

Snapbean IPM Element

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The purpose of this document is to consolidate current Ohio information on Integrated Pest Management (IPM) in the form of general working practices or tactics for a specific crop. The second intent is to use this checklist as an evaluation instrument for growers applying to conservation programs such as Environmental Quality Incentives Program (EQIP). This document is intended to help growers identify areas in their production system that possess strong IPM qualities and also point out areas for improvement.

Growers should review the seven sections of this document and indicate which practices they **currently use** on this crop in their operation. There is a point value associated with every IPM practice; the higher the number, the greater the relative importance of the practice. After going through the list, add the associated values for each section to get the **Baseline IPM Score**. Growers will complete this evaluation every year of their contract, and maintain at least 60% of the total points available each year of the contract to be considered in compliance and eligible for a payment.

Major Pests of Snap Beans - Primary concerns are diseases, insects, and weeds

Diseases	Insects	Weeds
Damping off	Potato leafhopper	Annual grasses
Bacterial blight	Bean leaf beetle	Annual broadleaf weeds
Anthrachnose	Mexican bean beetle	Perennial weeds
Rust	Spider mites	Yellow nutsedge
<i>Sclerotinia</i> white mold	Cutworms	
<i>Botrytis</i> gray mold	Wireworms	
Bean yellow mosaic virus	Aphids	
Cucumber mosaic virus	European corn borer	

Educational IPM Considerations

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Join local or state grower associations that handle this commodity.	5				
Attend winter or summer educational meetings or field days annually to keep current on pest management recommendations.	10				
Access University based vegetable information websites for research based information	5				
Obtain the latest Ohio Vegetable Production Guide (Bulletin 672) and other commodity specific reports / production guides.	10				
Subscribe to "free" VegNet newsletter for updates on disease, insect, and weed development, plus management options during the growing season.	10				
Research alternative markets that encourage less pesticide use either through specific use reduction requirements (organic, eco-, IPM labels) or simply by permitting more insect feeding, etc.	5				

Your section total is _____pts.

Pesticides and Record Keeping

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Calibrate insecticide and fungicide sprayer at least once a year.	10				
Calibrate herbicide sprayer at least once a year.	10				
Use drift control nozzles for pesticide applications	10				
Maintain accurate and organized spray records.	15				
Maintain accurate records of planting dates, field locations, varieties, and fertilizer applications.	10				
Analyze spray records to determine Environmental Impact Quotient.	10				
Among pesticides of comparable efficacy, use the one with the lowest Environmental Impact Quotient.	10				

Your section total is _____pts.

Pre-plant IPM Considerations

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Soil test annually; amend soil with fertilizer or compost according to guidelines and yield of crop. (Nutrient Management – 590)	15				
Adjust mineral soil pH to 6.0-7.0.	15				
Band place 100% of P at planting according to soil test and 50% of K, pre plant and disc in and remaining 50% band place at planting according to soil test.	15				
Split apply N, pre plant and side dress; place nitrogen in band at time of planting or broadcast and disc in if band placement not possible	15				
Adjust N application to account for any N given by cover crop, compost or other sources of organic nitrogen.	10				
Conserve organic matter by using no-tillage or minimum tillage to plant. (No-till 329)	10				
Select field with a well drained loamy soil.	15				
Plant western grown, disease free certified seed.	15				
Select hybrids well adapted for your growing area with good tolerance to Bean Yellow Mosaic Virus and other viruses.	15				
Plant into fields using no-till and zone tillage. (No-Till – 329)	10				
Practice weed seed exclusion tactics such as high pressure washing machinery shared between farms.	15				
Buy certified seed and weed free soil mixtures; determine weed seed content of all seed and do not plant seed contaminated with weed seed not known to occur on your farm.	15				
Use site free of perennials such as quack grass, Johnson grass, Yellow nutsedge, or Canada thistle if possible.	15				
Use a combination of fall/spring tillage and fall/spring application of a broad spectrum herbicide to control established perennials or rotate with a herbicide resistant crop on which a broad spectrum herbicide was used.	15				
Apply pre-plant herbicides to control seedling broad leaf weeds and annual grasses if necessary.	10				

Use stale seed bed technique.	10				
Select a site that has not been planted to beans, potatoes, tomatoes, cabbage, or lettuce for at least 2 years. (Conservation Crop Rotation – 328)	15				

Your section total is _____ pts.

At-planting IPM Considerations

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Apply pre-emerge herbicide if weed control is needed.	10				
Use seed treated with insecticide to control early season pests, especially if planting into wet, cool, organic soils.	10				
If seed is not insecticide treated, apply soil insecticides at planting for control of early season pests.	10				
Use row covers to prevent insect damage to plants and bean pods.	15				
Orient rows in direction of prevailing winds (E-W), use wide spacing if possible.	10				
Use fungicide treated seed or apply a fungicide at planting to control seedling diseases.	15				

Your section total is _____ pts.

In-season IPM Considerations

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Control nearby weeds (chickweed, milkweed, purslane, and clover) that may harbor CMV or other viruses potentially vectored to the crop by aphids.	10				
Use cultivation to control weeds.	10				
Use post emerge herbicides to control emerged perennial weeds, broadleaf weeds, or grasses.	10				
Watch for weeds that are not common or are new to the field, physically remove them in order to prevent seed production.	15				
Scout field for economic pests weekly, apply controls if pests appear to be causing damage to the crop.	15				
Set up pheromone traps for European corn borer, apply insecticides once trap detects moth activity and variety planted is known to be susceptible to attack.	10				

Your section total is _____ pts.

Harvest IPM Considerations

Activity	Points
None described	

Post-Harvest IPM Considerations

Place a check mark in the right hand column for activities currently used or expected to adopt on your farm.

Activity	Points	IPM Score			
		Baseline	1 st Yr	2 nd Yr	3 rd Yr
Plow down residue as soon as possible after harvest to reduce weed residue, fungal inoculum, and insect over wintering locations.	15				
Evaluate new IPM practices used on the farm this year, even if used on limited acreage. Implement successful practices over greater acreage next season.	10				
Plant a cover crop as soon as harvest is complete. (Cover Crops – 340)	15				
Update field weed maps, use to make treatment decisions next season.	15				
Control weeds after harvest to prevent further spread and seed production	15				

Your section total is _____ pts. Total points for Element is 560.

Baseline IPM Score (Add the scores of the previous 7 sections) _____

End of Year 1 at least 60% of total IPM Element points _____

End of Year 2 at least 60% of total IPM Element points _____

End of Year 3 at least 60% of total IPM Element points _____