Abstract

The nematode Pangrellus redivivus was cultured in two media: one with oat flakes and the other with Spirulina sp.-enriched oat flakes, in 15x15x5 cm plastic containers with 200 g oat flakes and 300 mL purified water. Five grams of Spirulina was used in the medium. SYSTAT version 10.2 was used for statistical analysis; to determine the significant differences between treatment a unidirectional analysis of variance (ANOVA) was used with a confidence level of α = 0.05. The results show that growth of the nematode population in the Spirulina-enriched medium presented the highest abundance of individuals on the second week of culture, whereas the population grown in the oat flakes medium showed the highest abundance on the fifth week of culture and did not reach the number of organisms attained by the population cultured in the Spirulina-enriched medium. The amino acids content of the populations from both media were compared to those reported for Artemia fed with Spirulina, observing that the amounts were higher for most amino acids in P. redivivus cultured in the Spirulina-enriched medium. The composition of fatty acids in the nematode cultures in both media depicted significant differences for the linoleic, arachidonic, and eicosapentaenoic fatty acids, which were found in a higher percentage than reported for P. redivivus cultures in oat flakes supplemented with sunflower oil. These data reveal that the cyanobacterium Spirulina sp. accelerates growth of the nematode populations and allows the presence of amino and fatty acids, making these nematodes suitable to cover the nutritional requirements of freshwater fish larvae, but further studies are needed to demonstrate it.

Keywords
Pangrellus, culture, aminoacids, fatty acids, oat, Spirulina