

IPM Priorities for Vegetables in the Northeast - 2005

In November 2005, the Vegetable IPM Working Group of the Northeastern IPM Center met in Harrisburg, Pennsylvania to create a list of prioritized IPM needs for vegetable commodities of the Northeast in the categories of research and extension, and general recommendations. Members of this group represent nine northeastern states including growers, crop consultants, processors, departments of agriculture, university researchers, and extension specialists. Membership changes over time.

2005 Vegetable IPM Working Group recommendations on priority needs within the Northeast region are as follows--

1. **Regional field pest identification guide.**

There is need for a comprehensive, regional pest identification guide, in print, that growers and agricultural professionals can carry to the field. It should have color pictures of all of the diseases, non-pathogenic disorders, weeds and insects that are described in Mid-Atlantic, New York and New England Vegetable Management Guides. This should provide photos of weeds at the seedling stage; diseases should include early symptoms and symptoms on different crops.

Specific project: Develop and print an expanded edition of the New England Pest ID supplement to include insects, diseases, and weeds for the entire region; include multiple photos as needed to assist in field identification.

These need to be promoted and made available to users.

Support use of the information to assist growers in better identification of pests and selection of appropriate control measures.

2. **Centralize vegetable IPM information through the Northeastern IPM Center database.**

Make it more user friendly, comprehensive and fully updated. Promote the availability of it.

3. **Improve and enhance existing monitoring and modeling infrastructure for determining insect, disease, weed and other pest conditions and forecasts.**

Include regional maps of pest pressure and phenology made publicly available through the Internet and other media.

4. **Expand adoption of IPM through:**

a. Serving needs of small or isolated operations and highly diversified farms where monitoring services are not available, with the goal of growers being able to accomplish IPM independently.

--Encouraging farmer to farmer educational exchanges about IPM practices.

--Provide effective educational tools for use by farmers such as sequential sampling, economic thresholds, ID guides, scouting and monitoring techniques.

--Encourage localized working groups of farmers and ag professionals to visit farms and scout and discuss timely pest management.

--Place emphasis on preventative practices

b. Serving needs of farmers in more concentrated crop production areas

-- Promoting cooperative or other organization structures to make it economically feasible for farmers to hire or create IPM services.

- c. Encourage application of IPM methods to enhance the success of organic farming systems.
5. **Conduct research on how to promote plant health and suppress insect, disease and weed problems through cultural and biological production practices.** These may include enhancing plant capacity to resist infection or injury, enhancing soil health, encourage conservation of beneficial organisms, using crop rotations, green manures, compost and fallow periods, to enhance whole farm health. Demonstrate efficacy of research outcomes through on-farm trials. Develop recommendations and disseminate this information in usable form for farmers.
 6. **Educate consumers, food distributors and buyers, and the public about the value and meaning of IPM**
 7. **Identify and prioritize pest problems on a regional basis.**
 8. **Support professional training and communication across the region for agricultural professionals in vegetable IPM.**
 9. **Identify crops for which there is need for regional crop profiles and pest management strategic plans and encourage development of those plans.**
 10. **Identify, and educate the vegetable production community, regarding new and emerging pests.**

Priority Pests for the Northeast.

The following list of priority pests were identified by the Vegetable IPM Working Group in 2003, 2004 and were reviewed and updated in 2005. The Working Group decided to drop the ranking scale that was included in this list in the past. All pests listed here are considered a priority for vegetable crops within the Northeast region. Some may have broader geographic range, involve more serious crop losses, or be cause for higher pesticide use at the present time, but all are serious and in need of further research and extension activities in some or all of the Northeastern states.

Category and Pest

DISEASES

Phytophthora of all the cucurbits, beans, and solanaceous crops and strawberries
Striped cucumber beetle/ bacterial wilt
Powdery mildew, downy mildew and other disease management on cucurbits
Plectosporium in pumpkin and summer squash
Fungal pathogens on solanaceous crops
Bacterial pathogens on tomatoes and peppers
Powdery scab, potato wart virus, and pink rot (esp. Ridomil resistant) in potatoes
Sweet corn leaf diseases
Aphid and thrips vectored viruses in snap beans, cucurbits, potatoes, brassicas, tomaotes and spinach
White mold (Sclerotinia) in beans, lettuce, tomato, potato, cabbage
Soybean rust on dry, lima, snap beans and edible soybeans
Leaf mold, powdery mildew and aphid transmitted viruses in high tunnels

Soil borne diseases of vegetables
Anthracnose of strawberries

INSECTS

Lepidopteran complex in sweet corn
European corn borer and other Lepidoptera in potato, beans, leafy greens, peppers.
Integration of the transgenic sweet corn with overall pest management and public policy
Sap beetle on corn
Potato leafhopper in beans, strawberries and potatoes, especially in organic systems
Wireworm on potatoes
Tarnished plant bug in beans, tomatoes, eggplant, pepper, strawberry
Stink bug on tomato, pepper, and bean
Flea beetle in brassicas
Aphid control on leafy vegetables
Lepidopteran complex in brassicas
Striped cucumber beetle/ bacterial wilt
Squash bug
Striped cucumber beetle/ bacterial wilt
Symphylans (high tunnels)

WEEDS

Increase post-emergence options, both chemical and cultural
Difficulty in using no-till due to weed control problems
Solanaceous weeds in solanaceous
Sweet corn -triazine resistance in weeds
Sweet corn -- foxtail control
Canadian thistle and other perennial weeds
Galinsoga

VERTEBRATES

Deer
Bird problems in sweet corn (crows, starlings, redwing blackbirds, geese) and in crops with attractive fruit (tomatoes, watermelons)

GENERAL

Pollination in vine crops
Better understanding of crop rotations