



Our ref: RFI 5703

Date: 13th August 2013

Dear

REQUEST FOR INFORMATION: RESPONSE TO IMPROVING HONEYBEE HEALTH CONSULTATION

Thank you for your request for information about provision of copies of the evidence concerning the impact of pesticides on bees and other pollinators, and the details of the company which had provided this which we received on 22nd July. As you know, we have handled your request under the Environmental Information Regulations 2004 (EIRs).

The EIRs apply to requests for environmental information, which is a broad category of information defined in regulation 2 of the EIRs. Public authorities are required to handle requests for environmental information under the EIRs. They give similar access rights to the Freedom of Information Act 2000 (FOIA).

I enclose a copy of the information you requested:

Submitted by Blue Planet Hydrogen Ltd on behalf of Bee The Change, Facebook Cause, Public Awareness Campaigners.

The campaign has 139,889 members worldwide as of March 08, 2013.

The group is campaigning for effective regulation (under the Bees Act 1980) to

(a) restrict the import of 'Foul Brood' spore infected honey products and

(b) control/ban protection from Neo-Nicotinoid Pesticides

(acetamiprid, imidacloprid, thiacloprid, thiamethoxam and related chemicals etc).

EVIDENCE

1. The Bees Act 1980 (Memorandum #3) requires that Secretary of State for Environment, Food and Rural Affairs, Secretary of State for Scotland and the Secretary of State for Wales must agree and decide jointly that a threat is posed to the health of bees. Individual powers and are now devolved to Assemblies.

(a) The spirit of 1980 Act of Parliament is towards the protection of Bees from 'pests'.

This does not explicitly exclude chemical pesticides, for instance sprayed on gardens/ agricultural areas, where forager bees are able to visit that area freely.

note: Colony Foragers that ingest chemicals may pass (as stomach contents) these agents throughout the colony, and contaminant may thus be stored in honey, re-affecting the colony at a later time. This reduces effects demonstration, of correlation, of any colony reduction in relation to chemical spraying/ seed coating (time delay).



(b) Please see, under Memorandum #3 (legislation.gov.uk) paragraph 3, revocation of licenses, to sell chemicals that are a pest to bees, is a power under the Bees Act 1980.

(c) Dictionary definition:

noun \pest\ (<http://www.merriam-webster.com/dictionary/pest>)

1: an epidemic disease associated with high mortality; specifically : plague

2: something resembling a pest in destructiveness; especially : a plant or animal detrimental to humans or human concerns (as agriculture or livestock production)

3: one that pesters or annoys : nuisance

2. Apiform Colonies, an organic system, may recover more slowly than could be expected under removal of any pestilent threat. This is due to other factors, eg. weather conditions, not under human control. As a result, the precautionary principle should be applied most strictly to any factor that can be regulated.

(a) £1.8bn spending on human hand-pollination (Memorandum #4, Carrington, April 2012) indicates a financial saving available to the government in the removal of detrimental factors to Honey Bee Stock. (Wild Pollinators carry out this service for nothing, £0.00).

(b) Pesticide use is not the only potential contributory factor to Honey bee decline but is a controllable one. Responsible agencies are required to control as part of protections required by the Bees Act 1980 should any detriment to bees be established.

3. Public concern in the area of honey bee decline is increasing.

(a) Worldwide pesticide useage demonstrates that there may be no land areas of refuge for pollinator species. (eg. with spraying, seed coating, genetic modification and domestic garden use, many areas of application, increases the likelihood of contact with Species, which are irreplaceable).

(b) Please note dangers of 'genetic bottleneck' where reduced numbers of colonies may cause total population to crash in the event of colony islandisation, where unmated queens for example, are out of range of male drones from unrelated colonies, if colonies become sporadic and spread out.

(c) The European Union is due to meet on a proposal a temporary ban (meeting March 14, 2013), a formal proposal on the basis of the report published the European Food Safety Authority (EFSA). Please see Memorandum 8. Current understanding is that UK representatives are lobbying to block this move.

4. On Thursday 21st February a Petition (of Memorandum #6) was handed to Secretaries of State, England, Scotland, Wales. (See Memorandum #7)

We are yet to receive any form of reply to that petition.

5. The Environmental Audit Committee (Insects and Insecticides, first meeting Wednesday 21 November 2012) is currently investigating DEFRA handling of new evidence (linking Neonic Pesticides to Bee decline, and under evidence hopefully no longer linked to manufacturer funded studies). While current control frameworks are under question, the precaution (of temporary suspension), having **not** being carried out is a dereliction of duty under the Bees Act 1980.

MEMORANDA

#1 Beekeepers fume at association's endorsement of fatal insecticides

Michael McCarthy , Environment Editor, The Independent

Wednesday 12 January 2011

Britain's beekeepers are at war over their association's endorsement for money of four insecticides, all of them fatal to bees, made by major chemical companies.

The British Beekeepers' Association has been selling its logo to four European pesticide producers and is believed to have received about £175,000 in return.

The active ingredient chemicals in the four pesticides the beekeepers endorsed are synthetic pyrethroids, which are among the most powerful of modern insect-killers.

The deal was struck in secret by the beekeepers' association executive without the knowledge of the overwhelming majority of its members.

After news of the deal emerged, some members expressed outrage and others resigned. The beekeepers have now said they will end their pesticide endorsements – but have left the door open to future deals with agrochemical companies.

The battling beekeepers will have a showdown this weekend at the National Beekeeping Centre at Stoneleigh in Warwickshire.

An open letter signed by prominent figures in the world of the environment and agriculture condemns the British Beekeepers' Association for its commercial relationship with the German chemicals giants Bayer and BASF, the Swiss-based Syngenta and the Belgian firm Belchim – and demands that it permanently sever commercial links with agrochemical companies.

"A charity that claims to have the interests of bees and beekeeping at heart should never put itself in a position where it is under the influence of corporations whose purpose is to sell insecticides which are able to kill bees," said Philip Chandler, a Devon beekeeper and one of the organisers of the open letter, which has been signed by the botanist David Bellamy, the author and television wildlife presenter Chris Packham and Lord Melchett, policy director of the Soil Association, the organic farming body. "It is the equivalent of a cancer research charity being controlled by a tobacco company," Mr Chandler added.

The beekeepers' executive, which effectively controls all the association's affairs, has thus far fended off attempts by its membership at getting the policy reversed.

The beekeepers' association's deal with the chemical companies had been running since 2001, and it received £17,500 a year for endorsing four pesticides: Bayer's Decis, BASF's Contest (also known as Fastac), Syngenta's Hallmark and Belchim's Fury.

The British Beekeepers' Association referred to the pesticides on several occasions in the newsletter BBKA News as "bee friendly" or "bee safe". Yet a 2003 study in the Bulletin of Insectology on modelling the acute toxicity of pesticides to honey bees found that cypermethrin, the active ingredient of Fury and Contest, and deltamethrin, the active ingredient of Decis, were in the top four most toxic to bees of all the 100 substances evaluated. Cypermethrin was second most toxic, and deltamethrin was fourth. (The active ingredient of Hallmark, lambda-cyhalothrin, was not included in the test.) Other studies confirm these conclusions.

Protests have mounted as the revelations came out. Such has been the anger of grass-roots beekeepers that the executive announced a strategic review of its links with "the plant protection industry", which concluded that endorsement and "related product specific payments" would cease "as soon as practically possible".

Yesterday the British Beekeepers' Association president, Martin Smith, confirmed the pesticide endorsements had finished, although he said there might still be some pesticide packaging in circulation bearing the BBKA logo. "We would expect that to be withdrawn within three months," he said.

Mr Smith said that the deals had been originally done as a means of developing good practice in relation to bees with the pesticides when they had been introduced, but that this aim had been achieved – so they were no longer necessary.

His announcement left the door open to future deals by insisting that "the trustees do not preclude accepting funds in the future from either the crop protection industry... or individual companies".

Some beekeepers feel this is insufficient and want all links to be broken.

At this weekend's meeting a motion put down by the Twickenham and Thames Valley Beekeeping Association stipulates that "the BBKA cease any commercial relationships with agrochemical or associated companies, including all endorsement of pesticides".

One of the drafters of the motion, Kate Canning, said last night: "They're leaving the door open for future agro-chemical relationships. Our bees deserve better than this. It's time for a clean, green break."

The beekeepers executive is trying to head off the move by inserting its own motion ahead of the Twickenham and Thames Valley one, which asks delegates to support them in the way in which it "should manage its intellectual property". It goes on: "This includes the use of its logo and maximises the benefits which can be gained from these assets and its reputation."

Mr Smith said the logo would not be used on pesticides in the future.

#2 Bees Throw Out Mites

Alfredo Flores (source Journal of Apicultural Research - International Bee Research Association) September 11, 2009

ARS researchers have developed honey bees that more aggressively deal with varroa mites, a parasite that is one of the major problems damaging honey bees today.

Honey bees are now fighting back aggressively against Varroa mites, thanks to Agricultural Research Service (ARS) efforts to develop bees with a genetic trait that allows them to more easily find the mites and toss them out of the broodnest.

The parasitic Varroa mite attacks the honey bee, *Apis mellifera* L., by feeding on its hemolymph, which is the combination of blood and fluid inside a bee. Colonies can be weakened or killed, depending on the severity of the infestation. Most colonies eventually die from varroa infestation if left untreated.

Varroa-sensitive hygiene (VSH) is a genetic trait of the honey bee that allows it to remove miteinfested pupae from the capped brood—developing bees that are sealed inside cells of the comb with a protective layer of wax. The mites are sometimes difficult for the bees to locate, since they attack the bee brood while these developing bees are inside the capped cells.

ARS scientists at the agency's Honey Bee Breeding, Genetics and Physiology Research Unit in Baton Rouge, La., have developed honey bees with high expression of the VSH trait.

Honey bees are naturally hygienic, and they often remove diseased brood from their nests. VSH is a

specific form of nest cleaning focused on removing varroa-infested pupae. The VSH honey bees are quite aggressive in their pursuit of the mites. The bees gang up, chew and cut through the cap, lift out the infected brood and their mites, and discard them from the broodnest.

This hygiene kills the frail mite offspring, which greatly reduces the lifetime reproductive output of the mother mite. The mother mite may survive the ordeal and try to reproduce in brood again, only to undergo similar treatment by the bees.

To test the varroa resistance of VSH bees, the Baton Rouge team conducted field trials using 40 colonies with varying levels of VSH. Mite population growth was significantly lower in VSH and hybrid colonies than in bee colonies without VSH. Hybrid colonies had half the VSH genes normally found in pure VSH bees, but they still retained significant varroa resistance.

Simpler ways for bee breeders to measure VSH behavior in colonies were also developed in this study. This research was published in the Journal of Apicultural Research and Bee World. Provided by Agricultural Research Service

More at:

<http://phys.org/news171872868.html#nRlv>

<http://phys.org/news171872868.html#jCp>

#3 Bees Act 1980 (1980 c. 12)

LEGISLATION AS ENACTED:

<http://www.legislation.gov.uk/ukpga/1980/12/contents>

Interpretation:

SCHEDULE: Specific Matters with respect to which Provision may be made by Orders under section 1

1. The conditions to be observed before, during and after importation.

2. Exemptions from prohibitions on importation in the order by means of licences, whether general or specific and whether conditional or unconditional, issued in accordance with the order (whether on or before importation) by the responsible Minister or (where the order so provides) by any authorised person.

3. The revocation of any licence issued in accordance with the order and the variation of any conditions attached to a licence so issued.

4. Securing information with respect to—(a)the persons who keep bees;(b)the occurrence of any pest or disease to which the order applies;(c)the country or place of origin or consignment, contacts in transit and destination of any bees or other things subject to control under the order (whether the information is required on, before or following their importation into or transportation within Great Britain);(d)any other matter relevant to determining whether any bees or other things subject to control under the order have been exposed to infection with **any pest or disease** to which the order applies.

5. The circumstances in which and the time when any bees or other things brought into Great Britain are to be regarded for the purposes of this Act as being imported into Great Britain.

6. Treatment of any bees found to be infected or to have been exposed to infection with any pest or disease to which the order applies.

7. Cleansing and disinfection.

8. Marking of hives or other containers for identification.

9. Recovery of costs.

10. Payment of compensation for bees or other things subject to control destroyed in accordance with section 1(4).

11. Any matter incidental or supplementary to any of the matters mentioned above.

#4 Grave threat of pesticides to bees' billion-pound bonanza is now clear

Damian Carrington 11 April 2012 (Guardian.co.uk)

Replacing the pollination of food crops that the UK's bees perform for free would cost £1.8bn. With hard data now linking pesticides to bees' rapid decline, there is no excuse for inaction. Bees ingest pesticides from crops treated with systemic insect nerve agents, because the chemicals are present in nectar and pollen.

How valuable are bees? In the UK, about £1.8bn a year, according to new research on the cost of hand-pollinating the many crops bees service for free. If that sounds a far-fetched scenario, consider two facts.

First, bees are in severe decline. Half the UK's honey bees kept in managed hives have gone, wild honey bees are close to extinction and solitary bees are declining in more than half the place they have been studied.

Second, hand-pollination is already necessary in some places, such as pear orchards in China, and bees are routinely trucked around the US to compensate for the loss of their wild cousins.

The new figure comes from scientists at the Reading University and was released by Friends of the Earth to launch their new campaign, Bee Cause. Paul de Zylva, FoE nature campaigner, said: "Unless we halt the decline in British bees our farmers will have to rely on hand-pollination, sending food prices rocketing."

So what's the problem? The losses of flowery meadows that feed wild bees is a factor, as are the parasites and diseases that can kill hives. But a third factor has now moved to the centre of the debate: pesticides called neonicotinoids. The insect nerve-agents are used as seed dressings, which means they end up in every part of the crop they protect, including pollen and nectar.

Two landmark studies, conducted in field conditions, published in *Science* in March clearly implicated sub-lethal doses of the pesticides with increases in disappeared bees and crashes in the number of queens produced by colonies. Then on 5 April, another study was released, showing the pesticides can cause colony collapse disorder (CCD), the name given to the ghostly hives from which bees have vanished.

"The data, both ours and others, right now merits a global ban," said Chensheng Lu, in the department of environmental health at Harvard University, and who led the CCD study. "I would suggest removing all neonicotinoids from use globally for a period of five to six years. If the bee population is going back up during the after the ban, I think we will have the answer."

Lu told me he was in no doubt about the result of his work, which tested the effect of a very widely used neonicotinoid called imidacloprid, which is registered for use on over 140 crops in 120 countries. "Our study clearly demonstrated that imidacloprid is responsible for causing CCD, and the survival of the control hives that we set up side-by-side to the pesticide-treated hives augments this conclusion." He said the hives were initially healthy, were placed in a natural foraging environment and that the doses of the pesticide the bees were exposed to were realistic.

After 12-weeks of dosing, all the bees were alive, but after 23 weeks, 15 of the 16 treated hives had died - but none of the untreated control hives. Lu said the dead hives were virtually empty, as is seen with CCD, and in contrast to the impact of parasites or disease, which leave hives littered with dead bees.

The leader of one of the *Science* studies, Mickaël Henry, at INRA in Avignon, France, agreed with Lu that action is urgently needed on neonicotinoids. "We now have enough data to say authorisation processes must take into account not only the lethal effects, but also the effects of non-lethal doses." In other words, testing whether the pesticide use kills bees stone dead immediately is no longer good enough, given the hard evidence now available that sub-lethal doses cause serious harm.

So what does the UK government have to say? To date, it has agreed with the neonicotinoid manufacturers that there is no evidence that the pesticides used at normal levels cause harm. A statement on Wednesday from an environment department spokeswoman suggests no change: "The UK has a

robust system for assessing risks from pesticides. We keep all the science under review and we will not hesitate to act if we need to."

What more does it need? The new data makes it impossible to maintain this position, whatever vested interests are at stake. It is 50 years since Rachel Carson published *Silent Spring*, which documented the devastation wrought by pesticides in the US. What better time to act?

Article;

<http://www.guardian.co.uk/environment/damian-carrington-blog/2012/apr/11/bees-pesticides-declinecolony-collapse>

#5 Backyard Pesticide Use May Fuel Bee Die-Offs

Brandon Keim, April 13, 2012

The controversy over possible links between massive bee die-offs and agricultural pesticides has overshadowed another threat: the use of those same pesticides in backyards and gardens.

Neonicotinoid pesticides are ubiquitous in everyday consumer plant treatments, and may expose bees to far higher doses than those found on farms, where neonicotinoids used in seed coatings are already considered a major problem by many scientists.

"It's amazing how much research is out there on seed treatments, and in a way that's distracted everyone from what may be a bigger problem," said Mace Vaughan, pollinator program director at the Xerces society, an invertebrate conservation group.

The vast majority of attention paid to neonicotinoids, the world's most popular class of pesticides, has focused on their agricultural uses and possible effects. A growing body of research suggests that, even at non-lethal doses, the pesticides can disrupt bee navigation and make them vulnerable to disease and stress.

Neonicotinoids are now a leading suspect in colony collapse disorder, a mysterious condition that's decimating domestic and wild bee colonies across much of North America and Europe. The emergence of colony collapse disorder coincided with a dramatic increase in agricultural neonicotinoid use.

Several European countries, including France, Germany and Italy, have banned agricultural neonicotinoids, though some researchers and pesticide-manufacturing companies say evidence of lowdose harm is still incomplete and methodologically unsound.

A garden center shelf. To determine if a pesticide contains a neonicotinoid, look at the ingredients: Imidacloprid, acetamiprid, dinotofuran, clothianidin, thiacloprid and thiamethoxam are all neonicotinoids. Photo: Matthew Shepherd/The Xerces Society

Few researchers, however, doubt that high doses of neonicotinoids are harmful to bees — and though research on neonicotinoid use by gardeners, nurseries and urban landscapers has proceeded slowly, a troubling picture has emerged of products found on the shelves of most any garden center.

“For homeowner use products, for backyard plants, the amount of neonicotinoids used is like 40 times greater than anything allowable in agricultural systems,” said entomologist James Frazier of Penn State University.

The Environmental Protection Agency sets its LD50 — the dose at which 50 percent of exposed honeybees will die — for imidacloprid, a common neonicotinoid, at a range of 40 to 400 parts per billion. In a recent study on the effects of imidacloprid, a food dose of just 20 ppb destroyed honeybee colonies. Critics said that bees in the wild wouldn't be exposed to such a high dose. Even higher doses, however, have been measured in neonicotinoid-treated gardens. According to toxicologist Vera Krischik of the University of Minnesota, using a standard Bayer plant care product produced imidacloprid levels of 501 ppb in milkweed nectar and 682 ppb in the nectar of agastache, a bee foraging favorite.

In an official company statement from Bayer CropScience, the company said that its “neonicotinoid-based insecticides — both for lawn and garden and crop applications — are safe for honey bees and other pollinators when used according to label directions.”

Yet Krischik's results came from by-the-label use. “It's not an artificially high dose,” said Krischik, who doesn't consider agricultural neonicotinoids to be a threat to bees. “It's a much higher rate in landscapes than in agriculture. It's 4 milligrams per square foot in agriculture, but you can put up to 250 milligrams in a three-gallon pot.”

Not everyone may follow instructions, either. “Gardeners have no training in their use, and will often overdose,” said bee biologist Dave Goulson of Scotland's University of Stirling, co-author of a recent paper on neonicotinoids and hive health. Goulson said in an e-mail that “gardens and fruitgrowing areas are potentially interesting/bad.”

A review of neonicotinoids published by the Xerces Society cited several other findings of extremely high non-agricultural imidacloprid levels: up to 850 ppb in rhododendron blossoms measured nearly six months after being treated, and roughly 2,000 ppb in cherry trees tested more than one year after dosing.

'I don't think anybody should be using these things in their backyards.'

According to Krischik, several other studies have found extremely high neonicotinoid levels in eucalyptus, maple and linden trees. “Linden trees are the best bee plants out there,” she said. The Xerces Society also calculated that non-commercial apple trees receive neonicotinoid doses an order of magnitude higher than their commercial counterparts.

An open research question is whether neonicotinoids, which spread through a plant's vascular system and remain active for extended periods of time, accumulate from year to year, especially in perennial plants. “Maybe if we treat once, it stays below lethal levels. But if you treat it two or three or four times, we have no idea,” said Vaughan.

Vaughan said that neonicotinoids are also commonly used in nurseries. People may purchase plants with the intent of providing habitat for bees, but end up poisoning them.

However, Vaughan stressed that an outright ban on neonicotinoids would be a mistake. They're popular in large part because they're far less toxic to people than earlier pesticides. In certain situations, such as in-home termite control, they may be appropriate. The key, he said, is determining what those situations are.

More than 1.25 million people have petitioned the Environmental Protection Agency to review its stance on neonicotinoids, which were approved on the basis of limited, largely industry-run safety studies.

“The EPA didn't ask for the data. They didn't realize systemic insecticides last a long time in pollen and nectar. They didn't give money to researchers to look at this. It was an oversight,” said Krischik. “It's not anybody's fault. Things happen. And we need to fix it before we lose the bees.”

“I don't think anybody should be using these things in their backyards. I think they don't understand that they're having such a negative impact,” said Vaughan, who wants all neonicotinoid-containing

consumer pesticides to be labeled. “Maybe a big butterfly with an X over it and a sign that says, ‘May Kill Pollinators.’”

Article: <http://alturl.com/25n4w>

#6 Petition (as of October 29, 2012)

44,310 signatures (Worldwide)

To: Department for Environment - Food and Rural Affairs, Secretary of State for Scotland, and the Secretary of State for Wales

We the undersigned, Demand that neonicotinoid insecticides products be withdrawn from general sale in UK supermarkets, hardware stores, garden centres and farm supply stores according to the Bees Act 1980. Anything that contains acetamiprid, imidacloprid, thiacloprid or thiamethoxam must be banned.

Neonicotinoid is a widely used farm pesticide first introduced in the 1990s that has caused significant changes to bee colonies and removing it could be the key factor in restoring nature's army of pollinators, according to two studies released in March.*

Neonicotinoids are a class of insecticides chemically related to nicotine. Neonicotinoid imidacloprid is currently the most widely used insecticide in the world.* The use of some members of this class has been restricted in some countries due to evidence of a connection to honey-bee colony collapse disorder. The pesticide works as a neurotoxin by interfering with the transmission of stimuli in the insect nervous system.*

More information:

<http://www.soilassociation.org/wildlife/bees/householdpesticides>

<http://www.pan-uk.org/home-garden/list-of-home-and-garden-pesticides-containing-neonicotinoids>

Sources:

*http://usnews.msnbc.msn.com/_news/2012/03/29/10921493-neonicotinoid-pesticides-tied-to-crashing-bee-populations-2-studies-find?lite

*Suchail, S., Guez, D. and Belzunces, L. P. (2001), *Discrepancy between acute and chronic toxicity induced by imidacloprid and its metabolites in Apis mellifera*. *Environmental Toxicology and Chemistry*, 20: 2482–2486. doi: 10.1002/etc.5620201113

**Nicotinoid Insecticides and the Nicotinic Acetylcholine Receptor*, Tokyo: Springer-Verlag, pp. 71–89

#7 Green Party Backs Insecticide Petition

19 February 2013

THE GREEN Party will be handing in a petition to the government on Thursday 21st February to outlaw the use and sale of neonicotinoid pesticides in the UK, which have been increasingly implicated in the decline of honeybees and wild bees over the past decade.

Pippa Bortolotti, leader of the Wales Green Party, will simultaneously hand in the petition to John Griffiths, Minister for Environment and Sustainable Development.

In France, Italy and other countries these insecticides have already been restricted. In Britain and the USA however, their use continues.

Green Party leader Natalie Bennett will be handing in the petition with prominent bee campaigner and *Facebook Cause* Leader Brigit Strawbridge. It will be the first time in history that a petition

gathered via social media will be delivered to the UK government by the leader of a political party.

Green Party MP Caroline Lucas has served on an Environmental Audit Committee inquiry that has investigated the risks posed by neonicotinoids, and has written repeatedly to the Government to

demand a ban on their use after a number of studies showed negative effects on bee populations.

She has also exposed evidence suggesting that European regulators have turned a blind eye to data on the danger that one of the world's biggest selling pesticides could pose to bees and other pollinators.

Caroline said: "Bees play an essential role in our ecosystem and declining numbers are a huge threat to UK agriculture – the authorities have a duty to act on these risks".

Malcolm Higginbottom, founder of the petition and Chairman of Good is Planet Earth, said: "This petition is a timely step in the right direction. The hand in will be prior to The European Food Standards Agency meeting on February 25 2013, which follows a Dutch delegation calling upon the European Commission to take action. A number of member states support the proposal, including France, Poland and the Czech Republic.

"Italy has introduced restrictions on the use of neonicotinoid pesticides, Slovenia has already imposed a full ban, and some national retailers in the UK including B&Q and Home Base have acted to remove neonic related products from their shelves amid growing public concern of pollinator collapse and potential food shortages.

"A study commissioned by Friends of the Earth finds that having to pollinate crops without the help of bees would cost the UK almost £2 billion a year in higher food prices. This huge annual bill amounts to what it would cost to hand-pollinate crops if bees died out in the UK.

"As Lord Jones of Cheltenham said in a debate in the House of Lords (January 10 2013), the "population decline of bees and other pollinators needs to be treated as a National Emergency."

"A study led by Stirling's Professor David Goulson showed that growth of bee colonies slowed after the insects were exposed to "field-realistic levels" of imidacloprid, a common neonicotinoid insecticide. The production of queens, essential for colony survival, declined by a massive 85 per cent in comparison with unexposed colonies used as a control.

"In another study, a French research group also investigated the impact of a different neonicotinoid, thiamethoxam, on the number of bees able to make it back to the colony with food. Calculations showed that cognitive impairment of forager bees at sub-lethal doses was bad enough that colonies would be severely compromised.

"BeeTheChange, a Facebook based Social awareness group, run by Goodisplanetearth.org have submitted evidence to the Environmental Audit Committee and other consultations, calling on the UK government to take preventative action to protect pollination species."

The hand-in of the petition took place at Defra's headquarters (Nobel House, 17 Smith Square, London) at 2pm on Thursday 21

st

February.

#8 EFSA identifies risks to bees from neonicotinoids

Press Release 16 January 2013

<http://www.efsa.europa.eu/en/press/news/130116.htm>

EFSA scientists have identified a number of risks posed to bees by three neonicotinoid insecticides[1]. The Authority was asked by the European Commission to assess the risks associated with the use of clothianidin, imidacloprid and thiamethoxam as seed treatment or as granules, with particular regard to: their acute and chronic effects on bee colony survival and development; their effects on bee larvae and bee behaviour; and the risks posed by sub-lethal doses[2] of the three substances. In some cases EFSA was unable to finalise the assessments due to shortcomings in the available data.

The risk assessments focused on three main routes of exposure: exposure from residues in nectar and pollen in the flowers of treated plants; exposure from dust produced during the sowing of treated seeds or application of granules; and exposure from residues in guttation fluid[3] produced by treated plants.

Where the risk assessments could be completed, EFSA, in cooperation with scientific experts from EU Member States, concluded the following for all three substances:

- **Exposure from pollen and nectar.** Only uses on crops not attractive to honey bees were considered acceptable.
- **Exposure from dust.** A risk to honey bees was indicated or could not be excluded, with some exceptions, such as use on sugar beet and crops planted in glasshouses, and for the use of some granules.
- **Exposure from guttation.** The only risk assessment that could be completed was for maize treated with thiamethoxam. In this case, field studies show an acute effect on honey bees exposed to the substance through guttation fluid.

EFSA's conclusions contain tables listing all authorised uses for seed treatment and as granules of the three substances in the EU and indicating for each route of exposure: where a risk has been identified; where a low risk has been identified; or where an assessment could not be finalised because of a lack of data.

In reaching their conclusions, EFSA's scientists evaluated data previously submitted for the approval of the active substances at EU level and in support of product authorisations at Member State level, as well as relevant literature and monitoring data. They also considered new developments in the assessment of risks to pollinators from plant protection products, in particular recommendations contained in the EFSA Scientific Opinion on the science behind the development of a guidance document on the risk assessment of plant protection products on bees, which was published in May 2012.

This opinion, published by EFSA's Panel on Plant Protection Products and their Residues (PPR Panel), proposed a much more comprehensive risk assessment for bees and also introduced a higher level of scrutiny for interpretation of field studies. The proposed changes are aimed at improving the level of protection afforded to bees when assessing risks from pesticides.

Furthermore, as much of the data were generated before publication of the opinion, a number of shortcomings were identified. And, because the final guidance document for the risk assessment of plant protection products and bees[4] is still under development, there is a high level of uncertainty in the latest evaluations.

All of these factors mean that EFSA's scientists were unable to finalise risk assessments for some of the uses authorised in the EU, and identified a number of data gaps that would have to be filled to allow further evaluation of the potential risks to bees from clothianidin, imidacloprid and thiamethoxam. Finally, it is highlighted that limited information was available for pollinators other than honey bees; therefore the risk to these other pollinators should be further considered.

In keeping with the spirit and effect of the EIRs, and in keeping with the government's Transparency Agenda, all information is assumed to be releasable to the public unless exempt. Therefore, the information released to you will now be published on www.gov.uk together with any related information that will provide a key to its wider context. Please note that this will not include your personal data.

I attach Annex A, which explains the copyright that applies to the information being released to you.

I also attach Annex B giving contact details should you be unhappy with the service you have received.

If you have any queries about this letter, please contact me.

Yours

Marie Holmes

T: 01904 462000
F: 01904 462250

Annex A

Copyright

The information supplied to you continues to be protected by copyright. You are free to use it for your own purposes, including for private study and non-commercial research, and for any other purpose authorised by an exception in current copyright law. Documents (except photographs or logos) can be also used in the UK without requiring permission for the purposes of news reporting. Any other re-use, for example commercial publication, would require the permission of the copyright holder.

Most documents produced by Defra will be protected by Crown Copyright. Most Crown copyright information can be re-used under the [Open Government Licence](#). For information about the OGL and about re-using Crown Copyright information please see [The National Archives website](#).

Copyright in other documents may rest with a third party. For information about obtaining permission from a third party see the [Intellectual Property Office's website](#).

Annex B

Complaints

If you are unhappy with the service you have received in relation to your request you may make a complaint or appeal against our decision under section 17(7) of the FOIA or under regulation 18 of the EIRs, as applicable, within 40 working days of the date of this letter. Please write to Mike Kaye, Head of Information Standards, Area 4D, Nobel House, 17 Smith Square, London, SW1P 3JR (email: requestforinfo@defra.gsi.gov.uk) and he will arrange for an internal review of your case. Details of Defra's complaints procedure are on our [website](#).

If you are not content with the outcome of the internal review, section 50 of the FOIA and regulation 18 of the EIRs gives you the right to apply directly to the Information Commissioner for a decision. Please note that generally the Information Commissioner cannot make a decision unless you have first exhausted Defra's own complaints procedure. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF