

Use of pesticides in agriculture

Westminster Hall debate briefing

January 2023



Background

- On 23 January 2023, the UK Government [re-authorised the use of Cruiser SB](#) for the treatment of sugar beet seed for the coming year, following an application from British Sugar and the National Farmers Union.
- The product contains the neonicotinoid, thiamethoxam, a pesticide that has been associated with causing harm to bees, other pollinators, and pollutes waterways.
- This month, the highest court in the EU [banned the emergency use of neonicotinoid-treated seeds](#).
- The Environment Secretary has said derogation is needed due to concerns that beet yellow virus, a virus spread by aphids, would damage sugar beet yield.
- Nine years ago, the Environmental Audit Committee called for a [moratorium on the use of sprays containing neonicotinoids](#).
- Under the [Environment Act](#) which became law in November 2021, the UK has a legally binding commitment to halt the decline in nature by 2030.

What role do pesticides play?

- Pesticides help ensure food availability and affordability by enhancing crop productivity, improving appearance of produce and maintaining food safety. By preventing pest damage, they extend the shelf life of food and reduce food spoilage and waste.
- There is [debate](#) on the amount of pesticide use necessary to provide food for a growing global population. Some argue that reduced or minimal use of pesticides, combined with changes in diet and reduction of food waste, could ensure food security. Others argue this would require more land, reduce food production, and impact food availability and affordability.

What are neonicotinoids and why are they considered harmful?

- Neonicotinoids are neurotoxic pesticides that affect the nervous system of bees and other insects. Academic and author, Professor Dave Goulson has warned [one teaspoon of the chemical can result in 1.25 billion honeybee deaths](#).
- The emergency authorisation allows “seed-coating” of sugar beet crops with neonicotinoids, a method of application that results in [only 5% of the pesticide reaching the crop](#). The rest accumulates in the soil, where it can be absorbed by the roots of wildflowers and hedgerow plants visited by bees, or can leach into water sources.
- Sugar beet is a non-flowering crop, but flowering ‘weeds’ which also grow in field will attract bees, both within the current growing season and in following years while the neonicotinoid is still present in the soil.
- The Expert Committee on Pesticides (ECP) and the Health and Safety Executive (HSE) object to the authorisation of Cruiser SB, concluding the potential risk to bees and other pollinators outweighs the benefits of granting the authorisation. The ECP also found [high levels of risk to birds](#) who consume the seeds treated by Cruiser SB.

Under what circumstances can farmers use the pesticide?

- The Environment Agency has detailed [proposals](#) that have to be met by farmers using Cruiser SB. This includes ensuring that a herbicide is used to prevent flowering weeds, no flowering crops are planted in the same field as the treated beets for at least 32 months, and Cruiser SB is not used in the same field for 48 months.
- However, DEFRA's chief scientist noted that there are [several areas where scientific data is lacking](#) and further research is needed to fully understand its impacts.

What role do pollinators play in food production?

- A thriving pollinator population is vital for improving seed setting, which results in higher yields and better quality products.
- Honeybees pollinate between [5-15% of the UK's insect pollinated crops](#), with wild bees pollinating between 85-95% of the UK's insect pollinated crops.

Does climate change impact crop yields?

- Since 1970, [the UK has lost 50% or more of our insects](#), and 41% of the Earth's remaining five million insect species are threatened with extinction.
- Climate change is threatening pollinator populations and in turn increasing pest infestation, leading to more severe drought events like the 2022 drought and frost that affected the sugar beet crop.
- Pest infestations such as virus yellows are increasing because of wetter, warmer temperatures caused by climate change, which mean fewer aphids die in the cold winter weather.

Is there an economic case for the use of harmful pesticides?

- The average annual economic impact of beet yellows virus is [estimated at £14.4 million](#).
- In comparison, the economic benefit of pollination to crop production in the UK is [estimated at £600 million each year](#) and wild bees alone pay out £1,800 per hectare in economic contribution.

What do voters think?

- [Polling](#) by the National Trust, RSPB and WWF in September 2022 found 81% of UK adults believe nature is under threat and that more must be done urgently to protect and restore it.
- Two thirds of the public and [blue wall voters](#) particularly, want to see environmental regulations maintained or increased, with the majority saying they would vote for the party with the most ambitious environmental plans.
- In a [poll](#) of UK adults, 53% said the environment motivated their food choices.