

Agri-chemical companies are both breeding and killing bees

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Agri-chemical companies like Syngenta don't just make the chemicals that have been blamed for the decline in bees; they also breed the bees that are being used as a replacement for wild pollinators



The new documentary, '[Vanishing of the Bees](#)' - out in UK cinemas this week - once again [blames the spread of neonicotinoid pesticides](#) for the decline in honeybee populations.

Neonicotinoids are a comparatively new group of synthetic chemicals used as a coating for agricultural seeds and in pot plants. The chemicals spread throughout the plant and into the nectar and pollen that bees then eat.

Conservationists say that exposure to these chemicals does not kill the bees outright but weakens and makes them more susceptible to other diseases.

'No-one doubts they are toxic to honey bees,' says Dr David Chandler an expert in bee health from Warwick University.

'The question is whether the dosage that honey bees acquire in agriculture is significant to cause damage to their health.'

Independent research

Groups including the [Bumblebee Conservation Trust](#), [Buglife](#) and even the [traditionally sceptical National Farmers Union](#), have been calling for independent research to look into the link.

But so far much of the research appears to be directed by the interests of agri-chemical companies.

Only last week, the biotech giant Syngenta, which produces neonicotinoid pesticides, announced the

joint funding of a £1m research project into the decline of honey bees.

However, a spokesman for the company said the research was 'not going to look at pesticides'.

The bee-breeding industry

But pesticides aren't the only reason agri-chemical companies are interested in bees.

Biotech companies like Syngenta, through a subsidiary [Syngenta Bioline](#), are part of a multi-million dollar industry breeding bees in captivity.

'Syngenta Bioline are dedicated to the production of premium quality bumblebees...for use in vegetables, fruit, flowers and ornamental crops,' claims the website.

These factory-reared bees are used by farmers to pollinate soft fruits and other crops.

Modern farming methods may have taken away the main wild bee habitats of meadows, hedgerows and flower-rich grasslands but they have not removed the need for pollinators.

Ironically, as wild pollinator numbers fall it is the biotech companies' 'natural' pollination service that stands to be the biggest beneficiary.

But while the use of factory-reared bees may be vital for pollination they are also a dangerous threat to native bees.

Native threat

Pollination experts have identified three main risks. If the factory-farmed bees are better at food collecting they can out-compete local bees and establish themselves as a dominant species. They can also inter-breed and gradually dilute native gene-pools.

But most significantly, they can act as a vector for diseases by the shared use of flowers to collect pollen.

The manufacturers say the bees are used in polytunnel production systems for soft fruits and vegetables like strawberries and peppers, and as such are only ever released in an enclosed area.

However, ecologist and pollinator expert Dr Claire Carvell from the [Centre for Ecology & Hydrology \(CEH\)](#), says that even in these circumstances bees do escape and mix with the native population and as such, 'the large-scale commercialisation of bumblebees poses a risk.'

Disease outbreak

Dr Carvell points out that Japan has previously banned the import of bees because of the threat of disease. A batch of queen bees from Australia in 2007 was found to have been affected by the nosema parasite.

The United States provides an even more worrying example of what can go wrong when we mass-produce and ship bees around the world.

In 2004, the US relaxed laws on importing bees and allowed farmers to bring in bumblebees from

Australia to use on almond crops.

Many scientists believe that these bees brought in a disease - Israeli acute paralysis virus (IAPV) - which subsequently spread to the native bee population and contributed to a sudden and catastrophic collapse in honeybee numbers.

Import ban

The UK Government department responsible for wildlife, Defra, claims the industry is small and that 'all bumblebee imports already need to receive a health certificate from the exporting country so they don't spread disease, and we work with industry on the risks to native species and safeguards.'

Bumblebee Conservation Trust (BCT) director Dr Ben Darvill says the industry is far from small and that the UK imports upwards of 50,000 bee colonies every year - equating to millions of bees.

As well as Syngenta Bioline, the other major companies involved in the UK market are Koppert and Biobest.

Dr Darvill says the sector lacks proper controls and that to minimise the risk of disease spreading, Defra should ban imports.

'The problem comes when you move bees over a scale of countries. You are moving genes and species to countries where they have not been.

'We're in favour of breeding in the same country rather than a global hub. There is no good reason in the UK why we couldn't produce our own,' he says.

Helping wild bees

Some argue that the very presence of a bee-breeding industry indicates a misguided focus away from increasing the native, wild bee population, and towards selling a product.

'We don't know whether the pollination service works or whether it is just clever marketing,' says Dr Darvill.

'It may be that just looking after your hedgerows will bring you more native bees and instead of relying on a factory to produce your bees. Getting a wild pollination service from a synthetic pollinator seems very odd.'