

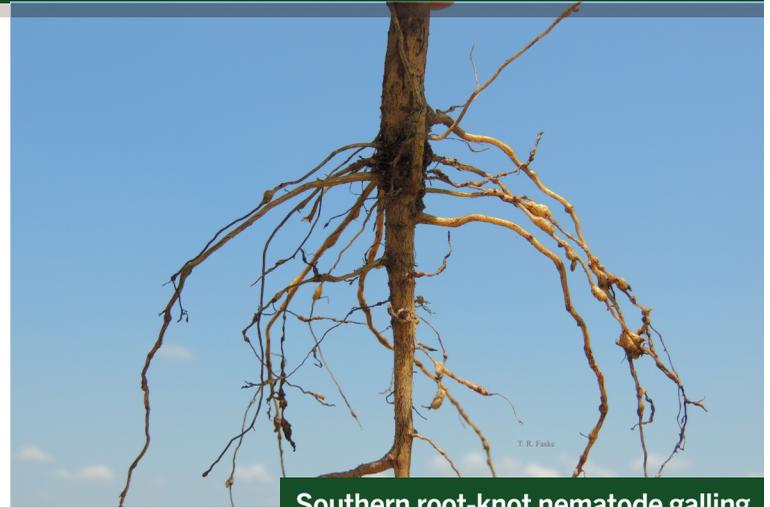


Selecting Cotton Cultivars With Nematode Resistance And Tolerance

The root-knot (*Meloidogyne incognita*) and reniform (*Rotylenchulus reniformis*) nematodes are among the most damaging plant-parasitic nematodes of cotton, capable of reducing yield and fiber quality. Managing these nematodes is a challenge since they are microscopic, hidden below ground, and not visible to the naked eye. These nematodes are difficult to eliminate once populations become established. For farmers, selecting nematode resistant cultivars remains one of the most practical and impactful tools to minimize yield loss. This guide compiles a list of commercially available cotton cultivars with documented resistance or tolerance to root-knot and reniform nematodes, providing farmers and certified crop advisors with a comprehensive resource to guide cultivar selection based on field-specific nematode challenges.

Resistant cultivars suppress nematode reproduction and oftentimes reduce any population increase, while tolerant cultivars do not reduce nematode reproduction but can help sustain yield under nematode pressure. Commercial cotton cultivars with resistance to reniform nematode are a recent development, with the first released in 2021. Some cultivars now carry stacked resistance, combining protection against both root-knot and reniform nematodes, expanding the tools available to farmers, particularly in areas where multiple nematode species are present.

Beyond individual farm decisions, this guide contributes to the broader effort of monitoring cultivar resistance and refining management recommendations. For Extension specialists and researchers, it provides a reference point to evaluate new releases and support integrated nematode management programs.



Southern root-knot nematode galling

Find Out More

The **Crop Protection Network (CPN)** is a multi-state and international collaboration of university and provincial extension specialists, and public and private professionals who provide unbiased, research-based information to farmers and agricultural personnel. Our goal is to communicate relevant information that will help professionals identify and manage field crop diseases.

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We Are Extension

This guide is a product from the Cotton Nematode Working Group and the following contributors: **Jefferson Barizon**, University of Missouri; **Mandy Bish**, University of Missouri; **Adrienne Gorny**, North Carolina State University; **Amanda Strayer-Scherer**, Auburn University; **Bob Kemerait**, University of Georgia; **Bradley Wilson**, University of Missouri; **Carl Bradley**, University of Kentucky; **Chang Liu**, Mississippi State University; **Chase Floyd**, University of Missouri; **Daisy Ahumada**, North Carolina State University; **David Langston**, Virginia Tech; **Ed Sikora**, Auburn University; **Heather Kelly**, University of Tennessee; **Ian Small**, University of Florida; **Intiaz Amin Chowdhury**, University of Georgia; **James Bormeman**, University of California, Riverside; **Jiahui Hu**, The University of Arizona; **John Mueller**, Clemson University; **Churamani Khanal**, Clemson University; **Kathy Lawrence**, Auburn University; **Kiersten Wise**, University of Kentucky; **Maira Duffeck**, Oklahoma State University; **Marina Rondon**, Texas A&M University; **Nolan Anderson**, Texas A&M University; **Reagan Noland**, Texas A&M University; **Terry Spurlock**, University of Arkansas; **Terry Weeler**, Texas A&M University; **Tom Allen**, Mississippi State University; **Tom Isakeit**, Texas A&M University; **Travis Faske**, University of Arkansas; **Trey Price**, Louisiana State University; **Tristan Watson**, Louisiana State University; **Xiaoping Pan**, East Carolina University; and **Zane Grabau**, University of Florida.

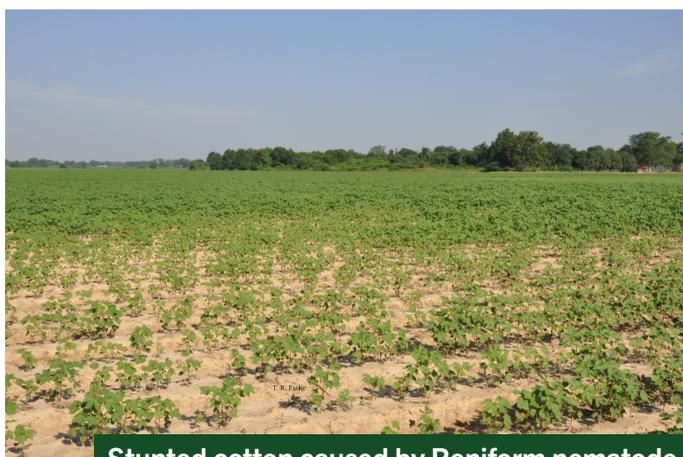
Reniform and root-knot photos contributed by **Travis Faske**, from the University of Arkansas.

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Stunted cotton caused by Reniform nematode



Table 1. Cultivar offerings from each of the cotton seed companies that provide cultivars with documented resistance or tolerance to the reniform or root-knot nematodes.

Company Name	Cultivar Name	Resistance /Tolerance ¹	Nematode
BASF (FiberMax)	FM 765 AX	Tolerant	Root-knot
	FM 814 AXTP	Tolerant	Root-knot
	FM 823 AXTP	Tolerant	Root-knot
	FM 868 AXTP	Tolerant	Root-knot
BASF (Stoneville)	ST 4833 AXTP	Tolerant	Root-knot
	ST 5855 AXTP	Tolerant	Root-knot
	ST 5931 AXTP	Resistant	Root-knot & Reniform
	ST 6000 AXTP	Tolerant	Root-knot
Bayer (Deltapine)	DP 2141NR B3XF	Resistant	Root-knot & Reniform
	DP 2143NR B3XF	Resistant	Root-knot & Reniform
	DP 2349NR B3XF	Resistant	Root-knot
	DP 2436NR B3TXF	Resistant	Root-knot
	DP 2522NR B3TXF	Resistant	Reniform
Corteva (PhytoGen)	PHY 136 W3E1	Resistant	Root-knot & Reniform
	PHY 137 W3E1	Resistant	Root-knot
	PHY 205 W3FE	Resistant	Root-knot & Reniform
	PHY 332 W3FE	Resistant	Root-knot & Reniform
	PHY 357 W3FE	Resistant	Root-knot & Reniform
	PHY 360 W3FE	Resistant	Root-knot
	PHY 400 W3FE	Resistant	Root-knot
	PHY 411 W3FE	Resistant	Root-knot & Reniform
	PHY 415 W3FE	Resistant	Root-knot
	PHY 433 W3FE	Resistant	Root-knot & Reniform
	PHY 443 W3FE	Resistant	Root-knot & Reniform
	PHY 475 W3FE	Resistant	Root-knot & Reniform
	PHY 545 W3FE	Resistant	Root-knot
DynaGro (Nutrien)	DG P224 B3XF	Tolerant	Root-knot
	DG 3215 B3XF	Tolerant	Root-knot
	DG 3387 B3XF	Tolerant	Root-knot
	DG 3421 B3TXF	Tolerant	Root-knot & Reniform
	DG 3422 B3RXF	Tolerant	Root-knot & Reniform
	DG 3519 B3XF	Tolerant	Reniform
DG 3644 B3XF	Resistant	Root-knot & Reniform	

¹The resistance or tolerance statements are based on information provided by each cotton seed company in the product descriptions of their respective websites.

Table 2. Internet links to product guides from each respective cotton seed company.

Company Name	Seed Catalog Direct Link
Americot	No information about nematode resistance or tolerance.
Armor	No information about nematode resistance or tolerance.
BASF (FiberMax)	https://agriculture.basf.us/crop-protection/products/seeds/fibermax.html#varieties
BASF (Stoneville)	https://agriculture.basf.us/crop-protection/products/seeds/stoneville.html
Bayer (Deltapine)	https://www.cropscience.bayer.us/cotton/deltapine/seed-catalog?page=8
Corteva (PhytoGen)	https://www.phytogen.com/varieties.html
DynaGro (Nutrien)	https://dynagroseed.com/seed-finder/cotton?cropId=dynagroseed.crops/cotton

Information on resistance and tolerance to root-knot and reniform nematodes was collected directly from company websites and publicly available resources. The designations of “resistant” or “tolerant” are as reported by the respective companies and have not been independently verified. This information is provided for reference only and does not constitute an endorsement or guarantee of product performance.