


## IRAC Susceptibility Test Methods Series

Method No: 009

Version: 3 (June 2009)

### Details:

Method:	No. 009 (Formally Method No. 9)	 <p><i>Leucoptera scitella</i> mines Photograph Courtesy of: Syngenta</p>
Status:	Approved	
Species:	<i>Leucoptera scitella</i> <i>Lithocolletis blancardella</i>	
Species Stage	Eggs Larvae	
Product Class:	IGRs e.g. diflubenzuron, novaflumuron, teflubenzuron and flufenoxuron	
Comments: None		

### Description:

#### Materials:

Clean plastic cups with push-on plastic lids, plasticine, nylon muslin with very small mesh (approximately 10.000 apertures cm<sup>-2</sup>) sharp knife or scalpel, scissors, glue, nail or other similar metal rod, untreated leaves.

#### Method:

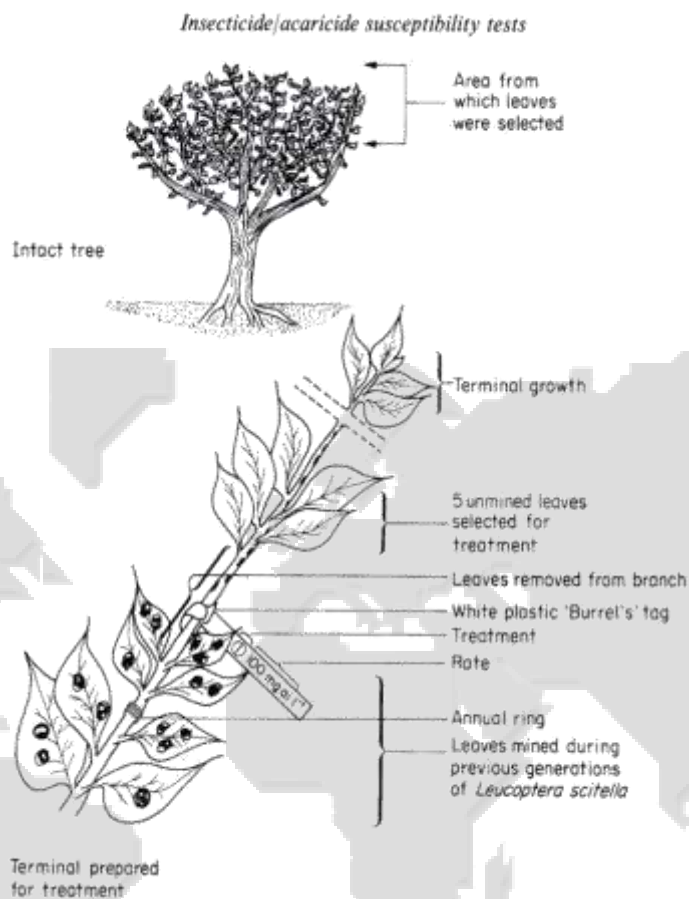
- (a) At the start of adult flight, select terminals on upper half of tree. Select five unmined leaves from each terminal (1 replicate). Cut off terminal above selected leaves and remove several leaves below the five unmined leaves. Attach treatment label where leaves have been removed.
- (b) Prepare 1 litre of each test liquid containing 0.2 % wetter (such as Agral). Agitate test liquids and dip selected leaves for 2 s, replicating each treatment 30 times. Dip equal numbers of terminals in water (untreated control).
- (c) Assess *Leucoptera scitella* after 3 weeks by recording total number of mines and numbers of mines greater than 3 mm diameter. Assume mines of less than 3 mm diameter are 'dead'. Calculate percent mortality for each treatment.
- (d) Assess *Lithocolletis blancardella* after three weeks, by recording total numbers of mines and numbers of mines where damaged leaf tissue is clearly visible from both upper and lower leaf surfaces. Assume mines where leaf damage is only visible from the lower surface are 'dead'. Calculate percent mortality for each treatment.

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### Diagram:



### Percautions & Notes:

For the insecticides listed, concentrations of around  $50 \text{ mg a.i. l}^{-1}$  are suggested for discrimination between resistant and susceptible types. This method is not suitable for systemic insecticides.

### References & Acknowledgements:

None