

Report on field visit for disease identification and management in tomato at Aurangabad, Palwal

Date: 19 January, 2023

Location: Aurangabad, Palwal

Organized By: MRCMPP & MRCAWTM, MRIIRS

A field visit was conducted on 19 January, 2023, in Aurangabad, Palwal, with the primary objective of identifying and managing diseases in tomato crops. The visit aimed to assess the prevailing disease situation in tomato fields and provide recommendations for effective disease management to improve crop yield and quality.

Participants:

- Local Farmers and Tomato Growers

Field Observations:

1. **Location and Climate:** Aurangabad, Palwal, is characterized by a subtropical climate, which is conducive to tomato cultivation. The region has experienced consistent rainfall in the past few weeks, creating favorable conditions for diseases.
2. **Crop Stage:** The tomato crops observed during the field visit were in various growth stages, from seedlings to mature fruit-bearing plants.
3. **Disease Symptoms:**
 - **Early Blight (*Alternaria solani*):** Early blight symptoms were prevalent, characterized by circular brown lesions with dark concentric rings on the lower leaves of the tomato plants.
 - **Late Blight (*Phytophthora infestans*):** Symptoms of late blight, including water-soaked lesions on leaves, stem, and fruits, were observed in some fields.
 - **Bacterial Spot (*Xanthomonas campestris pv. vesicatoria*):** Bacterial spot symptoms included small, dark, raised lesions with a water-soaked appearance on leaves and fruits.

- **Tomato Yellow Leaf Curl Virus (TYLCV):** Some plants exhibited symptoms of TYLCV, including yellowing and curling of leaves.

4. **Cultural Practices:**

- Crop rotation was not consistently practiced, contributing to disease build up in some fields.
- Limited spacing between plants was observed, leading to poor air circulation and increased disease pressure.

Recommendations:

1. **Biofungicide and Bactericide Application:** Farmers should apply appropriate biofungicides and bactericides following recommended dosage and schedules to manage early blight, late blight, and bacterial spot. Consultation with MRCMPP is advised for product selection and application guidelines.
2. **Sanitation:** Remove and destroy infected plant debris to reduce disease inoculum. Proper sanitation practices can help minimize disease spread.
3. **Crop Rotation:** Encourage farmers to practice crop rotation to break disease cycles. Avoid planting tomatoes in the same field consecutively.
4. **Spacing:** Maintain adequate spacing between tomato plants to ensure better air circulation and reduce humidity, which can minimize disease incidence.
5. **Virus Management:** For TYLCV, control the vector (whiteflies) through bioinsecticide applications and the use of reflective mulch. Resistant tomato varieties may also be considered.
6. **Training and Awareness:** Conduct training sessions for local farmers on disease identification, prevention, and management practices to enhance their knowledge and skills.
7. **Regular Monitoring:** Farmers should regularly monitor their fields for disease symptoms and take timely action to prevent disease outbreaks.

Conclusion: The field visit to Aurangabad, Palwal, highlighted the presence of several tomato diseases, including early blight, late blight, bacterial spot, and TYLCV. Effective disease

management strategies, such as timely application of fungicides and bactericides, crop rotation, proper spacing, and sanitation, are essential to mitigate the impact of these diseases on tomato crops. Furthermore, farmer education and awareness programs are crucial for long-term disease management and sustainable tomato cultivation in the region.

