

**PRODUCTION TECHNOLOGY FOR FULL FLAVOR BURLEY TOBACCO  
CY 2015-2016**

TECHNOLOGY COMPONENT	DETAILS					
		Bacterial Wilt	RKN	Black Shank	Fusarium Wilt	TMV/CMV
1. Variety	TN 90 CC812G NC 7 KT 206	S HR S S	S S HR S	MT R R HR	S MR HR S	R S R R
2. Sowing Date	October to December 10					
3. Transplanting Cut-off Date	January 23					
4. Transplanting Method	Ridge in low lying areas; all the rest, in furrow					
5. Distance of Planting	1.0 m x 0.42 1.10 m x 0.38 1.20 m x 0.35					
6. Number of Plants/ha	24,000					
7. Replanting	Within 5 days after planting					
8. Fertilizer Rate (kg N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O/ha)	ULPI CDF	261-108-194 282-125-173				
9. Fertilizer Source & Time and Method	Quantity	Rate & Source	Method and Time			
	<b>Combination 1 - ULPI</b>					
	12 bags	10-18-24	} Basal- band application along the furrow before ridge construction			
	2 bags	0-0-50				
	6 bags	46-0-0	} 1st Sidedress at 10-14 DAT - band application during hilling-up or dibble at 2 points about 8 cm from the plant base.			
	6 bags	21-0-0	} 2nd sidedress-band application after off-barring at 25-28 DAT			
	4 kgs	Foliar (20-20-20)	} Apply as spray starting at 10 DAT applied at weekly interval until topping time			
	<b>Combination 2 - CDF</b>					
	10 bags	Bio-Organic Fertilizer	} Basal - band application along the furrow before ridge construction			
	10 bags	16-20-0				
	2 bags	0-0-50				
	8 bags@25kg/ba	13.7-0-46.3	} Sidedress at 10-14 DAT- band application during hilling-up or dibble at 2 points about 8cm from the plant base			
	4 bags	46-0-0				
	6 bags	21-0-0	} Organic growth stimulant : Spray 14 DAT at 14 days interval			
	1 l/ha	Seapoint Foliar (19-19-19)	} Spray weekly from 30 DAT until topping			

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10. Cultivation	1st Off- Barring at 10-14 DAT 2nd Hilling Up at 25- 28 DAT 3rd Hilling Up at 35-40 DAT																																																																																								
11. Irrigation Method and Schedule	Hill to hill irrigation at transplanting 1st - 10 to 14 DAT, Hill to hill irrigation 2nd - 17 to 24 DAT, alternate furrow irrigation 3rd - 24 to 34 DAT , alternate furrow irrigation 4th - after the first priming, all furrows and succeeding irrigation will depend on soil moisture																																																																																								
12. Crop Protection Agents	<p><b>NOTE: THE FARMERS ARE ENCOURAGED TO APPLY CPAs ONLY AS NEEDED. To avoid CPA residues on tobacco, reduce farmers' exposure to CPAs, and, prevent insect resistance development, spray only when the insect or population is beyond ETL.</b></p> <p><b>INSECT PESTS                      Economic Treshold Level (ETL)</b>  CUTWORM                      5 out of 100 plants (5%) with recent cutworm  BUDWORM                      2 budworm larvae in 4 random sample groups of 10 plants each  APHIDS                              5 out 50 plants have at least 50 aphids in a leaf  LOOPERS                            Treat when 10 % or more of the plants checked are infested with live worms of any size.  LEAF MINERS  KATYDID                            Treat when 5 katydids are seen per 50 plants.</p> <p><b>NOTE: REFER TO ANNEX "H" FOR THE SAFE USE AND MANAGEMENT OF CROP PROTECTION AGENTS (CPAs)</b></p> <table border="1"> <thead> <tr> <th>GROWTH STAGE</th> <th>ACTIVE INGREDIENT</th> <th>BRAND NAME</th> <th>TOXICITY CATEGORY</th> <th>MODE OF ACTION</th> <th>TARGET PESTS</th> <th>DOSAGE PER 16 L</th> <th>PRODUCT VOLUME</th> <th>NO. 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	<b>Early Maturity (35 – 50 DAT)</b>	Bt + Pyridalyl	Dipel + Pleo	IV	systemic	cutworm, budworm, loopers	30g+20ml	330g+220ml	1	11		
		OR Acephate	Compete 75 SP	III	systemic	cutworm, budworm, loopers, aphids	20g	220g	1	11	3	24
			Blackhawk		contact, systemic, stomach	cutworm, budworm, loopers, aphids	30 ml	330 ml		11		24
		OR Flubendiamide	Fenos 480 SC	IV	systemic	cutworm, budworm	4ml	50-75ml	1	13-19	14	24
	<b>Maturity (60 DAT)</b> until the third or fourth harvest depending on insect population and crop stand	Bt + Pyridalyl	Dipel + Pleo	IV	systemic	cutworm, budworm, loopers	30g+20ml	360g+240ml	1	12		
		Indoxacarb	Steward 30 WDG	III	contact, stomach, ovicidal	cutworm, budworm, loopers, leaf miners	4g sachet	40g=10 sachet	1	10	7	12
									Total Tankloads		48-56	
<b>"Topping before full bloom and field sanitation are important IPM strategies that can sustainably reduce insect infestation on tobacco".</b>												
13. Topping	<p>When 30% of plants have one open flower. Topping height : <b>18 to 22 leaves</b></p> <p>Flumex            3 liters/ha            Dilution rate : 1.25 ml Flumex to 98.75 ml water ml water Apply 10 ml/plant ml solution per plant, right after topping or within 24 hours</p> <p>ART-78            12 liters            Dilution rate : 1 ml ART 78 to 30 ml water 20 ml solution per plant, right after topping or within 24 hours after topping</p>											

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15. Harvesting	<p>Prime 2-3 mature leaves (lugs) at 55-60 DAT. Priming is done at weekly interval to farmers who practice priming activity. Stalk cut at 85-90 DAT.</p> <p><b>Important:</b> Haul leaves/stalk immediately after harvest and unload under the shade, using cheese cloth, and buri "silag" or bamboo slats as matting material during sorting and sticking. File the leaves upright with the butt ends down; hang the stalk immediately inside the barn Sort leaves according to length, maturity and insect damage before sticking, and hang the leaves within the day</p> <p><b>Reminder: Do not stalk cut right after irrigation or rain</b></p>										
16. Curing Shed Type	<p>Curing shed with black plastic cover.</p> <p>Dimension</p> <p>Dimension: (7 units of this size is needed for 1 ha)</p> <table border="1"> <tr> <td>Floor</td> <td>L= 4.2 m; W= 20 m</td> </tr> <tr> <td>Height</td> <td>3.15 m</td> </tr> <tr> <td>No. of tiers</td> <td>2 if there is priming, one tier if stalk cut only</td> </tr> <tr> <td>Height of 2nd tier</td> <td>1.8 m to accommodate stalks</td> </tr> <tr> <td>Distance between tiers</td> <td>0.75 m.</td> </tr> </table>	Floor	L= 4.2 m; W= 20 m	Height	3.15 m	No. of tiers	2 if there is priming, one tier if stalk cut only	Height of 2nd tier	1.8 m to accommodate stalks	Distance between tiers	0.75 m.
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17. Air Curing	<p>Hang stalks at 25 cm apart for air circulation. Roll the shed cover for 3 days to pre-wilt the leaves/stalks then cover the shed fully to air dry the leaves. Maintain 65%-70% relative humidity (RH) inside the barn particularly during yellowing to lamina drying by closing or opening its sidings : higher than 70%, open sidings for aeration; lower than 65%, close the sidings.</p> <p><b>Note: Pre-wilting is recommended except for overripe tobacco Do not stripped tobacco leaves with swelled stems to prevent TSNA.</b></p>										
18. Unloading	<p>Pile for three days for pre-conditioning of leaves</p>										
19. Stripping, Sorting and Classification	<p>Stripping should be done when leaves are fully dried. Then leaves will be filed according to leaf position for conditioning for 2-3 weeks When leaves are fully conditioned, classify according to :</p> <ul style="list-style-type: none"> <li>Color</li> <li>Length</li> <li>Thickness</li> <li>Injury/damage</li> </ul> <p><i>Then pile for three (3) days then bale</i></p> <p><b>REMINDER: USE BURI MAT, CHEESECLOTH OR BAMBOO SLATS AS MATTING MATERIAL DURING THESE ACTIVITIES</b></p>										

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19. Straight Laid Open Bale (SLOB) System	<p><b>Bale the leaves using SLOB (Straight Laid Open Bale)</b></p> <p>Size of Bale Box :</p> <p>Size varies according to the requirement of the company in relation to the size of their grading ramp but the weight should not be more than 50 kg.</p> <p>Place 4 pieces of abaca twine inside the baling box just enough tie the leaves in the box.</p> <p>Put leaves of similar size and quality in a bale.</p> <p>Tie leaves before removing the bale box.</p> <p>The weight per bale should be 20-25 kgs</p> <p><b>REMINDER: KEEP THE MOISTURE CONTENT OF THE LEAVES AT 18% OR LESS</b></p>
<b>REFER TO ANNEX "I" FOR THE ELIMINATION OF NON-TOBACCO RELATED MATERIALS (NTRM)</b>	