

ANNIE THE ROBOT: Innovative technology in the field

Corteva Agriscience is among the first ag companies to leverage agile mobile robots to walk row crops. By adding Corteva-driven innovation and GPS navigation to Boston Dynamics' Spot robot, we hope to revolutionize phenotyping and crop protection applications.

Corteva has named its robot Anatoly — or "Annie" — after the Anatolian Shepherd dogs once owned by Pioneer founder Henry A. Wallace. Lightweight and portable, the Annie robot is an example of how Corteva is boldly pushing the frontiers of science to increase safety and sustainability.

In addition to Boston Dynamics, Corteva is working with Trimble, a leading provider of advanced location-based solutions that maximize productivity and enhance profitability, to integrate precise GPS guidance technologies into the Spot robot platform. As a jointly developed solution, Annie combines the unique mobility of the Spot robot with Trimble's autonomous navigation capabilities and Corteva's innovative approach to helping farmers overcome agriculture's most pressing challenges.

The Annie robot can "walk" between rows of corn, sunflowers and more. Annie has potential applications in field testing of both new seed and crop protection solutions due to its ability to collect large amounts of data, inspect operations and support the application of new crop protection discovery molecules. These capabilities can help Corteva more fully understand complex phenotypes to support our research and development selection processes.

"Annie's proximal sensing capabilities and ability to execute specific actions at a certain plot or by individual plant will help us challenge assumptions about the way things are done," said Geoff Graham, leader of seed product development for Corteva Agriscience. "The ability to leverage a robot to navigate row crop fields, while carrying and pulling instruments to collect data or apply chemicals more efficiently, has tremendous potential as we push the boundaries of what we can deliver to farmers."

Because Annie can work continuously in environments with uneven surfaces and high daily temperatures, she can protect Corteva Agriscience employees from potentially dangerous situations. With the ability to automate sensing and inspection, capture data and explore without boundaries, Spot robots like Annie make operations safer, more efficient and predictable.



Watch the "Annie the robot" video here:
[https://twitter.com/corteva/
status/1417492191690297352](https://twitter.com/corteva/status/1417492191690297352)



With her advanced eyesight, Annie collects data to understand complex phenotypes to support our product selection process.



Annie can help support the application of new crop protection discovery molecules and help inspect operations.



Annie works continuously in environments with uneven surfaces and high daily temperatures, protecting Corteva employees.

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