



NEWS RELEASE

Research Shows Neonics are Critical to Growers' IPM and Profitability

Loss of neonicotinoids would increase total amount of insecticides used, disrupt current pest management practices and increase costs by a projected \$848 million in major U.S. commodity crops

MADISON, Wis. (Nov. 5, 2014) – New research by agricultural economists finds that neonicotinoid insecticides are not only popular tools, but also are critically important to growers' integrated pest management (IPM) programs and profitability. In a comprehensive and detailed study, researchers found that without neonicotinoids, farmers of major U.S. commodity crops would be forced to apply more insecticides, suffer serious disruptions to their IPM practices, and incur hundreds of millions of dollars in additional costs to their farming operations.

The study was conducted by AgInfomatics, LLC, a consulting firm consisting of independent agricultural economists and scientists. The research investigated real world insecticide use in corn, cotton, sorghum, soybeans and wheat and explored the hypothetical question of what would happen if neonicotinoid insecticides were no longer available. The evaluation did not include impact on yields, or importance to farmers, which will be addressed in separate reports.

The research confirmed that neonicotinoids are the most widely used insecticides in these commodity crops. Over the three years investigated, researchers found that 135 million acres were treated annually with a neonicotinoid insecticide, representing 56 percent of the 240 million total planted acres of corn, cotton, sorghum, soybeans and wheat. By far the most prevalent use for these products is as a seed treatment, which accounted for 98 percent of the total neonicotinoid applications across these crops. Seventeen different pest groups were identified as primary management targets for all neonicotinoid applications, as pest pressure varies by crop and geography.

In the absence of neonicotinoids, researchers found that 77 percent of the previously-treated acres would use alternative insecticides to manage pests in these crops. Partly due to a lack of registered soil-applied alternatives, the remaining acreage would use non-chemical options, including higher-density seeding to offset anticipated stand loss. Despite the lower acreage treated, the total volume of insecticides used in these crops would actually increase – driven primarily by growers needing to rely on older chemicals, which require more frequent applications. Across the major commodity crops evaluated, the study found that each pound of neonicotinoid lost would be replaced by nearly five pounds of these older insecticides.

The economic impact of replacing neonicotinoids with alternative products in these commodity crops is significant – the research projected a total net cost increase of \$848 million per year. Factors contributing to this increase included the higher costs of alternative products to replace the lower-cost seed treatments, higher application costs associated with equipment changes and

more frequent spraying, increased scouting costs, and increased seeding rates and/or re-planting costs to offset early season pest damage.

The loss of neonicotinoid insecticides would raise serious concerns for growers' pest management and environmental practices. A greater reliance on older, less selective organophosphates and synthetic pyrethroids would not only result in more frequent applications, but also would have a negative impact on beneficial insects needed in IPM programs to lower pest populations. Furthermore, a loss of seed treatments would result in potential increased spray drift, more passes through the field and a greater potential for field runoff.

The results from this study are supported in a separate, 96-page report, which provides a detailed description of the methods and assumptions used by the researchers. The analysis relied primarily on GfK Kynetec data, which are widely recognized as among the best survey-based data on agricultural chemical use, having been collected annually for almost 50 years. The data were averaged over a three-year period (2010-2012) to minimize annual variability in pest pressure, chemical usage and operating costs. A total of 98 different insecticide active ingredients and 72 target pests were included in the data assessment.

Report References

The Value of Neonicotinoid Insecticides in North American Agriculture: Part I. Estimated Impact of Neonicotinoid Insecticides on Pest Management Practices and Costs for U.S. Corn, Soybean, Wheat, Cotton and Sorghum Farmers; Part II. Methods and Assumptions for Estimating the Impact of Neonicotinoid Insecticides on Pest Management Practices and Costs for U.S. Corn, Soybean, Wheat, Cotton and Sorghum Farmers

These reports are part of 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. Corporation.

All reports will be published online at: <http://GrowingMatters.org/case-studies/>.

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.