

Recognizing ToBRFV symptoms

Tomato Brown Rugose Fruit Virus (ToBRFV) - Tobamovirus Family

Symptoms:

- Highly diverse
- Possible to have only some or all symptoms together
- **Dependent on variety, ToBRFV isolate and climate conditions**

Leaf



Mosaic discoloration

Deformation & blistering

Needle like-deformation

Fruit



Mosaic discoloration

Brown coloration on fruit surface

Brown wrinkling

Patchy discoloration

Growth

- Reduced
- Sometimes premature death
- Sometimes wilting
- Sometimes plant collapse



Healthy plant

ToBRFV-infected plant

Spread

- Mechanical transmission
- Extremely persistent, long survival on materials and clothing
- Importance of hygiene
- Be careful with tools and crop handling
- Be vigilant: everything you touch after crop handling can become a potential new source for infection
- Limit visitor access and introduction of personal visitor items (e.g. cell-phones, notebooks, etc.)

Host plants

- Main host: tomato
- Others: Sweet pepper, petunia, some weeds, ...
- Seed transmission is possible so be careful with sprouting seeds in the greenhouse