Neonicotinoids Help Citrus Grower Manage Deadly Disease

A Florida citrus grower depends on neonicotinoids to keep a devastating disease at bay and worries what would happen to the entire industry if these tools were no longer available.

(October 28, 2014) – Over the past decade, a Florida grower has battled “citrus greening,” a currently incurable bacterial disease spread by an invasive insect, the Asian citrus psyllid, which now threatens the entire Florida industry. Lindsay Raley, a grower who manages a family business dating back to the 1920s, has come to rely on neonicotinoid insecticides or “neonics” as his primary defense in protecting his young trees against this disease and worries that the potential loss of these tools would make citrus production untenable.

Growing citrus in Florida has always been a challenge. Hurricanes and untimely freezes have taken their toll on the industry and the arrival of the Asian citrus psyllid, and the disease it vectors, has made matters far worse. If not managed properly, citrus greening, also known as Huanglongbing (HLB), will render the fruit unmarketable and can destroy an entire block of trees within a few years. Like other growers, Raley has maintained his groves using strategic management practices, the cornerstone of which is based on neonicotinoid insecticides to protect young trees.

Considering the great threat posed by this disease, it is remarkable that it can be managed using only a small amount of product. Research shows that when neonicotinoids are used, the insect pest will probe the plant but withdraw without feeding, thereby reducing potential for disease transmission. Growers rotate chemicals to avoid resistance development, but note that other products do not repel the psyllid in the same way, making neonics uniquely suited to help manage this disease.

“I believe the loss of neonicotinoids would have a devastating impact on the Florida citrus industry” said Raley. “Neonicotinoids are currently the only real protection Florida growers have in their toolbox to be able to protect their young trees from HLB infection.” Alternative pesticides typically require frequent foliar sprays and are far less effective against preventing disease transmission by the psyllid.

The consequences of not managing HLB are serious. According to a study conducted by the University of Florida Cooperative Extension Service in 2012, the direct impact of this disease over a five-year period (2006-2011) resulted in a loss of more than 8,000 jobs and a cost of $4.5 billion to Florida’s economy. The impact from being unable to replant trees lost to this disease could result in the loss of 76,000 jobs and nearly $9 billion estimated annual economic impact.

“When a new tree is put into the field to be productive long term, it’s got to stay free of the disease at least through its first five or six years of life, when it’s growing and putting on the size
that then can support a crop, said Dr. Harold Browning, chief operating officer for the Citrus Research and Development Foundation. “And the neonicotinoids prevent infection transmission during that time, and without them you would start to see infection coming in almost immediately once the tree is planted.”

Because citrus crops are self-pollinating, they do not need bees. But many growers work with and support the local beekeepers who depend on the citrus bloom for high-value orange-blossom honey. Raley has worked with the same beekeepers for many years without incident, allowing them access to his orchards and keeping them informed on his pest management practices.

Report Reference
The Value of Neonicotinoid Insecticides in North American Agriculture: A Case Study of Neonicotinoid Use in Florida Citrus

This report is one in a series that will be released over the next few months as part of a comprehensive evaluation of the economic and societal benefits of neonicotinoid insecticides in North America. The research was conducted by AgInfomatics, a consulting firm of independent agricultural economists and scientists, and jointly commissioned and sponsored by Bayer CropScience, Syngenta and Valent U.S.A.

All reports will be published online beginning October 28 at: www.GrowingMatters.org.

About Growing Matters
Growing Matters is a coalition of organizations and individuals committed to scientific discourse on the stewardship, benefits and alternatives of neonicotinoid insecticides in North America. Bayer CropScience, Syngenta and Valent U.S.A. Corporation are leading this coalition with support from Mitsui Chemicals Agro, Inc.

Agriculture and horticulture are key to nourishing families and communities. Feeding a growing population, enhancing the beauty of our surroundings, and sustaining a commitment to environmental protection are fundamental needs that matter. Crop protection products, both natural and synthetic, are important tools that protect plants from tough and invasive pests that can devastate crops and urban landscapes.

Go to www.GrowingMatters.org for the latest information, reports, videos and infographics on the benefits of neonicotinoid insecticides or to show your support.