

POTATO LEAFHOPPER RESISTANCE

November 2003

Empoasca fabae (Harris); Mark McCaslin and David Miller

PLANT CULTURE

Greenhouse

Container Bench, flat, or pot deep enough to allow root developments

Media..... Sand, soil or potting mix

Temp/Light..... 24 to 30°C; 16+ hr daylength

No. of Plants 25+ per replication

No. of Reps 3 to 6 replications

Other Spray and fertilize as necessary

FIELD ESTABLISHMENT

Location Transplant 8-12 week old plants to the field in mid to late May.

Spacing..... 0.3 to 0.4m x 0.6 to 1.0m

Culture Maintain vigorous growth and control weeds.

Location Test sites should be limited to areas where potato leafhopper populations normally cause damage.

RATING

Rating can be taken at any time during the establishment year when the susceptible check is showing severe and uniform stunting and yellowing.

Note – Potato leafhopper resistance may vary based on synthetic generation of seed used.

A 1-5 scale is used to rate PLH damage. Both foliar discoloration (yellowing and/or reddening) and plant stunting are used to assess damage.

1 No apparent injury

2 Very minor stunting and yellowing

3 Moderate stunting, yellowing is evident on 20-40% of leaves

4 Significant injury. Plants showing significant stunting with yellowing on 40-60% of leaves.

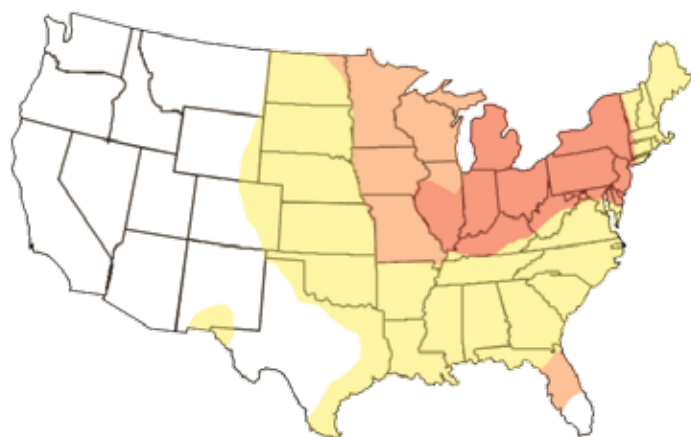
5 Severe injury. Plants with severe stunting; yellowing or reddening evident of 60-100% of leaves.

Alfalfa populations can be characterized for resistance to PLH by calculating an average severity index (ASI) and percentage of resistant plants (i.e. combined percentage of plants rated as class 1 and 2.)

CHECK CULTIVARS

	Approximate Expected Resistance (%)	Acceptable Range of Resistance (%)
Tolerant		
Evergreen	30	20-40
Susceptible		
5454	0	0-1

DISTRIBUTION AND SEVERITY OF POTATO LEAFHOPPER



- Not known to occur.
- Occurs but is not considered a problem.
- Occasionally causes significant losses on susceptible cultivars.
- Frequently causes significant losses on susceptible cultivars.

Potato leafhopper, *Empoasca fabae* (Harris)
(Click on the map to the left for a larger version.)

SCIENTISTS WITH EXPERTISE

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