

FACT SHEET

The Value of Neonicotinoid Insecticides in North American Agriculture

A Case Study of Neonicotinoid Use in Florida Citrus

Summary

As part of a comprehensive evaluation of the economic and societal benefits of neonicotinoid insecticides, researchers identified individual growers for case studies to more deeply examine their perceptions regarding the value these products bring to their operations. One such grower is Lindsay Raley, who manages 1,200 acres of citrus in Florida.

Over the past decade, Florida growers have battled “citrus greening,” an invasive bacterial disease spread by the Asian citrus psyllid, which now threatens the entire industry. Raley, who manages a family business dating back to the 1920s, has come to rely on neonicotinoid insecticides as his primary defense in protecting his trees against this disease. There are no viable alternatives that match the unique features and benefits neonicotinoids have to offer, and Raley worries that the potential loss of these products would make his citrus production untenable.

Key Findings

- Florida citrus growers have been battling an invasive bacterial disease that not only renders their fruit unmarketable, but can destroy an entire citrus grove if not controlled.
- Citrus greening disease, also known as Huanglongbing (or HLB), is spread by the Asian citrus psyllid and now threatens other citrus growing regions in the United States.
- Neonicotinoid insecticides applied in a very targeted manner are the primary tools growers like Raley use to protect their young citrus trees from this devastating disease.
- Research shows that when neonicotinoids are used, the psyllid will probe the plant but withdraw without feeding, thereby reducing the potential for disease transmission.
- Growers routinely rotate chemical treatments to avoid resistance development, but neonicotinoids are uniquely suited for optimum management of 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, such as older organophosphates or pyrethroids, would require frequent foliar sprays and are less effective in preventing disease transmission.
- 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 to Florida 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.

- Citrus trees are self-pollinating and do not need bees to set fruit, but many growers work with and support the beekeepers who depend on the citrus bloom for high-value orange-blossom honey.

Report Reference

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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](http://www.BayerCropScience.com), [Syngenta](http://www.Syngenta.com) and [Valent U.S.A. Corporation](http://www.ValentU.S.A.com) 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.