

Commercial Snapbean IPM

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Insects

Bean Leaf Beetle (BLB):

- Monitor snap bean plants for signs of BLB feeding. Treat if defoliation exceeds 20% during prebloom or 10% during podding and there is a population potential for further defoliation.
- BLB adults are known vectors of many snap bean viruses. Monitor fields for the early appearance of virus symptoms and treat with an insecticide to kill BLB if virus detection has been confirmed.

Corn Earworm (CEW):

- Blacklight and pheromone traps can be used to monitor peak moth flight. Treat if CEW catches in local traps average 20 or more per night and most corn in the area is mature. For continued control, insecticides should be applied every 5-7 days following the initial spray.

European Corn Borer (ECB):

- Blacklight and pheromone traps can be used to monitor peak moth flight. Treat if ECB catches in local traps average 5 or more per night. If this threshold is not reached, insecticides should still be applied every 7 days from pin stage until harvest for effective control.

Mexican Bean Beetle (MBB):

- Monitor snap bean plants for signs of MBB feeding. Treat if defoliation exceeds 20% during prebloom or 10% during podding and there is a population potential for further defoliation.

Seed Corn Maggot (SCM):

- In fields with previous SCM infestations, use treated seed or apply a seed protectant at planting.
- To reduce the potential damage from this pest, plow weeds or cover crops at least 2 weeks prior to planting,

avoid over-fertilization with manure, and plow under crop debris immediately after harvest.

Thrips:

- Scout snap beans beginning at plant emergence through flowering. Insecticide applications can be made if thrips are present from cotyledon stage to first true leaf stage and/or when first blossoms form.
- Later spring planting reduces thrips pressure.

Twospotted Spider Mites:

- Avoid harvesting corn or mowing weedy borders around snap bean fields prior to picking snap beans. Mites will move into snap beans as a result of these activities and can be very devastating.
- Examine the upper and lower sides of the leaves for white stippling along the mid-rib and veins, especially during hot, dry years. Treat if stippling is noted and 20 mites per leaflet are present.
- Natural enemies often keep mite populations under control; however, spraying for other insect pests can disrupt these enemies and flare mite populations.

Some sporadic pests of snap beans include *beet armyworms*, *cutworms*, *whiteflies* along with others.

Consult the Commercial Vegetable Production Guide (456-420) for insecticide recommendations.

Diseases

Root Rot:

- No economic thresholds have been established for snap beans. A fungicide application for root rot control is recommended at planting and is often a standard practice to prevent this disease.
- Cultural practices such as avoiding continuous bean rotations and poorly drained areas, plowing under previous crop residue, and alternating with

non-legume crops will also help reduce root rot occurrence.

Snap Bean Rust:

- No economic thresholds have been established for snap beans. Treatment should begin with disease appearance and be repeated every 7 days.
- Resistant varieties should be used in areas where this disease is troublesome.

White Mold:

- No economic thresholds have been established for snap beans. A preventative treatment is recommended when 70-80% of the plants have blossoms. A second application may be necessary for control.
- Avoiding close plantings will facilitate air movement and decrease disease development.

Anthracnose and *bacterial blight* rarely occur on snap beans in Virginia, though proper rotation and use of western grown seed can usually prevent these diseases.

Consult the Commercial Vegetable Production Guide (456-420) for fungicide recommendations.

Weeds

- Scout each field and keep records of the weed species present, their location and population density.
- Design a control program based on weed records for the specific problems in each field.
- *Cocklebur*, *common lambsquarter*, *mustards*, *smooth pigweed* and *spurred anoda*, may be problem weeds in snap beans, especially on the Eastern Shore of Virginia.
- Herbicides are the most valuable tools in a weed management program, but should be used in conjunction with cultural and mechanical methods of weed control whenever possible.

- Select the herbicide that best fits your specific weed infestation. Preplant-incorporated, preemergence, and postemergence treatments are available.

Consult the Commercial Vegetable Production Guide (456-420) for herbicide recommendations.

Nematodes

- Snap beans are susceptible to the *soybean cyst nematode*. Producers who rotate between soybeans and snap beans should be alert to the possibility of nematode infestation.
- In Virginia, both diagnostic and predictive nematode assay programs are available. Diagnostic assays help determine the cause of problems during the growing season. Diagnostic samples should be sent to the Disease Clinic at Virginia Tech for analysis and are processed free of charge. Predictive nematode assays are done on samples collected after harvest. These are also sent to Virginia Tech, but must be collected in the fall no later than November 20. Predictive samples are processed at a cost of \$11 (vermiform) and \$19 (cyst) per sample. Contact the local Extension office for sampling procedure and results analysis.

Consult the Commercial Vegetable Production Guide (456-420) for nematicide recommendations.

References

Alexander, S.A., Caldwell, J.S., Hohlt, H.E., Nault, B.A., O'Dell, C.R., Sterrett, S.B., and Wilson, H.P. 2000. Virginia Commercial Vegetable Production Recommendations (456-420). Virginia Cooperative Extension, (pg. 73-78).

For further information, contact your local Extension agent.