

With the 'bee crisis' fading and European farmers fearing an insect invasion, EU's neonicotinoid ban fiasco stumbles into the New Year

The future of a controversial agricultural pesticide remains very much in limbo, the victim of both scientific uncertainty and political malfeasance.

I am talking about neonicotinoids, a family of insecticides first deployed in the 1990s as an agricultural insecticide applied mostly as a seed coating and thought to be both more effective and less toxic to beneficial insects, including bees. Yet because of fears based on [controversial and less-than-convincing laboratory studies](#) that neonics, as they are called, might harm honeybees or wild bees, the European Union issued a moratorium in 2014 on their use. Since then, farmers in England have turned to other pesticides, which has turned out to be problematic ecologically for bees.

Toxic alternatives to neonics

[new holland t1 and field sprayer](#) One possible alternative to neonicotinoids is the organophosphate category of insecticides, including [chlorpyrifos](#). These insecticides are far more toxic to humans than neonicotinoids according to the Environmental Protection Agency. The [EPA writes](#) that while thirty-six such pesticides are presently registered for use in the US, "All can potentially cause acute and subacute toxicity."

The other major alternative adopted by desperate farmers, and blessed by anti-neonic activists are pyrethroid pesticides, which are derived from two species of asters and currently permitted in organic agriculture. Pyrethroid insecticides are supposedly low in toxicity to mammals and birds, but as the [Washington Post has reported](#), it turns out they are highly toxic to most insects, including beneficial insects like honeybees; in fact they are considered far more harmful to bees than any neonic. An oft quoted study published in 2015 in [Chemosphere](#) found that sublethal doses of pyrethroids reduced the movement and social interaction of honey bees.

What a mess, for both science and farmers. The current crisis was set in motion by the passage of the [Bee Guidance Document](#), or BGD for short, which created the regulatory framework used to make its way to the European Food Safety Authority. The [Food Safety Authority](#) to regulate pesticides, paving way for last April's ban.



Considering the ongoing crisis, it's not surprising

that once again, the European Commission tried and failed to get its member states to officially adopt the BGD. The vote was supposed to have happened at the European Commission's Standing Committee on Plants, Animals, Food and Feed, which met [in December](#). Activists such as [BeeLife](#), the French National Beekeepers Union and [Pesticide Action Network](#) had been geared up for months pushing for its adoption. SumofUs delivered a petition with 130,000 signatures to "push European governments to protect bees from killer pesticides." Nevertheless, the Committee meetings came and went without a vote.

The activists were outraged, as one might imagine. As had happened at similar recent failures to ratify the BGD, they accused the members of "cynically kowtowing to the wishes of agro=industry" and "putting profit before protection of bees." Those are familiar talking points when they don't get their way.

Nevertheless, it's fair to ask, what's going on?

The member states were practically falling over each other in their eagerness to vote for the neonics ban last April; so eager in fact that they banned neonicotinoids on everything, even crops such as sugar beets that don't flower, don't attract bees and can't possibly pose a threat to bee health. No matter, no one wanted to be outdone in their commitment to saving and protecting vital pollinators.

When it comes to voting on the regulatory guidance on which that ban was based, however, the member states suddenly have become shy. It's been five years now since the BGD was written and it still exists in a kind of legal limbo. Do the members harbor secret doubts about the integrity and workability of the BGD or about the economic and ecological consequences of officially adopting it as regulatory law?

BGD's troubled history

If so, they're right to be concerned. Voting the BGD into law means that it would automatically become the standard by which *all* pesticides are reviewed. The law of unintended consequences would suddenly kick into place as the result could be economically problematic to agriculture in Europe, multiplying many-fold the billions of losses already experienced due to the neonics ban.

Image not found or type unknown

The BGD has been an evolving problem for years. As I and others have [previously reported](#), the BGD was first [hijacked by anti-pesticide activists](#) in 2011, creating guidelines that are so onerous and in some cases literally impossible to meet that they would force almost any pesticide tested under its regime to fail. Science writer Matt Ridley has [called it](#) a “bizarrely one-sided piece of politicized science.”

Three examples:

- **The BGD requirements are statistically impossible to meet.** The BGD requires studies to demonstrate that a pesticide causes no more than 7 percent mortality in honeybee colonies. Bee colonies naturally fluctuate as much as 15 to 21 percent, due to rain, temperature, varroa mites and other diseases. It is statistically impossible to demonstrate no more than a 7 percent effect when the normal variation is some 2 to 3 times as large.
- **The BGD creates a Catch 22 for researchers that automatically invalidates realistic studies.** For field studies to be accepted, they must demonstrate that [at least 90 percent](#) of the honey bees in a colony have been exposed to the pesticide being tested. This, however, makes it impossible to conduct a realistic field study. In real life, there is practically no pesticide residue left in the nectar and pollen by the time the crops are flowering and bees are foraging on them (typically 1.5 parts per billion—or 6% of the residue level that the US EPA has identified as observably harmful to honeybee colonies). Bees generally forage on a variety of plants as well, including wild plants in the surrounding landscape, so the small residue levels will be even further diluted. Finally, bee colonies have natural self-detoxification capabilities that further reduces the pesticide exposure for the average bee within the hive. Meeting the required 90 percent exposure rate can only be accomplished by artificially and massively overdosing the bees, defeating the whole purpose to conducting a realistic field experiment.
- **The BGD spatial requirements of field studies create practical impossibilities.** It’s been calculated that to comply with all the BGD’s field separation distance and replication requirements would demand an area of some 173 square miles, approximately four times the size of the city of

Paris— something that is probably not possible in the crowded European landscape.

Clearly, setting impossible parameters was an effective way to assure neonics would fail any evaluation, which is what happened.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

Politics runs up against science

The problem for the European Commission now, however, is more complicated. Pretty much any pesticide reviewed under the BGD would [probably fail](#) as well, including organic pesticides. Following publication of the BGD in 2013, industry ran an analysis of how some 151 different pesticides might fare under the regulation. A solid 100 percent failed Tier One tests (in which bees are artificially force-fed the pesticide) and would therefore be subject to the Catch-22's and other impossible requirements of Tier II and Tier III field testing outlined above. In the words of the European Crop Protection Association, the Bee Guidance Document will "virtually make it impossible to register any new or existing insecticide, as well as many herbicides and fungicides."

So, the member states are between a rock and a hard place. If they vote *against* the BGD, it would they were so gung-ho to pass last April. It might even process has been.



If they vote *for* the BGD, however, the consequences

to European agriculture would be devastating. The neonic ban alone was estimated in 2017 to have cost the EU three-quarters of a billion dollars a year. As much as the members liked to grandstand on their support for the environment and the bees, they probably don't want to be held accountable for undermining the entire agricultural sector—thereby doubling, if not tripling, food prices in the EU.

Better to simply punt and not hold any vote at all—the decision they clearly made in December.

Meanwhile, as economic consequences of the neonics ban mount, more and more EU member states are

issuing or planning to issue derogations (exemptions) to keep their farmers from going bust, including [Austria](#), [Belgium](#), [Croatia](#), [Czech Republic](#), [Denmark](#), [Poland](#), Romania and [Slovakia](#). This in turn is making the anti-neonics campaigners increasingly restless, causing them to ramp up their pressure on the Commission to make the BGD the law of the land.

How long can the Commission continue to play dodge ball with both groups?

Lost in all this, of course, is that the neonics ban was instituted to solve a honeybee “crisis” that we know is a fraud—the so-called “bee-pocalypse,” perpetrated mostly by activist groups and endorsed at least initially by a credulous media, beginning back in 2012. Honeybee populations have been rising in North America, Europe and indeed world-wide since neonics first came on the market in the mid-1990s, and are likely to continue to rise in the future. Yes, there are bee health issues, but independent scientists and dozens of field studies point not to neonics or even pesticide overuse as the driving issue, but to a plethora of factors, most prominently mites and the miticides used to control them.

Jon Entine is the executive director of the Genetic Literacy Project. He and the GLP have reported extensively on pollinator issues, including the controversy over neonicotinoids; our [special section is archived here](#). Entine’s [bio can be found here](#). Follow him on Twitter [@jonentine](#)