

MANAGEMENT OF ROOT-KNOT NEMATODE *MELOIDOGYNE INCOGNITA* IN TOMATO IN EASTERN ETHIOPIA THROUGH ORGANIC SOIL AMENDMENTS

TADEOS SHIFERAW¹, NIGUSSIE DECHASSA² & P. K SAKHUJA³

¹College of Dryland Agriculture, Department of Dryland Crop Sciences, Jigjiga University,
Jigjiga, Ethiopia

^{2,3}College of Agriculture and Environmental Sciences, Department of Plant Sciences, Haramaya University,
Direedawa, Ethiopia

ABSTRACT

Study was conducted in root-knot nematode infested sick plot soil to determine effect of poultry manure and rapeseed oilcake soil amendment against root-knot nematode infestation and yield of tomato. Well decomposed poultry manure and grounded rapeseed cake at 0, 5, 10, 15 ton/ha and 0, 5 and 10 ton/ha respectively applied in experimental plot three weeks before transplanting the seedlings. The experiment was laid in RCBD factorial arrangement. Application of poultry manure except 5 ton/ha with rapeseed oilcake at 10 ton/ha significantly affected ($p < 0.05$) number of egg/egg mass, root galling, population of final J2, yield and growth of the crop. Root-knot nematode infestation significantly reduced as poultry manure increased from 5 ton/ha to 20 ton/ha with rapeseed cake at 20 ton/ha. Yield also increased as poultry manure application increased from 5 to 15 ton/ha with or without rapeseed oilcake.

KEYWORDS: Poultry, Manure, Rapeseed, Oilcake Root-Knot, Nematode, Infestation, Tomato