Mottled leaves and ringspots on New Guinea impatiens are common signs of a virus infection. Tomato spotted wilt virus (TSWV) was confirmed on the plant sample.

Impatiens necrotic spot virus (INSV) and tomato spotted wilt virus (TSWV) are the two most common viruses reported on New Guinea impatiens. It is not unusual to observe a few problems each year. The severity of the virus outbreaks varies from being minor with only a few plants infected to being a major problem if western flower thrips are present.

Plant Symptoms
At one greenhouse I visited last week, the grower asked if I would look at his New Guinea impatiens plants. Scattered plants along a bench containing multiple cultivars were stunted, had mottled leaves (Fig. 1&2), purple ringspots (Fig. 3,4&5), or black ringspots (Fig. 6). In scouting for western flower thrips, none were found.

Figure 1. Mottled leaves with a TSWV infection.
The plants were tested for both Impatiens necrotic spot virus (INSV) and tomato spotted wilt virus (TSWV). TSWV was confirmed with an enzyme-linked immunosorbent assay (ELISA) test from the NC State University Plant Disease and Insect Clinic (http://www.cals.ncsu.edu/plantpath/extension/clinic/).

If you suspect a virus problem, have the plants tested by a diagnostic clinic. You can also conduct in-house testing with ELISA kits from Agdia (http://www.agdia.com/).

Management
Once a plant has INSV or TSWV, it cannot be cured. So discarding infected plants is the only option. Note some plants may be asymptomatic but still have INSV or TSWV. Thus with the primary method of spreading these viruses is by Western Flower thrips (Frankliniella occidentalis) feeding, it is critical to keep them under control. See e-GRO Alert 4.18 for management options.
Figure 3. Purple ringspots caused by a TSWV infection.

Figure 4. Close up of ringspots.
Figure 5. Ringspots on impatiens leaf caused by a TSWV infection.

Figure 6. Black ringspots on a young impatiens leaf caused by a TSWV infection.