

## **Vegetable IPM Priorities from the New York IPM Program for 2007:**

### **2007 - Cross-Commodity Vegetable Research Needs**

#### **High Priority:**

**Cultural Practices for Yield and Quality Enhancement.** Includes investigations of row spacing, populations, soil additives, seed treatments, fertility (timing, application, and materials), rotation, soil compaction management, tillage practices, and stand establishment.

**Root Rot Management.** For peas, beans, and beets. Includes new directions in cover crops or other cultural practices.

**Seed Treatments.** Includes fungicides for soil-born pathogens, and insecticides for seed maggots and other crop specific insect pests. See individual crops below.

**Weed Control.** See individual crops below.

**Economics of Processing Vegetable Production.** Generating information on costs of production and risk factors. Information will be used to develop a better crop insurance program. Leveraging outside resources, e.g. Cornell and NYS Ag. and Markets.

**Adoption of New Marketing Opportunities/New Crops/New Products When They Arise .** Includes emphasis on IPM labeled product that will educate consumers on grower practices.

**Spray Technology.** Emphasis on the latest technology that will allow for the most effective application of pest management materials.

**Non-chemical Pest Management.** Support for seeking external funding that will support more sustainable agricultural practices. This includes practices from biotechnology, organic agriculture, and traditional agriculture.

#### **Medium Priority:**

**Phosphorus Management.** Includes support for seeking external funding as well as further study on variety response to added P on high P soils.

**Organic Production.** Includes the feasibility of transitioning, non-chemical weed and pest control. Support for seeking external funding.

## 2007 - Sweet Corn Research Priorities

### High Priority:

**Disease Management.** Fungicides and varieties for disease management. Contact with southern states for rust forecasting purposes. Includes Rust, NCLB, Stewarts Wilt

**Weed Control.** Particularly for annual grasses

**Breeding for ECB Resistance.**

**Variety Evaluation.** Includes disease susceptibility and Poast tolerance.

**Maximizing Yield and Quality.** Including varieties, managing ear size, population, row spacing and fertility.

**Early Season Insect Control.** Seed treatments for control of flea beetles, rootworms, black and variegated cut worms, wireworms and seed corn maggot with emphasis on efficacy and cost.

**Mid and Late Season Insect Control** - Worm management, including cultural, biological and chemical methods. A better understanding of the effect of temperature extremes on the efficacy of chemicals is also needed.

### Medium Priority:

**Non-chemical Pest Management.** Support for seeking external funding that will support more sustainable agricultural practices.

## 2007 - Snap Bean Research Priorities

### Highest Priority:

**Bean Virus.** Better understand the aphid/virus complex. Screen existing varieties and breeding lines. Develop effective control measures. Complement research that is going on elsewhere and reduce duplication of any research in Wisconsin.

**Pod Quality Control.** Includes pod mold control, especially alternatives to Ronilan, managing seed size/sieve size, identifying and controlling rust/russet (unmarketable pods), and insect damage to pods.

**European Corn Borer Management.** Includes developing thresholds for stress conditions, and application technology for control including foliar and seed treatments with emphasis on efficacy and cost.

### High Priority:

**Weed Control.** Includes new products, rates and cost effectiveness.

**Soybean Rust.** Better understanding of how disease may impact snap beans. Monitor movement from southern states. Stay informed.

**Variety Evaluation and Breeding.** Includes heat tolerance, white and gray mold and virus resistance, managing seed size and sieve size, yield factors (planting dates and populations) and harvestability (plant height, direction of pick, ease of picking).

**Leafhopper Management.** Includes developing thresholds for stress conditions, and application technology for control including foliar treatment and seed treatments such as Gaucho/Cruiser. Move to medium priority

**Vigor in Early Plantings.** Includes varieties, environmental conditions, fertility.

**Animal Contaminants.** Including slugs, frogs, snakes.

### Medium Priority:

**Irrigation Scheduling to maximize yield effects**

**Literature/Internet Searching.** Keeping up-to-date on snap bean research from other areas.

## 2007 - Beet Research Priorities

### Highest Priority:

**Reducing Decay in Beets.** Includes chemical and cultural controls as well as ways to assay fields to determine decay potential.

**Weed Control.** In particular, redroot pigweed, lambsquarters, nightshades, hairy galinsoga, velvetleaf, ragweed and fall panicum.

**New Products from Beets.** Food or non-food products, especially for utilizing larger beets.

**Seed Quality.** Seed age, germination, and vigor.

**Managing size.** Ways to maximize small beets and minimize large beets, including methods of suppressing large beets, varying spacing, or varieties.

**Stand establishment** – Reduced tillage practices

## 2007 - Pea Research Priorities

### Highest Priority:

**Weed Control.** In particular, chemical control of thistles, daisies, nightshade (with respect to Colorado potato beetle contamination) and grasses, particularly fall panicum. Optimal timing for control.

**Contaminants** (other than weeds). Colorado potato beetles (see comments under weed control above), daisies and especially slugs and snails.

### Medium Priority:

**Inoculants.** Inoculant types, application methods, with and without nitrogen and the effect on tenderometer readings.

**Seed Maggot.** Survey to find out where it's a problem and potential use of seed treatments (other than slurries)

**Irrigation Management.** Timing and amounts; effects on yield components.

**Variety Evaluation.** Root rot, yield, sieve size, and tenderometer readings. Continue looking at afila types.

**Growth Regulator, Foliar Fertilizer Evaluation.** Determine the effect and application timing of materials like Crop Set, Vitazyme and foliar fertilizer compounds for their effect on yield, tenderometer readings and maturity dates