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Low Labor "in vivo" Mass Rearing Method for Entomopathogenic Nematodes

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Abstract

The wide spread use of biological control agents in commercial agriculture is frequently limited by the high cost of the biological control agents. We describe in this paper an entomopathogenic nematode (EPN) "in vivo" mass rearing method, not based on the White trap concept, which is both "low technology" and "low labor", reducing the cost of producing large quantities of EPN IJ to the level conducive for use in an area-wide biocontrol program. Rearing temperature has a significant impact on the number of EPN IJ produced per host larvae and the IJ viability at any point in time. Emerged IJs remain within a non-aqueous, high humidity environment with improved oxygen access without extra steps or equipment. Depending on storage conditions, IJs remain viable for 7-14 d without extra labor. Our laboratory has used this rearing method to rear more than 100 billion IJ in the past 8 years to support an area wide biological control program.

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