Factsheet 21/10

Russet Mite Tomatoes

Horticultural Development Company

Stoneleigh Park
Kenilworth
Warwickshire CV8 2TL
T: 0247 669 2051
E: hdc@hdc.org.uk

Russet Mite

Dr Rob Jacobson, RJC Ltd

Infestations of russet mite (*Aculops lycopersici*) are becoming increasingly common in UK tomato crops. The presence of these tiny mites is often overlooked until damage becomes severe in localised areas. However, by then, the mites will be much more widely distributed. This factsheet is intended to increase awareness of the problem and help growers detect symptoms at the earliest possible stage.

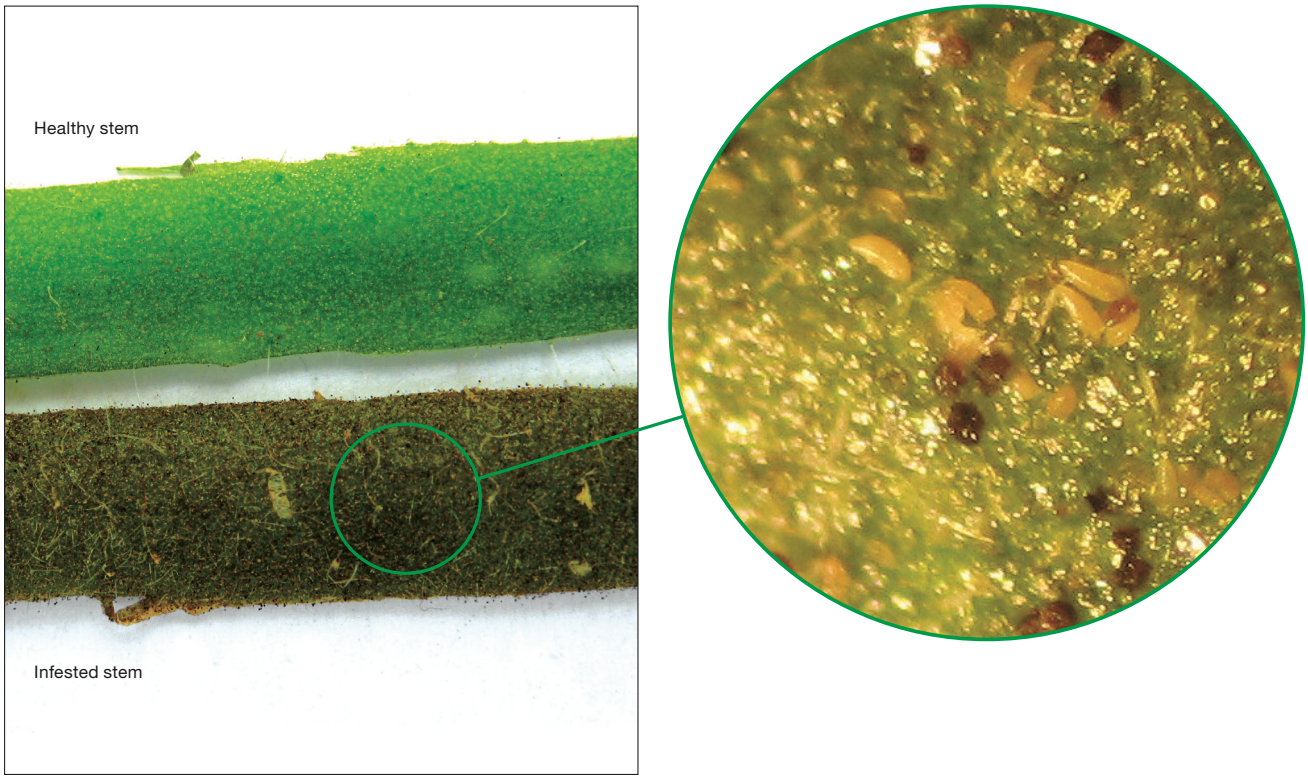
Introduction

Traditionally, russet mites have been found on lower stems and have been slow to move higher up tomato plants. The plants have continually grown away from the infestation and it has been rare to find damaged leaves and trusses. However, during the last few years there has been an increasing number of serious infestations within crop canopies. Symptoms vary and it is possible that there is a varietal effect.

Symptoms

Stems

Stems become rusty brown and have a slightly rough texture. The mites are only about one fifth of the size of a spider mite and are barely visible with the naked eye. Their presence can be confirmed by inspection with a good quality × 20 hand lens. This will reveal the tiny pale yellow/orange conical shaped mites moving on the plant surface (Figure 1).



1 Difference between a healthy and infested stem (left), magnified to show the mites (right)

Leaves

Initial symptoms on leaves can be very difficult to detect. The lower surface develops a distinctive silvery sheen while the upper surface gradually becomes chlorotic. Figures 2 and 3 show the lower and upper surfaces of an infested leaflet (left) in comparison with a healthy leaflet (right).

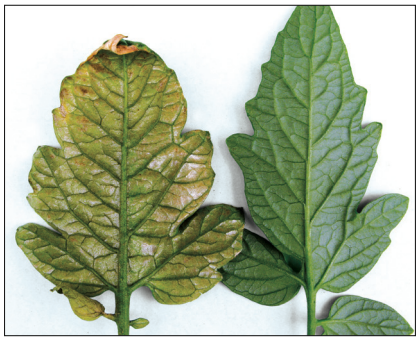
As the size of the infestation increases, localised areas of individual leaflets become necrotic (Figure 4). This may be the first obvious indication that something is wrong. Whole leaves then become curled dry and brittle (Figure 5).

Advanced infestations

When colonies become overcrowded, the mites produce threads which help them move on air currents, workers clothing or equipment. Affected plants are severely weakened; stems are thin and flowers fail to set fruit (Figure 6 and 7).

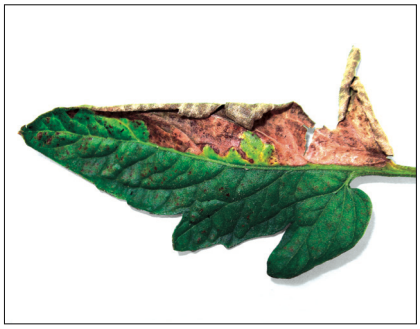
Occasionally, the mites congregate at weak points on stems/petioles where they can be seen with the naked eye as a pinkish dust (Figure 8).

The direct effect on fruit is very variable. Sometimes they simply lack gloss but on other occasions the surface becomes brown, rough and deeply cracked (Figure 9).



2 Lower surfaces of a leaflet: The infested leaflet is on the left

3 Upper surfaces of a leaflet: The infested leaflet is on the left



4 Localised necrosis on an infested leaflet

5 Curled, dry and brittle leaves

6 Advanced damage to foliage

7 Weakened stems leading to poor fruit set

8 Congregating mites

9 Severely damaged fruit

August 2010

Design and production: HDR Visual Communication