

DISCOVERY AND DISTRIBUTION OF ROOT LESION NEMATODE *PRATYLENCHUS NEGLECTUS* IN WHEAT FIELDS NARC PAKISTAN

SHAHID AHMED¹, MUHAMMAD FAYYAZ¹, SHAHZAD ASAD¹ ANDABDELFATTAH A. DABABAT²

¹Crop Diseases Research Institute (CDRI), National Agricultural Research Center (NARC), Park Road, Islamabad.

²International Maize and Wheat Improvement Center (CIMMYT), Emek, 06511, Ankara, Turkey.

Correspondence: nematologist@gmail.com



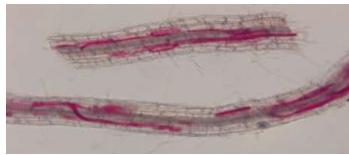
ABSTRACT

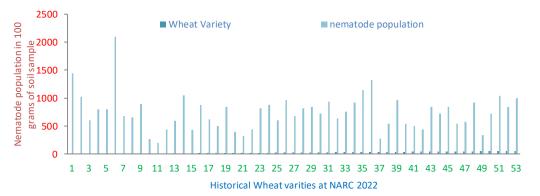
The root lesion nematodes (Pratylenchusneglectus and P. thornei) are major pathogen of cereals in many regions worldwide. Wheat genotypes resistance to these nematodes can be determined from final nematode population densities in controlled environmental chambers or glass house. To assess the prevalence of root lesion nematodes in wheat experimental field area of National Agricultural Research Center, Islamabad, soil samples along with wheat seeding of fifty seven historical wheat genotypes were collected in 2022. The nematode species P.neglectus was found in all the wheat genotypes associated with roots as well as in root rhizosphere. For fields having root lesion nematodes in 2022, P. neglectus mean population densities were found Margalla variety with maximum nematode population (2033/100gr) of soil, followed by wheat varieties as Markaz-19 (1446/100grams), Bakhtawar (1320/100gr), Suleman-96 (1140/100grams), Johar-16 (1053/100grams), Pastor (1040/100grams), Zinkol-2016, a zinc fortified wheat variety (1026/100grams) and WL711 (1000/100grams). Stunt nematodes (*Tylenchorhynchusspp*) were also detected from all the root rhizosphere in association.











REFERENCES

Nicol, JM, Ortiz-Monasterio I (2004) Effects of the root-lesion nematode, Pratylenchusthornei, on wheat yields in Mexico. Nematology 6, 485-493.

Jones JT, Haegeman A, Danchin EGJ, Gaur HS, Helder J, Jones MGK, Kikuchi T, Manzanilla-Lopez R, Palomares-Rius JE, WesemaelWML, Perry RN (2013). Top ten plant-parasitic nematodes in molecular plant pathology. *Mol. Plant Pathol.* 14, 946-961.

Maqbool MA,Zarina, B (1988) Distribution and host association of some members of the family *Pratylenchidae* (Thorne, 1949). In Maqbool, M.A., A.M. Golden and L.R. Krusberg (eds.) Advances in Plant Nematology. Proc. US-Pak. Int. Workshop Plant Nematol., pp.165-167.

Maqbool MA,Shahina F (1988). Taxonomic studies on some plant parasitic nematodes associated with important criop in Pakistan. In Maqbool, M.A., A.M. Golden and L.R. Krusberg (eds.) Advances in Plant Nematology. Proc. US-Pak. Int. Workshop Plant Nematol., pp.165-167.

Smiley RW, Nicol JM (2009) Nematodes which challenge global wheat production. Pages 71-187 in: Wheat Science and Trade, B.F. Carver. Ed. Wily-Blackwell, Ames.USA