

# **Title: Linking Agro-ecology, Biodiversity conservation and Agro-tourism**

## **Subtitle: Building Organic Bridges between Strategies**

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### **Summary**

Small organic farmers must adopt innovative strategies in order to survive in today's competitive marketplace. The Mojo spice farm is a small family-run enterprise located in the rainforests of the Western Ghats in southern India. Over the years we have evolved a strategy that successfully combines organic agriculture with biodiversity conservation and sustainable agro-tourism. The linkages between these 3 areas and how they can benefit small organic farmers will be shown using our farm as an example.

### **Introduction**

Biodiversity and agriculture are intrinsically linked. Plants, animals (particularly insects), fungi and soil microorganisms have co-evolved for millions of years and nature has created an intricate web of inter-dependencies and even forms of communication between these diverse life forms.

The introduction of modern farming practices (mechanization, monocultures, hybrid varieties, heavy use of toxic agro-chemicals and now GM crops) has devastated biodiversity all over the planet. Hence, the call for a paradigm shift from modern agriculture practices to a sustainable agro-ecology. A good organic farm emulates nature and resembles a complex ecosystem with niches for diverse plants, animals, insects, bacteria and fungi competing with each other and living in harmony. The 'ecosystem services' provided by a healthy environment rich in biodiversity are invaluable, not just for farmers, but for all of us. Here we highlight some of the tremendous benefits derived from this biodiversity using our organic spice farm in southern India as an example. As awareness of sustainable livelihoods spreads, many travelers are keen to spend time in healthy rural environments, particularly on organic farms. They are looking for a direct and meaningful engagement with the environment, local farmers and food production systems.

Agri-tourism (which can be simple farm visits or full accommodation and meals) is an effective means of bringing the consumer to the farmer.

### **Main Chapter**

Located at 1100m altitude in the rainforest tracts of Kodagu district in southern Karnataka, we receive up to 5000mm of rain annually, most of it between June and September. The farm (about 10 hectares) is densely forested with native trees and our spice crops are cultivated under this canopy. This environment creates challenges and places limitations on the variety of crops we can grow, and their yields. The commercial crops are cardamom, coffee, pepper, vanilla which are cultivated under the shade of rainforest trees. Other spices such as tumeric, ginger, cinnamon and some fruits and vegetables are grown for home consumption. We have introduced animal husbandry (cattle, goats, poultry) which allows us to be self-sustaining for farm inputs. The farm is certified Organic by IMO, India.

Our farm is located in the Western Ghats of southern India, a region internationally recognized as a 'biodiversity hotspot' which is under severe threat from human activities including

unsustainable agricultural practices. We are documenting some of this amazing biodiversity in order to demonstrate that sustainable agriculture contributes significantly to biodiversity conservation. This biodiversity provides valuable 'ecosystem services' such as water conservation, nitrogen and carbon sequestration, pollination and pest control. Organic farms rely on the balance of nature to control pests by providing niches for diverse and healthy populations of predators and parasitoids. We have photographed and identified some of these diverse predators (including mammals, birds, amphibians, reptiles, arachnids and insects) and their interactions. This documentation serves as a valuable educational tool for students, farmers and a whole range of guests who visit our farm.

Because of low yields due to excessive rainfall, we have endeavored to market our produce directly. We began to process and package the spices and coffee at a cottage industry scale to provide a high quality value added product. Initially we struggled for many years as there was no market for organic spices in India. In 2000 we started a very small sustainable tourism project that was closely integrated with the organic farm and its activities. We began with a single cottage to accommodate guests and provided home cooked meals. One of the key activities for the guests is an interpretive tour of the farm to show how our crops are sustainably cultivated and integrated into a rainforest ecosystem and the various methods we employ. This leads into discussions about a variety of issues such as sustainable livelihoods, importance of biodiversity, health and environmental effects of toxic agro-chemicals, dangers posed by GMOs and corporate control of agriculture. Information is shared with guests through hands on experience on the farm and slide shows so they so they can appreciate the importance of biodiversity and its relationship to agriculture.

The marketing opportunities for our produce have grown in parallel with the sustainable tourism and much of the produce is purchased by guests on site or through mail order. We have even created our own brand label. Our agro-tourism venture (the Rainforest Retreat – [www.rainforestours.com](http://www.rainforestours.com)) has grown steadily and now it sustains our family, several families who work here and our small educational NGO. For us it has developed into an educational platform to raise awareness about the need for sustainable agriculture and biodiversity conservation and to show that alternatives are possible.

## **Conclusion**

Argo-ecotourism is a viable and sustainable means to supplement farm income with little investment if it is done in a simple way. Many organizations and websites are now promoting sustainable tourism involving organic farms. Presently, travelers show a lot of interest in organic agriculture, biodiversity, and sustainable livelihoods and seek out places such as ours. We have inspired similar ventures locally and can serve as a model for others. Other sustainable models of community based agro-tourism and involvement of NGO's will also be discussed. The rural landscapes of our planet, especially in the tropics, harbor great deal of biodiversity and beauty which attracts travelers from all over the world. Organic farms are a logical choice for many of these travelers and this engagement can benefit small farmers as well as the environment.