**Livingston County Farm A Summary 2011-2012**

On farm scouting began at this Livingston County Farm in the end of September. A fall/winter crop of carrots, spinach, Swiss chard, and collard greens had already been planted, following a summer crop of cucumbers, beets, Swiss chard and onions. Amongst other pests, there was a high population of cabbage worms in the collard greens. Plots were set up two weeks later and an application of Dipel was made in and outside of the tunnel. After nine days the number of live worms had dropped by 80 percent, and after 19 days the worms were 100 percent controlled (see chart). Sprays continued into the winter, when the weather was warm enough to apply materials.

9/30/11:

* Cucumber beetles in spinach
* Leaf miner in Swiss Chard
* Cabbage worms in Collard Greens

10/10/11:

* **Sprayed Dipel** on Swiss chard, collard greens, grass surrounding tunnel, and broccoli outside tunnel to reduce migration of worms into tunnel.
* Cucumber beetle on spinach

10/19/11:

* **Sprayed Dipel** on kohlrabi, lettuce, Swiss chard and collard greens in tunnel; broccoli outside of tunnel

10/29/11:

* Too cold to spray

11/12/11:

* **Sprayed Dipel** on collard greens, kohlrabi and Swiss chard

11/25/11:

* Too cold to spray

***Sprayed Dipel***

**Cattaraugus County Farm A Summary 2011-2012**

Two tunnels at this Cattaraugus County Farm were evaluated from September 2011 until March 2012.

***Tunnel 1:***

Scouting of the summer crop of tomatoes began in late September. There were high levels of aphids and mites as well as late blight. An Aphid parasite mix, Aphiline Ace Mix, from Syngenta Bioline, was released on October 7 and again on October 18. This product contains the mummies of three different parasites: *Aphelinus abdominalis, Aphidius colemani* and *Aphidius ervi*, which will attack several different species of aphids. In the first week of October the tomatoes were removed and greens were planted. The tunnel was planted in beds containing pac choi, kale, beets, spinach and Swiss chard. Throughout the fall and early winter the tunnel was treated with Dipel for cabbage worms and cut worms. Aphids were first found in late January with an average of 2.6 aphids per leaf. Plots were set up in the spinach and Swiss chard. Treatments of Moltx and Mycotrol began on January 31 and continued until the end of February, when pests were under control. The materials worked well keeping the aphids at manageable levels (see chart). Cold weather made spraying difficult, as applications should be made when temperatures are above freezing, giving the leaves adequate drying time.

9/20/11: Significant aphid and mite pressure in fall crop of tomatoes

* Aphids: 5.9 per leaf
* Mites: 6.6 per leaf
* Mite Damage Rating (1-10): 2.6
* Disease (late blight)Rating (1-10): 5.1

10/7/11: **Released Aphiline wasps.** Leaf lettuce mix planted, tomatoes removed

10/18/11: **Released Aphiline wasps**

10/21/11:

* Cabbage worms in pac choi, kale, beets and swiss chard
* No aphids detected
* Grower **sprayed Dipel** last week

11/5/11: Leaf damage, likely due to cutworm, **Grower sprays Dipel on weekly basis.**

11/20/11: Leaf damage. Bottom rot on red lettuce.

12/4/11:

* **Sprayed Dipel**- Worms holes on chard and pac choi
* **Sprayed Oxidate**- Downy Mildew on lettuce
* No aphids spotted

12/17/11:

* Frass and new leaf damage in Swiss chard
* Downy Mildew in mixed lettuce- **treated with Oxidate**

1/29/12:

* Aphids found throughout tunnel.
* Plots set up within Swiss Chard and Spinach- 2.6 aphids per leaf

1/31/12: **Sprayed Moltx and Mycotol**

2/6/12: **Sprayed Moltx**

2/7/12:

* Aphid counts statistically different by treatment (p=0.0457)
  + Treated: 0.08 per leaf
  + Untreated: 1.1 per leaf

2/8/12: **Sprayed Moltx, Mycotol and Dipel**

2/14/12:

* Aphid counts
  + Treated: 0.48 per leaf
  + Untreated: 1.0 per leaf
* **Sprayed Moltx, Mycotol and Dipel**

2/20/12: **Sprayed Moltx, Mycotol and Dipel**

3/5/12:

* Aphid counts
  + Treated: 0.09 per leaf
  + Untreated: 0.13 per leaf

***Tunnel 2:***

This tunnel was monitored by the Cornell Vegetable Program throughout the season. Pest issues were very similar to tunnel 1. Recommendations were given to the grower and he treated as necessary. Plots were not established in this tunnel with the winter crop.

9/20/11: Significant aphid and mite pressure in fall crop of tomatoes

* Aphids: 2.9 per leaf
* Mites: 3.2 per leaf
* Mite Damage Rating (1-10): 2.4
* Disease (late blight)Rating (1-10): 6.1

10/5/11: Greens planted (spinach, arugula, lettuce, kale, Asian greens, etc)

10/7/11: **Released Aphiline wasps**

10/18/11**: Released Aphiline wasps**

10/21/11:

* Circular holes in spinach leaves
* Slug damage in Asian greens
* **Sprayed Dipel** on Asian greens for cutworm
* Cucumber beetle in bed 12

11/20/11:

* Bed 12, Spinach, aphids spotted by grower

12/3/11:

* Mouse traps put out for ragged holes in pac choi
* **Sprayed Dipel**
* Minimal slug damage in spinach
* **Sprayed Oxidate** for Downy Mildew in head lettuce
* No aphids spotted

12/17/11:

* Slug damage in Pochoi- **treated with Sluggo**
* Aphids in lettuce mix- 6.4 per leaf

1/29/12: Aphids found throughout tunnel

**Erie County Farm A Summary 2011-2012**

Fall scouting began in the high tunnel tomato crop in mid-September. The plants were infected with late blight and had established populations of aphids and two-spotted spider mites. An Aphid parasite mix, Aphiline Ace Mix, from Syngenta Bioline, was released on September 28. This product contains the mummies of three different parasites: *Aphelinus abdominalis, Aphidius colemani* and *Aphidius ervi*, which will attack several different species of aphids. Unfortunately the growers were unable to get the fall crop out early enough to plant a winter crop, therefore on farm evaluations were terminated.

9/16/11: Aphid and Mite counts taken

9/28/11: **Aphiline wasps released**

9/29/11: Aphid and Mite counted taken

**Erie County Farm B Summary 2011-2012**

This farm, located in East Aurora, NY, grew a mix poc choi, red Russian kale and arugula. Besides some minor grasshopper feeding, there were no pests detected. Cold weather limited the growing season, ending it in mid-December.

10/6/11: Planted Poc Choi, and Red Russian Kale

10/14/11: Planted Arugula

11/5/11: No pests. Plants stunted due to cold

12/3/11: Grasshopper damage

12/17/11: Arugula harvested, no pests, hit by frost, yellow wilt set in

**Seneca County Farm A Summary 2011-2012**

No data was collected as this farm, but rather scouting support to enable the grower to make their own management decisions, having participated last year in a formal trial.

2/7/12: Scouted 30 leaves per bed (10 plants, 3 leaves each)

2/11/12: Treated with essential oil

2/22/12: Treated with essential oil

2/24/12: Treated with milk and sugar

2/29/12: Treated with Moltx and Mycotol.

Scouted 30 leaves per bed (10 plants, 3 leaves each)

3/5/12: Treated with Moltx and Mycotol.

3/12/12: Treated with Moltx and Mycotol.

**General Observations by Technician and Grower:**

-Finer leaf varieties tend to have fewer aphids

-Spinach, Asian Greens (not fine leaves) and Lettuce tend to be most susceptible to aphids