

Section IV
Biological and Cultural Control

EVALUATION OF RELEASE RATES AND DISPERSAL OF PREDATORY MITES IN
CONTAINER-PLANTED SHRUB AND FIELD-PLANTED SHADE TREES.

R.L. Rosetta and N.C. Bell
Oregon State University
North Willamette Research and Extension Center
Aurora, OR 97002-9543
(503) 678-1264 x233
Neil.Bell@orst.edu
Robin.Rosetta@orst.edu

Predatory mites (*Neoseiulus fallacis*) were released for two-spotted mite (*Tetranychus urticae*) control in field planted shade trees and container shrubs. At each of two nursery sites, a single row of 'Greenspire' Linden was chosen and divided into 25 plots of nine trees each. Predator mites were released either once or twice per plot, and on either every tree or every third tree. In the shrubs, 15 plots were established in a block of *Spiraea japonica* 'Shirobana'. *N. fallacis* was released either every fourth plant per plot, or every eighth plant per plot. Results in the shade trees show that releases of *N. fallacis* on every tree to be more effective at establishing populations than every third tree. No significant reduction in two-spotted mites was seen due to any *N. fallacis* treatment. However, it was consistently observed that species of *Orius* and *Stethorus* gave significant, though not complete, control of two-spotted (and predator) mites. In the shrubs, two-spot numbers were reduced in plots where both the low and high rate of *N. fallacis* were released compared to control plots (Figure 1). Movement of *N. fallacis* through study plots was observed to be rapid following release.

Twospotted Mite Numbers on
Spiraea japonica 'Shirobana'

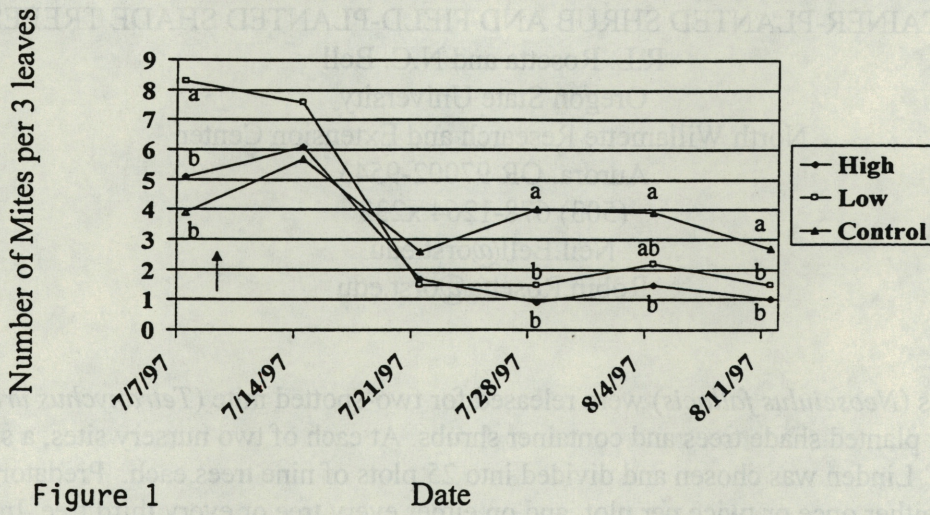


Figure 1