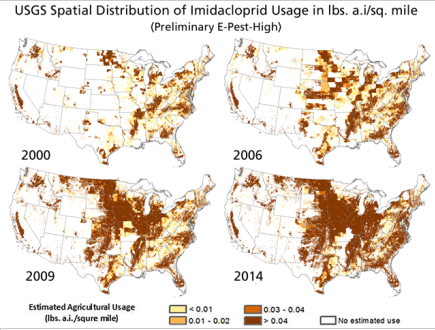
Seed Treatment Numbers

New Documents Detail Extensive Use of Neonic Seed Coatings

Emily Unglesbee , DTN Staff Reporter
1/16/2017 | 3:12 PM CST



These USGS maps show how the use of one neonicotinoid, imidacloprid, grew extensively between 2006 and 2014. (Photo courtesy EPA and USGS)

ROCKVILLE, Md. (DTN) -- New EPA documents have finally put hard numbers to the use of neonicotinoid insecticides, which have quietly grown to dominate corn and soybean acreage in the U.S. over the past five to six years.

Data on the usage of clothianidin (Poncho, from Bayer), thiamethoxam (Cruiser, from Syngenta) and imidacloprid (Gaucho, from Bayer and Valent USA) has been scarce in the past, in part because the EPA does not regulate seed treatments in the same way it does foliar or soil applications of the same chemicals.

Now pollinator and aquatic risk assessments on three neonicotinoids released on Jan. 12 revealed what many have long suspected: the chemicals are everywhere.

EPA estimated that 42 million to 61 million acres of corn are treated with clothianidin annually (45% to 65% of all U.S. corn acres), and 24 million to 42 million acres of corn are treated with thiamethoxam (26% to 45% of all U.S. corn acres).

That means, in any given year, nearly 100% of U.S. corn acres are likely treated with one of two insecticides.

In soybeans, 13 million to 21 million soybean acres are treated with thiamethoxam (16% to 25% of all U.S. soybean acres), and 2.1 million acres are treated with clothianidin each year (3% of all U.S. soybean acres). The number of imidacloprid-treated soybean acres is likely substantial, although EPA did not report that number. However, the agency did estimate that 880,000 pounds of imidacloprid were applied to soybeans in 2014. For comparison, that is nearly three times the amount of thiamethoxam applied to soybeans each year, which accounted for 13 million to 21 million acres.

These numbers represent a major shift in the traditional understanding of agricultural pesticide usage, where herbicides reigned. In 2014, USDA reported that while 97% of corn acres had herbicides applied to them, insecticides were used on only 13%. Likewise, in 2015, USDA estimated that 96% of soybean acres received herbicides, compared to insecticide applications on just 22%.

The new numbers on neonicotinoid seed treatments confirm that insecticide and herbicide use are not actually so far apart. Insecticides have merely gone underground -- in the form of seed treatments.

Heavy dependence and repeated use of certain herbicides, insecticides and genetic traits have led to resistant-pest problems in the past.

Whether neonicotinoid seed treatments will create a similar problem is less certain. The insecticide targets a range of biting and sucking pests, and in corn and soybean acres, they are used primarily to treat soil pests such as the seed corn maggot, white grubs and the bean leaf beetle.

Dave Fischer, director of pollinator safety with Bayer, said pests have proved to be far slower at evolving resistance to neonicotinoid pesticides in the past, although some problems have surfaced, such as the Colorado potato beetle.

Fischer defended the industry practice of placing neonicotinoid chemicals on nearly every corn seed planted in the country (and the majority of soybeans seeds), regardless of pest pressure. "There's nothing wrong with crop insurance," he said.

Fischer called the practice a "preventative application" and noted that it's hard to scout for the soil pests that neonicotinoids are often used to treat.

"It gives the grower flexibility if it should happen," he said. "I'd liken it to getting a flu shot."

Unlike the flu shot, however, neonicotinoid pesticides are under global scrutiny for the role they may play in the decline in pollinator health and survival. These concerns have prompted the EPA to conduct pollinator-specific risk assessments in the agency's routine registration review of this class of chemicals, as well as risk assessments for aquatic animals and insects. See the DTN story on those assessments here: http://bit.ly/....

Academic scientists have been more critical of the widespread use of neonicotinoids. When the EPA released a report in 2014 that concluded that neonicotinoid seed treatments had no economic benefit to soybean growers, a large group of university scientists from the Midwest and Southeast released statements agreeing with that conclusion.

In a DTN interview on that report, Penn State University entomologist John Tooker likened industry's use of neonicotinoids to the overuse of glyphosate among many farmers over the past decade.

Most Popular

1 **Mexican Senator Champions Bill to Stop U.S. Corn Shipments**

2 **Demand Change**

3 **Alternative Grazing Gaining Support**

4 **No Change May be Step in Right Direction**

5 **House Aggie Peterson Sees Fewer Fights in Next Farm Bill**

Emily Unglesbee

About the Author

Connect with Emily:

@Emily_Unglesbee

"This seems to be yet another example of the agricultural industry loving something to death," he said, "I would like growers that need neonicotinoids to be able to use them. But by having them used so indiscriminately, their utility is being greatly obscured."

You can access the EPA risk assessments, which contain the usage and acreage data for neonicotinoids, here: http://bit.ly/....

Emily Unglesbee can be reached at Emily.unglesbee@dtn.com

Follow Emily Unglesbee on Twitter @Emily_Unglesbee

(PS/AG)