

BENEFICIAL INSECTS FOR NATURAL PEST CONTROL:

Foliage Scouting

PURPOSE

Beneficial insects like lady beetles, damsel bugs, and lacewing larvae can provide important natural pest control in a farm or garden setting. This guide and worksheet is designed to help you assess the beneficial insects present - though not always readily visible - in plant vegetation. Many beneficial insects hunt and rest in plant vegetation. Using a simple tool called a beat sheet, you will be able to count the foliage-dwelling predatory insects in habitat adjacent to crops. Use this guide along with our flower and soil scouting guides to gain a better understanding of the beneficial insect community on your farm.

WHAT YOU NEED	<ul style="list-style-type: none">• Beat sheet (blank sheet of paper)• Clipboard (for beat sheet and worksheet) and pen/pencil• Timer• Measuring tape (100-ft. preferred, shorter ok)• Flags or stakes (to mark transect lines)• Thermometer (or means to collect weather info)• Hand lens (optional)
WHERE TO USE	Undisturbed habitats adjacent to crops (e.g. field borders, hedgerows, woodland edges) or within crops (e.g. cover crops, beetle banks, insectary strips). Scouted habitat areas should be located in full sun and protected from pesticide applications.
WHEN TO USE	Twice per year, June-September <ul style="list-style-type: none">• Visits separated by at least 2 to 3 weeks• Visits between 10:00 AM and 3:00 PM Warm and calm conditions <ul style="list-style-type: none">• Temperatures >60 °F (15.5 °C)• Skies sunny to partly cloudy or bright but overcast

HOW TO SCOUT

You will use an insect beat sheet (see image, right) to observe beneficial insects on plant foliage along two 100 ft.-length transect lines (scouting paths). Observations will occur for 7.5 minutes along each 100 ft. transect. Smaller habitat areas may require a transect line to be divided into shorter lengths.

- Select the habitat area(s) you want to monitor, and lay out the measuring tape to define your transect lines. Use flags to mark the transects if needed.
- Set your timer for 7.5 minutes and ready your beat sheet and worksheet. Begin your timer and slowly move along the transect line, using the beat sheet as you go.
- Choose a handful of stems near the top of herbaceous plants or ends of branches on woody plants then carefully bend the plant material over the insect beat sheet. Smartly tap plant material onto the beat sheet several times to dislodge insects from vegetation.
- Quickly and briefly observe insects on the sheet. Record observations of beneficial insects onto the worksheet. Use images to the right as a starting point for common beneficial insects you may observe.
- Only plants within 3 ft. of the transect line should be sampled.
- Try to pace all transect walks to end simultaneous with the timer. If timer ends before you complete a transect, quickly assess the remaining transect left.



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FOLIAGE SCOUTING WORKSHEET

Site Name: _____

Date: _____ / _____ / _____

Observer: _____

Time: _____ AM / PM

Visit #: _____ of _____

Temperature: _____ °F

Skies (circle one): Clear / Partly Cloudy / Bright Overcast

Type of Habitat (circle): Cover Crop / Beetle Bank / Field Border / Hedgerow / Insectary Strip / Other: _____

CHOOSE ONE OF THREE SURVEY OPTIONS BASED ON HABITAT TYPE OR HABITAT SIZE:

Large habitat areas: Survey two 100-foot transects for 7.5 minutes each. Transects should be located near the habitat center or edge and separated by at least 250 feet.

Hedgerows: Survey two 100-foot transects, located on each side of the hedge, for 7.5 minutes each

Smaller, divided, or odd-shaped habitat areas: Survey an equivalent of 200 feet of transect(s) for 15 minutes. Transect may be divided, curved, etc. to meet the 200-foot requirement.

DIRECTIONS:

Conduct observations between 10:00 AM and 3:00 PM, when temperatures are over 60°F, skies are clear, partly cloudy or bright overcast, and wind speeds are gentle. For each transect, use the Insect Beat Sheet and record the number of lady beetles, minute pirate bugs, lacewing larvae, damsel bugs, and other predaceous insects found on plant vegetation along your transect line. See foliage scouting guide protocol for additional scouting details.

Transect Number	Transect Length (ft.)	Start Time	End Time	# Lady Beetles	# Minute Pirate Bugs	# Damsel Bugs	# Lacewing Larvae	# Other Predators	Notes
Transect 1									
Transect 2									
Transect 3 (if needed)									
Transect 4 (if needed)									
Total Length	(should be 200 ft)								

ADDITIONAL OBSERVATIONS (Habitat area details, plant species in bloom, etc.):

