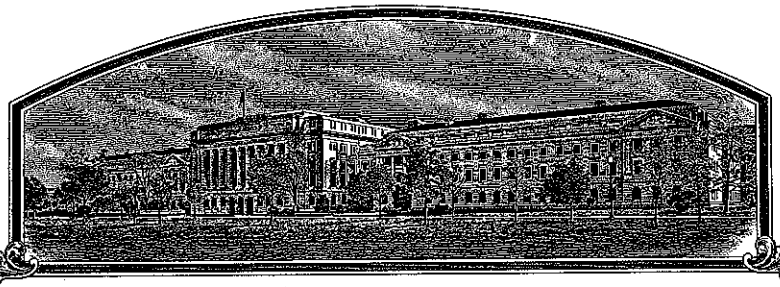
No. 200400327



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seminis Vegetable Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE 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.)

CARROT

'Anthonina'

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 third day of November, in the year two thousand and six.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

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

Form Approved - OMB No. 0581-0055

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

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

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

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

1. NAME OF OWNER
Seminis Vegetable Seeds, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
PSR 710605

3. VARIETY NAME
Anthonina

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
2700 Camino del Sol
Oxnard, CA 93030-7967

5. TELEPHONE *(Include area code)*
805 647 1572

6. FAX *(Include area code)*
805 918 2545

FOR OFFICIAL USE ONLY

PVPO NUMBER
200400327

FILING DATE
Sept. 27, 2004

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
California

9. DATE OF INCORPORATION
04-Jun-1962

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Sharen Chaffin
Seminis Vegetable Seeds, Inc.
37437 State Hwy 16
Woodland CA 95616

Marcel Bruins
Seminis Vegetable Seeds, Inc.
Nude 54D
6702 DN Wageningen
The Netherlands
mbruins@svseeds.nl
Ph: 31 317 450218 Fax: 31 317 450217

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 3652.00
DATE 9/27/04

CERTIFICATION FEE:
$ 768 + 41
DATE 10/11/06

11. TELEPHONE *(Include area code)*
530 669 6172

12. FAX *(Include area code)*
530 666 4426

13. E-MAIL
sharen.chaffin@seminis.com

14. CROP KIND *(Common Name)*
Carrot

15. GENUS AND SPECIES NAME OF CROP
Daucus carota

16. FAMILY NAME *(Botanical)*
Umbelliferae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. 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. ☒ Voucher Sample *(2,500 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 ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. 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 20 and 21 below)* ☑ NO *(If "no", go to item 22)*

20. 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

21. 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.* ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. 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 FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned 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		SIGNATURE OF OWNER	
Sharen Chaffin			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Sharen Chaffin			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Specialist	9-24-02		

INSTRUCTIONS

200400327

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore 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 initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. 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

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. 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.

18d. 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.*

18e. 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.

19. 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).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

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

22. 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.)*

23. 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).)*

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. There is no charge for filing a change of address. The fee for filing a change of 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.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed/ls-sd.htm

200400327

SMS 7/6/06

EXHIBIT A
Origin and Breeding History of PSR 710605, Black Carrot
Anthonina

PSR 710605 was developed from work based at the Seminis Breeding Station in Payette, Idaho. The reproductive cycle was carried out at Payette, while the vegetative cycle was performed at The Elmore Farms, Inc. property near Brawley, California. Roots are grown at the Southern California location and transported to Idaho for seed production. This carrot is the result of a mass selection breeding system out of an original landrace seed source labeled 'Turkey Black Carrot'.

During November 1999, a former Seminis representative, Mr. John Wester, purchased seeds of a landrace, open-pollinated carrot variety at a farmers market in Adana, Turkey. He then sent this seed to the Seminis carrot breeder, Mr. Rob Maxwell, in Payette, Idaho during January 2000. The seed container received by Mr. Maxwell did not have a name on the package, so it was named 'Turkey Black Carrot' in the Seminis variety database. It is worth noting that this type of collection activity is similar to the ongoing activities of the USDA and any other seed collection conservatory where wild sources of germplasm are collected from remote isolated areas, as they can provide all kinds of new and exciting diversity.

Mr. Wester left the employment of Seminis several years ago and it is unfortunate that we do not know where he is currently located. However, we can confirm that the 'Turkey Black Carrot' was a landrace which displayed a lot of segregation and therefore considerable effort and breeding input were needed to come to a commercially acceptable variety which is uniform and stable. Especially in regards to bolting and anthocyanin, a strong selection was needed in order to get rid of the remaining heterogeneity that was present in the landrace.

The main differentiating characteristics between PSR 710605 and 'Turkey Black Carrot' are: PSR 710605 has a more uniform population expression of single tap root with greatly reduced root hair development (refer to Exhibit B - Photo # 2), whereas the 'Turkey Black Carrot' has an excessive amount of "hairy" roots (refer to Exhibit B - Photo # 1) which exhibit forking and splitting. Furthermore, early bolting and anthocyanin root-to-root content variation is greatly reduced in PSR 710605.

Seed of 'Turkey Black Carrot' was planted and sub selections made based upon root quality, interior color, and anthocyanin content. This landrace demonstrated high Anthocyanin content with expression in the xylem, as well as the phloem and exterior. However, the general appearance of the root was unmarketable in Western markets. Roots had an extremely high incidence of early bolting, root forking, prolific secondary root hair formation, and variability in the expression of Anthocyanin, both internal and external. The breeding process was as follows:

Sept. 2000	Planted seed of landrace line identified as 'Turkey Black Carrot' in California.
Feb. 2001	Harvested non-bolting, non-forking roots with high intensity of internal Anthocyanin within 'Turkey Black Carrot'.
Sept. 2001	Harvested seeds from a small mass population (M1) of 16 roots. The carrot was termed 'Black 1' and seed was planted in California.
Feb. 2002	Harvested non-bolting, non-forking roots with high intensity of internal Anthocyanin within 'Turkey Black Carrot'.
Sept. 2002	Harvested seeds from a small mass population (M2) of 4 roots. Seed was planted in California.
Feb. 2003	Harvested non-bolting, non-forking roots with high intensity of internal Anthocyanin within 'Turkey Black Carrot'.
Sept. 2003	Harvested seeds from a small mass population (M3) of 3 roots. Seed was planted in California.
Feb. 2004	The selection was termed '71 0605' and was evaluated as compared to the original 'Turkey Black Carrot'

There is marked improvement in the selection 71 0605, as compared to the original landrace. Early bolting, secondary root hair formation, and root forking are all markedly reduced. Interior anthocyanin development through the core is substantially more uniform. The roots, for the past two generations, demonstrated a form that is acceptable to our Western markets, as a fresh product. The uniformity of the anthocyanin development also makes this more attractive for the juice industry.

As this carrot is open –pollinated and there is always some genetic variation within a population, there are some roots that will have a degree of variation within commercially acceptable limits. However, this selected population is far superior in uniformity and market acceptability than the original germplasm source, and was determined to be uniform and stable within commercially acceptable limits.

JMS 7/6/06

Anthonina

Observations during the years 2004 and 2005 confirm that PSR 710605 is uniform and stable within commercially acceptable limits. As is true with other carrot varieties, a small percentage of off-types can occur within commercially acceptable limits for almost any characteristic during the course of repeated multiplications. No variants are known to occur.

REVISED: 1 June 2006
REVISED: 30 June 2006

200400327

JMS 7/6/06

EXHIBIT B

Novelty Statement Concerning PSR 710605, Black Carrot

Anthonina

PSR 710605 is the result of a mass selection breeding system from a landrace seed source acquired from Turkey. This landrace is referred to as 'Turkey Black Carrot'. To our knowledge, the result is a greatly refined version of the predecessor line. These qualities were demonstrated at a demonstration trial near Brawley, California in February of 2004.

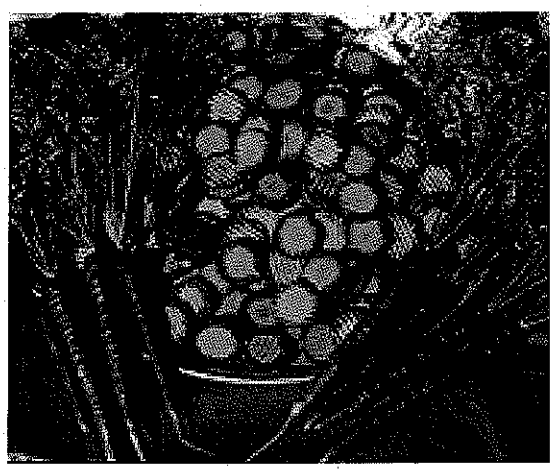
Photo # 1: Turkey Black Carrot:

To our knowledge, the variety most similar to PSR 710605 is the variety Beta Sweet. The comparative characteristics that best distinguish the two include, but are not limited to: root base, root halo, root zoning and xylem color.

- **PSR 710605 has a pointed root base, whereas Beta Sweet has a blunt root base.**
- **PSR 710605 has a faint halo, whereas Beta Sweet has a prominent halo.**
- **PSR 710605 has a faint zoning, whereas Beta Sweet has a prominent zoning.**
- **PSR 710605 has a dark purple xylem (RHS N92C), whereas Beta Sweet has an orange xylem (RHS 28A).**

Photo # 2: PSR 710605

Photo # 3: Beta Sweet:



REVISED: 1 June 2006
REVISED: 30 June 2006

IAS 7/6/06

The experimental and environmental conditions under which <PSR 710605>, 'Turkey Black', and 'Beta Sweet' were grown: Anthonina

Location : Brawley, CA.
Planting time temperatures: 38-42 degrees C.
Approximate latitude: 32 degrees N
Day Length: Probably shortening to 10 ½ hours
Planting period: September
Harvest period: February
Temperatures during growing season: Max =30 degrees; Min= 5 degrees C.
Annual rainfall: Approx. 5 cm
Soil types: Sandy loam

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

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Carrot (*Daucus carota*)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Seminis Vegetable Seeds, Inc.	PSR 7101605	Anthonina

ADDRESS (Street and No. or RD No., City, State, Zip Code and Country)
2700 Camino del Sol
Oxnard, CA 93030-7967

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PVPO NUMBER
200400327

7101606

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

In the spaces on the left, enter the appropriate numbers that describe the characteristics of the application variety. On the right, enter the appropriate numbers that describe the characteristics of the most similar comparison variety. Right justify whole numbers by adding leading zeros if necessary. The variety that you choose for comparison should be the most similar one in terms of overall morphology, background and maturity. The comparison variety should be grown in field trials **with** the application variety for 2-3 location/years (environments) in the region and season of best adaptability. At least one year of trials should be conducted within the United States of America. In general, measurements of quantitative traits should be taken **from one trial on 15-25 randomly selected plants or plant parts** to obtain averages and statistics that describe a typical field of the variety. (Form technical content last updated Feb. 2003.)

Application Variety	Comparison Variety
1. TYPE: 6 1 = Amsterdam 2 = Flakee 3 = Berlicum 4 = Chantenay 5 = Danvers 6 = Imperator 7 = Nantes 8 = Other (Specify) _____	Comparison Variety Name Beta Sweet 3 Type Purple Berlicum
2. REGION OF ADAPTATION IN THE U.S.A.: 7 1 = Northeast 2 = Northwest 3 = Southeast 4 = Southwest 5 = North Central 6 = South Central 7 = Most Regions	4 Region of Adaptability
3. MARKET MATURITY: 120 No Days from Seeding to Harvest	120 Days to Market Maturity
4. PLANT TOP: (At Harvest Stage) 2 Habit: 1 = Erect 2 = Semi-erect 3 = Prostrate 0.5 cm Height from Shoulder to Top of Crown Plant Top Height 75 cm 012 mm Neck Diameter 1 Top Attachment: 1 = Single 2 = Multiple	2 Habit 070 cm Plant Top Height 035 mm Plant Top Diameter 1 Top Attachment Neck Diameter 16 mm
5. LEAF: (At Harvest Stage) 2 Name of Color Chart: 1= Munsell Book of Color 2 = RHS Colour Chart 3 = Other (Specify) _____ 3 Blade Color: 1= Light Green 2 = Medium Green 3 = Dark Green 4 = Other (Specify) _____ Color Chart Value 135A	2 Name of Color Chart 3 Blade Color: Color Chart Value 135A
Application Variety	Comparison Variety

Application Variety	Comparison Variety
5. LEAF: (continued)	
2 Blade Divisions: 1= Fine 2 = Medium 3 = Coarse	2 Blade Divisions
025 cm Blade Length (Without Petiole)	025 cm Blade Length
015 cm Petiole Length from Crown to First Pinna	015 cm Petiole Length
2 Petiole Anthocyanin: 1 = Absent 2 = Present	2 Petiole Anthocyanin
2 Petiole Pubescence: 1 = Absent 2 = Present	2 Petiole Pubescence
6. ROOT: (At Market Maturity)	
15 mm Cortex (Phloem) Thickness (Midpoint X-Section)	15 mm Cortex (Phloem) Thickness
10 mm Core (Xylem) Thickness (Midpoint X-Section)	15 mm Core (Xylem) Thickness
35 cm Carrot Length (Minus Taproot)	24 cm Carrot Length
020 mm Length of Taproot	020 mm Length of Taproot
040 mm Diameter at Shoulder	045 mm Diameter at Shoulder
030 mm Diameter at Midpoint	035 mm Diameter at Midpoint
1 Amount Exposed (Above Ground): 1 = None 2 = 1-10% 3 = 11-20% 4 = 21-30% 5 = 31-40% 6 = > 40%	1 Amount Exposed
2 Shape: 1 = Round 2 = Conic 3 = Cylindrical	2 Shape
2 Collar: 1 = Sunken 2 = Level 3 = Square	2 Collar
1 Shoulder: 1 = Rounded 2 = Sloping 3 = Square	1 Shoulder
1 Base: 1 = Pointed 2 = Medium 3 = Blunt	3 Base
2 Surface Smoothness: 1 = Very Smooth 2 = Dimpled or Corrugated	2 Surface Smoothness
2 Number of Secondary Root Scars: 1 = None 2 = Few 3 = Many	2 Number of Secondary Root Scars
1 Appearance of Secondary Root Scars: 1 = Not Prominent 2 = Prominent	1 Appearance of Secondary Root Scars
2 Halo: 1 = None 2 = Faint 3 = Prominent	3 Halo
2 Zoning: 1 = None 2 = Faint 3 = Prominent	3 Zoning
3 Flavor Harshness: 1 = Very Harsh 2 = Moderately Harsh 3 = Mildly Harsh	2 Flavor Harshness
3 Flavor Sweetness: 1 = Not Sweet 2 = Moderately Sweet 3 = Very Sweet	3 Flavor Sweetness

Notes:

Halo: Cross-section showing color difference between xylem and phloem.

Zoning: Longitudinal cut showing color difference between xylem and phloem.

Application Variety	Comparison Variety

Application Variety	Comparison Variety

COLORS:

Color choices: 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Green 7 = Salmon 8 = Light 9 = Dark 10 = Other (describe)

Color Examples: 02 = Yellow; 34 = Orange-Red; 94 = Dark Red

2 Name of Color Chart: 1 = Munsell Book of Color 2 = RHS Colour Chart 3 = Other (Specify) _____

Application Variety	Comparison Variety
Above Ground Exterior Color: 95 Shoulder (Color chart value N92C)	95 Shoulder (Color chart value 93A)
Above Ground Exterior Color: 95 Skin (Color chart value N92C)	95 Skin (Color chart value 93A)
Below Ground Exterior Color: 95 Shoulder (Color chart value N92C)	95 Shoulder (Color chart value 93A)
Below Ground Exterior Color: 95 Skin (Color chart value N92C)	95 Skin (Color chart value 93A)
X-Section Interior Color: 95 Xylem (Core) (Color chart value N92C)	03 Xylem (Color chart value 28A)
X-Section Interior Color: 95 Phloem (Color chart value N92C)	95 Phloem (Color chart value 93A)

7. FLOWER:

15 Flower Color (Color chart value 91D)	15 Flower Color (Color chart value 91D)
1 Male Fertility: 1 = Fertile 2 = Male-Sterile 3 = Other _____	1 Male Fertility
1 Anthers: 1=Normal 2=Petaloid 3= Other _____	1 Anthers

7. SEED:

100 cm Height of Seed Stalk	110 cm Height of Seed Stalk
2 Stalk Pubescence: 1 = Absent 2 = Little 3 = Moderate 4 = Heavy	2 Stalk Pubescence
150 mm Diameter of First Order Umbel	160 mm Diameter of First Order Umbel
1 Seed Spines: 1 = Absent 2 = Present	1 Seed Spines
210 mg per 100 Seeds	240 mg per 100 Seeds

8. DISEASE REACTIONS: (1 = Susceptible; 2 = Resistant; give races if known)

___ Alternaria Blight	___ Alternaria Blight
___ Aster Yellows	___ Aster Yellows
___ Cavity Spot	___ Cavity Spot
___ Cercospora Blight	___ Cercospora Blight
___ Motley Dwarf Virus	___ Motley Dwarf Virus
___ Powdery Mildew	___ Powdery Mildew
___ Pythium Root Dieback	___ Pythium Root Dieback
___ Schlerotinia Decay	___ Schlerotinia Decay
___ Other (Specify) _____	___ Other (Specify) _____

9. INSECT REACTIONS: (1 = Susceptible; 2 = Resistant; give races if known)

___ Root Knot Nematode	___ Root Knot Nematode
___ Other (Specify) _____	___ Other (Specify) _____

Application Variety	Comparison Variety

Application Variety	Comparison Variety
10. PHYSIOLOGICAL REACTIONS: (1 = Susceptible and 2 = Resistant)	
2 Bolting	1 Bolting
2 Root Splitting	2 Root Splitting

COMMENTS:

JMS 7/6/06

EXHIBIT B D

Novelty Statement Concerning PSR 71 0605, Black Carrot

Anthonina

PSR 71 0605 is the result of a mass selection breeding system from a landrace seed source acquired from Turkey. This landrace is referred to as 'Turkey Black Carrot'. To our knowledge, the result is a greatly refined version of the predecessor line. These qualities were demonstrated at a demonstration trial near Brawley, California in February of 2004.

- Reduced bolting susceptibility. Visual crown observations noted that the 71 0605 had minimal early bolting individuals as compared to the 'Turkey Black' .
- Secondary root hair formation was nearly absent in 71 0605. The 'Turkey Black' was covered in a mat of secondary roots, under the same growing conditions.
- The degree of root forking in 71 0605 was minimal. A visual observation notes that the 'Turkey Black' had nearly 50% forking, while the 71 0605 demonstrated only about 5%.
- The anthocyanin content of 71 0605 was greatly increased over the original landrace. This was due to intensity within roots, as well as increased uniformity between roots.

Please see the data below, that demonstrates the amount of anthocyanin found in 71 0605 as compared to the original landrace and some other anthocyanin breeding lines. There is almost no alpha or beta carotene content in either carrot. The 71 0605 is higher in anthocyanin, but slightly reduced in total sugar content and lutein (data taken from roots grown near Brawley, CA, harvested February 2002).

Variety	Fru	Glc	Suc	Total	Lyc	Lutein	AC	BC	IU Vit A/g	Antho-cyanins
710601	2.42	2.57	2.72	7.71	1.2	2.3	41.7	105.8	211.1	561
710602	2.28	2.48	1.86	6.62	0.5	2.0	44.4	86.2	180.7	800
710603	2.45	2.60	2.81	7.86	0.6	1.6	48.7	94.9	198.7	239
710605	1.38	1.39	2.19	4.96	0.0	1.0	0.0	0.2	0.3	10861
Turkey Black	2.16	2.32	2.37	6.85	0.0	3.0	0.4	3.1	5.4	5262

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

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)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Seminis Vegetable Seeds, Inc.	PSR 710605	Anthonina
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
2700 Camino del Sol Oxnard, CA 93030-7967	805 647 1572	805 918 2545

7. PVPO NUMBER **200400327**

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

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 *(If needed, use the reverse for extra space)*:

The variety named in this application was developed by the Seminis Vegetable Seeds, Inc., employee (breeder) named below. By agreement between employee and Seminis Vegetable Seeds, Inc., all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.

Employee (Breeder): Rob Maxwell Site Location: Payette, Idaho

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.