

## Scientists say plants 'scream' when stressed

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Plant lovers believe that talking to plants helps them grow. Scientists have discovered there could be a grain of truth in this belief. Researchers have discovered that plants emit sounds when they are stressed. The noises are

akin to a human cry or scream. The scientists believe the sounds are specific enough for us to be able to interpret them and to attend to their needs. Unfortunately, plant sounds are at too high a frequency for the human ear to pick up. Humans can only hear frequencies of up to 16 kilohertz. The scientists used special AI algorithms to detect ultrasonic sounds emitted by plants that were up to 250 kilohertz. The AI also differentiated between different types of plant sounds.

The research was conducted in an acoustic chamber in an adapted greenhouse at Israel's Tel Aviv University. Scientists discovered that vibrations from stressed tobacco and tomato plants turned into sound waves. Lead researcher Professor Lilach Hadany said: "Plants usually emit sounds when they are under stress. Each plant and each type of stress is associated with a specific identifiable sound." She suggested that fields of crops could be quite noisy, saying: "While imperceptible to the human ear, the sounds emitted by plants can be heard by...bats, mice, and insects." Interpreting these sounds could help us understand when crops are dehydrated. Farmers could irrigate their crops more efficiently, and thus conserve water.

Sources: [cbsnews.com](https://www.cbsnews.com) / [sciencealert.com](https://www.sciencealert.com) / [gizmodo.com](https://www.gizmodo.com)

### Writing

We need to understand plants so we can create a better planet. Discuss.

### Chat

Talk about these words from the article.

plants / lovers / truth / belief / scream / frequency / human ear / ultrasonic / sounds / research / acoustic / greenhouse / stress / crops / bats / farmers / dehydrated / water

### True / False

- 1) Talking to plants makes people better lovers. T / F
- 2) Scientists said it was true that grains emit sounds. T / F
- 3) Scientists said plant sounds are too high-pitched for us to hear. T / F
- 4) Scientists said plants make different types of sounds. T / F
- 5) The research was conducted in a special greenhouse. T / F
- 6) The scientists said farmers' fields could be quite noisy to bats and mice. T / F
- 7) Understanding plant sounds could help us to hydrate them. T / F
- 8) Understanding plant sounds could help us to save water. T / F

### Synonym Match

(The words in **bold** are from the news article.)

- |                          |                  |
|--------------------------|------------------|
| 1. <b>lovers</b>         | a. unnoticeable  |
| 2. <b>emit</b>           | b. distinguished |
| 3. <b>akin to</b>        | c. carried out   |
| 4. <b>detect</b>         | d. release       |
| 5. <b>differentiated</b> | e. water         |
| 6. <b>conducted</b>      | f. similar       |
| 7. <b>stress</b>         | g. decoding      |
| 8. <b>imperceptible</b>  | h. fans          |
| 9. <b>interpreting</b>   | i. strain        |
| 10. <b>irrigate</b>      | j. notice        |

### Discussion – Student A

- a) What do you think of plants?
- b) Do you think plants have feelings?
- c) What would you do if you heard a plant scream?
- d) How much of a plant lover are you?
- e) What do you think plants might communicate?
- f) What would you like to ask plants?
- g) How will life change if we can understand plants?
- h) What advice do you have for plants?

## Phrase Match

- |   |                         |
|---|-------------------------|
| 1. there could be a grain of                | a. to a human cry       |
| 2. The noises are akin                      | b. an acoustic chamber  |
| 3. plant sounds are at too high a frequency | c. different types      |
| 4. detect ultrasonic                        | d. human ear            |
| 5. The AI also differentiated between       | e. are dehydrated       |
| 6. research was conducted in                | f. for the human ear    |
| 7. Plants usually emit sounds when they     | g. irrigate their crops |
| 8. imperceptible to the                     | h. are under stress     |
| 9. help us understand when crops            | i. sounds               |
| 10. Farmers could                           | j. truth in this belief |

## Discussion – Student B

- What do you think about what you read?
- Would you like to hear plants screaming?
- What's your favourite plant?
- What would plants say about climate change?
- What might plants say to each other?
- Would we get tastier food if we could understand plants' feelings?
- Could plants help us to conserve water?
- What questions would you like to ask the researchers?

## Spelling

- noises are kani to a human cry
- be able to tetinprer them
- sounds are at too high a ycrnfeeug
- scientists used special AI gamoitlrhs
- detect laosunictr sounds
- dttiardfineeef between different types
- conducted in an asuccoit chamber
- viitrnboas from stressed tobacco
- specific inebdtieafil sound
- eptprimeeiblc to the human ear
- etepgtrnrnii these sounds
- Farmers could tragriie their crops

### Answers – Synonym Match

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

## Role Play

### Role A – Farm Irrigation

You think farm irrigation will be the biggest benefit from communicating with plants. Tell the others three reasons why. Tell them why their things won't be as beneficial. Also, tell the others which is the least beneficial of these (and why): tastier food, better medicines or mental health.

### Role B – Tastier Food

You think tastier food will be the biggest benefit from communicating with plants. Tell the others three reasons why. Tell them why their things won't be as beneficial. Also, tell the others which is the least beneficial of these (and why): farm irrigation, better medicines or mental health.

### Role C – Better Medicines

You think better medicines will be the biggest benefit from communicating with plants. Tell the others three reasons why. Tell them why their things won't be as beneficial. Also, tell the others which is the least beneficial of these (and why): tastier food, farm irrigation or mental health.

### Role D – Mental Health

You think mental health will be the biggest benefit from communicating with plants. Tell the others three reasons why. Tell them why their things won't be as beneficial. Also, tell the others which is the least beneficial of these (and why): tastier food, better medicines or farm irrigation.

## Speaking – Plant Help

Rank these with your partner. Put the best ways plants could help us if we understood them at the top. Change partners often and share your rankings.

- |                   |                      |
|-------------------|----------------------|
| • Farm irrigation | • Better medicines   |
| • Tastier food    | • Climate change     |
| • Pest control    | • Mental health      |
| • Colour          | • Water conservation |

### Answers – True False

1	F	2	F	3	T	4	T	5	T	6	T	7	F	8	T
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Answers to Phrase Match and Spelling are in the text.