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## Torenia: *Impatiens Necrotic Spot Virus (INSV)*

*Necrotic leaf spot and faint necrotic ringspots were observed on torenia. Further inspection revealed necrotic stem tissue. This Alert will aid in you identifying Impatiens necrotic spot virus (INSV) on torenia. A series of photos provided by this Alert will aid in you identifying this problem on torenia.*

Torenia (*Torenia fournieri*) are nice cascading plants that are excellent additions to combination pots or by themselves in hanging baskets. During a recent scouting of a greenhouse, a few scattered torenia plants were noticed to be slow growing and having a number of leaves exhibiting browning tissue (necrosis) (Fig. 1). A closer inspection revealed several leaves with extensive spotting (Fig. 2) and having larger areas of necrotic tissue (Fig. 3). Some flower buds also displayed necrosis (Fig. 4). With the waxy surface, it was difficult to notice, without some effort, a faint necrotic ring pattern on two of the leaves (Fig. 5). No leaf mottling was present.

In addition, necrosis can also develop on the stems. The necrotic canker will ultimately girdle the stem causing wilt. This is the stage

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Figure 1. Torenia plant with overall slow growth and leaf spotting.

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## e-GRO Alert

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most growers notice that there is a problem (Fig. 6) (see earlier Alert 2.04 with more stem necrosis photographs).

These are all typical signs of a virus infection of torenia. A plant was tested for impatiens necrotic spot virus (INSV). INSV was confirmed with an enzyme-linked immunosorbent assay (ELISA) test by Mike Munster of the NC State University Plant and Insect Clinic.

### Management

Once a plant has INSV or tomato spotted wilt virus (TSWV), the virus cannot be removed. Discarding infected plants is the only option, and this will help prevent the virus from spreading further. It is important to note that some plants may be asymptomatic, but still have INSV or TSWV. Since the primary method of spreading these viruses is via Western Flower thrips (*Frankliniella occidentalis*) feeding, it is critical to keep them under control. See e-GRO Alert 4.18 for management options.



Figure 2. Close-up of necrotic leaf spotting on torenia that is indicative of a virus infection.



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Figure 3. Expanding necrotic areas on the leaf as a result of an impatiens necrotic spot virus (INSV) infection.

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Figure 4. Close-up view of necrosis of the flower bud due to an impatiens necrotic spot virus (INSV) infection.



Figure 5. Necrotic ringspot symptoms associated with impatiens necrotic spot virus (INSV) infection. The ringspot can be difficult to observe with waxy leafed plants (within the circle).



Figure 6. Necrotic stem tissue associated with an impatiens necrotic spot virus (INSV) infection.