1º Simpósio Internacional de Luta Biológica em Ilhas Europeias
1st International Symposium on Biological Control in European Islands

23 a 29 de Setembro de 1995
September 23 to 29, 1995

PROGRAMA / PROGRAMME
RESUMOS / ABSTRACTS / RESUMEES
LISTA DE PARTICIPANTES / PARTICIPANTS LIST / LISTE DES PARTICIPANTS

Organizado por/ Organized by
Centro de Luta Biológica
DEPARTAMENTO DE BIOLOGIA
UNIVERSIDADE DOS AÇORES

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PRODUCTION AND APPLICATION OF ENTOMO-PARASITES FOR THE BIOLOGICAL CONTROL OF AGRICULTURAL PESTS IN THE AZORES

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Mythimna unipuncta (Haworth) (Lepidoptera, Noctuidae) and *Popillia japonica* Newman (Coleoptera, Scarabaeidae) are considered as the worst agricultural insect pests in the Azores. The noctuid parasites various crops, specially forage gramineae, in all the islands of the archipelago, mainly during summer months, causing a yeld loss of 8%, that is about one billion escudos per year. The beetle, which is considered as a quarantine pest in Terceira Island, affects several crops in the adult stage (i. e., corn, vine, ornamental plants, forage crops), and was inefficiently controled using chemical aerial sprays.

Utilization of chemical control by farmers is increasing. In São Miguel Island, in 1990, costs associated with the application of two pesticides for *M. unipuncta* control reached more than 9 million escudos. However, chemical control is not a permanent solution, it increases the costs supported by the farmers, and may aggravate environmental problems, namely the destruction of beneficial insects.

If dependence on chemical control is to be reduced, beside the project for the forecasting of *M. unipuncta* outbreaks (supported by Programa STRIDE) and the monitoring system (sexual traps) for *P. japonica*, now in place, a biological control program should also be developed, including: studies on the natural enemies of those pests, namely hymenopetra (genus *Apanteles*, *Telenomus*, *Trichogramma*) and diptera (genus *Istocheta*); and mass production of natural enemies in order to reinforce their natural populations.

Considering the above discussion, and aiming to suppress the needs of the regional agricultural services and farmers that face *M. unipuncta* and *P. japonica* infestations, the candidate institution is now submitting a research project to be evaluated by Programa PRAXIS XXI commission.

The project is meant to be performed in a cooperative basis: *M. unipuncta* natural enemies will be studied by the candidate institution in São Miguel; work on *P. japonica* is to be undertaken, in Terceira. A French laboratory will access mass production of natural enemies with artificial diets, and a Canadian institution is going to assist the development of an integrated pest management strategy.