

Cockroach milk may be the next superfood

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It might not be everyone's cup of tea, but scientists say cockroach milk could become a new superfood. Insect dairy could be the next big thing on supermarket shelves and in our diets. Scientists say insect milk could be a perfect non-dairy

alternative to cow's milk, no matter how hard it might be for people to accept milk from bugs. Scientists studied the nutritional value of the milk from the Pacific Beetle cockroach. They discovered that the milk was much richer in nutrients than dairy milk. Scientists said: "A single crystal [of cockroach milk] is estimated to contain more than three times the energy of an equivalent mass of dairy milk." The crystals were also full of amino acids and proteins.

Most cockroaches do not actually produce milk. The Pacific Beetle cockroach is the only one known to feed milk to its young. However, milking enough cockroaches to satisfy a growing human population clearly isn't as easy as milking cows. An alternative is to try and replicate the milk in a lab using stem cell technology, and then turn this technique into a large-scale industrial process. A South African company called Gourmet Grubb has already started selling insect-milk ice cream. It says the milk is, "a sustainable, nature-friendly, nutritious, lactose-free, delicious, guilt-free dairy alternative of the future". It won't be too long before other companies jump on the bug-milk bandwagon.

Sources: cbslocal.com / sciencealert.com / abc7news.com

Writing

Food from insects is the future. Discuss.

Chat

Talk about these words from the article.

cup of tea / cockroach / milk / superfood / bugs / nutrients / energy / protein / crystal / growing / human population / alternative / technology / delicious / guilt / bandwagon

True / False

- Scientists said cockroach milk in tea is very healthy. T / F
- The report said supermarket shelves are already full of cockroach milk. T / F
- Cockroach milk was found to be more nutritious than cow's milk. T / F
- Cockroach milk was lacking in amino acids. T / F
- Only one type of cockroach is known to produce milk. T / F
- The article said suggested it could be difficult to milk cockroaches. T / F
- A South African company started selling cockroach-milk ice cream. T / F
- Other companies will never join a bug-milk bandwagon. T / F

Synonym Match

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

- | | |
|------------------------|----------------|
| 1. perfect | a. worth |
| 2. alternative | b. reproduce |
| 3. accept | c. offspring |
| 4. value | d. replacement |
| 5. estimated | e. fulfill |
| 6. young (noun) | f. ideal |
| 7. satisfy | g. delectable |
| 8. replicate | h. evaluated |
| 9. process | i. embrace |
| 10. delicious | j. operation |

Discussion – Student A

- What do you think about what you read?
- How good is milk for us?
- Would you buy cockroach milk if it was better than cow's milk?
- How could insects solve the world's food problems?
- Is lab-made cockroach milk preferable to milked cockroach milk?
- Would you like to try the cockroach-milk ice cream?
- What insect products should companies make?
- What questions would you like to ask the researchers?

BreakingNewsEnglish - The Mini Lesson

Phrase Match

1. It might not be everyone's
 2. the next big
 3. a perfect non-dairy alternative
 4. Scientists studied the nutritional value
 5. The crystals were also full of
 6. the only one known to feed milk
 7. clearly isn't as easy as
 8. replicate the milk
 9. turn this technique into a large-scale
 10. jump on the bug-milk
- a. milking cows
 - b. of the milk
 - c. amino acids
 - d. bandwagon
 - e. to cow's milk
 - f. industrial process
 - g. cup of tea
 - h. to its young
 - i. in a lab
 - j. thing

Discussion – Student B

- a) What do you know about cockroaches?
- b) What do you think of milk?
- c) What do you think of drinking cockroach milk?
- d) What alternatives are there to milk?
- e) How strange is it that we drink cow's milk?
- f) Why do we need amino acids and proteins?
- g) What other superfoods do you know about?
- h) What is the best way to use milk in food?

Spelling

1. supermarket lsesehv
2. a perfect non-dairy laieearvttn
3. richer in trnseintu than dairy milk
4. stiedemat to contain more
5. an utanlieqev mass of dairy milk
6. full of amino acids and poistenr
7. staysfi a growing human population
8. try and iepraetc the milk in a lab
9. turn this quchietne into a...
10. uiidarlnts process
11. sleasn baitu, nature-friendly...
12. jump on the bug-milk bgodnwnaa

Answers – Synonym Match

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

Role Play

Role A – Cockroaches

You think cockroaches are the most appealing insects for food. Tell the others three reasons why. Tell them what is wrong with their insects. Also, tell the others which is the least appetizing of these (and why): ants, worms or scorpions.

Role B – Ants

You think ants are the most appealing insects for food. Tell the others three reasons why. Tell them what is wrong with their insects. Also, tell the others which is the least appetizing of these (and why): cockroaches, worms or scorpions.

Role C – Worms

You think worms are the most appealing insects for food. Tell the others three reasons why. Tell them what is wrong with their insects. Also, tell the others which is the least appetizing of these (and why): ants, cockroaches or scorpions.

Role D – Scorpions

You think scorpions are the most appealing insects for food. Tell the others three reasons why. Tell them what is wrong with their insects. Also, tell the others which is the least appetizing of these (and why): ants, worms or cockroaches.

Speaking – Insect Food

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

- mealworms
- beetles
- scorpions
- termites
- cockroaches
- ants
- crickets
- tarantula

Answers – True False

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