

**D-09 Effect of the age of the second stage juveniles of *Meloidogyne javanica* on detachment of spores of bacterial *Pasteuria penetrans***

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Root-knot nematodes (*Meloidogyne spp*) constitute a major group of plant-parasitic nematodes, affecting crop production through root damage. The bacterial species *Pasteuria penetrans* which acts as a biological control agent of these nematodes, has been known for many years. Infection is initiated by the attachment of the spores on the cuticle of the second stage juveniles in the soil. The infection destroys the reproductive capacity of females and prevents the invasion of roots by second stage juveniles. High spore attachments are important to increase the infection. However, there is a possibility of detachments of spores after the initial attachments and it is a very serious drawback, because it reduces the spore attachments on the nematodes. Therefore, the study on the factors that affect the possible detachments of *P. penetrans* spores will be important. The age of the second stage juveniles of the *M.javanica* on the detachments of spores is investigated in this study. One day and 5 day old second stage juveniles were selected for the study under normal laboratory conditions. *P. penetrans* spore suspension was used to inoculate the juveniles. The initial spore number attached to the cuticle of the juveniles was 10-20. During the investigation the number of spores remaining on juveniles was counted with respect to the time (a period of 13 days). statistically significant difference was observed between the following: the spores on one day old *M. Javanica* juveniles detached with time while those on 5 day old juveniles remained almost constant.

Results of this experiment indicated that the age of juveniles could influence the detachment of spores after the initial attachment. This is caused by the physical and chemical changes in cuticle of developing juveniles.