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### 1. Pesticides and neonicotinoids

- What are neonicotinoids? Pesticides were originally developed as chemical warfare agents in the 1930s and 1940s, but were later remanufactured as chemicals for use in arable agricultural to kill "pests" (i.e. wildlife which is detrimental to crop yields). Since their invention these highly toxic chemicals have been used in UK farming and different types of pesticides are increasingly relied upon by many conventional farmers and around 2,000 pesticides products are already approved for agricultural use in the UK<sup>1</sup>.
- Neonicotinoids are the group of pesticides most commonly used around the world and are specifically aimed at controlling a variety of insects who feed on plant sap. Neonicotinoids are "systemic" instead of being "contact" in application (as other pesticides are) meaning that they remain on the surface of the crops and hedgerows on which they are used before being taken up by each plant individually where they can remain for a long time.
- Research from the UK Pesticide Action Network ("PAN") shows that neonicotinoids represented a €6.330 billion industry as of 2008, creating a huge market within the wider agriculture industry.<sup>2</sup>

#### 2. Harms posed by neonicotinoids

- Neonicotinoids and bees Following years of industry wide use, multiple ecological studies produced clear evidence that many types of neonicotinoids have devastating affects on different bee species. The studies established that certain neonicotinoids (e.g. clothianidin) were toxically lethal to honey bees whilst others (including Thiacloprid and acetamiprid) are moderately toxic to honey bees.<sup>3</sup>
- Even when bees are exposed to sublethal levels of neonicotinoids the studies established that neonicotinoids weaken bees' immune systems, harm the development of baby bees' brains, leave bees unable to fly or properly navigate and honey bees taking up neonicotinoids frequently have contaminated honey samples.<sup>4</sup>
- **Exposure**: Bees are even exposed to neonicotinoids where they don't pollinate or feed from the crops treated with the pesticides. This due to the systematic nature of neonicotinoids meaning that wildflowers (which do attract bees) surrounding crop fields in hedgerows, ditches or surrounding fields will take up and retain neonicotinoids.
- Agriculture Bill Committee, Agriculture Bill (HC 2017-19) evidence of Georgina Downs (AB26),
- <u>https://www.pan-uk.org/about\_neonicotinoids/</u>
   Xerces Society for Invertebrate Conservation *"How Neonicotinoids Can Kill Bees"* (November 2016) <u>https://www.ipswichma.gov/DocumentCenter/View/1</u> 1328/How-Neonics-Can-Kill-Bees



#### 3. Regulation of neonicotinoids





- EU Regulation In light of the demonstrable harms posed by neonicotinoids, the EU bolstered its existing regulation of pesticides provided by EU Regulation 1107/2009 (the "Pesticides Regulations") to prohibit the use of neonicotinoids initially through Regulation (EU) (No 485/2013) which was later strengthened in 2017 to prohibit the use of three of the most harmful neonicotinoids namely clothianidin, imidacloprid and thiamethoxam.
- The EU restrictions on neonicotinoids are subject to significant limitations. Under article 53 of the Pesticides Regulation EU Member States can authorise the sale of certain pesticides for a period up to 120 days in special circumstances where "where such a measure appears necessary because of a danger which cannot be contained by any other reasonable means". Under this derogation several Member States have authorised the commercial sale of neonicotinoids for extended time periods
- UK regulation of neonicotinoids: The UK's regulation of neonicotinoids stems from its retention of the relevant EU regulation pre-Brexit. Following Brexit, the UK is now legally free to deviate from the standards imposed by the EU's pesticide policy, with the government's policy being implemented by the Department for Environment, Food and Rural Affairs ("DEFRA").



### 3. Regulation of neonicotinoids (continued)

- UK regulation of neonicotinoids

   (continued): Whilst Brexit presented a significant opportunity for the UK to go above the standards set by the EU to become an international leader in environmental protection, sadly the government decided to go in the opposite direction, notwithstanding statements to the contrary from the the secretary of state for the environment at the time that the UK would retain the ban<sup>5</sup>.
- In December 2020, DEFRA published a draft 'Revised National Action Plan for the Sustainable Use of Pesticides'<sup>6</sup> alongside a public consultation. Whilst the draft plan included some positives (such as preventing the sale of professional pesticides to non-certified users) the consultation concluded with



a statement from DEFRA which provided "emergency authorisation" for the use of products containing the three most harmful neonicotinoids to treat sugar beet seed<sup>7</sup>. DEFRA's decision utilised the derogation under article 53 of the Pesticides Regulation (as retained under UK law) with the justification that sugar beet yields were lower in 2020 than in previous years allegedly due to virus incidence which could only be prevented through the use of neonicotinoids.

DEFRA's decision directly went against prevailing scientific evidence of the catastrophic danger neonicotinoids pose to bee populations and has prompted Wildlife Trusts to consider a legal challenge. The decision cites mitigating conditions in an attempt to reduce the risk to bees, including that no flowering crops are planted in the 22 months following the treatment of sugar beet with neonicotinoids<sup>8</sup>. Whilst such restrictions are well intentioned they are difficult to practically enforce and are defeated by the reality of bee enticing wildflowers naturally growing near and around sugar beet crops.

5. "unless the evidence base changes again, the government will keep these restrictions in place after we have left the EU". Michael Gove, 'The evidence points in one direction - we must ban neonicotinoids', The Guardian (9 November 2017)
<a href="https://www.theguardian.com/environment/2017/nov/09/the-evidence-points-in-one-direction-we-must-ban-neonicotinoids">https://www.theguardian.com/environment/2017/nov/09/the-evidence-points-in-one-direction-we-must-ban-neonicotinoids</a>
6.. DEFRA Draft National Action Plan
<a href="https://consult.defra.gov.uk/pesticides-future-strategy/sustainable-use-of-pesticides-national-action-plan/">https://consult.defra.gov.uk/pesticides-future-strategy/sustainable-use-of-pesticides-national-action-plan/</a>
7. Decision: "Statement on the decision to issue – with strict conditions – emergency authorisation to use a product containing a neonicotinoid to treat sugar beet seed in 2021" 8 January 2021) DEFRA
8. Ibid n1, para 1.43.



### 4. Conclusion

1.

2.

3.

Neonicotinoids present a severe threat to the survival of honey bees at a time when the species are already more threatened than ever

DEFRA's decision represents a regression of environmental standards when Brexit presented a real opportunity for improvement

DEFRA should reverse its decision and revise the national action plan to prioritise the protection of honey bees as cornerstone of wild habitats.

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