BreakingNewsEnglish - The Mini Lesson

Scientists change plants sunblock to grow more crops

19th November, 2016



Plant biologists have thought of a clever new way to increase the size of crops by as much as 20 per cent. They have genetically modified part of in mechanism is plants that responsible for

photosynthesis. Of course, photosynthesis is the most important chemical reaction in the world. It is the process where plants use sunlight to change carbon dioxide into oxygen. This means we can all breathe. The scientists have found a way for plants to use the energy they get from sunlight better, so they grow bigger and produce more food. Lead researcher Professor Stephen Long said his team is genetically modifying staple crops such as rice, wheat, maize and soybean – the world's biggest crops.

The scientists targeted the mechanism that plants use to protect themselves from damage when the Sun's rays are too strong. To prevent damage, plants turning their energy into heat, which disappears into the air. However, this heat-loss process continues even when clouds block the Sun. The scientists put extra copies of the heat-loss genes into modified plants. These additional copies speed up the heat-loss process so the plants can more quickly return to using energy to grow. Professor Long believes this could help the world's food needs. He said if he could get 20 per cent more food from crops, "that would greatly [reduce] what we see as the future pressure on food supply".

Sources: ScienceMag.org / the-scientist.com / sciencedaily.com

Writing

We should stop the world population growing. Discuss.

Chat

Talk about these words from the article.

plant / biologists / genetically modified / mechanism / chemical / reaction / sunlight / protect / damage / energy / heat / process / grow / food / future / pressure / supply

True / False

- Biologists have created a better sunblock from plants and crops. T / F
- b) Photosynthesis is the process that concerts oxygen to carbon dioxide. T / F
- Scientists found a better way for plants to use energy to grow. T / F
- d) Scientists said they had genetically modified stable crops. T / F
- e) Plants cannot protect themselves from the sun's strong rays. T / F
- f) Plants turn their energy to heat even when it is cloudy. T / F
- g) Scientists added genes to plants so they could use energy to grow. T / F
- h) The scientists say their idea could help the world's food supply. T / F

Synonym Match

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

1. clever

2. mechanism

3. change

4. found

5. produce

6. damage

7. continues

8. additional

9. believes

10. reduce

a. extra

b. discovered

c. harm

d. thinks

e. smart

f. goes on

g. transform

h. cut

process

j. grow

Discussion - Student A

- a) What are the benefits of genetically modified food?
- b) What do you know about genes?
- c) What did the scientists do to make the crops bigger?
- d) Why are so many people in the world without food?
- e) What will happen if we cannot produce enough food?
- f) How would the world change if we were all vegetarian?
- g) What will the food supply be like in 50 years from now?
- h) What questions would you like to ask the researchers?

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Phrase Match

- Plant biologists have thought of a clever
- increase the size of crops by as
- chemical
- 4. use the energy they
- crops such as rice, wheat, maize
- protect themselves
- 7. the Sun's rays are too
- plants turn their energy
- this could help the world's food
- 10. the future pressure

Discussion - Student B

- What do you know about photosynthesis?
- What do you think of genetically modifying plants and crops?
- What do you think about what you read?
- How important could this news be? d)
- Where do you get your energy from?
- Which staple food do you prefer, and why? f)
- What does sunlight do to you?
- What advice do you have for farmers?

Spelling

- 1. Plant siloigostb
- 2. that is loserenibps for photosynthesis
- 3. use the energy they get from higtlnus
- 4. oepdcru more food
- 5. epltsa crops
- 6. rice, wteah, maize and soybean
- 7. protect themselves from <u>aamged</u>
- 8. this heat-loss <u>crpsoes</u> continues
- 9. meodiidf plants
- 10. litaniaodd copies
- 11. that would greatly ueedcr what we see
- the future essreurp on food supply

Answers - Synonym Match

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

- and soybean
- get from sunlight
- needs
- from damage
- much as 20 per cent
- into heat
- new way q.
- on food supply
- reaction
- strong

Role Play

Role A - Overpopulation

You think overpopulation is the biggest danger to the world's food supply. Tell the others three reasons why. Tell them why their reasons aren't as bad. Also, tell the others which is the smallest danger of these (and why): climate change, over-eating or ageing workers.
Role B - Climate change

You think climate change is the biggest danger to the world's food supply. Tell the others three reasons why. Tell them why their reasons aren't as bad. Also, tell the others which is the smallest danger of these (and why): overpopulation, over-eating or ageing workers.

Role C - Over-eating

You think over-eating is the biggest danger to the world's food supply. Tell the others three reasons why. Tell them why their reasons aren't as bad. Also, tell the others which is the smallest danger of these (and why): climate change, overpopulation or ageing

Role D – Ageing workers

You think workers getting older is the biggest danger to the world's food supply. Tell the others three reasons why. Tell them why their reasons aren't as bad. Also, tell the others which is the smallest danger of these (and why): climate change, overeating or overpopulation.

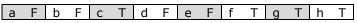
Speaking - Food supply

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

- genetic modification
- overpopulation
- climate change
- ageing workers

- overeating
- drought
- pests
- war

Answers - True False



Answers to Phrase Match and Spelling are in the text.