

A New Seed Treatment Nematicide in Cotton Powered By Bio ST Nematicide 100

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Abstract

Albaugh Seed Treatment Technology will be launching a new cotton seed treatment in 2017 that will be powered by their new bio-nematicide product, BioST Nematicide 100. It couples nematode management with very effective insect and disease protection provided on the seed from day one. BioST Nematicide 100 is a nematicide that is derived from “heat-killed” *Burkholderia rinojensis*, and spent fermentation media. BioST Nematicide 100 utilizes multiple modes of action (enzymes and toxins) against the most common early season nematodes in cotton. Even though BioST Nematicide 100 is considered non-living (heat-killed), it kills nematodes (nematicidal) via contact and ingestion and has shown activity on some of the most important nematodes in cotton, soybeans and corn. This technology is supported by science, in that it has been tested via graduate studies, universities, seed companies and Independent Crop Consultants in 2016. In graduate studies conducted at Mississippi State University (Ph.D. Thesis), BioST Nematicide 100 significantly reduced the number of eggs and juveniles of both root-knot and reniform nematodes over a fungicide insecticide control and had similar efficacy on nematodes as abamectin (Avicta) treated cottonseed. In ten university trials in 2016, BioST Cotton Nematicide custom blend was evaluated on both reniform nematode fields (AL,MS, TX) and root-knot nematode fields (AR,LA, VA, GA, TX) versus a fungicide insecticide control and abamectin or fluopyram based nematicide seed treatments. Seed cotton yields from University trials indicated that BioST Cotton Nematicide custom blend outperformed (> 100 lbs/A seed cotton) abamectin and fluopyram based seed treatments. In Independent Crop Consultant trials, the BioST Cotton Nematicide custom blend yielded similar, if not better, than abamectin (Avicta Complete) applied as a seed treatment in large scale grower trials that were implemented in naturally infested fields with either root-knot or reniform nematodes. Average lint yield advantage of BioST Cotton Nematicide over abamectin (Avicta) in these independent crop consultant trials was between 7 and 10lbs lint cotton per acre.