

# Fungus in a test tube first step to curing 'corn smut'

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Researchers have mimicked a corn plant's make-up in the lab to investigate "corn smut," opening the door to finding a cure for the disease. Their study appears in *Science*.

Ustilago maydis or "corn smut" is a [fungus](#) that presents as soot-like tumors on corn cobs, and can only exist on a host. It costs the United States' agricultural industry \$1 billion annually by disrupting corn seed production.

It's also considered a delicacy in Mexico. Known as "huitlacoche," it's prized for its rich, smoky flavor and has been served in dishes since the time of the Aztecs.

For the first time, researchers have replicated the plant environment in the lab to study the fungus and its traits. In this controlled, precise environment, they can investigate factors that affect [virulence](#) and reproduction, and identify promising targets for future fungicide development.

Investigating [corn](#) smut could help provide clues not only to its [cure](#), but the cure of similar staple-crop affecting fungi, says UBC researcher and lead author Dr. Matthias Kretschmer, who plans to sample the smoky growth next time he's in Mexico.

**More information:** Matthias Kretschmer et al, Organic acids and glucose prime late-stage fungal biotrophy in maize, *Science* (2022). [DOI: 10.1126/science.abo2401](#)

Provided by University of British Columbia

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