

Seed Treatments for Soybean Cyst Nematode

Soybean cyst nematode (SCN) is the most damaging pathogen of soybeans in the United States and is responsible for hundreds of millions of bushels in yield losses every year. Historically, nematicides have been used to manage economically important nematodes that affect crop production. However, soil-applied nematicides have not been used commonly to manage SCN due to their cost and lack of effectiveness. Nematode-protectant seed treatments have grown in availability and popularity since the mid 2000s, and they have varied modes of action. Many of these products contain biological control organisms or concentrated chemical compounds, making them ideal for use in sustainable production systems. Nematode-protectant seed treatments are intended to supplement current SCN management strategies, therefore should be used in coordination with growing varieties with SCN resistance genes and rotation to nonhost crops.

Brand Name	Targeted Crop	Targeted Nematode	Active Ingredient	Mode of Action
 By Syngenta Crop Protection	cotton, corn, soybean	all plant-parasitic nematodes	abamectin	inhibits nerve transmission
 By Plant Health Care, Inc.	all	all plant-parasitic nematodes	harpin protein	bolsters plant natural defenses
 By Bayer Crop Science	cotton, corn, soybean	all plant-parasitic nematodes	<i>Bacillus firmus</i>	repels nematodes from roots
 By Syngenta Crop Protection	soybean	SCN	<i>Pasteuria nishizawae</i>	nematode parasite
 By Bayer Crop Science	soybean	SCN, root-knot	fluopyram	SDHI enzyme inhibitor
 By Monsanto	cotton, corn, soybean	SCN, root-knot, lesion, reniform	tioxazafen	mitochondrial translation inhibitor
 By Valent USA	soybean	SCN, lesion, reniform	<i>Bacillus amyloliquefaciens</i>	under investigation

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CROP 3142 August 2017