

# Pesticides stop bees learning

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Scientists have found that pesticides harm the ability of bees to find food. Bees must learn which flowers contain nectar (their food) from the smell of the flowers. If the bees do not learn

which scents mean food, they will starve. Researchers at the University of Dundee in Scotland and Newcastle University in England found that pesticides used by farmers and gardeners can switch off the part of a bee's brain that is responsible for associating smells with food. Lead researcher Dr Geraldine Wright said pesticides could seriously impact the survival of honeybee colonies. She said, "bees that cannot learn will not be able to find food". This also means bees will not pollinate crops and wild plants.

Bee populations around the world have been declining. Scientists have searched for a long time for a reason why so many bees are disappearing. This new research may be an important clue. However, the British government does not want to stop the use of the pesticides that may prevent bees from learning. It wants to carry out more tests to make sure pesticides are the real reason for the reduction in the number of bees. A spokeswoman from the Friends Of The Earth charity said the government must act sooner rather than later. "Bee health is far too urgent to wait until more research has been completed. [Controls] should be placed on these pesticides until bee safety can be [guaranteed]," she said.

Sources: *Guardian / ScienceRecorder*

## Writing

*Farmers should only use natural things on their farms, not pesticides. Discuss.*

## Chat

Talk about these words from the article.

*pesticides / nectar / smell of flowers / starve / farmers / gardeners / switch off / brain / reason / disappearing / prevent / learning / carry out / real reason / bee health*

## True / False

- a) Chemicals that kill harmful bugs can stop bees from finding food. T / F
- b) Bees automatically understand which flowers contain food from birth. T / F
- c) A scientist said pesticides could increase the number of bee colonies. T / F
- d) The article suggests bees will not pollinate so many crops in the future. T / F
- e) Scientists tried to find reasons why the number of bees is going down. T / F
- f) The British government has decided to stop farmers using pesticides. T / F
- g) A charity said the British must do something soon and not wait. T / F
- h) The charity said we should wait until scientists do more bee research. T / F

## Synonym Match

- |                 |                 |
|-----------------|-----------------|
| 1. harm         | a. in charge of |
| 2. smell        | b. effect       |
| 3. responsible  | c. going down   |
| 4. associating  | d. stop         |
| 5. impact       | e. damage       |
| 6. declining    | f. take action  |
| 7. disappearing | g. linking      |
| 8. prevent      | h. limitations  |
| 9. act          | i. scent        |
| 10. controls    | j. dying out    |

## Discussion – Student A

- a) Did you like reading this article? Why/not?
- b) Do you like bees?
- c) What other reasons might there be for bees disappearing?
- d) Why does Britain's government want to wait before banning pesticides?
- e) Are pesticides bad?
- f) Do you think bee health is urgent?
- g) Do you think pesticide companies don't tell us about pesticide safety?
- h) What questions would you like to ask a bee expert?

## Phrase Match

- |                                     |                          |
|-------------------------------------|--------------------------|
| 1. pesticides harm the ability      | a. with food             |
| 2. pesticides used by               | b. clue                  |
| 3. associating smells               | c. crops and wild plants |
| 4. seriously impact the survival    | d. have been declining   |
| 5. bees will not pollinate          | e. rather than later     |
| 6. Bee populations around the world | f. of honeybee colonies  |
| 7. an important                     | g. of bees to find food  |
| 8. It wants to carry                | h. too urgent to wait    |
| 9. act sooner                       | i. out more tests        |
| 10. Bee health is far               | j. farmers and gardeners |

## Discussion – Student B

- What did you think when you read the headline?
- What springs to mind when you hear the word 'bee'?
- What do you know about bees?
- How useful are bees?
- What do you think about pesticides harming bees?
- What happens if bees disappear?
- What would life be like if you couldn't smell?
- Why do we need pesticides?

## Spelling

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- they will traevs
- farmers and esrdeangr
- osnirlseepb for associating smells with food
- the ulasvvir of honeybee colonies
- alpltnoie crops and wild plants
- populations around the world have been nldicengi
- many bees are aaiprnsgedpi
- new ehcsearr
- the idocretnu in the number of bees
- far too nuetrg
- bee safety can be eadntgeura

### Answers – Synonym Match

1. e	2. i	3. a	4. g	5. b
6. c	7. j	8. d	9. f	10. h

## Role Play

**Environmentalist** - You are worried about pesticides. Tell the others three reasons why. Tell the government that it must ban all pesticides immediately. Tell them that pesticides will kill all bees and that means people will have no flowers or food. Tell everyone food is healthier without pesticides.

**Pesticide company boss** - You know no one should worry about pesticides. Tell the others three reasons why. You think the environmentalist worries too much. Tell him/her that food is more dangerous and more expensive without pesticides. Say also there is no proof that pesticides harm bees.

**Government** - You don't think pesticides should be banned. Tell the others three reasons why. You want to wait until there is more evidence that pesticides are harmful. Tell the environmentalist that food would be much more expensive without pesticides and it would be full of disease.

**A bee** - You cannot believe the others are arguing about pesticides. You know they are dangerous. Tell the others three reasons why. The boss is most interested in money and the government wants to stay in power. Your bee friends are dying because of pesticides.

## Speaking – Food Dangers

Rank these and share your rankings with your partner. Put the biggest dangers at the top. Change partners often and share your rankings.

- preservatives
- pesticides
- food additives
- saturated fats
- bacteria
- genetically modified food
- radiation
- sugar

### Answers – True False

a	T	b	F	c	F	d	T	e	T	f	F	g	T	h	F
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Answers to Phrase Match and Spelling are in the text.