

## **2006 Vegetable IPM Working Group Priority Needs for IPM in Vegetable Crops within the Northeast**

Developed at the December 2006 IPM Working Group annual meeting, Philadelphia, PA.

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### **General Pest Management Needs**

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.
2. **Centralize vegetable IPM information through the Northeastern IPM Center database.**  
Make it more user friendly, comprehensive and updated. Advertise and promote the availability of it.
3. **Expand adoption of IPM through addressing the unique needs of all types of vegetable growers including**
  - a. Small or isolated operations and highly diversified farms
  - b. Larger growers in more concentrated crop production and their use of IPM.
  - c. Organic farmers
4. **Increase support for IPM in the market place.**
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. **Support training and communication across the region for agricultural professionals in vegetable IPM.**
7. **Identify crops for which there is need for regional crop profiles and pest management strategic plans and encourage development of those plans.**
8. **Identify and conduct research to support vegetable producers regarding new and re-emerging pests as well as resistance issues.**
9. **Improve and enhance 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.

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### **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, tomatoes 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  
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 crops  
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