

## Elements of IPM for Lettuce in New York State

MAJOR PESTS		
Insects	Diseases	Weeds
aster leafhopper	anthracnose	annual and perennial grasses
Aphids (primarily green peach)	Botrytis gray mold	annual and perennial broadleaves
	bottom rot	
	damping off	
	downy mildew	
	drop	
	northern root knot nematode	
	lettuce mosaic virus	
	cucumber mosaic virus	
	broadbean wilt virus	
	aster yellows	

A. SITE PREPARATION AND SELECTION	Acreage Goal	Points
1) Review weed map/list of fields to choose appropriate weed control strategies. See the Weed Assessment List available for use in satisfying this element.	50%	10
2) Crop rotation. Anthracnose: at least 1 year to non susceptible crop; Botrytis gray mold: rotate to reduce survival of sclerotia; Bottom rot: minimum 3 years away from lettuce and endive; Drop: minimum 3 years with non-hosts Root knot nematode: rotate with grain crop	50%	10
3) For anthracnose plant disease free seed.	100%	10
4) Soil test at least once every 3 years. Maintain records. Fertilize according to test results.	100%	10
5) For bottom rot use raised beds to allow better air circulation.	10%	3
B. PLANTING		
1) Select seed treated with fungicide for protection from damping off fungi.	50%	3
2) Use tolerant and resistant varieties for lettuce mosaic virus, broadbean wilt virus.	50%	10

3) Eliminate weed hosts for cucumber mosaic virus (milkweed, marshcress, yellow rocket)	10%	5
4) For cucumber mosaic virus make the earliest planting downwind from weedy borders to avoid acting as reservoir for later plantings	10%	3
5) Eliminate weed hosts for broadbean wilt virus (broadleaf plantain, buckhorn plantain)	50%	5
<b>C. PEST MONITORING and FORECASTING</b>		
1) Monitor at least weekly for insects and diseases. Keep records of occurrences.	75%	10
2) Use available thresholds for insect and disease pests. Particularly before cutting spray insecticides only when insect infestation is noted. Only use fungicides when wet, cool weather is observed.	50%	10
3) Update weed map/list of the field when crop is small for use in evaluating the current year's weed control and for use in determining if a post emergent treatment is needed. See the Weed Assessment List available for use in satisfying this element.	50%	10
<b>D. PEST MANAGEMENT</b>		
1) Where possible mow all headlands around fields to minimize aster leafhopper.	20%	3
2) Cultivate as necessary for weed control	50%	3
3) Keep records of pest densities, cultural procedures, and pesticide applications for use in the future.	100%	10
4) Choose labeled pesticides that have the least environmental impact. Choose pesticides that preserve natural enemies — especially for aphids. (EIQ can be used for decision making)	50%	5
<b>E. POST HARVEST</b>		
1) Make (or update if one has been made for this field previously) a weed map/list of the field for use in planning for next year. See the Weed Assessment List available for use in satisfying this element.	50%	10
2) Destroy all crop residue into the soil at the end of the season to control aphids and leafhoppers.	50%	5
3) Establish cover crop for weed control and nitrogen retention	50%	10

Total Points Available: 155

Points needed to qualify (80%): 124

#### TO LEARN MORE...

Specific information on how to apply and use these IPM elements can be found in the following publications:

[Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production.](#)

[A Method to Measure the Environmental Impact of Pesticides.](#) 1992. New York Food and Life Sciences Bulletin Number 139.

The above reference material can be obtained from county Cornell Cooperative Extension offices