

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 2.0 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, age, disability, and where applicable, sex, marital status, familial 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 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 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). USDA is an equal opportunity provider and employer.

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

**Exhibit C**

**OBJECTIVE DESCRIPTION OF VARIETY  
Carrot (*Daucus carota*)**

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country)		FOR OFFICIAL USE ONLY
		PVPO NUMBER

**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. 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.

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

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

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
<b>COLORS:</b>	
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: <u>0 2</u> = Yellow; <u>3 4</u> = Orange-Red; <u>9 4</u> = Dark Red	
___ Name of Color Chart: 1 = Munsell Book of Color 2 = RHS Colour Chart 3 = Other (Specify) _____	
Above Ground Exterior Color: ___ Shoulder (Color chart value _____)	___ Shoulder (Color chart value _____)
Above Ground Exterior Color: ___ Skin (Color chart value _____)	___ Skin (Color chart value _____)
Below Ground Exterior Color: ___ Shoulder (Color chart value _____)	___ Shoulder (Color chart value _____)
Below Ground Exterior Color: ___ Skin (Color chart value _____)	___ Skin (Color chart value _____)
X-Section Interior Color: ___ Xylem (Core) (Color chart value _____)	___ Xylem (Color chart value _____)
X-Section Interior Color: ___ Phloem (Color chart value _____)	___ Phloem (Color chart value _____)
<b>7. FLOWER:</b>	
___ Flower Color (Color chart value _____)	___ Flower Color (Color chart value _____)
___ Male Fertility: 1 = Fertile 2 = Male-Sterile 3 = Other _____	___ Male Fertility
___ Anthers: 1=Normal 2=Petaloid 3= Other _____	___ Anthers
<b>7. SEED:</b>	
___ cm Height of Seed Stalk	___ cm Height of Seed Stalk
___ Stalk Pubescence: 1 = Absent 2 = Little 3 = Moderate 4 = Heavy	___ Stalk Pubescence
___ mm Diameter of First Order Umbel	___ mm Diameter of First Order Umbel
___ Seed Spines: 1 = Absent 2 = Present	___ Seed Spines
___ mg per 100 Seeds	___ mg per 100 Seeds
<b>8. DISEASE REACTIONS:</b> (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) _____
<b>9. INSECT REACTIONS:</b> (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) Bolting Root Splitting Bolting Root Splitting

**COMMENTS:** Attach ONE photographic print of the application variety and the comparison variety described above, indicating the identity of each variety. This photograph should show roots and leaves of each variety at a magnification sufficient to identify most of the verbal descriptors given above. (Additional information and photographs in support of this application may be supplied as part of the Exhibits B or D.)