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

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY
Zinnia (*Zinnia* spp.)**

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. 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 August 1978.)

Application Variety Data	Comparison Variety Data
<p>1. SPECIES:</p> <p>___ Species: 1 = <i>Z. elegans</i> 2 = <i>Z. linearis</i> 3 = <i>Z. hageana (angustifolia)</i> 4 = Species Cross _____</p>	<p>Comparison Variety Name _____</p> <p>___ Species</p>
<p>2. PLOIDY</p> <p>___ Ploidy: 1 = Diploid (2n) 2 = Tetraploid (4n) 3 = Other (Specify) _____</p>	<p>___ Ploidy</p>
<p>3. FLOWER TYPE</p> <p>___ Type: 1 = Button (<i>Cherry Buttons, Thumbelina</i>) 2 = Pompon (<i>Scarlet Gem, White Gem</i>) 3 = Dahlia (<i>Dream, Exquisite</i>) 4 = Crested, Scabiosa (<i>Wind Witch</i>) 5 = Cactus (<i>Blaze, Sunny Boy</i>) 6 = Mexican (<i>Old Mexico</i>)</p>	<p>___ Type</p>
<p>4. PLANT</p> <p>___ ___ Days from Emergence to First Flower</p> <p>___ Season: 1 = Short, Concentrated Flowering 2 = Long, Continuous Flowering</p> <p>___ ___ No. of Primary Branches</p> <p>___ ___ No. of Secondary Branches</p> <p>___ ___ No. of Tertiary Branches</p> <p>Main Stalk:</p> <p>___ ___ No. of Internodes on Main Stalk</p> <p>___ ___ cm Length of Internodes Between First and Second Nodes</p> <p>___ ___ mm Diameter Between First and Second Nodes</p>	<p>___ ___ Days to First Flower</p> <p>___ Season</p> <p>___ ___ No. of Primary Branches</p> <p>___ ___ No. of Secondary Branches</p> <p>___ ___ No. of Tertiary Branches</p> <p>Main Stalk:</p> <p>___ ___ No. of Internodes on Main Stalk</p> <p>___ ___ cm Length of Internodes</p> <p>___ ___ mm Diameter</p>
Application Variety Data	Comparison Variety Data

Application Variety Data	Comparison Variety Data
<p>4. PLANT, Main Stem:(cont.)</p> <p>___ Habit: 1 = Compact 2 = Spreading</p> <p>___ cm Wide</p> <p>___ cm High</p> <p>___ Pubescence: 1 = Glabrous 2 = Sparsely Pubescent 3 = Pubescent</p>	<p>___ Habit</p> <p>___ cm Wide</p> <p>___ cm High</p> <p>___ Pubescence</p>
<p>5. LEAF</p> <p>___ Leaf Shape: 1 = Lanceolate 2 = Ovate 3 = Elliptic</p> <p>___ mm Wide</p> <p>___ mm Long</p> <p>___ Dorsal Surface Pubescence: 1 = Glabrous 2 = Pubescent</p> <p>___ Ventral Surface Pubescence: 1 = Glabrous 2 = Pubescent</p>	<p>___ Leaf Shape</p> <p>___ mm Wide</p> <p>___ mm Long</p> <p>___ Dorsal Surface Pubescence</p> <p>___ Ventral Surface Pubescence</p>
<p>6. FLOWERS</p> <p>___ cm Length of Cut Flower (From head to first branch)</p> <p>___ Average No. Flowers per Plant</p> <p>___ cm Diameter of Head</p> <p>___ Stem Rigidity: 1 = Rigid 2 = Flexible</p> <p>___ Stem Brittleness: 1 = Brittle 2 = Wirey</p> <p>___ Doubleness: 1 = Single (<i>one row of rays</i>) 2 = Semi-single (<i>several rows of rays</i>) 3 = Semi-double (<i>many rows of rays</i>) 4 = Double (<i>all rays</i>)</p>	<p>___ cm Length of Cut Flower</p> <p>___ Average No. Flowers per Plant</p> <p>___ cm Diameter of Head</p> <p>___ Stem Rigidity</p> <p>___ Stems Brittleness</p> <p>___ Doubleness</p>
<p>7. RAY PETALS</p> <p>___ Shape 1 = Flat 2 = Twisted 3 = Curled 4 = Shaggy 5 = Quilled 6 = Combination or Other (Specify) _____</p> <p>___ Dorsal Surface Pubescence: 1 = Glabrous 2 = Pubescent</p> <p>___ Ventral Surface Pubescence: 1 = Glabrous 2 = Pubescent</p> <p>___ Dorsal Surface Luster: 1 = Dull 2 = Shiny</p> <p>___ Ventral Surface Luster: 1 = Dull 2 = Shiny</p> <p>___ Apices Shape: 1 = Acute 2 = Obtuse</p> <p>___ Apices Margin: 1 = Entire 2 = Notched 3 = Spined</p>	<p>___ Shape</p> <p>___ Dorsal Surface Pubescence</p> <p>___ Ventral Surface Pubescence</p> <p>___ Dorsal Surface Luster</p> <p>___ Ventral Surface Luster</p> <p>___ Apices Shape</p> <p>___ Apices Margin</p>
Application Variety Data	Comparison Variety Data

Application Variety Data

Comparison Variety Data

8. COLOR OF RAYS: Select from colors below. Consider only the predominant colors. Select two color codes when necessary, i.e. Whitish-Orange) 01 06
 (See References below.)

- 01 = White 02 = Cream 03 = Pink 04 = Rose 05 = Red 06 = Orange 07 = Gold 08 = Bronze
 09 = Yellow 10 = Green 11 = Lavender 12 = Scarlet 13 = Salmon 14 = Other (Specify) _____

Color Chart Name _____

___ ___ Monocolor Color Chart Value _____

Patterns for Bicolor or Multicolor:

___ ___ Apex Half Dorsal Side Color Chart Value _____

___ ___ Apex Half Ventral Side Color Chart Value _____

___ ___ Base Half Dorsal Side Color Chart Value _____

___ ___ Base Half Ventral Side Color Chart Value _____

___ ___ Background Dorsal Side Color Chart Value _____

___ ___ Background Ventral Side Color Chart Value _____

___ ___ Streaks Dorsal Side Color Chart Value _____

___ ___ Streaks Ventral Side Color Chart Value _____

___ ___ Stripes Dorsal Side Color Chart Value _____

___ ___ Stripes Ventral Side Color Chart Value _____

___ ___ Spots Dorsal Side Color Chart Value _____

___ ___ Spots Ventral Side Color Chart Value _____

___ ___ Blotches Dorsal Side Color Chart Value _____

___ ___ Blotches Ventral Side Color Chart Value _____

___ ___ Other Dorsal Side Color Chart Value _____
 Describe _____

___ ___ Other Ventral Side Color Chart Value _____
 Describe _____

Color Location Color Chart Value

___ ___ Monocolor _____

Patterns for Bicolor or Multicolor:

___ ___ Apex Half Dorsal Side _____

___ ___ Apex Half Ventral Side _____

___ ___ Base Half Dorsal Side _____

___ ___ Base Half Ventral Side _____

___ ___ Background Dorsal Side _____

___ ___ Background Ventral Side _____

___ ___ Streaks Dorsal Side _____

___ ___ Streaks Ventral Side _____

___ ___ Stripes Dorsal Side _____

___ ___ Stripes Ventral Side _____

___ ___ Spots Dorsal Side _____

___ ___ Spots Ventral Side _____

___ ___ Blotches Dorsal Side _____

___ ___ Blotches Ventral Side _____

___ ___ Other Dorsal Side _____
 Describe _____

___ ___ Other Ventral Side _____
 Describe _____

9. DISK FLORETS

___ Presence: 1 = Absent 2 = Present, Covered 3 = Present, Conspicuous

___ Type: 1 = Not Quilled 2 = Quilled

___ ___ Color (Choose from Colors in No. 8 Above)

Color Chart Name _____ Color Chart Code _____

___ Presence

___ Type

___ Color

Color Chart Code _____

10. ANTHOCYANIN (1 = Absent, 2 = Present)

___ Seedlings

___ Stems

___ Leaves

___ Flowers

___ Seedlings

___ Stems

___ Leaves

___ Flowers

Application Variety Data

Comparison Variety Data

Application Variety Data	Comparison Variety Data
<p>11. SEEDS:</p> <p>___ Yield: 1 = None 2 = Poor 3 = Fair 4 = Good</p> <p>___ mm Long</p> <p>___ mm Wide</p> <p>___ Color: 1 = Tan 2 = Light Brown 3 = Dark Brown</p> <p>Color Chart Name _____ Color Chart Code _____</p> <p>___ mg Per 100 Seeds</p>	<p>___ Yield</p> <p>___ mm Long</p> <p>___ mm Wide</p> <p>___ Color</p> <p>Color Chart Code _____</p> <p>___ mg Per 100 Seeds</p>
<p>DRIED RECEPTICLE (<i>After Seed Removal</i>):</p> <p>___ Shape: 1 = Flat 2 = Dome 3 = Globe 4 = Cone</p> <p>___ cm Length</p> <p>___ cm Diameter at Base</p>	<p>___ Shape</p> <p>___ cm Length</p> <p>___ cm Diameter at Base</p>
<p>13. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)</p> <p>___ Powdery Mildew</p> <p>___ Mosaic</p> <p>___ Fusarium Wilt</p> <p>___ Alternaria Leaf Spot</p>	<p>___ Powdery Mildew</p> <p>___ Mosaic</p> <p>___ Fusarium Wilt</p> <p>___ Alternaria Leaf Spot</p>
<p>14. 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 flower heads of each variety at a magnification sufficient to identify most of the verbal descriptors given above. (Additional photographs in support of this application may be supplied as part of the Exhibits B or D.)</p>	

REFERENCES:

- Bodger Seed Company, LTD. *The Zinnia and Its Uses*. Bul. No 1, 19 pp. 1935.
- Honeywell, E. R., 1970. *The Zinnia*. Purdue University Ext Service HO-104.
- Metcalf, H. N. and J. N. Sharma. *Germplasm Resources of the Genus Zinnia* L. Econ. Bot. 25:169-181. 1971.
- Weddle, Charles. *The Elegant Zinnia*. Nat. Hort. Mag. 24(2): 83-91. 1945.

COLOR: Munsell Book of Color, Royal Horticultural Society Colour Chart, Nickerson's or any recognized color fan may be used to determine the color of the variety.