



Cornell University
Cooperative Extension

Elements of IPM for Cucumber, Melon, and Summer Squash in New York State

MAJOR PESTS			
Insects	Diseases	Rotation	Weeds
Major Insects	angular leaf spot	1 year	annual broadleaves
striped cucumber beetle	bacterial leaf spot	1 year	annual grasses
spotted cucumber beetle	bacterial wilt	NA	perennial broadleaves
aphids	Alternaria	2 years	perennial grasses
	anthracnose	2 years	
Minor/Sporadic Insects	Fusarium crown and fruit rot	5 years	
squash bug	Fusarium wilt (melons)	7 years	
western corn root-worm	downy mildew	NA	
seed maggot	gummy stem blight (black rot)	2-3 years	
cutworms	Phytophthora	>3 years*	
spider mites	powdery mildew	NA	
	Septoria leaf spot	2 years	
	sudden wilt (melons)	NA	
	Ulocladium	2 years	
	Viruses	NA	
	damping off	NA	
	white mold	3 years	
* - duration of rotation uncertain		NA - not applicable	

A. Site Preparation and Selection	Acreage Goal	Points
1) Review previous season's 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: 2-3 years away from cucurbits, more if needed for diseases indicated in table above.	75%	10
3) Avoid peppers, tomatoes, and eggplant in rotation with cucurbits to minimize disease problems	25%	3

4) Nutrient management: soil test at least every third year. Fertilize according to test recommendations.	100%	10
5) Do not apply all nitrogen at planting: sidedress or topdress part of the total N application during the growing season.	75%	10
6) Bonus: use trickle irrigation and fertigation	10%	3
	25%	5
	50%	10
7) Choose sites with good air drainage; not surrounded by woods	25%	3
9) If manure is applied to field, apply only before planting and incorporate	100%	10
B. Planting		
1) Resistant varieties: Choose disease resistant varieties and varieties less-preferred by beetle pests when available and feasible	50%	10
2) Use fungicide treated seed. Use seeder box treatment for seedcorn maggot only if conditions dictate	100%	10
3) Turn under any cover crop residue 3 weeks before planting to avoid seedcorn maggot	50%	5
C. Pest Management		
1) Calibrate sprayer at least once per season or every time nozzles are changed	100%	10
2) Scout for insects and diseases as recommended in IPM procedures	25%	3
	50%	5
	100%	10
3) Follow thresholds for pests that have established thresholds	25%	3
	50%	5
	100%	10
4) Follow management guidelines in the Cornell IPM recommendations or scouting guidelines for pests that do not have thresholds	75%	10
5) Select fungicides based on a resistance management strategy	50%	10
6) Choose labeled pesticides with the lowest environmental impact	10%	3
7) Keep records of pest populations, pesticide applications, and cultural practices	100%	10
D. Post Harvest		
1) If washing crop, chlorinate wash water and maintain proper chlorine levels.	100%	10
2) Make late season weed map/list for use the following season. See the Weed Assessment List available for use in satisfying this element.	50%	5
3) Disk down fields after harvest	50%	10
4) Establish a cover crop to scavenge nutrients and control weeds or use spot applications of translocatable herbicide for control of perennial weeds	50%	10

Total points available (excluding bonus points): 179

Points needed to qualify: 143

10 bonus points available

TO LEARN MORE...

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

2000 Cucurbit IPM Scouting Procedures, IPM Bulletin 113

[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