



*KALRO/NAVCDP/ Tomato Leaflet No. 112/2024*

# TOMATO BLOTCH/BLOTCHY RIPENING

Environmental stresses produce several common physiological disorders of tomatoes, key among them being tomato blotch/blotchy ripening which occurs on the fruit's surface at the stem end is very frequent.

A physiological disorder is the abnormal growth pattern or abnormal external or internal conditions of a crop due to adverse environmental conditions such as deviation from the normal state of temperature, light, moisture, nutrients, harmful gases and inadequate supply of growth regulators.

## What is Tomato Blotch/Blotchy Ripening?

This is a physiological disorder of tomato fruits caused by lack of typical red pigment on isolated regions of the fruit. On otherwise normal-coloured ripening fruit, these regions appear as yellow or grey-green blotches and when fruits are cut open, brown staining is observed.

## Causes

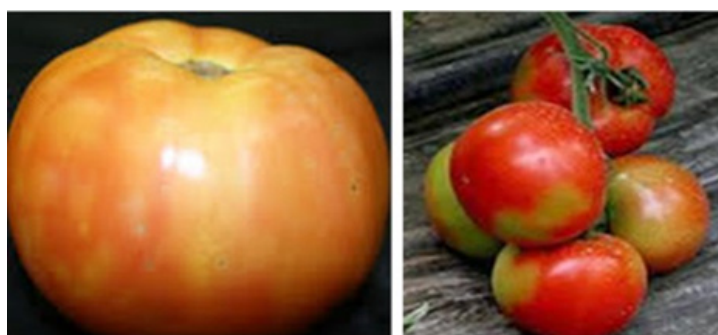
- Low potassium levels in plants, as well as extended overcast spells or insufficient light intensity, have been linked to the disease.
- High soil moisture, high humidity, low temperature, soil compaction, and excessive fertiliser are all potential contributors.
  - The environmental variables may cause nutritional shortages or other imbalances in the fruit, preventing the formation of red pigment.
  - Excess of potassium in soil may lead to blotchy ripening.
  - It can occur also due to the collapse of the

parenchymatous cell of the pericarp.

- Faulty and uneven pollination also causes blotchy ripening.
- Water deficiency with a high transpiration rate also enhances this disorder

## Symptoms

- Presence of greenish-yellow and whitish patches particularly at the stem end portion is known as blotchy ripening.
- It is also known as grey wall, vascular browning, cloud, waxy patch, green patch, green back and internal browning.



*Mature tomato fruits showing blotchy ripening  
Source: Raman Selvakumar*

## Management


- Follow appropriate cultural measures to preserve nutritional balance and plant vigor to reduce the occurrence of blotchy ripening.
- If you are going to use commercial fertilizers, be sure they are balanced and do not overdo it.



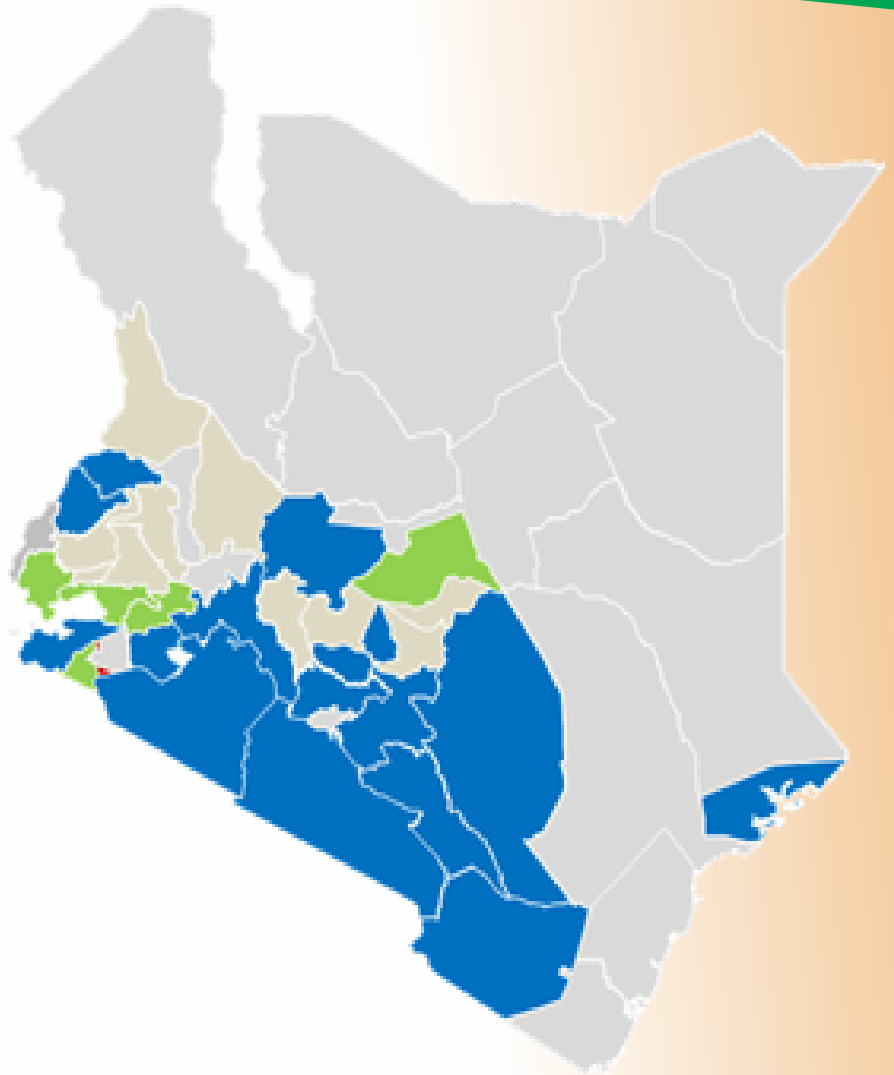
Change the planting date to get the best light intensity for fruit growth

- Increase potassium calcium ratio.
- Regulate intensity and duration of light and temperature.
- Use clean seed to minimize the spread of tomato fruit blotch virus (ToFBV).

## Legend

 Major tomato producing Counties: Kajiado, Kirinyaga, Machakos, Taita Taveta, Narok, Makueni, Bomet, Muranga, Bungoma, Homabay, Laikipia, Nakuru, Lamu, Kitui, Kiambu and Trans Nzoia (AFA-Horticulture Crops Directorate; 2021 Report)

 Emerging tomato growing counties: Siaya, Meru, Migori, Kericho and Kisumu (AFA-Horticulture Crops Directorate; 2021 Report)



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