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**Feeding and reproduction of *Aphelenchus avenae*, *Aphelenchoides sacchari* and *Aphelenchoides clarus* on cultures of soil related fungi *Aspergillus niger*, *A. flavus*, and *Fusarium oxysporum***

Lerzan ÖZTÜRK<sup>1\*</sup>, Nur SİVRİ<sup>2</sup>

<sup>1</sup>Namık Kemal University, Faculty of Art and Science

<sup>2</sup>Rize Directorate of Provincial Agriculture and Forestry, 17020, Rize, Türkiye

\*corresponding author: lerzanzoturk@gmail.com

**Abstract**

*Aphelenchus avenae* Bastian 1865, and *Aphelenchoides clarus* Thorne and Malek, 1968, and *Aphelenchoides sacchari* Hooper 1958 are mycophagous nematodes belonging to the *Aphelenchida* order. These nematodes are highly distributed in vineyards in Turkey. In this study, the reproduction potential of these three nematodes was determined under in-vitro conditions using the fungi *Aspergillus niger*, *A. flavus*, and *Fusarium oxysporum*. The fungi used in the experiments were isolated from soils collected from vineyards and maintained on Potato Dextrose Agar (PDA) at 25°C. Nematodes were extracted from the soils using the modified Baermann funnel method. After one week of fungal growth, 30 females of each nematode species (*A. avenae*, *A. clarus* and *A. sacchari*) were hand-picked and inoculated into the fungal cultures, which were then incubated for about a month at 25°C. At the end of the month, all nematode species reproduced in the *Fusarium oxysporum* culture. The reproduction rate was the lowest in *A. avenae* (44 individuals, a 1.46-fold increase) and the highest *A. sacchari* (177 individuals, a 5.9-fold increase). However, none of the nematodes reproduced in the *A. niger* or *A. flavus* cultures. The juvenile populations of *A. sacchari*, and *A. clarus* were abundant in the fungal cultures, and in petri dishes where the nematode population increased significantly, fungal cultures showed visible deterioration and a decrease in biomass.

**Keywords:** Fungivore nematodes, fungal culture, nematode reproduction, fungi control

