

**PRODUCTION TECHNOLOGY FOR CIGAR FILLER TOBACCO
CY 2015-2016**

TECHNOLOGY COMPONENT	DETAILS		
1. Variety	Vizcaya Tabije Simmaba		
2. Sowing Date	October to Dec. 15		
3. Transplanting Cut-off Date	January 30		
4. Transplanting Method	Furrow		
5. Distance of Planting	Upper vega	0.9 -1.0 m x 0.6- 0.8 m	
	Lower vega	1.0-1.2m x 0.48-0.8m	
	CDF :	1.0 m x 0.50	
6. Number of Plants/ha	Upper vega	17,256- 18, 519	
	Lower vega	21,000- 10,500	
	CDF :	20,000	
7. Replanting	Not more than 5 days after transplanting (DAT)		
8. Fertilizer Rate (kg N-P ₂ O ₅ -K ₂ O/ha)	ULPI	122 - 54 - 122	
	ILTC	41 - 25 - 37.5	
	CDF	282 - 125 - 173	
9. Fertilizer Source & Time and Method of Application	Quantity	Rate & Source	Method and Time
	ULPI		
	6 bags	10-18-24	} Band application at 0 DAT or dibble at two points beside the plant base at 10 DAT
	2 bags	0-0-50	
	4 bags	46-0-0	} Band application along the furrows after offbarring at 21 DAT Spray starting at 10 DAT and at every insecticide spraying at 21,28, 35 and 42 DAT.
	4 kgs	20-20-20	
	ILTC		
	6 bags	Premix :	Apply either as band application at transplanting (0 DAT) when there is enough moisture or dibble at two points beside the plant base at 10-14 DAT followed immediately by watering.
	Composition of Premix fertilizer 2.5 bags 16-20-0 2 bags 21-0-0 1.5 bags 0-0-50 7 kg Biozome (soil conditioner)		

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10. Cultivation (Off-barring/Hilling-up)	Off-barring at 14 DAT followed by hilling up at 21-25 DAT to remove weeds																									
11. Irrigation Method and Schedule	<p>watering 7 to 14 DAT, hill to hill</p> <p>1st irrigation 31-35 days after transplanting, in alternate furrow</p> <p>2nd irrigation after first priming, all furrows</p> <p>Note: Irrigation volume and frequency depends on soil moisture and weather condition.</p>																									
12. Crop Protection Agents	<p>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.</p> <table border="0"> <tr> <td style="text-align: center;">INSECT PESTS</td> <td style="text-align: center;">Economic Treshold Level (ETL)</td> </tr> <tr> <td>CUTWORM</td> <td>5 out of 100 plants (5%) with recent cutworm</td> </tr> <tr> <td>BUDWORM</td> <td>2 budworm larvae in 4 random sample groups of 10 plants each</td> </tr> <tr> <td>APHIDS</td> <td>5 out 50 plants have at least 50 aphids in a leaf</td> </tr> <tr> <td>LOOPERS</td> <td>Treat when 10 % or more of the plants checked are infested with live worms of any size.</td> </tr> <tr> <td>LEAF MINERS</td> <td></td> </tr> <tr> <td>KATYDID</td> <td>Treat when 5 katydids are seen per 50 plants.</td> </tr> </table> <p>NOTE: REFER TO ANNEX "H" FOR THE SAFE USE AND MANAGEMENT OF CROP PROTECTION AGENTS (CPAs)</p>											INSECT PESTS	Economic Treshold Level (ETL)	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.	
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	GROWTH STAGE	ACTIVE INGREDIENT	BRAND NAME	TOXICITY CATEGORY	MODE OF ACTION	TARGET PESTS	DOSAGE PER 16 L	PRODUCT VOLUME	NO. OF Spraying s	Maximum Tankload/(L for seedbed) per ha	PRE-HARVEST INTERVAL (days)	RE-ENTRY PERIOD (hours)														
	Seedling	Propamocarb HCl	Proplant, Previcur-N	IV	systemic	Pythium spp																				
		Acephate	Blackhawk	III	contact, systemic, stomach		30ml	57ml		1-2 liter/10		24														
			Compete 75 SP			systemic	cutworm	20g	37.5g		3	24														

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	Vegetative (10 - 34 DAT)	Acephate	Blackhawk	III	contact, systemic, stomach	cutworm, budworm, loopers	30ml	120ml	1	4		24
			Compete 75 SP		systemic	cutworm, budworm, loopers	20g	80g	1	4	3	24
		Chlorantraniliprole	Prevathon 5 SC	IV	systemic	cutworm, budworm, loopers	25ml	140ml	1	7	3	12
	Early Maturity (35 - 50 DAT)	Bt + Pyridalyl	Dipel + Pleo	IV	systemic	cutworm, budworm, loopers	30g+20ml	330g+220ml	1	11		
			Compete 75 SP		III	systemic	cutworm, budworm, loopers, aphids	20g	220g	1	11	3
		OR Acephate	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
	60 DAT 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	

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13. Harvesting /Priming Sorting/Sticking	<p>Start at 55 to 60 DAT when leaves are dry. Harvest mature leaves as indicated by the following:</p> <ul style="list-style-type: none"> - leaf color changes from dark green to light green - browning of the leaf tips - midrib turns light green <p>Important: Haul leaves immediately after harvest and unload under the shade, using cheese cloth, bamboo slats or "silag"/ buri mat as matting material during sorting and sticking. File the leaves upright with the butt ends down Sort leaves according to length, maturity and insect damage before sticking and hang the leaves within the day</p> <p>Reminder: Do not prime right after irrigation or rain</p>																		
14. Sunwilting of Tobacco	<p>Sun-wilt stucked leaves for not more than 5 days before hanging them inside the shed Distance between sticks in the rack should be 15 cm apart</p> <p>IMPORTANT : Sunwilting rack should be about 1.5 m high and away from dusty roads.</p>																		
15. Curing Shed Material	<p>Permanent, using GI as roofing Collapsible using black or opaque plastic</p>																		
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17. Curing of Tobacco	<p>Load the barn vertically, or fill a portion of the barn from top to bottom tier for each priming. Hang the stucked leaves parallel to the prevailing wind direction at a distance of 15-20 cm for air circulation. Cure/air-dry the leaves for 21-35 days depending on leaf size and weather condition.</p>																		
18. Ordering/Piling	<p>Unload dried leaves when they are soft and pliable Mist the butt end of the leaves by spraying with water or by exposing the leaves to morning dew before piling Pile leaves according to priming then cover with cheesecloth or buri mat</p>																		

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19. Bulking and Fermentation	<p>Bulk the leaves per priming into mandala for fermentation with the butt ends outward Place a small perforated bamboo pole, with a thermometer INSIDE, at the middle of mandala for temperature monitoring at 7am and 5 pm daily. Cover the mandala with cheese cloth or buri mats and put weights on top Turn/re-bulk the mandala when the temperature reaches the following level:</p> <p>1st turning : 46-48 °C 2nd turning : 49- 51 °C 3rd turning : 52 - 54 °C</p> <p>Fermentation of cigar filler tobacco should last for 30-35 days.</p>
20. Sorting, Classification and Bundling/Baling	<p>Classify the leaves according to NTA grading system; High, Medium -1, Medium-2, Low 1 and Low 2 Bundle "Pongos" leaves according to classification (based on length, color, texture and elasticity) Bale leaves according to classification.</p> <p>REMINDER: KEEP THE MOISTURE CONTENT OF THE LEAVES AT 18% OR LESS</p>
REFER TO ANNEX "I" FOR THE ELIMINATION OF NON-TOBACCO RELATED MATERIALS (NTRM)	