



## **Investigation on autochtonal cuttings suitability for soil bioengineering measures in Central America**

A. Petrone, F. Preti

Department of Agriculture and Forestry Engineering, University of Florence, Italy  
(alessandro.petrone@unifi.it / Fax: +39 055-310224)

In the last years DIAF (Department of Agriculture and Forestry Engineering of Florence University) has been testing in Central America the effectiveness of Soil Bio-Engineering measures. The focus of the experience was to find out wich native plants were most suitable for soil-bioengineering purposes. In addition we have been also working on the economic efficiency.

Concerning the plants to be used we started, and we are at the moment carrying on, experimentations on these native species: Madero negro (*Gliricidia sepium*), Tigüilote (*Cordia dentata*), Tempate (*Jatropha curcas*), Jiñocuabo (*Bursera simaruba*) and Willow (*Salix humboldtiana*). We found that *Gliricidia sepium*, *Cordia dentata* and *Jatropha curcas*, are very adequate for this kind of works. At the moment we are now testing also two other species: Helequeme (*Erythrina fusca*) and Roble macuelizo (*Tabebuia rosea*).

With regard to the costs we figured out, by realizing various interventions and also by market studies, that, due to the very low cost of local labour, the cheapness of the simplest intervention typologies (drainage fascines, palisades, etc.) is unimaginable if compared to the european context. Concerning the most complicated works, for example the live crib wall, we have found that the realization prices are almost 15 times lower than the italian ones.