

CLASSICAL BIOCONTROL OF APHIDS IN THE WESTERN PACIFIC

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Past studies suggest that there are insufficient numbers of aphid natural enemies in the Republic of Palau and other Micronesian islands to adequately suppress aphid populations, resulting in substantial crop loss to Micronesian farmers. This project seeks to provide long-term sustainable aphid control throughout Micronesia by evaluating the potential for and then implementing classical biological control against three of the major aphid species most likely to occur on beans, cucurbits, bananas and taro. These aphids are *A. gossypii*, *A. craccivora* and *P. nigronevosa*. Rearing facilities for aphid natural enemies were established at the University of Guam in 2000, and personnel trained to mass-produce aphidiid parasitoids. Following aphid and aphid natural enemy surveys on Palau from December 2000 through April 2001, the aphidiid parasitoid, *Lysiphlebus testaceipes*, was collected and mass-reared on Guam and released in pesticide-free fields on Palau in August 2001. *Lysiphlebus testaceipes* preys specifically on aphids. Work in Palau was modeled on previous aphid and aphid natural enemy surveys conducted on Guam and in the CNMI islands of Saipan, Tinian and Rota. Post-release aphid and aphid natural enemy surveys are ongoing on Palau, Guam, and the CNMI. Initial aphid and aphid natural enemy surveys are planned in the Federated States of Micronesia and the Republic of the Marshall Islands as funds become available. The Palauan aphid biocontrol project provides a model for assessing aphid pest problems in the humid tropics, and for introducing natural enemies pre-adapted to the humid-tropical conditions of the many islands of the tropical Western Pacific.