New York State Integrated Pest Management Program | Cornell Cooperative Extension

Elements of IPM for Soybeans in New York State

MAJOR PESTS

Insects	Diseases	Weeds
brown marmorated stink bug	bacterial blight	annual grasses
bean leaf beetle	bacterial pustule	annual broadleaves
Japanese beetle	brown spot (Septoria leaf spot)	biennial weeds
leaf miner	brown stem rot	perennial grasses
seed corn maggot	downy mildew	perennial broadleaves
soybean aphid	frogeye leaf spot	herbicide resistant broadleaves
two-spotted spider mites	northern stem canker	yellow nutsedge
wireworm	Phytophthora root and stem rot	
grasshoppers	pod and stem blight	
potato leafhopper	Sclerotinia stem rot or white mold	
	seedling blights and diseases: Rhizoctonia, Phomopsis, Pythium, Phytophthora, etc.	
	soybean vein necrosis virus	
	soybean cyst nematode	
	sudden death syndrome	

Pre-Season IPM Considerations

Activity	Priority	Points	Acreage Goal	Grower Points
Rotate soybean fields every year.	H	15	75%	
Review weed maps of fields to choose appropriate weed control strategies. Create field maps if none exist.	H	15	75%	
Soil test at least every three years.	H	15	75%	
Follow soil test recommendations when applying fertilizer.	H	15	75%	
Review field history records (Cornell Cropware or other crop records keeping system is recommended).	H	15	75%	
Calibrate sprayer annually or custom hire applications.	M	10	---	
Use at least one reduced tillage practice: no till, zone till or reduced till.	L	5	25%	
Consideration of crop variety for weed suppression and herbicide tolerance.	L	5	25%	
Maintain and establish flowering plants in hedgerows for pollinators and beneficial organisms. Avoid removing hedgerows.	Bonus	5		
TOTAL		95		

At Planting IPM Considerations

Activity	Priority	Points	Acreage Goal	Grower Points
Use certified seed.	H	15	100%	
Use cultivars with resistance or tolerance to diseases and insect pests important in your area.	H	15	75%	
Use pre and post herbicides with multiple modes of action with each year to prevent resistant weeds.	H	15	75%	
Use Rhizobium seed inoculant at time of planting every year.	H	15	75%	
Plant when soil temperature is above 50° F.	H	15	75%	
Use a commercial fungicide seed treatment.	H	15	75%	
Use bee friendly planting technology (seed lubricant that does not create dust and direct blowers toward the soil surface).	M	10	50%	
Use Environmental Impact Quotient (EIQ) or Windows Pesticide Screening Tool (Win PST) to help select a more environmentally friendly pesticide when needed.	H	15	75%	
Reduce weed spread by cleaning or power washing tillage, planting, and spraying equipment between fields.	L	5		
TOTAL		120		

In-Season IPM Considerations

Activity	Priority	Points	Acreage Goal	Grower Points
Keep good in-season records.	H	15	75%	
Conduct a post-emergence stand count assessment. (reduced plant populations is an indication of pest issues)	H	15	75%	
Use recommended economic thresholds for making decisions about applying pesticides for insect pests and diseases of importance.	H	15	75%	
Scout insect pests and diseases every 7-10 days.	H	15	75%	
Scout fields for weeds in the spring, mid-summer (weed escapes) and fall to evaluate weed management program and update weed maps.	M	10	50%	
Integrate tine weeding and cultivation to reduce the use of herbicides.	M	10	25%	
TOTAL		80		

Post-Harvest IPM Considerations

Activity	Priority	Points	Acreage Goal	Grower Points
Update weed maps in fall to use when planning for next year.	H	15	75%	
Record yield, quality, and storage location for each harvest.	L	5	50%	
Establish a cover crop for weed control, soil surface protection, and to capture nitrogen.	H	15	50%	
TOTAL		35		

Calculate Total Points Earned - 80% Needed to Qualify for Certification

Section	Available Points	Grower Total
Pre-Season IPM Considerations	95	
At Planting IPM Considerations	120	
In-Season IPM Considerations	80	
Post-Harvest Considerations	35	
TOTAL 80% = 264	330	

To Learn More

Specific information about the use of these IPM elements can be found in the following publications:

1. NYS IPM Weekly Field Crops Pest Report published during the growing season, http://blogs.cornell.edu/ipmwpr.
2. NYS IPM Livestock and Field Crops Program, https://nysipm.cornell.edu/agriculture/livestock-and-field-crops.
3. Cornell Guide for Integrated Field Crop Management, http://store.cornell.edu/c-875-guidelines.aspx.
4. Cornell Cropware or other crop record keeping system, http://www.farminfotech.com/cropware.htm.
5. Cornell Cooperative Extension Field Crop Meetings when offered.

IPM Options for Managing Specific Soybean Pests

The management techniques listed below offer varying degrees of control for pests listed.

For more information, consult the Cornell Guide for Integrated Field Crop Management.

Soybean Pests	Planting Date	Certified Disease-Free Seed	Resistant or Crop Varieties	Seed Treatment Pesticides	Pesticide	Field Sanitation	Crop Rotation	Biological Control	Cultural Control
weeds	√		√		√		√		√
seedling blights		√		√					√
bacterial blight		√					√		√
Phytophthora root & stem rot			√	√	√				√
downy mildew		√				√	√		
pod & stem blight		√		√		√	√		√
brown spot		√			√	√	√		
brown stem rot		√	√			√	√		
Sclerotinia stem rot		√			√	√	√	√	√
soybean mosaic		√	√						
sudden death syndrome	√		√	√		√			
soybean aphid			√	√	√			√	
seedcorn maggot	√			√		√	√		
Japanese beetles					√			√	
northern stem canker	√	√	√			√	√		
two-spotted spider mites					√			√	
grasshoppers					√			√	
wireworm				√					√
soybean cyst nematode			√				(non-host)		√