

Nema-Test  
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**2018 Nematode Threshold  
 Levels Crop = Cotton**

www.nematest.com

Given Below are estimated economical threshold values for injurious (pathogenic) nematodes on cotton. Attempting to establish a strict threshold value is folly, as local environmental factors such as water, heat, wind, soil type all come into play when assessing stress caused by pathogenic nematodes. However, some line must be drawn, and I have done that for three seasons. The population dynamics of one nematode may not follow another. For example, *Xiphinema* is often higher in the spring and late fall than in mid-summer. In my opinion there are four nematodes that are extreme pests; the reniform, the root knot, the lance and the sting. In addition, there are seven highly pathogenic nematodes: the dagger, cystoid, cyst, needle, lesion, stubby root, and stunt. The spiral and ring nematodes can be injurious if their numbers are high enough.

Nematodes Per 100 cm <sup>3</sup> soil	Threshold Levels		
	Early Spring April - May	Mid Summer July - August	Early Fall Sept - October
A.Stylet Forms			
Aphelenchoides	+	+	+
Aphelenchus	+	+	+
Belonolaimus (Sting)	1	1	1
Criconema/Mesocriconema (Ring)	200	400	600
Ditylenchus (Stem)	No Data	No Data	No Data
Dorylaimus/Dorylaimida	No Data	No Data	No Data
Helicotylenchus (Spiral)	500	600	800
Hemicycliophora	No Data	No Data	No Data
Heterodera (Cyst)	60	100	100
Hoplolaimus (Lance)	15	25	40
Meloidodera (Cystoid)	10	25	50
Meloidogyne (Root Knot) juveniles	25	50	100
Longidorus (Needle)	1	1	1
Paratrichodorus (Stubby Root)	25	50	100
Paratylenchus (Pin)	No Data	No Data	No Data
Pratylenchus (Lesion)	25	50	100
Rotylenchus	No Data	No Data	No Data
Rotylenchulus (Reniform)	25	50	100
Tylenchorhynchus/Quinisulcius (Stunt)	25	50	50
Tylenchus/Psilenchus	+	+	+
Xiphinema (Dagger)	40	40	40
Other:			
B.Non-Stylet Forms	++	++	++
Nematodes Per Gram Dry Root			
Hoplolaimus (Lance)	50	100	150
Pratylenchus (Lesion)	500+++	400	1000
Meloidogyne (Root Knot)	50	100	150
Other:			

Comments:      + = Fungal Feeders, no threshold value assigned  
 ++ = Non-pathogenic to cotton plants  
 +++ = Lesion often high in young plants due to small root mass concentrating them; but plants can outgrow feeding effects of lesion nematodes under this number.  
 = Severely pathogenic nematodes

**Threshold levels are those levels of nematodes that would reduce yields by 10%.**