



US Surgeon General: Even Moderate Drinking is Risky

Description

A recent study from the University of California, Berkeley, has revealed interesting findings about how plants communicate. Researchers discovered that plants can send out signals when they are stressed or damaged. These signals are in the form of chemicals that travel through the air.

When a plant is cut or injured, it releases a specific chemical. Other nearby plants can detect this chemical signal and start preparing themselves for possible danger. They might change the way they grow or strengthen their defenses to protect themselves from harm. This discovery helps us understand more about how plants survive and adapt to their environment.

The research team conducted experiments in a greenhouse. They tested different types of plants, including tomatoes, corn, and beans. They found that all these plants reacted in similar ways to the chemical signals. When one plant was harmed, the neighboring plants quickly responded by altering their growth patterns.

One of the scientists, Dr. Maria Rodriguez, explained the significance of the findings. She said, "This research shows that plants are more aware of their surroundings than we previously thought. They can communicate in their own way to ensure survival."

Understanding how plants communicate can have important benefits for agriculture. Farmers might use this knowledge to develop better strategies for protecting crops from pests and diseases. By enhancing plant communication, it may be possible to improve crop yields without depending too much on chemicals.

This study opens the door for further research into plant behavior and communication. It encourages us to look at plants as active participants in their ecosystems, capable of complex interactions.

Vocabulary List:

1. **Discover** /dɪs'kʌvər/ (verb): To find information or develop a new understanding.
2. **Chemical** /'kɛmɪkəl/ (noun): A substance with a distinct molecular composition that is produced by or used in a chemical process.
3. **React** /rɪ'ækt/ (verb): To respond or behave in a particular way as a result of something.
4. **Defenses** /dɪ'fɛnsɪz/ (noun): The means of protecting oneself against harm or danger.
5. **Survival** /sər'vaɪvəl/ (noun): The state of continuing to live or exist especially in spite of difficult conditions.
6. **Ecosystem** /'iː.koʊ.sɪs.təm/ (noun): A biological community of interacting organisms and their physical environment.



Comprehension Questions

Multiple Choice

1. What did researchers at the University of California, Berkeley discover about how plants communicate?
Option: Plants can send out signals in the form of chemicals when they are stressed or damaged.
Option: Plants communicate through physical touch with other plants.
Option: Plants communicate through sounds in their environment.
Option: Plants communicate through underground root networks.
2. What happens when a plant is cut or injured according to the study?
Option: It sends out a distress signal in the form of light.
Option: It releases a specific chemical signal.
Option: It emits a high-frequency sound.
Option: It releases a burst of oxygen.
3. How did neighboring plants respond when one plant was harmed in the experiments?
Option: They emitted a different type of chemical signal.
Option: They wilted and died.
Option: They started preparing themselves by altering their growth patterns.
Option: They moved away from the harmed plant.
4. What did Dr. Maria Rodriguez highlight about the research findings?
Option: Plants are not aware of their surroundings.
Option: Plants cannot communicate with each other.
Option: Plants are more aware of their surroundings than previously thought.
Option: Plants communicate only through physical contact.
5. How can understanding plant communication benefit agriculture?
Option: It can reduce the need for water in farming.
Option: It can increase the need for chemicals in farming.
Option: It can help develop better strategies for protecting crops from pests and diseases.
Option: It has no impact on agriculture.
6. What does the study suggest about plants in their ecosystems?
Option: Plants are passive and do not interact with other organisms.



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- Option: Plants have no means of communication.
Option: Plants are not capable of complex interactions.
Option: Plants are active participants capable of complex interactions.

True-False

7. Plants release chemicals as signals when they are stressed or damaged according to the study.
8. The research team conducted their experiments in a laboratory setting.
9. Dr. Maria Rodriguez mentioned that plants are not aware of their surroundings.
10. Understanding plant communication has no benefits for agriculture according to the study.
11. The study concludes that plants play a passive role in their ecosystems.
12. Chemicals released by plants when they are harmed can influence neighboring plants according to the study.

Gap-Fill

13. Researchers at the University of California, Berkeley found that plants can send out signals in the form of _____ when they are stressed or damaged.
14. Neighboring plants responded by altering their growth patterns when one plant was _____ in the experiments.
15. Farmers might use the knowledge of plant communication to develop better strategies for protecting crops from pests and diseases, potentially improving crop yields without depending too much on _____.
16. Dr. Maria Rodriguez stated that plants are more aware of their surroundings than previously _____.



17. Plants are seen as active participants in their ecosystems, capable of _____ interactions according to the study.

18. The study conducted by the research team involved testing different types of plants such as tomatoes, corn, and _____.

Answer

Multiple Choice: 1. Plants can send out signals in the form of chemicals when they are stressed or damaged. 2. It releases a specific chemical signal. 3. They started preparing themselves by altering their growth patterns. 4. Plants are more aware of their surroundings than previously thought. 5. It can help develop better strategies for protecting crops from pests and diseases. 6. Plants are active participants capable of complex interactions.

True-False: 7. True 8. False 9. False 10. False 11. False 12. True

Gap-Fill: 13. chemicals 14. harmed 16. thought 17. complex 18. beans

Vocabulary quizzes

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

1. Which natural disaster can significantly impact an ecosystem?

- Option: Droughts
- Option: Earthquakes
- Option: Tornadoes
- Option: Floods

2. Who conducts scientific studies and experiments to make new discoveries?

- Option: Doctors
- Option: Researchers
- Option: Engineers
- Option: Teachers

3. What is the instinctual drive to stay alive in challenging situations called?

- Option: Relaxation
- Option: Excitement
- Option: Survival
- Option: Adaptation



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4. Which substance acts as a chemical messenger in the body?
- Option: Vitamin
 - Option: Mineral
 - Option: Hormone
 - Option: Antibody
5. What is the obligation to take care of something or someone known as?
- Option: Leisure
 - Option: Freedom
 - Option: Responsibility
 - Option: Carelessness
6. Where are well-equipped places or services provided for a particular purpose?
- Option: Streets
 - Option: Homes
 - Option: Parks
 - Option: Facilities
7. What term is used to describe finding or learning something new?
- Option: Loss
 - Option: Discovery
 - Option: Forgetfulness
 - Option: Mistake
8. What encourages an individual to take action or work towards a goal?
- Option: Procrastination
 - Option: Motivation
 - Option: Rejection
 - Option: Demotivation
9. What is the bond or friendship between individuals or animals called?
- Option: Loneliness
 - Option: Isolation
 - Option: Companionship
 - Option: Rivalry
10. What term describes a disease that spreads over a large geographic area?
- Option: Epidemic
 - Option: Outbreak
 - Option: Pandemic
 - Option: Endemic



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

11. Understanding the _____ nature of the human brain requires extensive research.
12. It is essential to take breaks to _____ one's energy and focus.
13. Always ensure that your sources of information are credible and _____.
14. Success is often the result of consistent hard work and determined _____.
15. Not achieving your goals can leave you feeling _____ and demotivated.
16. The team was well _____ to handle any challenges that came their way.
17. After the long weekend the company had a significant _____ of work to catch up on.
18. Proper communication is _____ in maintaining healthy relationships.
19. The couple strolled through the park at a _____ pace enjoying the sunshine.
20. Regular exercise and a balanced diet are essential for overall health and _____.

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

21. The immune system uses antibodies to protect the body from harmful invaders.
22. Scientists conduct controlled tests to study the effects of different variables.
23. Despite facing adversity the community showed remarkable strength and adaptability.
24. Individuals who volunteered for the research study were considered the participants.
25. The cozy blanket provided warmth and a sense of security during the cold night.
26. The pep talk from the coach inspired the team to give their best performance.
27. The interdependent relationships of plants animals and the environment form an ecosystem.
28. The state-of-the-art gymnasium offers top-notch facilities for fitness enthusiasts.



29. Endocrine glands secrete hormones that regulate various bodily functions.

30. Taking care of a pet comes with the responsibility of providing food shelter and love.

Answer

Multiple Choice: 1. Droughts 2. Researchers 3. Survival 4. Hormone 5. Responsibility 6. Facilities 7. Discovery 8. Motivation 9. Companionship 10. Pandemic

Gap-Fill: 11. complex 12. renew 13. valid 14. efforts 15. frustrated 16. equipped 17. backlog 18. crucial 19. leisurely 20. well-being

Matching sentence: 1. Defenses 2. Experiments 3. Resilient 4. Participants 5. Comfort 6. Motivation 7. Ecosystem 8. Facilities 9. Hormones 10. Responsibility

CATEGORY

1. Health - LEVEL3

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