** This video release from K-State Research and Extension is available online at https://ksre-learn.com/nanotechnology-eggshell-pesticide

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Video: Entomologists use a waste product -- eggshells -- to control flour beetles

K-State Research and Extension news service

In this video, Kansas State University inorganic chemist Amy Norton explains how entomologists developed a pesticide solution using nano-particles derived from a waste product -- eggshells -- to kill the red flour beetle.

"We're using a cheap commodity, the eggshells, to eradicate a pest," Norton said. "This can be used very easily (using nanotechnology), and so we're trying to expand upon this idea and see if it works just as well with other stored product pests out there."

The process involves drying and grinding eggshells into nano particles using a ball mill. Experiments revealed that these nano particles achieved a 100% kill rate on adult red flower beetles, outperforming the organic pesticide Spinosa, which only killed 50%.

K-State scientists say this method is cost-effective and could be expanded to other pests, offering a potential organic alternative to traditional pesticides.

View the full video at https://youtu.be/vrVjHmPyLv8.

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