



Agronomic Vermiform Nematode Thresholds

These are generalized population thresholds for risk of damage by plant-parasitic nematodes in Illinois. These figures are guidelines only; thresholds often must be increased or decreased substantially, depending on plant weather conditions, sampling and extraction methods, and other biotic and abiotic factors. Threshold numbers are based on analyses of 100cc of soil. Figures in each column subjectively correspond to trace, minor, moderate, heavy, and very heavy nematode population levels, respectively.

Common (Generic) Names	Note	Non-Significant	Minor	Moderate	Severe	Very Severe
Dagger (<i>Xiphinema</i>)	-	1 – 10	11 – 25	26 – 50	51 – 100	>100
Lance (<i>Hoplolaimus</i>)	-	1 – 10	11 – 40	41 – 75	76 – 150	>150
Lesion (<i>Pratylenchus</i>)	Preplant Only	1 – 10	11 – 25	26 – 50	51 – 100	>100
Needle (<i>Longidorus</i>)	Corn Only	--	1 – 5	6 – 20	21 – 75	>75
Pin (<i>Paratylenchus</i>)	-	1 – 50	51 – 100	101 – 500	501 -1000	>1000
Ring (<i>Criconemoides</i>)	-	1 – 75	76 – 150	151 – 300	301 – 600	>600
Root-Knot (<i>Meloidogyne</i>)	Juveniles	1 – 10	11 – 40	41 – 80	81 – 150	>150
Spiral (<i>Helicotylenchus</i>)	-	1 – 75	76 – 150	151 – 300	301 – 500	>500
Sting (<i>Belonolaimus</i>)	-	--	1 – 5	6 – 20	21 – 50	>50
Stubby-Root (<i>Paratrichodorus</i>)	-	1 – 5	6 – 20	21 – 50	51 – 100	>100
Stunt (<i>Tylenchorhynchus</i>)	-	1 – 10	11 – 50	51 – 100	101 – 200	>200

Table compiled by D. I. Edwards (2003) and T. L. Niblack (2005).

Non-Significant - Population of no consequence during present growing season. Potential for increase to damaging level remote in subsequent years.

Minor – Population of little consequence at present. Potential for increase to damaging level remote during present growing season, but good on highly susceptible, monoculture hosts in subsequent years.

Moderate – Borderline situation with soil nematodes. Measurable damage from nematodes alone highly dependent on present and future weather conditions and fertility level. Nematodes possibly a contributing factor in a disease complex with bacteria, fungi, viruses, and/or other nematodes. Control measures may not be economically practical. Strip test recommended. Continued monoculture may result in a severe problem. Eventual mortality of parts or all of plant can be expected with foliar and stem nematodes. Treatment or destruction of plant recommended.

Severe & Very Severe – Population sufficiently high to cause severe economic damage and some plant mortality. Established planting may not be salvageable. Control measure mandatory.