

Afla-Guard also protects corn crops

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Afla-Guard®, a biological control used to thwart the growth of fungi on peanuts, can be used on corn as well, according to a study by U.S. Department of Agriculture (USDA) scientists who helped develop it.

After extensive study and research trials in Texas, Afla-Guard was registered by the U.S. [Environmental Protection Agency](#) (EPA) for use on corn, beginning with the 2009 crop.

Recently retired Agricultural Research Service (ARS) microbiologist Joe Dorner at the National [Peanut](#) Research Laboratory in Dawson, Ga., helped develop Afla-Guard®, a biological control for the aflatoxin-producing fungi *Aspergillus flavus* and *A. parasiticus* in peanuts. ARS is USDA's principal intramural scientific research agency.

A. flavus and *A. parasiticus*, naturally-occurring [soil fungi](#), can invade food and feed crops, contaminating them with aflatoxin. Aflatoxin is a human carcinogen produced by the fungi and is also toxic to pets, livestock, and wildlife.

Afla-Guard is composed of hulled barley coated with spores of a nontoxic strain of *A. flavus*. The nontoxic *Aspergillus* fungi successfully compete against the toxic species for the limited space and nutrients each needs to grow and thrive. In peanuts, Afla-Guard reduced aflatoxins by an average of 85 percent in farmers' stock peanuts and up to 97 percent in shelled, edible-grade peanuts.

In light of this success, Dorner and other ARS scientists conducted a two-

year study of Afla-Guard in corn. They again found that it was effective in reducing [aflatoxin](#) levels—showing an overall reduction of 85 percent, when compared to control fields.

Afla-Guard was applied to the corn crop in different ways: to soil when corn was less than a meter tall, in plant whorls prior to tassel formation, and as multiple sprays during silking.

The research was published in the *Journal of Food Protection*.

Provided by United States Department of Agriculture

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