)	11.3	0.5	15	mm Petal Length (ray flower if Compositae)	11.8	0.6	15
	mm Petal Width (ray flower if Compositae)	10.7	0.5	15	mm Petal Width (ray flower if Compositae)	11.7	0.5	15
	mm Disk Flower Length (Compositae only)	---			mm Disk Flower Length (Compositae only)	---		
	mm Disk Flower Width (Compositae only)	---			mm Disk Flower Width (Compositae only)	---		
	mm Sepal Length	11.0	0	15	mm Sepal Length	15.0	0	15
	mm Sepal Width	2.0	0	15	mm Sepal Width	2.0	0	15
	INDIVIDUAL FRUIT	mm Fruit Length	31.6	6.3	15	mm Fruit Length	45.7	6.0
mm Fruit Width		2.0	0	15	mm Fruit Width	2.0	0	15
mm Fruit Thickness		2.0	0	15	mm Fruit Thickness	2.0	0	15
gm Fruit Weight		---			gm Fruit Weight	---		
mm Fruit Rind or Skin Thickness		---			mm Fruit Rind or Skin Thickness	---		
mm Fruit Flesh Thickness		---			mm Fruit Flesh Thickness	---		
Number of Locules (Cavities) per Fruit		2.0	0	15	Number of Locules (Cavities) per Fruit	2.0	0	15
mm Cavity Width		1.0	0	15	mm Cavity Width	1.0	0	15
mm Cavity Length		31.6	6.3	15	mm Cavity Length	45.7	6.0	15
Number of Seeds per Fruit		---			Number of Seeds per Fruit	---		
SEEDS	mg Weight per 1000 Seeds	2020.2			mg Weight per 1000 Seeds	1433.8		
	mm Seed Length	2.0	0	20	mm Seed Length	2.0	0	20
	mm Seed Width	1.0	0	20	mm Seed Width	1.0	0	20
	mm Seed Thickness	1.0	0	20	mm Seed Thickness	1.0	0	20
OTHER								

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3. PLANT COLORS:

	Color Verbal Name	Color Chart Code	Name of Color Chart		Color Name	Color Chart Code	Color Chart Name
EXAMPLE	Light Blue	106C	RHS				
Hypocotyl Color				Hypocotyl Color			
Cotyledon Color				Cotyledon Color			
Brace Root Color				Brace Root Color			
Main Stem Color, Mature	Yellow-green	144A	RHS	Main Stem Color, Mature	Yellow-green	144A	RHS
Leaf or Leaflet Color, Dorsal	Green	137A	RHS	Leaf Color, Dorsal	Green	137A	RHS
Leaf or Leaflet Color, Ventral	Green	138A	RHS	Leaf Color, Ventral	Green	138A	RHS
Leaf or Leaflet Venation Color	Green	138B	RHS	Leaf or Leaflet Venation Color	Green	138B	RHS
Leaf Color, Other (describe location or placement)				Leaf Color, Other			
Petiole Color	Green	138B	RHS	Petiole Color	Green	138B	RHS
Tendrill Color				Tendrill Color			
Thorn Color				Thorn Color			
Bud (Unopened Flower) Color	Orange	N25B	RHS	Bud (Unopened Flower) Color	Orange	N25B	RHS
Stigma Color	Yellow-green	145A	RHS	Stigma Color	Yellow-green	145A	RHS
Style Color	Yellow-green	145B	RHS	Style Color	Yellow-green	145B	RHS
Ovary (Immature Fruit) Color	Green	143A	RHS	Ovary (Immature Fruit) Color	Green	143A	RHS
Pollen Color	White	155D	RHS	Pollen Color	White	155D	RHS
Anther Color	Yellow-green	145A	RHS	Anther Color	Yellow-green	145A	RHS
Filament Color	Yellow-green	145C	RHS	Filament Color	Yellow-green	145C	RHS
Petal Color, Main	Orange	N25C	RHS	Petal Color, Main	Yellow-orange	14B	RHS
Petal Color, Edges (Picotee)				Petal Color, Edges (Picotee)			
Petal Color, Blotches				Petal Color, Blotches			
Petal Color, Streaks				Petal Color, Streaks			
Petal Color, Spots				Petal Color, Spots			
Petal Color, Veins				Petal Color, Veins			
Petal Color, Eye				Petal Color, Eye			
Petal Color, Throat	Orange	N25C	RHS	Petal Color, Throat	Yellow-orange	14B	RHS
Petal Color, Disk Flowers (Compositae only)				Petal Color, Disk Flowers (Compositae only)			

Floral Color, Other (describe location or placement)				Floral Color, Other (describe location or placement)			
Sepal Color	Yellow-green	145A	RHS	Sepal Color	Yellow-green	145A	RHS
Mature Fruit Color, Skin	Yellow-green	144A	RHS	Mature Fruit Color, Skin	Yellow-green	144A	RHS
Mature Fruit Color, Flesh				Mature Fruit Color, Flesh			
Fruit Color, Other (describe location or placement)				Fruit Color, Other			
Seed Coat Color	Grey-brown	N199D	RHS	Seed Coat Color	Grey-brown	N199D	RHS
Seed Embryo Color				Seed Embryo Color			
Seed Structure Color, Other (describe location or placement)				Seed Structure Color, Other			

Note: Common Color Charts: RHS=Royal Horticultural Society Colour Chart
 Munsell=Munsell Book of Color
 HCC=Horticultural Colour Chart
 BCC=British Colour Council Dictionary of Colour Standards

4. DISEASE, INSECT, and ENVIRONMENT RESISTANCE

(Rate from 1 (most susceptible) to 9 (most resistant)):

<input type="checkbox"/> Powdery Mildew <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Aphids <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Heat <input type="checkbox"/> Cold <input type="checkbox"/> Lodging <input type="checkbox"/> Wind <input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Powdery Mildew <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Aphids <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Heat <input type="checkbox"/> Cold <input type="checkbox"/> Lodging <input type="checkbox"/> Wind <input type="checkbox"/> Other (Specify) _____
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REFERENCES:

Bailey, L.H. 1971. Manual of Cultivated Plants. MacMillan, New York, N.Y.
 Hay, R., P. M. Synge. 1991. The Colour Dictionary of Garden Plants with House and Greenhouse Plants. Bloomsbury Books, London.
 Munsell Color Chart for Plant Tissues. Macbeth. P.O. Box 230. Newburgh, N.Y. 12551-0230
 The Wise Garden Encyclopedia. 1990. HarperCollins Publishers, New York, N.Y.

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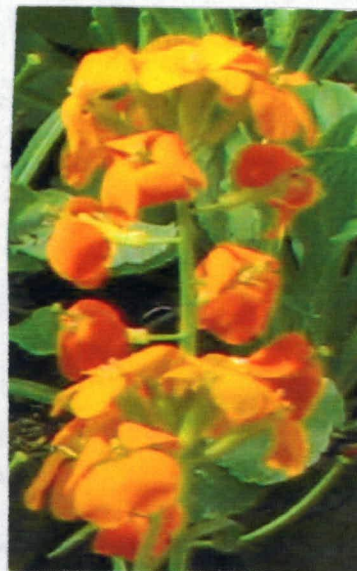
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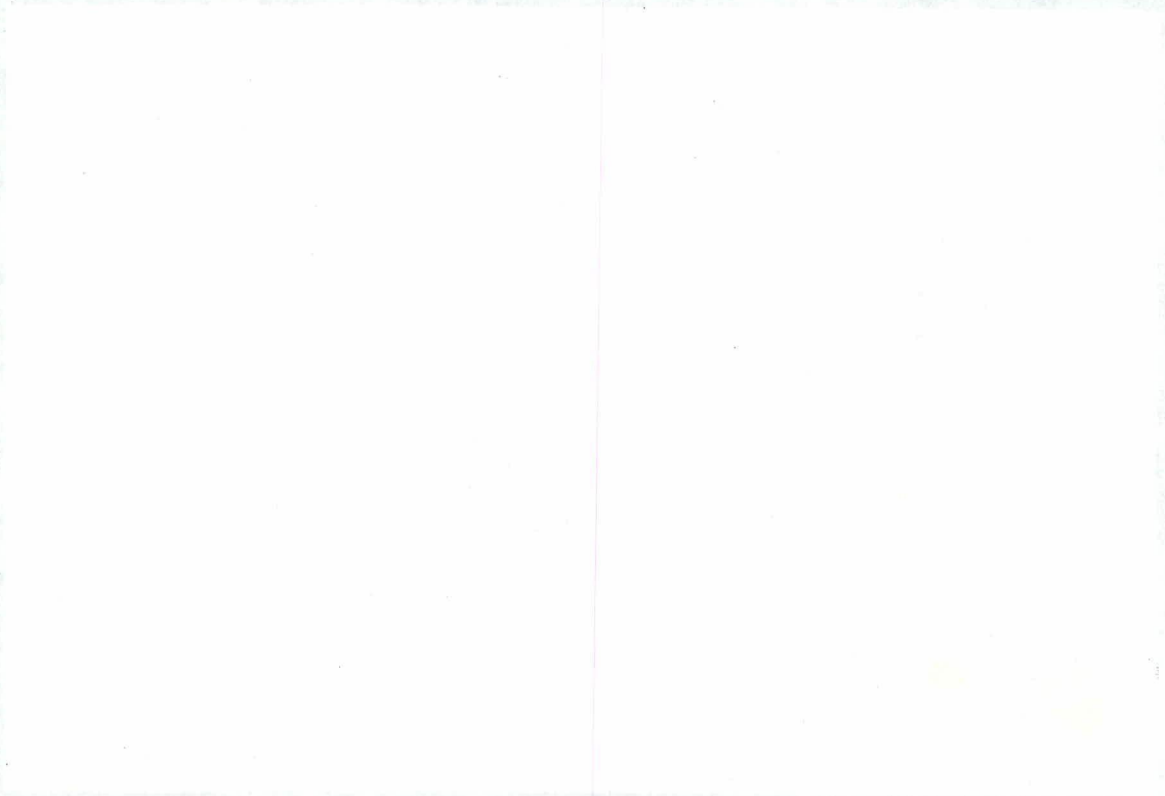
COMMENTS (Attach photographic prints; Continue in Exhibit D):

Photograph taken at the time of application variety 'PAS415015' data collection. Application variety 'PAS415015' on the right with comparison variety 'Golden Bedder' vernalized on far left and unvernalized in the center.



Flower detail of application variety 'PAS415015' on the right with comparison variety 'Golden Bedder' vernalized on left.





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U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE

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

**EXHIBIT E
 STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) Ball Horticultural Company	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME 'PAS415015'
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 622 Town Road West Chicago, IL 60185 USA	5. TELEPHONE (Include area code) (630) 231-3600	6. FAX (Include area code) (630) 231-2590
	7. PVPO NUMBER 200600167	

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

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

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

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

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

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

The breeding of variety 'PAS415015' was conducted in Guadalupe, California at a Ball Horticultural Company Research facility. Other than greenhouse technical staff, the breeder, Troy Thorup, worked alone to develop this variety. He was and currently is an employee of Ball Horticultural Company. By agreement between the employee and Ball Horticultural Company, all rights and ownership to the variety resides with Ball Horticultural Company.

PLEASE NOTE:

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

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

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

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. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the 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, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (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 Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.

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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. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 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 all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (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 Center at 202-720-2600 (voice and TDD).

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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 (S) PanAmerican Seed, a division of Ball Horticultural Company	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 622 Town Road West Chicago, IL 60185 USA	TEMPORARY OR EXPERIMENTAL DESIGNATION
		VARIETY NAME 'PAS415015'
NAME OF OWNER REPRESENTATIVE (S) Audrey Charles	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 622 Town Road West Chicago, IL 60185 USA	FOR OFFICIAL USE ONLY
		PVPO NUMBER 200600167

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.

Audrey Charles
Signature

March 24, 2006
Date

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