



## Bee Survival Bolstered by Life-Saving Pesticide Antidote

### Description

ESL-NEWS.COM





Scientists found that giving bees absorbent hydrogel can help them survive harmful pesticides. Bees are important for plants and crops but can get sick from chemicals in pollen. Hydrogel, a safe material, can stick to pesticides in the bees' bodies. Researchers tested this on common eastern bumblebees.

Julia Caserto and her team from Cornell University in New York did the study. They put tiny hydrogel particles in sugar water for the bees to drink. The bees then got a lot of pesticides. Bees that had hydrogel had a better chance of staying alive.

When bees had pesticides that could make them sick, hydrogel helped them feel better. Bees with hydrogel could eat, walk, and fly more easily. This could be a good solution for managed bee colonies, like those for honey and crops.

Hydrogel can be added to bee food to protect them from pesticides. This can help bees stay healthy and safe while working.

---

## Vocabulary List:

1. **Hydrogel** /'haɪ.drəʊ.gəl/ (noun): A water-absorbing gel used in various applications including agriculture and medicine.
2. **Pesticides** /'pest.ɪ.saɪdz/ (noun): Chemical substances used to kill pests that harm crops and plants.
3. **Absorbent** /əb'zɔr.bənt/ (adjective): Having the ability to soak up liquid or moisture.
4. **Survive** /sər'vaɪv/ (verb): To continue to live or exist especially after a dangerous situation.
5. **Colony** /'kɑː.lə.ni/ (noun): A group of organisms living together especially in reference to social insects like bees.
6. **Chemicals** /'kɛmɪkəlz/ (noun): Substances with a defined composition used in or produced by chemical processes.

## Comprehension Questions

### Multiple Choice

1. What is the purpose of giving bees absorbent hydrogel?

Option: Help them survive harmful pesticides

Option: Enhance their ability to gather nectar

Option: Improve their pollination efficiency

Option: Increase their lifespan



2. Where did Julia Caserto and her team conduct the study on bees with hydrogel?

- Option: Harvard University
- Option: Cornell University
- Option: Stanford University
- Option: Yale University

3. What effect did hydrogel have on bees that had pesticides?

- Option: Increased nectar production
- Option: Strengthened wings for better flight
- Option: Improved chances of survival
- Option: Enhanced vision for navigation

4. What type of bees were used in the research study with hydrogel?

- Option: Western honey bees
- Option: Common eastern bumblebees
- Option: Africanized killer bees
- Option: European honey bees

5. How did researchers administer hydrogel to the bees in the study?

- Option: Injecting it into the bees
- Option: Mixing it with nectar
- Option: Spraying it on the bees
- Option: Placing it in beehives

6. In what way did hydrogel help bees with pesticides feel better?

- Option: Improved memory retention
- Option: Enhanced camouflage abilities
- Option: Increased communication skills
- Option: Enabled eating, walking, and flying more easily

## Answer

**Multiple Choice:** 1. Help them survive harmful pesticides 2. Cornell University 3. Improved chances of survival 4. Common eastern bumblebees 5. Mixing it with nectar 6. Enabled eating, walking, and flying more easily

## Vocabulary quizzes



---

**Multiple Choice ( Select the Correct answer for each question. )**

1. What term describes the act of donating money goods or services to charitable causes?  
Option: Philanthropic  
Option: Variant  
Option: Controversy  
Option: Pesticides
2. What term is used to describe the rapid expansion of a concept idea or disease among a population?  
Option: Spread  
Option: Hostile  
Option: Reputation  
Option: Impact
3. What are substances used to stimulate the production of antibodies and provide immunity against diseases?  
Option: Populous  
Option: Vaccines  
Option: Dangerous  
Option: Hydrogel
4. Legal instances or examples brought before a court for resolution are known as:  
Option: Accounts  
Option: Cases  
Option: Detected  
Option: Colony
5. What term describes something very good or successful typically requiring a lot of effort or skill?  
Option: Fined  
Option: Achievement  
Option: Unintentional  
Option: Accessed
6. Individuals who have a prolonged or intense experience through practice and education in a particular field are commonly known as:  
Option: Experts  
Option: Survive  
Option: Attention  
Option: Chemicals
7. What term means to be able to enter or make use of a computer system or retrieve data?  
Option: Incredible



- Option: Accessed
- Option: Subscribers
- Option: Frustrated

8. A group of organisms of the same kind living or growing together is referred to as a(n):

- Option: Spread
- Option: Colony
- Option: Absorbent
- Option: Hostile

9. Substances with a distinct molecular composition and produced by or used in a chemical process are known as:

- Option: Chemicals
- Option: Attention
- Option: Philanthropic
- Option: Variant

10. The effect or influence of one person thing or action on another is termed as:

- Option: Fragmented
- Option: Impact
- Option: Allege
- Option: Reputation

**Gap-Fill ( Fill in the blanks with the correct word from the vocabulary list. )**

- 11. The soldiers were met with a \_\_\_\_\_ reception when they crossed the enemy lines.
- 12. A company's \_\_\_\_\_ can significantly impact its success in the market.
- 13. The security system \_\_\_\_\_ the intruder before they could enter the building.
- 14. The company was \_\_\_\_\_ for violating environmental regulations.
- 15. The magician performed an \_\_\_\_\_ trick that left the audience in awe.
- 16. Paper towels are designed to be highly \_\_\_\_\_ to soak up spills quickly.
- 17. Only the fittest organisms are able to \_\_\_\_\_ in harsh environmental conditions.
- 18. India is one of the most \_\_\_\_\_ countries in the world with a large population.



19. The teacher requested the students' \_\_\_\_\_ during the important lecture.

20. Farmers use \_\_\_\_\_ to protect crops from pests and insects.

**Matching Sentences ( Match each definition to the correct word from the vocabulary list. )**

21. A new of the virus was discovered in the latest research findings.
22. Rumors tend to quickly in a close-knit community.
23. Swimming in the deep end of the pool without supervision can be very .
24. The bandage was made of a special material to promote healing.
25. The billionaire's acts included funding multiple educational institutions.
26. The accountants audited the company's financial to ensure accuracy.
27. It is the duty of law enforcement agencies to regulations and maintain order.
28. The team consulted with medical to better understand the rare disease.
29. The video streaming service gained thousands of new after releasing popular shows.
30. The hiker became when the trail markers led him in circles.

## Answer

**Multiple Choice:** 1. Philanthropic 2. Spread 3. Vaccines 4. Cases 5. Achievement 6. Experts 7. Accessed 8. Colony 9. Chemicals 10. Impact

**Gap-Fill:** 11. Hostile 12. Reputation 13. Detected 14. Fined 15. Incredible 16. Absorbent 17. Survive 18. Populous 19. Attention 20. Pesticides

**Matching sentence:** 1. Variant 2. Spread 3. Dangerous 4. Hydrogel 5. Philanthropic 6. Accounts 7. Enforce 8. Experts 9. Subscribers 10. Frustrated

## CATEGORY

1. Sci/Tech - LEVEL2

### Date Created

2024/09/14

### Author

aimeeyoung99