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European Court ruling on neonicotinoids further highlights muddle created by ongoing EU regulatory inconsistency and dysfunction

The recent Court of Justice of the European Union (CJEU) ruling¹ that EU Member States can no longer grant derogations (exemptions) for the use of neonicotinoid seed treatments to control pests in arable crops like sugar beet and oilseed rape raises a number of important questions and highlights the regulatory inconsistency and muddle that the European Union (EU) has created for itself.

As its implications unravel, agricultural economist Graham Brookes asks how will farmers be able to continue growing these crops given there are no current effective alternative forms of control? Will the ruling extend to banning all emergency derogations permitting the use of other banned pesticides? Will the ruling result in the banning of emergency derogations permitting the routine and widespread use of 'banned' products in the organic sector?

Farmers who know from experience the major yield losses that yellow virus carrying aphids can cause — sugar beet yields in France have dropped by as much as 50% in recent years² — have mobilised to protest against the Court ruling, with for example, almost one thousand having descended on Paris to protest in early February 2023.

What is the background?

The class of insecticides called neonicotinoids, include imidacloprid, clothianidin and thiamethoxam. They are used in many countries around the world to control disease carrying pests that can destroy crops. They have also been used in European agriculture for many years to control aphids that can infest arable crops like sugar beet and oilseed rape with yellow virus and lead to major yield losses. These insecticides can be applied to the crops during the growing season or, to help reduce the need to spray insecticides, as a preventative coating or dressing of the seed before planting.

They are known as systemic insecticides. They can transfer from the soil through the sap of the plants and reach the nectar glands at the time of pollination, when the pollinators are attracted to the flowers. The question whether this harms bees and other pollinators has split scientists.

The use of neonicotinoids has been linked in some studies, mostly in laboratory settings to harming bees and other pollinators, contributing to a decline in their populations. Bee population declines have multiple causes which may include parasites like Varrora mites, pathogens, nutrition, habitat loss caused by urbanisation and forest clearing, climate change and pesticides (Goulson D et al, 2015³), though the data and relative importance of each cause are contested.

Some scientists say much of the evidence relies on less reliable laboratory studies while in field research shows fewer impacts (Stephenson and Solomon, 2017⁴). Other scientists, studies and advocacy groups contend that there is persuasive evidence of dangers to bees from cumulative exposure⁵.

Despite ongoing disagreements in the science community, the European Union, citing the precautionary principle, banned the use of neonicotinoid insecticides in 2018. Farmers were critical of the decision because there are no substitutes that are known to be safer or as effective.

After widespread yield losses experienced by sugar beet farmers in 2020 largely arising from yellow virus infections, sugar beet grower groups in some Member States applied for emergency authorisations to use neonicotinoid seed treatments. In France, a derogation was issued for the three years up to and including the 2023 season.

A case against the use of these emergency authorisations was filed in Belgium by the anti-pesticide groups Pesticide Action Network Europe (PAN) and Nature et Progrès Belgique. This was then passed to the European Court of Justice (CJEU), which recently issued its judgement¹ potentially banning the use of these derogations. EU member states are now waiting for the EU Commission to issue a formal interpretation of this CJEU ruling⁶.

The principle of allowing derogations for the use of a specific plant protection product at a Member State level stems from Article 53 of Regulation 1107/2009 which permits them for limited and controlled use, *where such a measure appears necessary because of a danger which cannot be contained by other reasonable means*. In allowing such derogations, authorities consider five tests that must be met, namely:

- There must be a danger;
- There must be special circumstances which make it appropriate to derogate from the standard approach to authorisations;
- The danger must not be capable of being contained by any other reasonable means;
- An emergency authorisation must appear necessary because of that danger, and;
- An emergency authorisation may allow only limited and controlled use of the plant protection product.

Anti pesticide and organic farming advocates claim the ruling has broader implications but this highlights a major inconsistency

The first to applaud the CJEU ruling were the anti-pesticide advocacy groups referred to above, as well as other groups and bodies actively promoting lower intensity agricultural production systems, notably in the organic sector. PAN interprets the CJEU ruling to mean *'that all pesticide derogations must end, as none of them can be deemed a real emergency'* [Commission's verdict still out on EU court ruling on bee-toxic pesticides – EURACTIV.com](#).

However, if the broad PAN interpretation is applied by regulatory authorities then a closer examination must be made of the numerous and regular emergency derogations applied for, and obtained by, the organic sector for the use of various pesticides and other inputs that would otherwise not be permitted in organic agriculture.

The relevant EU organic regulations 2021/1165⁷ and 2018/848⁸ (Part one of Annex II) requires pest and disease management to rely for protection from natural enemies, resistant varieties, crop rotation and thermal processes. Where plants cannot adequately be protected from pests by these measures or in the case of an established threat to a crop, an additional list of otherwise banned products can be used but 'only to the extent necessary'. Therefore the organic regulations specifically provide for the use of emergency derogations to allow the use of some pesticides in circumstances very similar to those referred to above for non organic production systems. These derogations allow for the use of various pesticides including copper-based products (eg, oxychloride,

sulphate and Bordeaux Mixture), sulphur, paraffin oil, Spinosad and pyrethrins. The insecticides deltamethrin and lambda cyhalothrin can also be used in pheromone traps.

Emergency derogations to use some of these pesticides in organic production systems are regularly applied for and granted in the EU, including the use of copper-based products to control blight in organic potato crops.

Many of these products are not authorised for general use on the basis of scientific concerns surrounding their safety and environmental impact. The European Food Safety Authority (EFSA)'s 2018 assessment of the environmental risks of various copper compounds⁹ found that the potential accumulation in the soil of copper, a non-biodegradable heavy metal, is an ecological risk endangering farm workers, mammals, birds and soil organisms. The EU has, nonetheless, continued to grant derogations for the use of these products in the organic sector. An impact assessment of the EU's Green Deal Farm to Fork and Biodiversity Strategies by Wageningen University¹⁰, also warned that a switch to organic farming would have adverse consequences for meeting the EU's targets for reduced use of pesticides, mainly due to the widespread use of copper-based active ingredients in organic crop production. Similarly, the insecticide spinosad, used by organic farmers has been found to cause brain damage in non-target insects, and to be more damaging to non-target insects than synthetic insecticides, according to recent research led by the University of Melbourne¹¹.

If anti pesticide advocacy groups were being consistent with their stance against the emergency use of derogations for limited and controlled use of pesticides like neonicotinoid seed treatments in non-organic agriculture and perceive that the CJEU ruling means all pesticide derogations must end, they should accept that the regular use of similar derogations in the organic sector must also end.

Given that the main EU organic regulation (Reg 2018/848) also provides for a number of other derogations and exceptions for the use of non organic inputs, reproductive materials (seeds or the animal-equivalent), feed materials, additives (food and feed) and processing aids in the production and manufactured of products certified as organic, then a consistent application of PAN's interpretation of the CJEU ruling should mean these regularly used organic derogations should end.

The fact that, for example, it may be difficult to obtain sufficient quantities of organic seed or organically reared youngstock should be immaterial. In the eyes of consumers, they are paying a price premium for organic food because it comes from a totally organic production system and this means from start to finish, from seed or birth to harvesting, finishing and sale. Moving away from this completely organic system through regular (annual) derogations for the use of non-organic seed or to use conventionally reared youngstock is misleading consumers. Therefore, on the basis of PAN's interpretation of the CJEU ruling, the use of conventional seed and conventionally reared youngstock for organic use should also stop.

EU regulatory inconsistency

Returning to the broader issue of EU regulatory inconsistency, the foundation of this inconsistency largely stems from the move away from science and evidenced based regulation and policy making over the last 25-30 years, in favour of regulation and policy development based on a poorly defined 'precautionary principle'. This has resulted in non-science and evidenced based factors increasingly being taken into consideration when developing or changing EU regulations and policies, as evidenced by the increasing divergence between the regulatory approval mechanisms of the EU for pesticides, genetically modified crops and more recently gene edited crop and livestock innovations,

and the equivalent regulatory authorities in major agricultural producing and trading countries in North and South America and Asia.

The fingerprint of the precautionary principle is evident in the EU neonicotinoid ban decision as illustrated by the European Food Safety Authority (EFSA)'s Question and Answer briefing on its neonicotinoid review findings of 2018 in which '*information on the most likely way in which bees might be exposed to neonics is somewhat limited*' [180228-QA-Neonics.pdf \(europa.eu\)](#) and the fact that regulators in other countries such as the US and Canada have determined, on the basis of science and evidence, that neonicotinoids are safe for outdoor use. In addition, in the UK, where pesticide approvals and derogations are also currently implemented under the same EU regulations operating in post Brexit UK law, the relevant authorities have continued to allow emergency authorisation based on evidence. In January 2023, the UK extended the derogation for the use of one neonicotinoid product for use in sugar beet for the forthcoming 2023 growing season [Neonicotinoid product as seed treatment for sugar beet: emergency authorisation application - GOV.UK \(www.gov.uk\)](#).

The inconsistency in the EU's regulatory approach has also been recently exposed in relation to the development of GM derived covid-19 vaccines. Politicians across Europe queued up to praise these medical breakthroughs and to re-assure citizens of the robust, science-based regulatory approval systems in place to ensure their safety as the vaccines were fast-tracked through the approval process and into deployment. Yet these vaccines use the very same techniques of genetic modification (GM) or gene editing (GE) that many of the same politicians have spent the last 25 years preventing their citizens and farmers from having access to for the production and consumption of food, feed and fibre crops through the application of a non-science and non-evidence based approval approach to these products.

Persisting with policy and regulation systems based on the poorly defined precautionary principle which is open to variable interpretation and the application of non science and evidenced based influences is a recipe for inconsistency and failure. If the EU wants its agricultural production sector to actively contribute and transition to a more sustainable future, its regulations and policies need to be consistently based on science and evidence.

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