



REFORESTATION AND AGRO-FORESTRY SITES IN THE MONARCH BUTTERFLY MODEL FOREST



The Monarch Butterfly annually migrates from North America to overwinter in Mexican forests. Agricultural and economic pressures have resulted in a reduction of these forests and subsequent loss of butterfly habitat. In response, the Manitoba Model Forest (MBMF) and Bosque Modelo Mariposa Monarca (BMMM) have initiated the Reforestation and Agro-forestry Sites in the Monarch Butterfly Model Forest Project.



Two families in the Mexican communities, or ejidos, of La Mesa and El Rosario near Zitacuaro, Mexico, were chosen to participate in this unique agro-forestry project. Management of the two agro-forestry project sites is a family affair with the entire family participating in the project on their land. The objective is to use chickens to help renew the forest and improve the families' economic prospects.

Approximately 161,000 trees were planted in the two ejido communities of La Mesa and El Rosario. In the Ejido of La Mesa, these trees were planted in a previously burnt portion of the Monarch butterfly reserve, an Agro- forestry site and 24 deforested agricultural sites which are being converted back to forest. In the Ejido of El Rosario, trees were planted in the understory at the Monarch butterfly reserve, an agro-forestry site, and 38 deforested agricultural sites which are being converted back to forest. The level of attention to creating proper planting sites is far superior to typical tree planting projects in Canada. This is a reflection of the dedication of the local tree planters and their supervisors. Sites are completely fenced using a combination of page wire and barbed wire to exclude grazing animals and predators.



Once trees were planted, forage grasses and legumes were hand seeded to establish site specific blends. These blends include; Alfalfa, Red Clover, Orch pasture, perennial Rye Grass, annual rye grass, a perennial pasture mix, and Hercules grass. The forages provide control of competing ground cover and a source of feed for the chickens.

With the establishment of plantations, and training in techniques for successful reforestation management and pasture poultry management, the families began managing the sites. They constructed

two chicken grazing cages for each site. These cages allowed the chickens to be easily moved around the plantation. As they are moved, the chickens feed on the forages. They provide not only vegetation control in the plantation, but a valuable economic commodity for the family.

A great deal of skepticism from neighbouring producers greeted the project at the start. The impressive forage stands however, raised a great deal of interest within the Ejido communities.

The successful establishment of forage species resulted in the availability of more forage than can be potentially used by 2 chicken grazing cages at each site. Other methods of rotational grazing with other livestock on the farm to utilize the additional forage are being investigated including grazing with cattle, horses, or sheep. This can lead to additional economic spin-offs from the agro-forestry project.

With proper management, the agro-forestry sites should continue to provide forage for poultry for many years. The tree plantations will be protected by the fencing until the trees are large enough to survive the impacts of larger grazing animals.

The MBMF and BMMM would like to acknowledge the support of the Canadian International Development Agency. In addition, this project owes much of its success to experts from Manitoba Agriculture and Manitoba Conservation who have been directly involved in this project.



Support from the Manitoba Government in providing their staff has been exceptional. An HRDC intern, fluent in Spanish, was contributed by Earthbound Environmental and played a key role in providing translation services and acting as a liaison between the MBMF and BMMM. Materials for this project, including fencing, tree stock, forage seed and chickens were sourced locally in Mexico.

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