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"Challenges to Organic Farming and Sustainable Land Use in the Tropics and Subtropics"

Agricultural Utilization for Genetic Resources Conservatin of a Medicinal Plant from Chile: *Buddleja globosa* Hope

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Abstract

In recent years, Chilean institutions have started to explore the vast native genetic resources of potentially useful plants, which could provide new raw materials, especially within medicinal plants that could be introduced to agricultural production. The domestication of native species helps to prevent them from extinction through indiscriminate use. In case of potentially marketable plants, it also helps to give an additional income to small farmers and poor people, simply by using a portion of their land to cultivate medicinal plants or spices.

As part of the projects "Domestication of different native species for potential industrial use" and "Study of cultivation of some native medicinal species of chile" carried out by the Faculties of Agronomy and Forest Engineering of the University of Talca, Chile, and financed by the "Fundación para la Innovación Agraria, FIA", one of the investigated species has been *Buddleja globosa* (Loganiaceae) a native deciduous shrub called "Matico", also known as "butterfly bush" in England. Its medicinal use is reported from the indigenous tribe of "Mapuche", who used the "Matico" or "Panil" as a herb to cure wounds. Because of indiscriminate harvest from wild stands, only a few known native populations remain in Chile to date. Since its introduction to gardens in South America over 200 years ago, it has been a great favorite as medicinal and ornamental plant.

We studied the environmental characteristics of the species native habitats. Also, morphologic, phenologic and chemical characteristics have been determined comparing three native populations with plants randomly selected from the same populations cultivated at the experimental station of the University of Talca. These data add to the information being gathered with regard to the overall strategy followed for the domestication of "Matico", which includes identifying origin and centres of diversity; collecting genetic material and further genetic improvement; determining the most appropriate regenerative or vegetative propagation method and studying agronomy and management in cultivation.

Keywords: *Buddleja globosa*, Chile, conservation, diversity, domestication, genetic resources, medicinal plants

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