

Biology: Where Have All The Bees Gone?

Name:

Read through the content and then answer the question(s) at the end. When you have finished don't forget to save the document to your device or computer.

Where Have All The Bees Gone?

Biology



The Importance of Bees

The bee populations in many countries have been declining in recent years.

Why does the health of bees matter to humans?

Bees play an important part in plant reproduction.

Bees are pollinators. They carry the pollen from one plant to the stigma on another plant (though sometimes it is the same plant).

A lot of plants that bees pollinate are human food crops. If bees disappear this will affect (and devastate) human food production.



Bees are pollinators. They transfer pollen from flower to flower as part of the plant reproductive cycle.

Neonicotinoids

Recent scientific research provides evidence that use of an insecticide group called **neonicotinoids** is in part responsible for the observed decline (in bee populations).

In 2013, the European Commission believed the evidence strong enough to restrict the use of three neonicotinoids: clothianidin, imidacloprid and thiametoxam.

Another pesticide, fipronil, has also been subject to restrictions in the EU.

The observed decline in bee populations is a cause for concern for all of us.

Did you know?

There are still other neonicotinoids in use, that scientific evidence suggests are causing harm to bees, ***which have not yet been banned.***

Against the advice of some of its own experts, the United Kingdom in 2015 gave permission for some farmers to use the banned neonicotinoids. The farmers argued the pesticides were need to fight the cabbage stem flea beetle.

Some Facts and Figures

In the European Union (source European Commission, 2015):

- ❑ There are over 16 million hives
- ❑ There are over 630 000 beekeepers

In the winter of 2012/13, bee mortality rates reached almost 30% in the UK, more than double that in other EU countries in the same period.

It is hard to measure the impact of just one factor, such as pesticides, on a population especially over short time periods. Other factors, such as changing climate or farming practices could also be having an impact.

Did you know?

Some 9% of Europe's approximately 2000 wild bee species are at risk of extinction according to 2014 research by the International Union for the Conservation of Nature (IUCN).



Summary

- ✓ The bee populations in many countries have been declining in recent years
- ✓ Bees are pollinators and play an important part in plant reproduction
- ✓ A lot of plants that bees pollinate are human food crops. If bees disappear this will affect (and devastate) human food production
- ✓ Recent scientific research provides evidence that use of an insecticide group called neonicotinoids is in part responsible for the observed decline (in bee populations)
- ✓ In 2013, the European Commission restricted the use of three neonicotinoids and fipronil
- ✓ Against the advice of some of its own experts, the United Kingdom in 2015 gave permission for some farmers to use the banned neonicotinoids

Biology: Where Have All The Bees Gone?

Knowledge Check

Enter your answers below.

KC1 Why are declining bee populations a concern for humans?

KC2 List some pesticides which have been linked with declining bee populations:

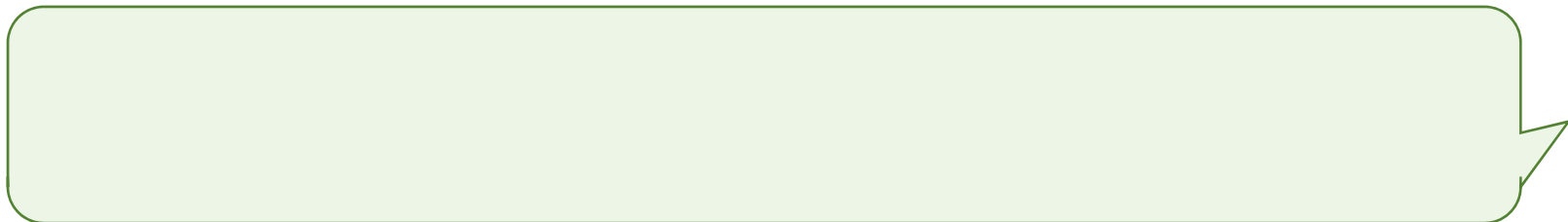
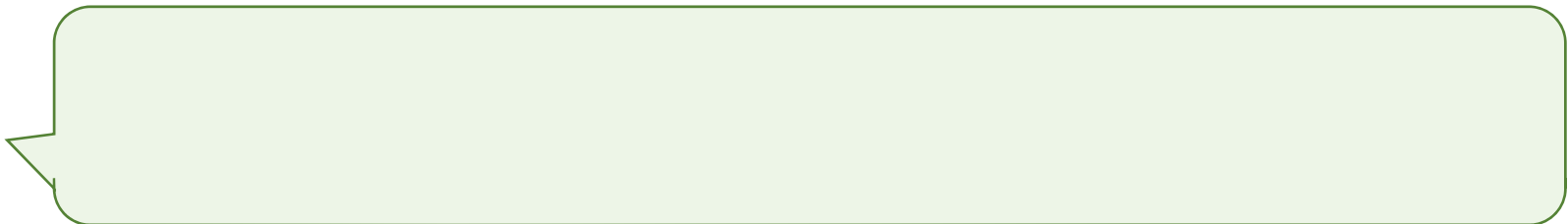
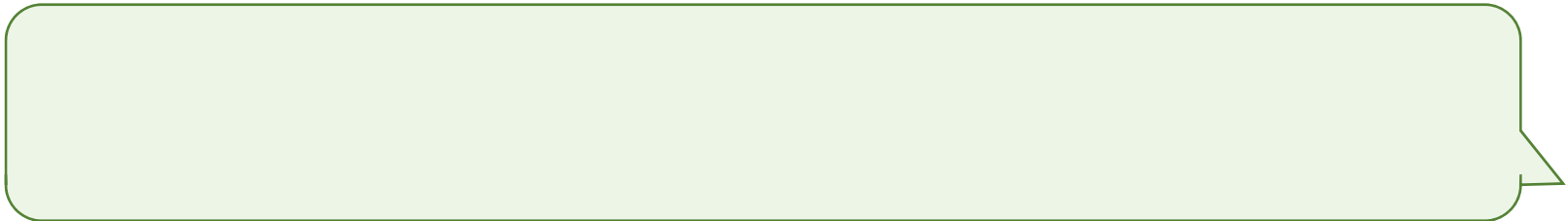
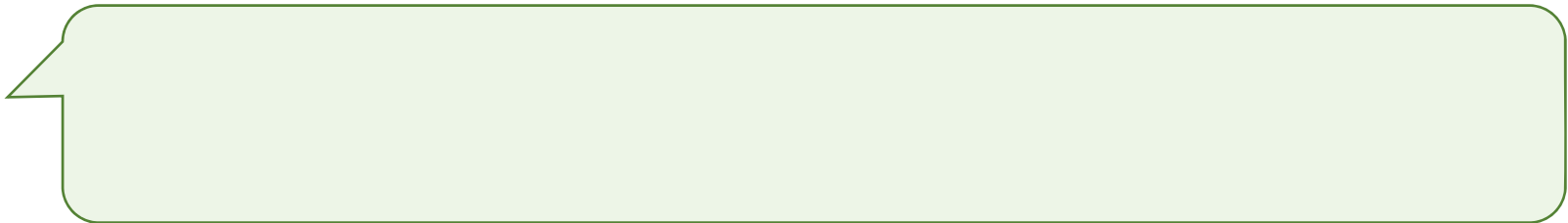
KC3 Why is it difficult to link the health of any population with just one factor?

Biology: Where Have All The Bees Gone?

Knowledge Check

Enter your opinions below.

KC4 In terms of bee populations, describe two reasons for and two reasons against continuing the EU restrictions on the use of certain pesticides:



Biology: Where Have All The Bees Gone?

Enter text below as needed.

Feedback/Notes

