





Potato Leaf Hopper Resistant Alfalfa Varieties



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Glandular Hairs



On Leaves

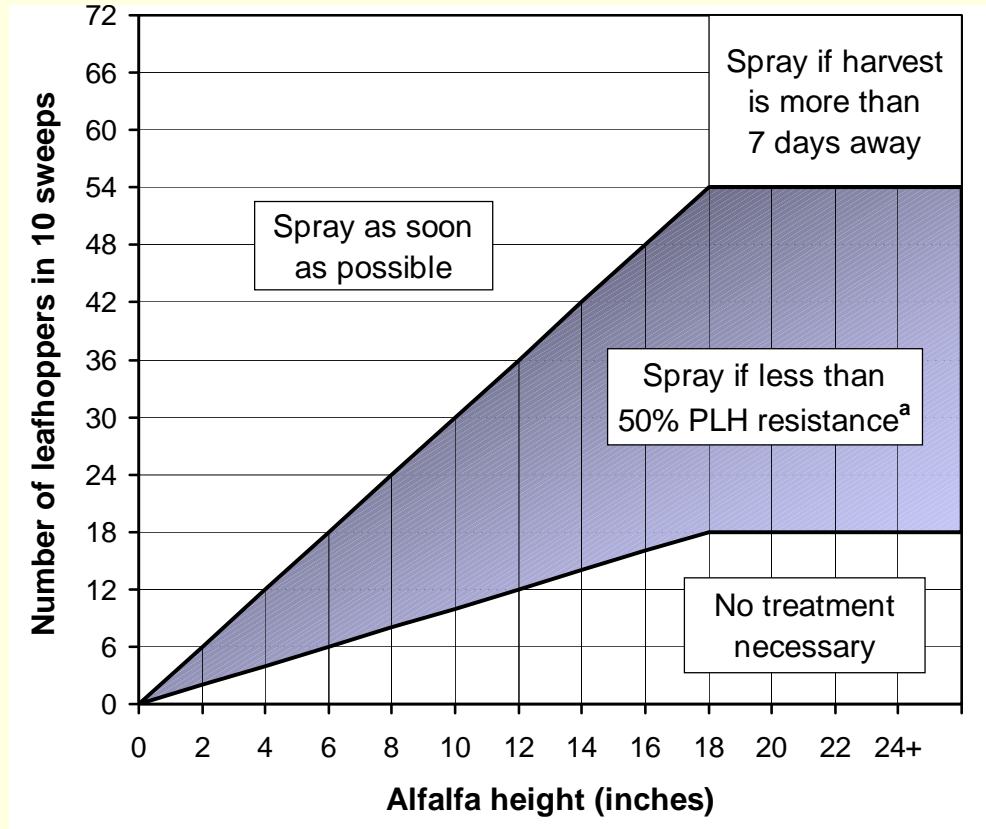
On Stems



Why is trait not used more?

- Poor history
- Lack of complete control

Economic thresholds for control of potato leafhopper in alfalfa varieties differing in resistance to the pest.



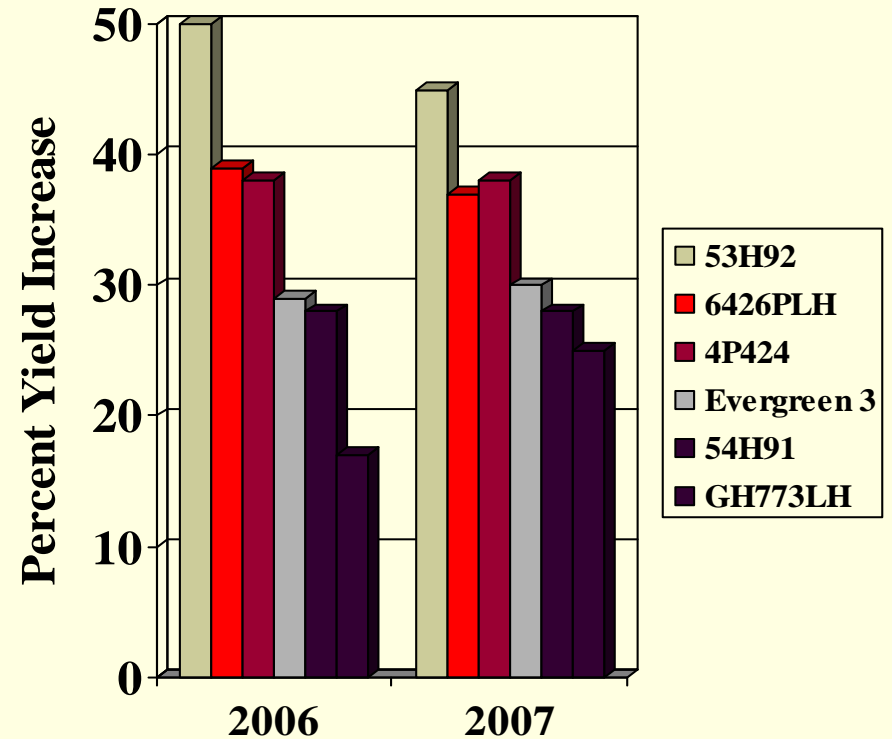
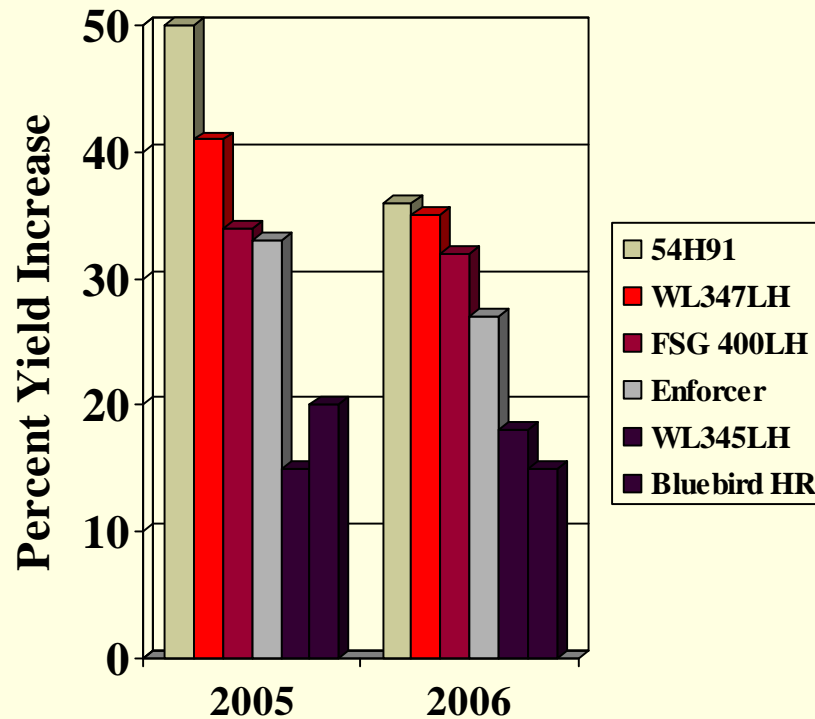
Assuming HR (>50%) resistance

Source: Mark Sulc and Ron Hammond, The Ohio State University, 2004.

Yield (% of trial mean) of PLH resistant alfalfa varieties in absence of PLH

Age of stand	54H91		Enforcer		FSG 400LH		WL345LH		WL346LH		WL347LH	
	% of Avg	Site -yrs	% of Av	Site -yrs	% of Avg	Site -yrs	% of Avg	Site -yrs	% of Avg	Site -yrs	% of Avg	Site -yrs
1	102	22	99	4	100	6	100	2	103	3	96	1
2	98	54	101	3	96	12	98	4	99	7	100	1
3	93	42			91	6			96	4		
4	92	33							94	1		

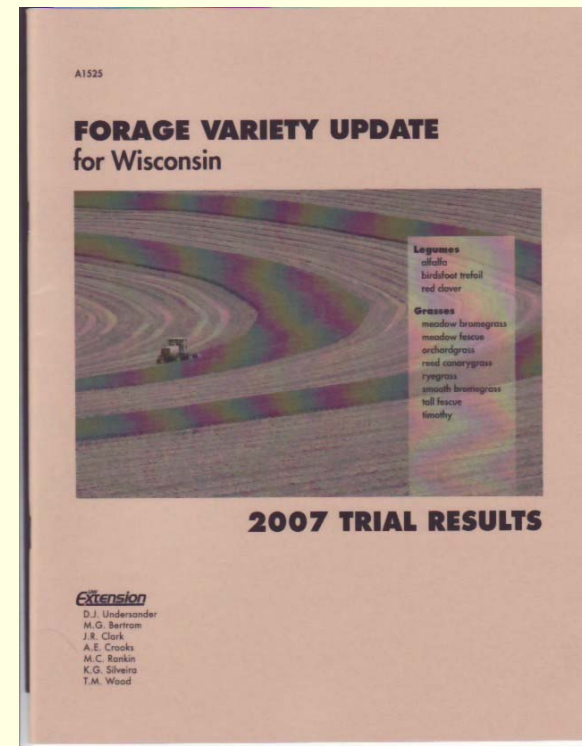
Yield increase of PLH resistant alfalfa varieties above susceptible checks when PLH above recommended spraying threshold



Data is average from tests in Iowa and Ohio

Find Alfalfa Variety Trial Results

- Printed results in newspapers or county extension office
- <http://learningstore.uwex.edu>



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- <http://learningstore.uwex.edu>
- <http://www.uwex.edu/ces/forage>
 - Wisconsin variety trial results
 - Compare alfalfa varieties

Alfalfa Variety Comparison



Welcome to the Alfalfa Variety Comparison Site.

Your first step is to select some criteria for your comparison.

You may select one, multiple, or all states and/or years. Check as many boxes as you would like.

Choose a State

- All States
- Illinois
- Indiana
- Iowa
- Kansas
- Michigan
- Minnesota
- Nebraska
- New York
- Ohio
- Ontario, Canada
- Pennsylvania
- Wisconsin

And/Or

Choose a Seeding Year

- All Years
- 1984
- 1985
- 1986
- 1987
- 1988
- 1989
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995

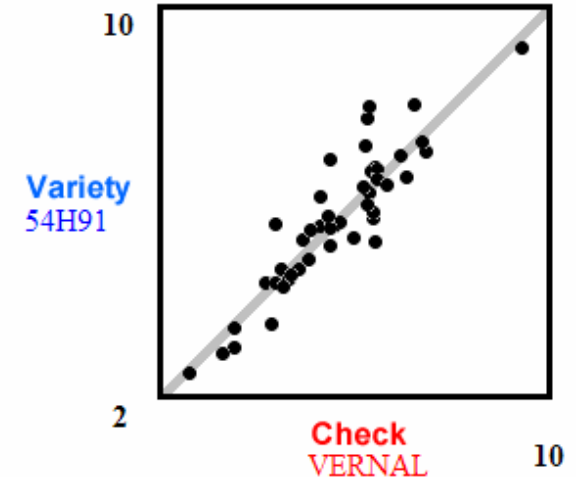
Alfalfa Variety Comparison



Individual Variety Results By Age of Stand

Stand Age	Total Trials	Trial Mean Yield (T/A)	Variety Yield (T/A)	Percent of Mean
Check Variety: VERNAL				
1	147	2.64	2.48	94%
2	315	5.85	5.37	92%
3	301	5.83	5.31	91%
4	257	5.49	5.01	91%
5	49	4.48	4.12	92%
6	10	3.79	3.53	93%
7	2	1.99	2.25	113%
8	1	0.85	1.15	136%
Variety: 54H91				
1	22	2.88	2.93	102%
2	54	5.98	5.85	98%
3	42	5.95	5.55	93%
4	33	5.31	4.90	92%
5	3	7.14	6.38	89%

Yield in Tons/Acre for 54H91 & VERNAL, stand age 2 year(s)



Summary

- PLH resistance is a valuable trait
- PLH resistance is crucial if not spraying in the seeding year
- Yield benefit of PLH resistance varies among highly resistant (HR) varieties
- Check variety yields and performance at www.uwex.edu/ces/forage