



## Honeybee news

Honeybee news is produced by our own Jill Hill and contains interesting snippets and links to articles from around the world that mention the honeybee.

This page is updated approximately 4 times per year with previous years available in our [Library](#).

### 2025 ( Part One )

#### Can honeybees detect human lung cancer?

Beekeepers know how sensitive the sense of smell is in the honeybee-try inspecting your bees after a trip to the hairdresser or leave the window open while extracting honey!

Scientists in Michigan State University have investigated the changes in brain activity of honeybees when exposed to biomarkers of lung cancer in exhaled human breath.

Not only did the olfactory system of the honeybee detect lung cancer, it was also able to distinguish between two types of lung cancer in 82% of cases.

The scientists conclude the honeybee olfactory system can be used as a sensitive biological gas sensor to detect human lung cancer.

Quite a lot of further work needs to be done before you'll find honeybees being used as a diagnostic tool in your local chest clinic!

[Click here to read the full article](#)

#### Screening for honey fraud

Almost £90m worth of honey was imported into the UK last year but evidence shows that a significant amount of this may be adulterated with rice or corn syrups and is not pure honey.

An easy, quick method for detecting honey which has been interfered with has been the focus of research at Cranfield University in Bedfordshire.

A team lead by Dr Maria Anastasiadi, working with the Food Standards Agency and the Science and Technology Council UK, has used a specialist light analysis technique to identify the presence of rice and corn syrups in jars of honey.

A non-invasive Spatial Offset Raman Spectroscopy is portable and easy to implement and can identify culprits without the jar being opened.

Another test being investigated is the use of DNA bar-coding which can detect the presence of even very small amounts of rice and corn syrup DNA in honey.

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#### Neonicotinoids in our rivers

The Rivers Trust and the Wildlife and Countryside Link found the presence of neonicotinoid pesticides in 85% of samples provided by the Environment Agency between 2023 and 2024.

Although a relatively small number of samples were investigated, the analysis probably reflects the state of many rivers in the UK and showed a slight increase compared to past surveys.

High concentrations of neonicotinoids can kill bees but Dr Richard Gill, principle researcher at Imperial College, noted that even small amounts of the pesticide can affect pollinators' behaviour and genes

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#### Risks to urban bees from wildflowers

Researchers at Cambridge University have shown that brownfield former industrial lands can accumulate metal contaminants including lead, arsenic, cadmium and chromium.

Wildflowers growing on these sites can pose a risk to pollinators foraging on them as their nectar can contain these metals, which have been shown to damage the health of these insects.

As a result, the researchers are keen to raise awareness of considering soil health when planting wildflowers.

They recommend the history of the land in urban areas should be investigated before cultivation. Soil testing and clean-up may be required.

Wildflowers which have colonised contaminated land should be mowed regularly to reduce the risk of polluted nectar being gathered by insects.

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