

Organic Pest Management

How can IR-4 help?

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An of overview of needs

- **Needs for organic vegetable growers**
- Abby Seaman with input from others at the Northeast Biopesticides meeting
- Spotted wing drosophila (small fruit)
- Brown marmorated stink bug (tomatillos, bell and specialty peppers, tomatoes)
- Striped cucumber beetle
- Crucifer flea beetles
- Solanaceous flea beetles (potato, tobacco)
- Systema flea beetles (red headed flea beetle)
- Cabbage and onion maggots
- Leafminers in spinach, chard, beets
- Potato leafhopper
- Japanese beetle
- Swede midge (cruciferous crops esp. broccoli)
- Late blight
- Cucurbit downy mildew
- Cercospora leaf blight on beet, chard
- In general: effective fungicides other than copper across crop groups (exception powdery mildews have a number of effective options)
- Four lined plant bug
- Basil downy mildew
- Brown leaf mold in high tunnel and greenhouse (used to be Fulvia)

Overview of Needs, WI

- Efficacy testing – Alternatives to copper
- Fungal and bacterial management
 - Potential removal of streptomycin and oxytetracycline
- Weeds – potential weed control chemicals have difficulty getting organic approval
 - Maybe not an IR-4 issue

Overview of Needs

- Caterpillar pests are pretty well covered
- Hemipteran pests are a particularly difficult to manage with organic pesticide sprays
- An organic-approved useful herbicide is desperately needed

Possible Pesticide Projects

- These existing labels could possibly be expanded to other commodities.
- Keep in mind that efficacy data are often lacking
- The need for efficacy data was a common theme from all correspondents

Spinosad

- One of the few really effective chemicals available to organic growers
- Labeled on a long list of commodities but not everything
- Need something to rotate to retard resistance

Regalia - Biofungicide

- Marketed for fungal/bacterial diseases
 - E.g., powdery mildew, leaf spot
- Listed on label – artichoke, asparagus, caneberries, bush berries, bulb vegetables, some cereal grains, citrus, cole crops, and many others.
 - Not many commodities that are not covered.

Grandevo - bioinsecticide

- Chromobacterium
- Labeled for alfalfa/forages, artichoke, asparagus, banana, brassica, bulb veg., blueberries, cane berries, etc.
- Not labeled for every kind of citrus, every kind of fruiting vegetable, every kind of vegetable

Label interpretation

- **Leaves of Root and Tuber Vegetables**
 - **Beets and turnips**
- **Oilseed Crops**
 - **Canola, safflower, sunflower**

Venerate - bioinsecticide

- *Burkholderia* spp.
- Registration pending in several states
- Labeled crops similar to Grandevo

Azera

- Azadirachtin + pyrethrum
- Labeled crops very extensive

Previsto

- Fixed copper fungicide
 - Proposed replacement for fire blight control
- Additional work may not be necessary

Hydrogen peroxide + peroxyacetic acid

- Sanitizer – disinfectant
- Mostly post-harvest uses

Weed Management

- Corn gluten meal
 - Potential pre-emergent activity on some weeds
 - Efficacy questionable
- Citric acid/acetic acid products/Pelargonic acid
 - Dehydrate top foliage