

KEY MESSAGES

- There is currently no evidence to suggest that neonicotinoid pesticides are responsible for bee deaths in the UK.
- A study by the Wildlife Incident Investigation Scheme into bee deaths reported in 2008 that it found no evidence of pesticides having been a contributory factor in any of those cases.
 - Government has a robust system for assessing risks to honey bees from the use of pesticides. We will keep this under review and will not hesitate to act if there is any evidence of unacceptable risks to bees.
 - Government is aware that regulatory authorities in some other EU member states have restricted use of some pesticides due to concerns over impact on bee health.
 - However, the active substances about which concerns have been raised are all authorised for use at EU level.
 - The incidents that led some EU Member states to ban neonicotinoids related to misuse of products rather than the actual pesticides.
 - Pesticides can only be sold or used after they have been approved by Government Ministers following review by the independent Advisory Committee on Pesticides.
 - As part of this approval process, the Chemicals Regulation Directorate (CRD) of the Health and Safety Executive carries out checks to ensure the risks which can arise from the use of these products are reduced to acceptable levels.
 - This will include an assessment of the toxicity of each product and the ways in which spray operators, the public or environment (in particular honey bees) may be exposed to it.
 - We routinely restrict the way products can be used (e.g. specifying dose rates, timing and place of application) to ensure protection of human health and the environment. Section 3.8.5 of the Code of practice for using plant protection products also sets out measures to be taken by spray operators to protect bees.
 - Government scientists have assessed a report from Buglife and others recently sent to Ministers for any new evidence and any relevance this information may have for the current regulatory process. Their response to the report is attached.
 - Pesticide usage in Wales is monitored by the Pesticide Usage Survey. Following advice from WAG officials on how it is carried out in Wales, the Survey is co-ordinated by FERA on a Great Britain basis. The information

from these surveys is available on the FERA website (<http://www.fera.defra.gov.uk/plants/pesticideUsage/index.cfm>).

- Recent data shows that only 1% of all pesticides used in the UK are applied in Wales and pesticides of the neonicotinoids group are applied in small amounts (Imidacloprid - 700 kg per year and Thiacloprid – 2 kg per year; this represents less than 0.4% of the total pesticide applied in Wales). All pesticides marketed in Wales have to meet strict regulatory requirements, which have been put in place to ensure that these products cause no harm to human health and the environment when used correctly. Any reported cases of misuse of pesticides are taken very seriously and are investigated by the Health and Safety Executive.

Bees and systemic insecticides

Introduction

In recent years there has been interest in the impact of certain systemic insecticides on bee health. This interest has focussed on a group called the neonicotinoids (specific active substances being clothianidin, imidacloprid, thiacloprid, acetamiprid, and thiamethoxam) and another active substance called fipronil. In view of the interest, the Chemicals Regulation Directorate (CRD) of the Health and Safety Executive as the regulatory authority for plant protection products is issuing this information note of answers to common questions on this issue.

These insecticides are toxic to bees so the pesticide risk assessment process is designed to determine the likely effects and ascertain whether the product can be used safely under field conditions. The fact that a product is toxic to non-target organisms need not necessarily preclude it from being approved for use as a pesticide. This is because it is possible (for example by restricting dose rates, timing and method of application, etc) to reduce the exposure of non-target organisms to acceptable levels.

Until relatively recently concern focussed on the degree of exposure from systemic seed treatments. Exposure occurs once the seeds germinate and the crop/plant comes into flower and the bee harvests the nectar or pollen.

Recently, however, concern has focussed on an additional source of exposure; that from dust emitted from the machinery used during the drilling process when treated seed is drilled.

Political and stakeholder interest in the UK

Interest in the alleged impact of pesticides on bees has increased markedly in recent years in line with more general public, media and political concerns over bee health and news of the 'bans' in other EU member states.

The Soil Association wrote to the Secretary of State calling for a ban on the use of these pesticides (issuing a news release to publicise this, and the response).

The Co-op has also launched an initiative known as 'Plan Bee' a 'campaign and ten point plan to help save the bee'. The campaign website states that the cause of bee losses is not yet known but lists a number of potential factors (including pesticides). It notes that the neonicotinoids have been implicated in bee deaths. It states that as the EU is planning to revoke approval for the use of these pesticides – we are not aware of any such intention (and are seeking clarification from the Co-op) and believe the Co-op may think this could be the impact of the

new EU pesticide authorisation Regulation. It goes on to say that the retailer is taking pre-emptive action by seeking to eliminate their use on fresh produce (if patterns of use amongst Co-op growers are representative of wider usage of these pesticides the desired impact could be limited as use on fresh produce is an extremely small proportion of the treated area). The majority of both foliar and seed treatment use of neonicotinoids occurs on arable crops.

This activity has resulted in a number of letters to Ministers, and Parliamentary or Assembly questions/interest in England, Scotland and Wales.

Government position

There is no evidence to suggest that current risks to bees from the use of these pesticides is unacceptable. CRD is, however, keeping the Advisory Committee on Pesticides updated on this issue and stakeholder's representative organisations have been advised on developments in meetings such as The Pesticides Forum.

CRD is, and continues to be, pro-active in ensuring the pesticides approvals system takes account of peer-reviewed scientific information and relevant regulatory data and reviewing the practice of users. CRD scientists attended the 10th International Symposium of the International Commission for Plant-Bee Relationships (ICPBR) on Hazards of Pesticides to Bees in Bucharest on 8-10 October 2008. This meeting considered information on the seed treatments. There was no new scientific evidence presented to suggest a need for action with regard to UK authorisations of such products.

CRD will also continue to be involved with the development of bee risk assessment methodology, particularly through the revision of the European Plant Protection Office (EPPO) risk assessment scheme and guidelines which were also discussed at the ICPBR. CRD would, of course, act on any substantive evidence should incidents occur in the UK, and will continue to keep abreast of research and developments in other EU Member States and elsewhere to see if they are relevant to the UK.

Q&A

What are the issues relating to bee health and pesticides?

In recent years concerns have been expressed that the use of certain pesticides (those from the neonicotinoid group and fipronil) has resulted in the death of bees. A number of EU Member States (France, Germany, Italy and Slovenia) have restricted the use of these pesticides. The Soil Association and some beekeepers have called for the Government to ban the use of these pesticides and the Co-op is seeking to eliminate their use on own-brand fresh produce 'until such time as they are shown to be safe'.

How are these pesticides alleged to affect bee health?

These insecticides are toxic to bees. They are alleged to affect bee either directly from contact with the insecticides or indirectly by feeding and contact with nectar and pollen from treated plants.

Until relatively recently concern focussed on the degree of exposure from systemic seed treatments. Exposure occurs once the seeds germinate and the crop/plant comes into flower and the bee harvests the pollen.

Recently, however, concern has focussed on an additional source of exposure; that from the machinery used to drill treated seed.

How does the government know these particular pesticides are safe?

The pesticides are applied as both seed treatments and foliar applications – exposure of bees to pesticides from both these methods of application have been assessed as being safe. The assessment is addressed on a case-by-case basis with studies appropriate to the behaviour of the particular pesticide, its mode of action, the life stages of the bee which will be exposed and crops on which it is to be used.

For example, the assessment for systemic seed treatments determines risk via the use of a tented field study or field study where bees are exposed to flowers that have grown from seed grown from treated crop.

Concerns relating to seed drilling equipment relate to an incident which occurred in Germany last year. We are satisfied that the likelihood of such an incident occurring in the UK is negligible.

Does the government monitor dead bees for traces of pesticides?

The Government's Wildlife Incident Investigation Scheme (WIIS) is used to monitor the impact of pesticides on wildlife, including bees. Misuse of pesticides has resulted in a relatively small number of bee deaths investigated by the scheme in the past few years. There have been no instances of neonicotinoids (or fipronil) having contributed to bee deaths.

Other European countries have banned the use of these pesticides why isn't the UK doing likewise?

Because we have no evidence to suggest that the risks to bees are unacceptable when these products are used responsibly under UK conditions.

The Government is maintaining contact with the regulatory authorities in those member states which have imposed restrictions on the use of these pesticides and will not hesitate to act if we receive information which indicates that the risk to bees in the UK is unacceptable.

These pesticides killed bees in Germany and the government there banned the use - why isn't it happening here?

It should be noted that these pesticides have not necessarily been 'banned' in Germany. Rather the circumstances in which they can be used have been limited; use on crops such as oilseed rape is approved.

The Government is satisfied that risk of the circumstances which led to the incidents in Germany being replicated in the UK is negligible.

What were the circumstances of the German incident?

According to the German authorities the incidents (which occurred in May 2008) resulted from the inadvertent exposure of bees to clothianidin applied as a seed treatment to maize seed. Dust containing the pesticide from the machinery used to drill the seed drifted onto adjacent flowering crops of oilseed rape and contaminated foraging bees.

An investigation by the German authorities established that this was due to a combination of factors, including: the lack of a 'sticker' to ensure the pesticide adhered to the seed; the fact that the application equipment blew the dust containing the pesticide into the air; timing of the application (normally maize seeds would be drilled before oilseed rape crops came into flower but in this case planting had been delayed due to heavy rains); and weather conditions (dry and windy).

Given the above, there is no evidence to suggest that similar operations in the UK would result in an unacceptable risk to bees.

How do you know this won't happen in the UK?

We cannot give an absolute guarantee, but have assessed the risk of this happening as negligible. Firstly, the dose rates used in the seed treatment in Germany is almost double that which would be used in the UK. Also seed treatments in the UK are carried out by professional contractors (which minimises the risk of a sticker not being applied). Furthermore, we have established that drilling equipment in the UK is manufactured differently and directs dust towards the ground, thus minimising the risk of drift (this is one of the main changes Germany is proposing to introduce in the wake of this incident).

What is the attitude of the EU and other member states?

Experts from the Commission and other member states have been made aware of restrictions on the use of these pesticides in some member states, but have not decided that it is appropriate to ban their use. They are, however, examining the possibility of strengthening various provisions relating to treated seeds and new restrictions (relating to the need to use professional seed treatment contractors) were introduced when imidacloprid was authorised for use by the EU.

What about the bans in France, Slovenia and Italy?

Slovenia took action on similar products later in 2008 following incidents similar to those in Germany.

Italy has also restricted the use of these pesticides. We understand that Italy has been aware of the alleged connection between bee health and the use of these chemicals for some time. We believe the German incident prompted them to take this precautionary measure whilst it develops a system (similar to the WIIS) to monitor impacts on bee health.

Will the new EU pesticide authorisation regulation ban these pesticides?

It is impossible to say at this point in time. Our assessment based on our current understanding of how the new arrangements will operate is that these products would fulfil the necessary criteria in order to demonstrate that they were safe for human health and the environment.

Why has the Co-op restricted the use of these pesticides?

This is a question that should be addressed to them. It should be noted that the Co-op is seeking to 'engage with suppliers to eliminate their usage, where possible' on their own brand fresh produce. The Co-operative Group have temporarily prohibited the use of neonicotinoid insecticides on 'own brand fresh produce'. Full details of the pesticide policy can be found on page 95 of The Co-operative Sustainability Report 2007/08. This report can be found at www.co-operative.coop/ethicsinaction/sustainabilityreport/.

We understand that the use of neonicotinoid insecticides is not prohibited on broadacre crops, but, in line

with their pesticides policy, they will endeavour to use alternatives to the neonicotinoids where possible on broadacre crops in 2009.

What is the government doing to keep an eye on developments?

Officials from CRD are continuing to liaise with their counterparts in regulatory authorities which have imposed restrictions on the use of these pesticides. They are also keeping themselves apprised of national and international developments on how we assess and monitor risks to bee health from the use of pesticides.