

INTISARI

Pratylenchus spp. merupakan salah satu nematoda parasit yang paling merugikan pada tanaman kopi. Pertumbuhan tanaman yang terserang akan terhambat akibat dari luka pada akar atau nekrotik yang disebabkan oleh *Pratylenchus* spp.. Faktor abiotik tanah merupakan salah satu faktor yang mempengaruhi keparahan serangan *Pratylenchus* spp. pada tanaman kopi. Tujuan penelitian ini adalah untuk mengetahui hubungan faktor abiotik tanah terhadap kelimpahan, distribusi vertikal dan keragaman jenis *Pratylenchus* spp. dengan mempertimbangkan jenis klon yang ditanam. Lokasi pengambilan sampel yaitu di Kebun Malangsari PTPN XII (kopi excelsa dan klon BP 308), Kebun Getas PTPN IX (kopi excelsa dan klon BP 308) dan Kebun petani di Candirotto (klon BP 42). Parameter abiotik yang digunakan di antaranya adalah pH, RH, suhu, dan tekstur tanah, Pengamatan distribusi vertikal dilakukan pada dua kedalaman tanah yaitu < 30 cm dan 50 cm. Sampel tanah dan akar diekstraksi menggunakan metode *white-head tray* dan pengkabutan. Hasil penelitian menunjukkan bahwa populasi *Pratylenchus* spp. pada akar dan tanah tertinggi berada di Kebun Candirotto yaitu 26,7 nematoda / 100 mL tanah dan 60 nematoda / 10 g akar. pH, RH dan suhu tanah memiliki hubungan yang sangat lemah dengan kelimpahan populasi *Pratylenchus* spp.. pH berpengaruh sebesar 22% dengan tren yang menurun, RH berpengaruh sebesar 8% dengan tren yang meningkat dan suhu tanah berpengaruh sebesar 11% dengan tren yang menurun. Distribusi vertikal *Pratylenchus* spp. pada semua lokasi dan klon dominan berada pada kedalaman < 30 cm, sedangkan pada kedalaman 50 cm *Pratylenchus* spp. hanya ditemukan pada klon BP 308 di Kebun Malangsari. Kelimpahan populasi *Pratylenchus* spp. lebih dominan dipengaruhi oleh pH tanah, tekstur tanah dan jenis klon. *Pratylenchus goodeyi* ditemukan di Kebun Malangsari dan Kebun Getas. *P.loosi* ditemukan di Kebun Getas dan Kebun Candirotto, sedangkan *P. coffeae* ditemukan di Kebun Candirotto, *P. vulnus* ditemukan di Kebun Malangsari dan *P. fallax* ditemukan di Kebun Getas.

Kata kunci: Distribusi vertikal, faktor abiotik tanah, kelimpahan, kopi, *Pratylenchus*.

ABSTRACT

Pratylenchus spp. is considered as the most destructive plant parasitic nematodes of coffee plantation. Plant growth that infected by *Pratylenchus* spp. was poor because there were some lesion that caused by *Pratylenchus* spp. Soil abiotic factor is one of the factor that influence the severity damage and vertical distribution of *Pratylenchus* sp.. The aims of this research were to know the abundance, vertical distribution and species diversity of *Pratylenchus* sp. that influenced by soil abiotic factor and clone in 3 fields area. The research was observed in Malangsari Field (excelsa coffee and BP 308 clone), Getas Field (excelsa coffee and BP 308 clone) and Candirotto Field (BP 42 clone). Sample of soil and roots were carried out and estimate parameter of soil abiotic factor (pH, soil moisture, soil temperature, and soil texture) were observed from each 3 fields. Vertical distribution used 2 kinds of soil sample depth (< 30 cm and 50 cm). Nematode extraction used whitehead tray method for soil sample and mistifier method for roots sample. This research showed that the highest population abundance of *Pratylenchus* sp. both from soil and roots was in Candirotto Field i.e. 26.7 nematodes per 100 mL of soil and 60 nematodes per 10 g of roots, respectively. pH, soil moisture and soil temperature had a very weak correlation with population abundance. pH was influence the population as about 22% with had a decrease trend, soil moisture was influence the population as about 8% with had an increase trend and soil temperature was influence the population as about 11% with had a decrease trend. Vertical distribution of *Pratylenchus* spp. in all fields on Excelsa coffee, BP 308 and BP 42 clone were detected in < 30 cm depth, whereas in 50 cm depth only detected on BP 308 clone in Malangsari Field. The abundance of *Pratylenchus* spp. was mostly influenced by soil pH, soil texture and clone. *Pratylenchus goodeyi* was found in Malangsari Field and Getas Field. *P. loosi* was found in Getas Field and Candirotto Field. *P. coffeae* found in Candirotto Field, *P. vulnus* found in Malangsari Field and *P. fallax* was found in Getas Field.

Key words: Abundance, coffee, *Pratylenchus*, soil abiotic factor, vertical distribution