

IPM Needs and Priorities for Vegetable Crops and Strawberries

In the Northeast Region

Updated November 2007 at the annual meeting of the Northeast Vegetable IPM Working Group

Part I – General needs and priorities

1. **Expand adoption of IPM through addressing the unique needs of all types of vegetable growers including:**
 1. Small or isolated operations and highly diversified farms
 2. Larger growers in more concentrated crop production and their use of IPM.
 3. Organic Farmers.

2. **Increase support for IPM in the market place.**

3. **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.

4. **Identify and conduct research regarding new and re-emerging pests of vegetable crops.**

5. **Support training and communication across the region for agricultural professionals in vegetable IPM.**

6. **Centralize vegetable IPM through the Northeast IPM Center database.**

Make it more user-friendly, comprehensive and updated. Advertise and promote the availability of it.

7. **Develop updated vegetable IPM Guidelines or checklists**

8. **Improve and enhance monitoring and modeling infrastructure for determining and forecasting insect, disease, weed and other pest conditions.**

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

Part II: Priority Pests

The following list of priority pests were identified by the Vegetable IPM Working Group in 2003, 2004, and 2005, and were reviewed and updated in 2007. 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.

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

Potato pathogens (such as powdery scab, potato wart virus, and pink rot)

Sweet corn leaf diseases

Insect vectored viruses in vegetable crops

White mold (Sclerotinia) in vegetable crops

Diseases of vegetables grown in high tunnels

Soil borne diseases of vegetables

Strawberry diseases (especially root disease)

Plant parasitic nematodes

INSECTS

Lepidopteran complex in sweet corn

peppers European corn borer and other Lepidoptera in potato, beans, leafy greens,

Integration of the transgenic sweet corn with overall pest management

Sap beetle on corn

Potato leafhopper in beans, strawberries and potatoes, esp. 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

Squash bug

Striped cucumber beetle/bacterial wilt esp. on organic farms

WEEDS

Increase post-emergence options, both chemical and cultural

Non-chemical and cultural weed control

Weed control and resistance management in no-till

Solanaceous weeds in solanaceous crops

Canadian thistle and other perennial weeds

Galinsoga

Annual weed control in sweet corn

VERTEBRATES

Deer

Birds

Other vertebrates (including raccoons, skunks, mice, moles/voles, bears)

GENERAL

Pollination in vine crops

Better understanding of crop rotations

Role of transgenic crops in IPM

IPM Priorities for Northeastern Vegetables and Strawberries: 2007 Update