

Reducing Postharvest Losses in Rwanda Project

Reducing Postharvest Losses in Rwanda project is a three-year project (2016 – 2019), which is facilitating systemic changes in the horticultural sector with a focus on postharvest practices. Postharvest management is a systems-based challenge and requires an integrated innovation strategy that incorporates technological and financial innovations, capacity building, enhanced market access and other elements to achieve impact at scale.

Funded by Feed the Future Horticultural Innovation Lab, the Reducing Postharvest Losses in Rwanda project is working under the guidance of the Ministry of Agriculture and Animal Resources in Rwanda with implementing partners, Agribusiness Associates, Rwanda Agricultural Board, National Agriculture Export Development Board and University of Rwanda – College of Agriculture and Veterinary Medicine. The project's postharvest technical assistance partner is Postharvest Education Foundation.

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Tomato: Maturity Indices and Quality



Maturity Indices

Maturity stage	Class	Description	Photo
1	Green	The tomato is completely green	
2	Breaker	Break of color from green to tannish-yellow of less than 10% of the tomato surface. Start harvest →	
3	Turning	Tannish-yellow, pink or red color shows on over 10% but not more than 30% of the tomato surface	
4	Pink	Pink color shows on over 30% of the tomato surface	
5	Light-red	Less than 90% of tomato surface is covered by pinkish-red	
6	Red	More than 90% of the tomato surface is red Tomatoes for drying should be harvested when color changes from green to red →	

Weight, Size, Soluble Solids, Color, Firmness in Maturity Stage

Maturity Stage	Weight (Average of 3 pcs in g)	Size (in cm)	Shape	Color	Firmness (Average of 3 pcs in Kgf)	Soluble Solids (Brix)
1	Was not in the experiment!		Oval	Green		
2	153	13.7		Breaker	1.5	4
3	155	14		Turning	1.2	4.5
4	157	14		Pink	1.3	5
5	161	14.9		Light-red	1	5.5
6	165	17.2		Red	0.1	5.5

High Quality

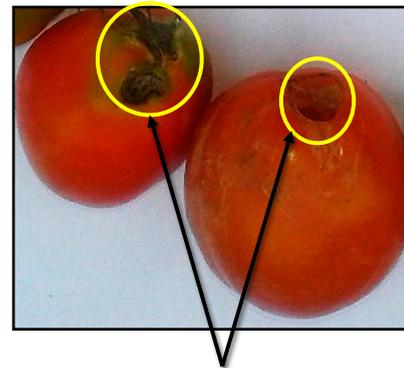


Suitable for directly selling ripe tomatoes. Red color is uniformly distributed. No sunburn, cracks, decay and insect damage on the fruit



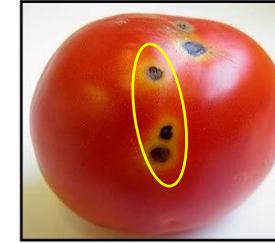
Suitable for storing for 3-4 days before selling until they get ripe.

Rejects



Damaged parts by insects may harbor microorganisms

Quality Defects



Decay

Microorganisms such as bacteria, yeasts and fungi feed on the fruit and break it down.



Cracks

It is a disorder resulting in peel thickness and hardness. There is insufficient mineral nutrients in the peel of the fruit.



Sunburn

It is loss of pigmentation resulting in a yellow, bronze, or brown spot on the sun exposed side of the fruit. The sunburnt fruit can not prevent oxidative stress as the pool of soluble antioxidants is reduced.



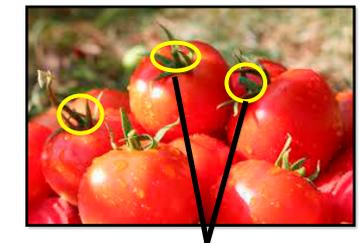
Insect damage

Damaged parts by insects may harbor microorganisms

Tomato Harvesting



Tomatoes can be harvested manually by using the cutting tool like scissor to avoid damages.



Little stocks should be left on the fruit to limit the deterioration