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

**OBJECTIVE DESCRIPTION OF VARIETY
Tobacco (*Nicotiana tabacum* L.)**

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

INSTRUCTIONS: Place the appropriate number that describes the varietal character of this variety on the lines below.

STANDARD VARIETIES AND CODE NUMBERS

01=NC 95	04=Hicks	07=Madole	10=KY 17	13=KY 160	16=Other
02=NC 2326	05=Speight G-28	08=Burley 21	11=VA 509	14=Pennbel 69	
03=Coker 319	06=SC 58	09=KY 14	12=Maryland 609	15=Havana 503	

AREA OF ADAPTATION

1. CLASS _____

1=Flue-cured	3=Burley	5=Dark/air-cured	7=Cigar binder
2=Fire-cured	4=Maryland	6=Cigar filler	8=Other

2. MATURITY (Transplant to 50% plants 1 fl.)(Select code from Standard Varieties listed above)

_____ No of days	Maturity class _____
_____ No. of days earlier than _____	1=Early (NC 2326, MS KY 14 X L8, MS Bu 37 X L8)
_____ Flowering same as _____	2=Medium (NC 95, Speight G-28, Coker 319, KY 14, MS Bu 21 X KY 10)
_____ No. of days later than _____	3=Late (NC 50, Coker 298, VA 509, R7-11)
	4=Very Late (NC 22NF, Bu 64)

3. PLANT HEIGHT (Select code from Standard Varieties listed above)

<p>TOPPED NORMAL</p> <p>_____ cm tall</p> <p>_____ cm shorter than _____</p> <p>_____ topped height same as _____</p> <p>_____ cm taller than _____</p> <p>Height Class _____</p>	<p>NOT TOPPED (Height to crowfoot)</p> <p>_____ cm tall</p> <p>_____ cm shorter than _____</p> <p>_____ topped height same as _____</p> <p>_____ cm taller than _____</p>
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1=Short (Speight G-28, Bu 49, Bu 64)
 2=Medium (NC 95, NC 2326, Coker 319, KY 14, KY 17)
 3=Tall (Coker 48, Coker 298, C1 501, Bu 21, R7-11)

4. LEAF SIZE AND ANGEL (At leaf maturity of harvestable leaves counting from the bottom of plant) select code from Standard Varieties listed above)

LENGTH 5 TH LEAF		LENGTH 10 TH LEAF		LENGTH 15 TH LEAF	
___ . ___ . ___	cm length	___ . ___ . ___	cm length	___ . ___ . ___	cm length
___ . ___	cm shorter than	___ . ___	cm shorter than	___ . ___	cm shorter than
___ . ___	length same as	___ . ___	length same as	___ . ___	length same as
___ . ___	cm longer than	___ . ___	cm longer than	___ . ___	cm longer than

Leaf Length Class (10th leaf or center of plant) ___

- 1=Short (Bu 49, Bu 64)
- 2=Medium (Bu 21, MS Bu 21 X KY 10)
- 3=Long (MS Bu 21 X L8, R7-11)

WIDTH 5 TH LEAF		WIDTH 10 TH LEAF		WIDTH 15 TH LEAF	
___ . ___ . ___	cm width	___ . ___ . ___	cm width	___ . ___ . ___	cm width
___ . ___	cm narrower than	___ . ___	cm narrower than	___ . ___	cm narrower than
___ . ___	width same as	___ . ___	width same as	___ . ___	width same as
___ . ___	cm wider than	___ . ___	cm wider than	___ . ___	cm wider than

Leaf Width Class (10th leaf or center of plant) ___

- 1=Very Narrow
- 2=Narrow (NC 2326, Bu 64, KY 10)
- 3=Medium (Coker 319, MS Bu 21 X KY 10, KY 14)
- 4=Broad (NC 13, Coker MS Bu 21 X L8, CL 59)
- 5=Very Broad

LEAF ANGLE (Upper angle between stalk and leaf when turgid)

WIDTH 5 TH LEAF		WIDTH 10 TH LEAF		WIDTH 15 TH LEAF	
___ ___	degrees	___ ___	degrees	___ ___	degrees
___ ___	degrees less than	___ ___	degrees less than	___ ___	degrees less than
___ ___	angle same as	___ ___	angle same as	___ ___	angle same as
___ ___	degrees more than	___ ___	degrees more than	___ ___	degrees more than

Leaf Angle Class (10th leaf or center of plant) ___

- 1=Upright (35 degrees) (Speight G70, K 399, Bu 49, Bu 64)
- 2=Medium Upright (35 - 45 degrees) (NC 73, Speight G-15, MD 10, KY 14, Bu 21)
- 3=Medium Drooping (46 - 65 degrees) (Coker 48, Coker 176, MS KY 14 x L8)
- 4=Drooping (65 degrees)

5. LEAF YEILD (Select code from Standard Varieties listed above)

___ ___	kg/ha yield
___ ___	%less yield than
___ ___	yield same as
___ ___	%more yield than

6. LEAF NUMBER (Not including 2 bed leaves) (Select code from Standard Varieties listed above)

TOPPED NORMAL		NOT TOPPED (No. of leaves or nodes to crowfoot from 1 st harvestable leaf)	
___ . ___ . ___	No. per plant	___ . ___ . ___	No. per plant
___ . ___	No. leaves less than	___ . ___	No. leaves less than
___ . ___	Leaf no. same as	___ . ___	Leaf no. same as
___ . ___	No. leaves more than	___ . ___	No. leaves more than

7. INTERNODE AND STALKS (*Plants topped normal*)(*Select code from Standard Varieties listed above*)

___ mm length
 ___ mm shorter than ___
 internodes same as ___
 ___ mm longer than ___
 Internode Length Class
 1=Short (Speight G-28, Bu 49, Bu 64)
 2=Medium (Coker 319, KY 14)
 3=Long (NC 2326, MS Bu 21 X L8)

___ Stalk Diameter Class
 1=Small (LY 14, MS Bu 21 X KY 10)
 2=Medium (MS KY 14 X L8, R7-11)
 3=Large (VA 509, KY 17)

8. LEAF CHARACTERISTICS

___ LEAF CARRIAGE (<i>Midrib</i>) 1=Arched 2=Not arched (<i>Coker 347, Bu 21</i>)	___ TIP SHAPE 1=Acute (<i>MD 64</i>) 2=Acuminate (<i>Speight G-70, McNair 373, Coker 48</i>) ___ cm tall 3=Obtuse(<i>MD 872, Reams 64, NC 13</i>)	___ LEAF MARGIN 1=Wavy(<i>McNair 944, MD 59</i>) 2=Not wavy (<i>McNair 373, Speight G-70</i>)
___ LEAF COLOR 1=Light green (<i>Coker 298, K 399, MD 609</i>) 2=Green (<i>NC 95, Coker 48</i>) 3=Dark green (<i>MD 10, MD 201, KY 14</i>)	___ VENATION PATTERN 1=Square(<i>McNair 944</i>) 2=Angular(<i>Speight G-70, Hicks</i>)	___ LEAF MARGIN CURVING 1=Recurved (<i>MD 59</i>) 2=Not recurved (<i>Speight G-70, McNair 373</i>)
___ LEAF SHAPE 1=Broadcast at middle of leaf (<i>Coker176</i>) 2=Broadcast below middle (<i>K 399, McnAIR 373</i>) 3=Broadcast above middle (<i>Speight G-140</i>)	___ LEAF SURFACE (<i>Web, Rugosity</i>) 1= Smooth(<i>Hicks, Speight G-70</i>) 2=Puckered(<i>NC 95</i>)	

9. FLOWERS

___ COLOR
1=White
2=Pink
3=Red
4=Other (*Specify*) _____
 ___ FLOWER HEAD HABIT
1=Closed (*NC 95, Bu 21*)
2= Intermediate (*NC 89*)
3=Open (*Hicks, NC 2326*)

10. PLANT FORM

___ 1=Pyramidal (*Coker 176*)
 ___ 2=Columnar (*K 326, Bu 49, Bu 64*)
 ___ 3=Inverted cone
 ___ 4=Other

11. GROUND SUCKERS (*Select code from Standard Varieties*)

___ No. per plant
 ___ No. per plant less than ___
 No per plant same as ___
 ___ No. per plant more than ___

12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Low resistant, 3 = Moderate resistance, 4 – High resistance)

___ Black Shank (<i>Phytophthora parasitica var. nicotianae race 0</i>)	___ Bacterial Wilt (<i>Granville Wilt</i>) (<i>Pseudomonas solanacearum</i>)
___ Black Shank (<i>Phytophthora parasitica var. nicotianae race 1</i>)	___ Potato Virus Y (<i>Vein banding</i>)
___ Black Root Rot (<i>Thielaviopsis basicola</i>)	___ Tobacco Vein Mottling Virus (<i>TVMV</i>)
___ Blue Mold (<i>Peronospora tobacina</i>)	___ Tobacco Mosaic Virus (<i>TMV</i>)
___ Wildfire (<i>Pseudomonas tabaci</i>)	___ Tobacco Etch Virus
___ Blackfire or Angular Leaf Spot (<i>Pseudomonas angulata</i>)	___ Cyst Nematode (<i>Heterodera tabacum</i>)
___ Fusarium Wilt (<i>F. oxysporum var. nicotianae</i>)	___ Nematode Root Rot (<i>Leision</i>) (<i>Pratylenchus spp.</i>) Species _____
___ Fusarium Wilt (<i>F. oxysporum var. batatas</i>)	___ Root Knot Nematode (<i>Meloidogyne spp.</i>) Species _____
___ Frog-eye (<i>Cercospora nicotianae</i>)	___ Ozone Air Pollution (<i>Weather fleck</i>)
___ Brown Spot (<i>Alternaria alternata</i>)	___ Other (<i>Specify</i>) _____
	___ Other (<i>Specify</i>) _____

13. LEAF CONSTITUENTS (*GIVE DATA FOR APPLICATION AND A STANDARD VARIETY*)

___ . ___ % Nicotine	___ . ___ % Nicotine (<i>Standard</i>) _____
___ . ___ % Nor Nicotine	___ . ___ % Nor Nicotine (<i>Standard</i>) _____
___ . ___ % Total Nitrogen	___ . ___ % Total Nitrogen (<i>Standard</i>) _____
___ . ___ % R. Sugars Flue-cured	___ . ___ % R. Sugars Flue-cured (<i>Standard</i>) _____

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE(S) THE APPLICATION VARIETY. (For the following characteristics indicate "Degree of Resemblance" by placing in the column marked "D.R.," one of the following numbers)

1=Application variety is less than comparison variety

2=Same as

3=More than, better, greater, darker, etc.

CHARACTERISTICS	VARIETY(S)	D. R.	CHARACTERISTICS	VARIETY(S)	D. R.
Flowering			Leaf tip shape		
Leaf length			Venation pattern		
Leaf width			Leaf surface		
Leaf carriage			Leaf margin		
Patiote angle			Leaf color		
Leaf shape			Plant form		

15. COMMENTS (Describe all characters and conditions that cannot be adequately described in this form (lodging resistance disease rating compared to standard checks, etc.)