



## *Aspergillus flavus* AF36 Prevail

For displacing aflatoxin-producing fungi

*Arizona Cotton Research and Protection Council*

*“for growers by growers”*

**It is on the label: AF36.** Biopesticides are just like chemical pesticides in one respect: It is the active ingredient that counts! AF36 Prevail is the only product directed at preventing aflatoxin contamination in pistachios that has the fungus AF36 as the active ingredient. AF36 is a living fungus and similar to living cultures in yogurt, the fungus must be alive in the treated orchard to provide both immediate and long-term benefits. Other products have other active ingredients that have not been shown to be as effective. AF36 is the only aflatoxin preventative that has been shown to disperse to the pistachio canopy from soil application and it has been shown to disperse to the lower, middle, and upper pistachio canopy at high rates while displacing fungi that cause aflatoxin contamination of pistachios. These results have been published in peer reviewed scientific journals. Displacement of aflatoxin producers is how aflatoxin biocontrol products work. If an active ingredient does not disperse in the canopy, it cannot be effective. AF36 is also naturally the most common and widely distributed atoxigenic strain of *Aspergillus flavus* in California orchards. This means AF36 is the best adapted to reproduction, survival, and spread in the agroecosystems of California and these characteristics allow AF36 to displace aflatoxin producers in the year of treatment and to carry over between seasons to provide long-term (with a single application) and additive (if initial applications are followed up with subsequent applications) benefits. Treating any orchard with AF36 has been shown to provide benefit in reducing aflatoxin producers throughout the treated orchard and also in nearby orchards, even if those nearby orchards are a different tree crop like almonds, figs, or walnuts.

**The original and still the best.** As the original atoxigenic strain active ingredient and the first registered biopesticide for prevention of aflatoxins on any crop, AF36 had to meet stringent requirements of EPA to demonstrate ability to prevent aflatoxin contamination of crops. It also was shown to reduce aflatoxins throughout the environment by reducing aflatoxin producers. Because AF36 was the first biopesticide active ingredient of its type, registration required not just laboratory and field station trials but trials on tens of thousands of commercial acres. This was in addition to meeting environmental and human health standards.

AF36 is a living organism that must grow to be effective. The product will remain stable and viable throughout the season so long as it is kept dry. After application, when there is sufficient moisture, the fungus will grow on the product and spread to organic matter throughout the field including plant debris, insect bodies, and even excrement. The fungus will then compete with and displace aflatoxin-producers on that material and throughout the orchard. Timing of application is the most important factor determining reductions in aflatoxin-producers. For best results, apply AF36 before the aflatoxin producers have begun to multiply and spread through the orchard. This is generally Late May through Early June. Contact ACRPC for suggestions for your operation.



There are many economic methods to treat an orchard. Contact ACRPC for suggestions that fit your operation. For best results, apply AF36 before the aflatoxin producers have begun to multiply and spread through the orchard. This is generally late May through early June.

Contact ACRPC for suggestions for your specific area.

For scientific literature on AF36, contact Mark W. Killian, Director of the Arizona Cotton Research and Protection Council, 3721 E Wier Avenue Phoenix AZ 85040, 480.250.8410: [mkillian@cotton.az.gov](mailto:mkillian@cotton.az.gov).