NYS IPM Weekly Field Crops Pest Report 2016

2016

The NYS Field Crop Weekly Pest Report provides timely pest information to field crop extension educators and agricultural professionals. The report compiles weekly pest and crop observations collected by field crop extension personnel across NYS. In addition, the weekly report provides a vehicle to disseminate other relevant IPM information such as pest identification, scouting techniques and a calendar with suggestions for pest management activities.

Cornell Garden-Based Learning Collaborates with American Horticultural Society to “Sow the Seeds of Success” through Relevant and Accessible Online Resources

2016

As educators struggle to balance competing demands on time, they continue to voice a need for outstanding program planning resources that are relevant and readily available. Many frequently speak to the importance of an outdated publication from the early 90s which had considerable content value, but until recently existed as an obsolete PDF and which was in need of updating.

2016 4-H National Youth Science Day Challenge: Drone Discovery

2016 to 2017

“Drone Discovery” is the 2016 4-H National Youth Science Day Challenge sponsored by the National 4-H Council. New York 4-H, the 4-H Geospatial Sciences Program and CCE Broome County educators developed the Challenge. It is comprised of activities for youth to introduce them to the science, technology, engineering and math of unmanned aerial vehicles and delivered as a kit of supplies for science inquiry.

Impacts of landscape and farming practices on bumble bee colony health and success

2016
Bumble bees are important pollinators of crops and wildflowers, but pesticides and parasites have been linked to their declines. This study seeks to compare the performance of experimental bumble bee colonies across landscapes (natural and suburban areas) and farming practices (conventional agriculture and organic agriculture). The research is being conducted by a Masters student, Nelson Milano.

**Improving beekeeper management practices to increase pollinator health and honey production in New York**

2016

Despite the increasing demand for crop pollination and growing consumer preference toward local honey, NYS beekeepers are experiencing excessive and unsustainable colony losses. These losses totaled 54% in 2014 alone, exceeding what beekeepers consider economically sustainable (15-20%) and the national average (42%). The prevalence of Varroa, Nosema, and viruses in colonies, as well as beekeepers’ management practices used to control them, are currently unknown for NYS. These parasites and pathogens have negative implications on NYS agriculture.

**Transmission networks in trait-based communities: Implications for disease in bees**

2016

The complexity of ecological communities creates challenges to understanding multi-host parasite transmission. Pronounced heterogeneity in transmission among individuals, species and across space is the rule rather than the exception. Community ecologists are beginning to make great strides in predicting multi-species interactions using a trait-based rather than taxonomic approach, identifying key functional attributes of organisms and environments that are important to understanding the system.

**Applying Statistical and Crop Growth Modeling To Facilitate Adaptation of Corn Production to Climate Change**

2016 to 2019

Growing season temperatures are projected to increase in corn production areas. In previous work, we have identified responses and possible adaptations to increasing temperature that minimize negative impacts of high temperatures on corn yields. We will extend this work to identify adaptation opportunities and improve yield predictions for projected changes in future corn production climates.

**The honey bee extension program 2016**

2016
My mission is to work with beekeepers in New York State to understand the factors affecting honey bee health, with a focus on pathogens, pesticides, and management practices. I provide extension and education through the NYS Beekeeper Tech Team, the Cornell Master Beekeeper Program, the Pollinator Network Website, and a variety of workshops. The overall goal of beekeeping extension is to improve honey bee colony health and the profitability of the beekeeping industry.

**The impact of a honey bee extension program**

2015

My goal is to increase honey bee health by educating beekeepers, gardeners, the public, government, and pesticide applicators. I use a variety of avenues and platforms to educate and inform these individuals including the following:

- Advising particular groups, such as the NYS Pollinator Task Force Team and the Apiary Industry Advisory Committee
- Creating a brand new pollinator website for anyone to access: [www.pollinator.entomology.cornell.edu](http://www.pollinator.entomology.cornell.edu)

**Drawing for Disclosure: Modeling the Impacts of Hydraulic Fracking in the Susquehana River Basin**

2015

Drilling the Marcellus shale for natural gas extraction consists of many disparate actions by multiple mining companies, including drilling process, leasing and contracts, spills and violations and water withdrawals. Assembling this data in one model can help make transparent the collective or aggregate impacts (positive and negative) of this industry operating in rural Pennsylvania. Many impacts are felt north of the border in New York State.

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