Robot saves grain

A robot that is able to **burrow** through grain could help save millions of tons of food waste every year.

The Crover robot is able to go 10 meters beneath grain storage **silos** and report on moisture and humidity levels. A tiny sensor on the robot watches conditions in real-time, and it sends information to farmers via a smartphone app.

Long-term grain storage is laborious, dangerous, and easy to make mistakes. When grain isn't stored correctly, temperature and moisture start to grow. As a result, bugs start to breed, and **mycotoxins** and fungus start to grow in the grain, which means a total loss to a farmer.

An estimated 630 million tons of grain are lost in storage every year on a global scale. The robot could help save grains and human lives, too.

Difficult words: burrow (to dig a hole or tunnel through the ground or something solid), **silo** (a tall tower that farmers use to store grain), **mycotoxin** (a toxic substance that a fungus makes).

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LEVEL 3 ADVANCED

Discussion Questions

Topic Talk

1. Define the following words: *shelling, radiation and cease*

2. According to the article, what could help save millions of tons of food waste every year?

3. How many tons of grain are lost in strorage every year on a global scale?

3. What could this robot do to save millions of tons of food waste?

4. What enables the robot to see through the conditions of grain and send information to farmers via a smartphone app?

5. What happens when grain is not stored properly?

6. Why do bugs start to breed and mycotoxins and fungus start to grow in the grain?

Express Your Thoughts

1. What is the most important grain that your country grows?

2. Do farmers in your country have problems with their crops or grain? What are they?

3. Do you think that using robots in farming pose any special problems?