

Alfalfa's #1 Pest: Potato Leafhopper

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Do You or Your Cliental Practice Any of These...

- Cut, bale and spray an insecticide immediately after forage removal?
- Spray alfalfa for leafhoppers when your neighbors do?
- Spray alfalfa 5-7 days after cutting regardless of leafhopper sweep nets counts?
- Scout alfalfa 5-7 days after cutting to monitor insect populations?

Potato Leafhopper 101

- Leafhopper identification.
- Lifecycle and characteristics of PLH.
- Damage and loss from PLH.
- Scouting and Economic Thresholds.
- Management of PLH.

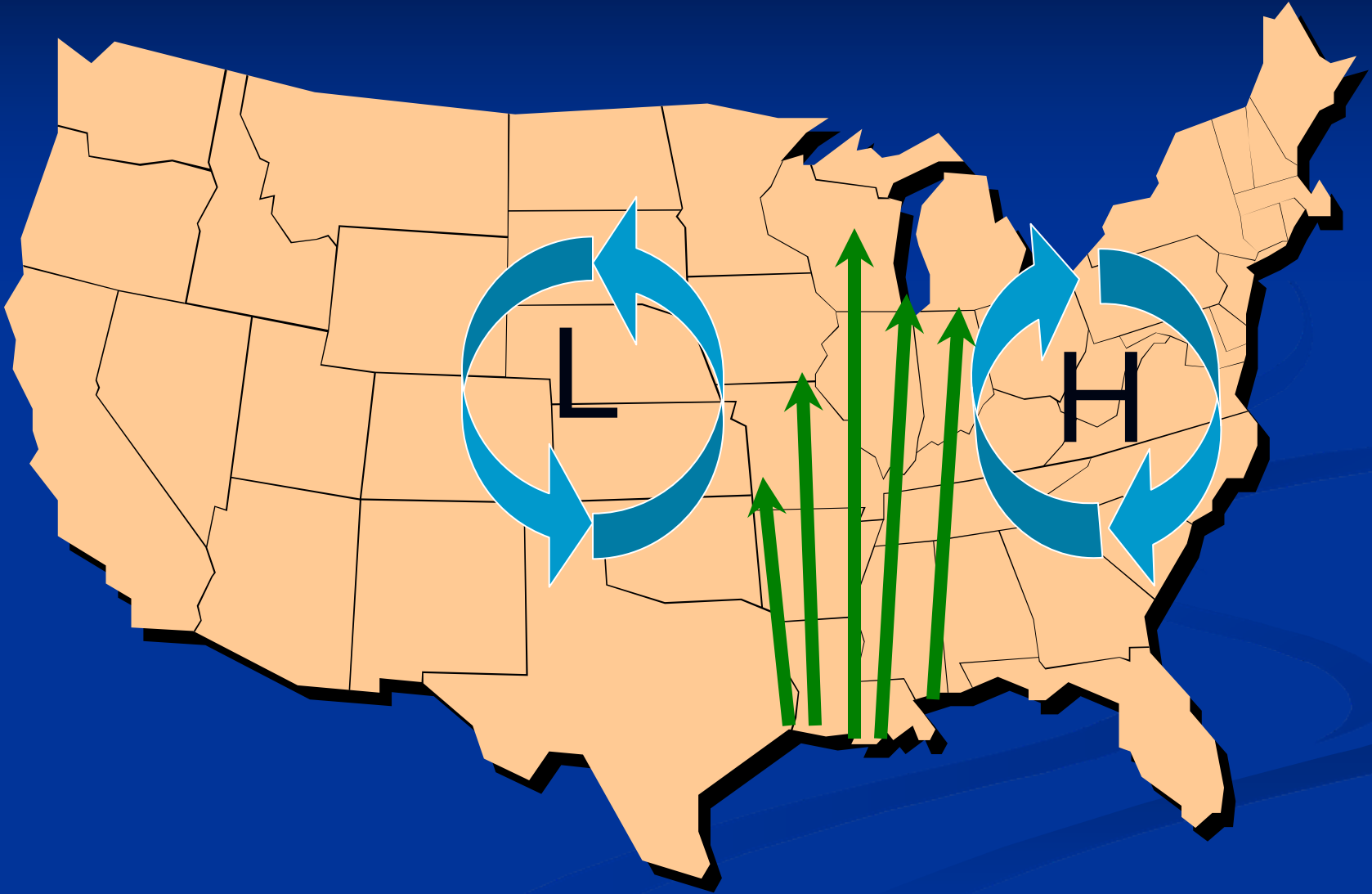
Potato Leafhopper ID



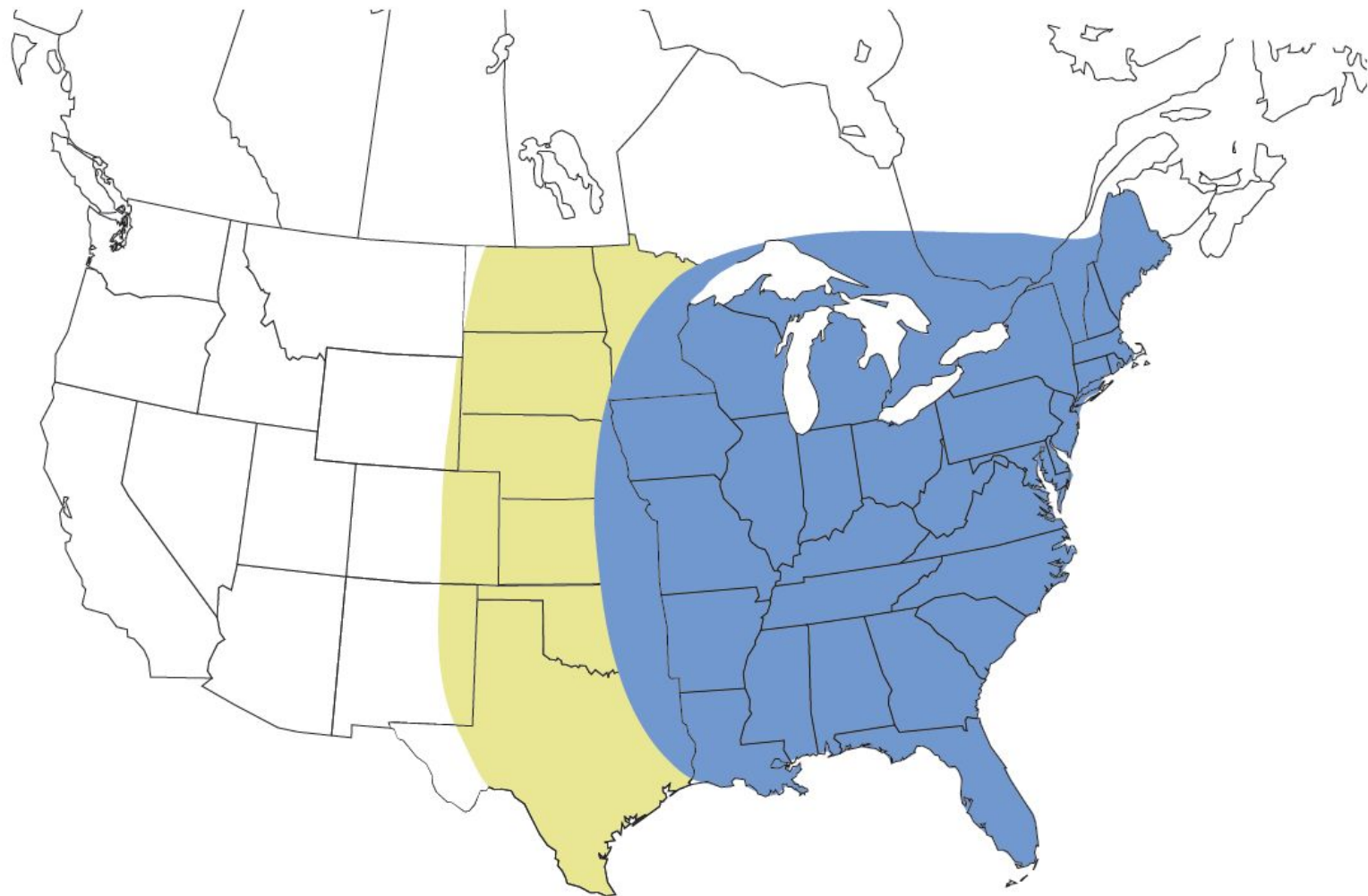
- Small, 1/8 inch long.
- Wedge shaped.
- Adults are fluorescent green.
- Nymphs tend to be yellow.



PLH overwinter in the Gulf States



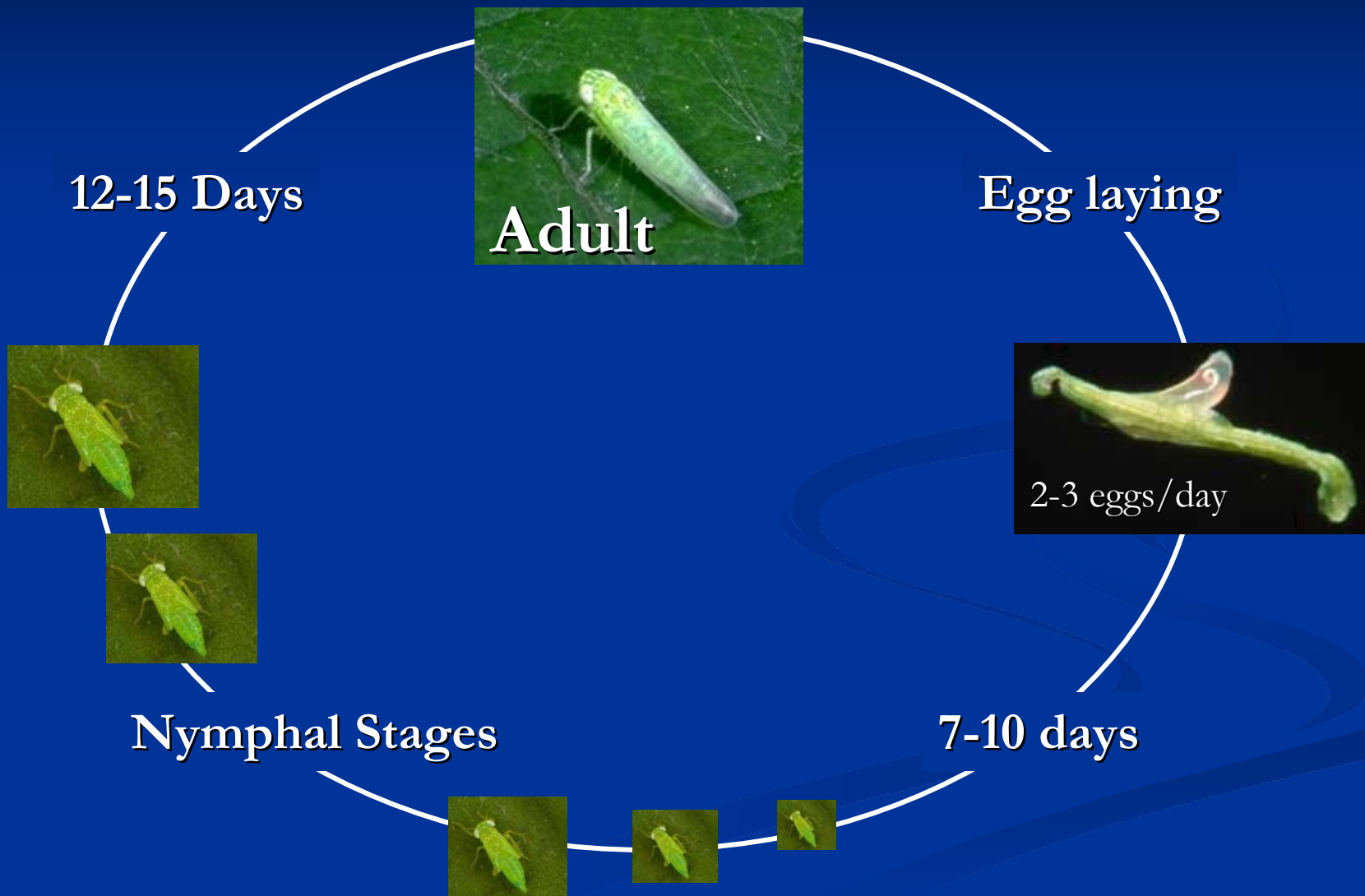
Potato leafhoppers



■ **severe** ■ **moderate** □ **mild**

Source: NCR 547, Alfalfa Management Guide

PLH Lifecycle

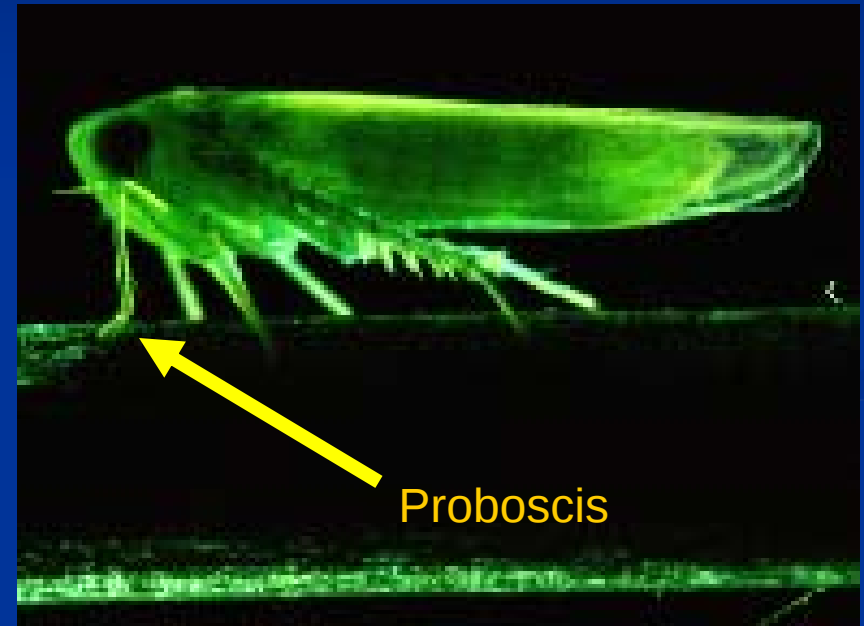


Characteristics of PLH

- 1. Long range migration/locally dispersive.
- 2. Wide range of host plants.
 - Alfalfa, apples, beans, clovers, potato, soybean, many ornamentals and deciduous trees.
 - They do not feed on grasses.
- 3. Explosive growth potential.
 - Particularly in hot, dry weather.

Damage and Losses from PLH

- Potato leafhoppers have piercing and sucking mouthparts.
- Plants injury caused by blocking the translocation of carbohydrates.
- Reduces photosynthesis, decreasing productivity, resulting in stunted plants.



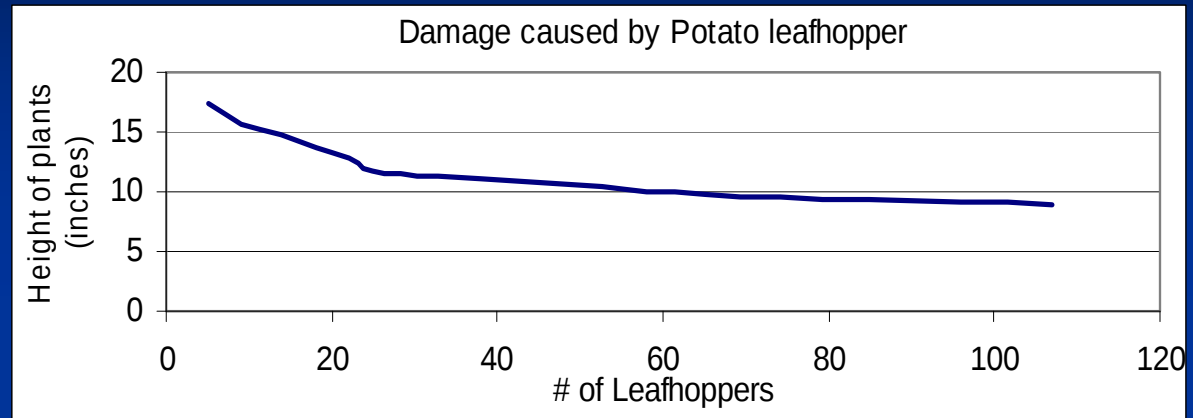
Damage and Losses from PLH

- Symptoms: whitening of leaflet veins, followed by the characteristic yellow “hopper burn”, turning brown, curl and die.
- May take only 4-5 days.
- Injury is most severe in new seedlings and young regrowth.

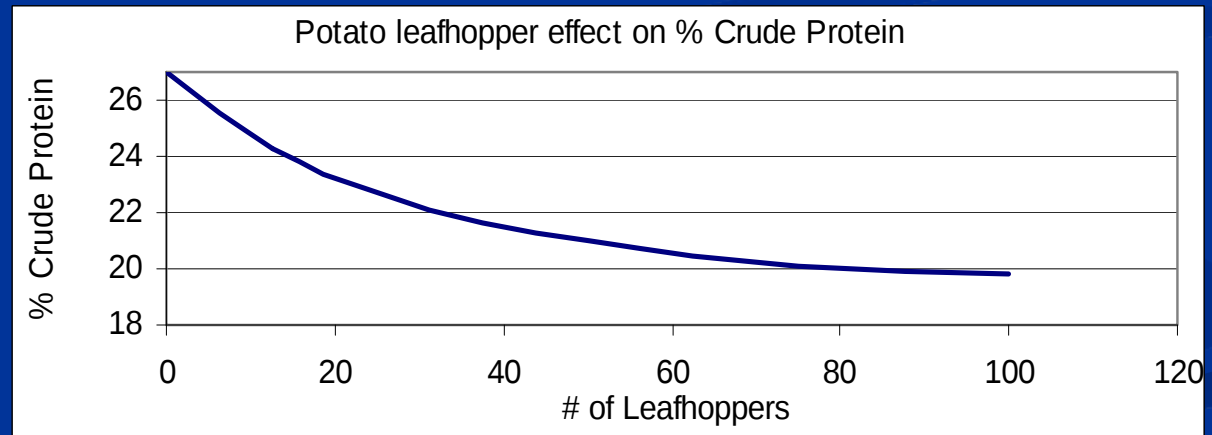


Potato Leafhopper Damage

Yield is reduced with plant stunting.



Forage quality is lowered because crude protein is reduced.



Source: Improving Alfalfa Forage Quality, CASC

Scouting for PLH

- Start 5-7 days after first cut.
- Use a standard 15-inch diameter insect sweep net.
- Walk a W-shaped pattern in the field taking 20 consecutive sweeps in each of 5 areas.
- Keep a running total of both adults and nymphs caught.
- Divide total by 100 and compare field counts with threshold based on crop height.



Scouting for PLH

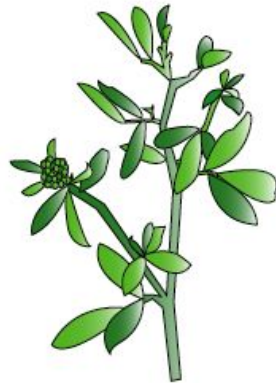
- Tips for sweeping.
 - Keep the bottom edge of the net slightly forward of the upper edge.
 - Don't sweep too hard.
 - Avoid field edges.
 - Don't sweep fields in cold, wet or windy conditions.
 - Don't sweep deeper than 10" into the plant canopy.
 - Short regrowth => sweep as deep as you can.
 - If nymphs are present, sweep 3-5 days after last cut.

Leafhopper Thresholds



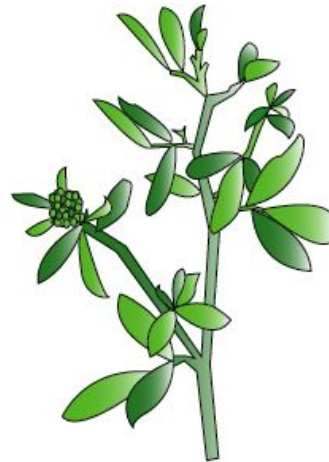
3 inch

0.2/sweep



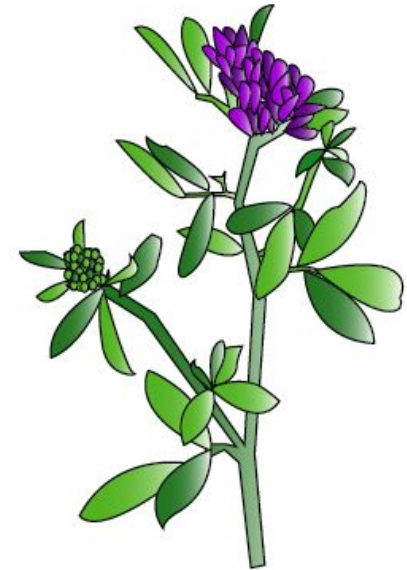
6 inch

0.5/sweep



8-11 inch

1.0/sweep



12+ inch

2.0/sweep

Managing PLH

- Thresholds are a starting point. Spray cost and economic value of crop should be considered.
- Must monitor PLH populations and manage when necessary.
- Harvesting forage.
 - Within 5-7 days of harvest, harvesting early is the best option.
 - Disrupts PLH lifecycle. Eggs are removed with the forage and nymphs die from starvation or desiccation.

Management of PLH

- Insecticide application.
 - Ambush 2E, Baythroid XL, Tombstone Helios, dimethoate, Furadan 4F, Imidan 70WP, Lorsban 4e, Warhawk, Mustang Max, Pounce 3.2 EC, Proaxis, Sevin XLR Plus, Warrior 1CS, & Silencer 1EC.
 - Read and follow labeled rates, REI, PHI, etc.
- Resistant Varieties.

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Summary

- PLH causes more damage to alfalfa than any other insect pest.
- Scouting information provides the foundation for proper PLH management.
- Management options include early harvest, insecticide applications and resistant varieties.