

# Structural Design of A Forest Garden



The forest garden is a multi-layered system where plants are arranged in distance according to their frequency of use. The edges of the property are typically forested with trees which can be used for live fences and timber and serve as a wind and noise barrier.

Closer to the house, edible plants such as fruit trees, root crops, trees for firewood and medicinal uses can be found.

Taking into account shade tolerance, space, and nutrient requirements of each species helps to optimize the structural planning.

For example, planting guandu for food or macano for firewood, two nitrogen fixers, in between other fruit trees, making the nutrients available for the plants around it.

Ornamental plants are often located closer to the house, showing the aesthetic importance of forest gardens.

Social spaces with hammocks, chairs and a table are typically found in the shade of trees where people can gather and enjoy the fresh outdoor temperature created by the trees.

This eco-guide is a living document. If there are any errors, comments or clarifications to this info please contact Pro Eco Azuero in person, by email, or phone.

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# FOREST GARDENS OF AZUERO

A guide to creating and maintaining  
forest gardens

# 8 Reasons to Have A Forest Garden

## 1. Save money

Producing one's own food is a way to secure access to basic food products and to avoid costly trips to distant stores.

## 2. Improve food security

They provide physical and economic access to healthy and preferred foods. Having different edible plants in a forest garden sustains a regular provision of food.

## 3. Maintain a long term guarantee

Forest gardens add value to a property by providing timber and other market products, which represent an advantageous investment.

## 4. Prevent soil erosion

Vegetation acts like a buffer slowing down agents of soil erosion such as water and wind.

## 5. Improve water abundance and quality

By slowing down runoff in times of rain, vegetation allows water to percolate into the soil and fill groundwater and streams.

## 6. Nourish and regenerate soils

Due to their diversity, forest gardens supply different nutrients and microorganisms that benefit the soil. Some trees for example, have the ability to associate with microbes that fix nitrogen into the soil, making it available for other plants and avoiding the need for artificial fertilizers.

## 7. Preserve Nature

Forest gardens are highly diverse ecosystems, specially if they are composed of native trees they can provide habitat for wildlife.

## 8. Conserve an Azuero Tradition

Forest gardens are part of the rural tradition that emerged from a culture of family homesteading and gastronomy. With the option of buying food in stores, new generations are losing the knowledge of planting, maintaining and using such valuable local resources that forest gardens provide.

## What Are Forest Gardens?

Forest gardens are multi-use associations of trees and shrubs with annual and/or perennial crops and animals, typically located in home lots. Forest gardens are agro-forestry systems that integrate trees for fruit, firewood and timber, root crops and other vegetable crops, as well as ornamental and medicinal plants. They provide a basic source of food for sustaining the food security of the family. In addition, they generate income through the sale of high value products.



## Composition of Forest Gardens of Azuero

<b>Achiote</b> <i>Bixa orellana</i> FR M FW W T LF PA FL EF	<b>Aguacate</b> <i>Persea americana</i> FR M FW W T LF PA FL EF	<b>Bambú</b> <i>Bambusodae</i> FR M FW W T LF PA FL EF
<b>Banano</b> <i>Musa sp.</i> FR M FW W T LF PA FL EF	<b>Café criollo</b> <i>Coffea sp.</i> FR M FW W T LF PA FL EF	<b>Caimito</b> <i>Chrysophyllum cainito</i> FR M FW W T LF PA FL EF
<b>Calabazo</b> <i>Crescentia cujete</i> FR M FW W T LF PA FL EF	<b>Caña dulce</b> <i>Saccharum sp.</i> FR M FW W T LF PA FL EF	<b>Caoba</b> <i>Swietenia macrophylla</i> FR M FW W T LF PA FL EF
<b>Caracucha</b> <i>Plumeria rubra</i> FR M FW W T LF PA FL EF	<b>Carambola</b> <i>Averrhoa carambola</i> FR M FW W T LF PA FL EF	<b>Carate</b> <i>Bursera simaruba</i> FR M FW W T LF PA FL EF
<b>Cedro amargo</b> <i>Cedrela odorata</i> FR M FW W T LF PA FL EF	<b>Cedro espino</b> <i>Pachira quihata</i> FR M FW W T LF PA FL EF	<b>Cerezo</b> <i>Prunus sp.</i> FR M FW W T LF PA FL EF
<b>Chile</b> <i>Capsicum sp.</i> FR M FW W T LF PA FL EF	<b>Cítrico</b> <i>Citrus sp.</i> FR M FW W T LF PA FL EF	<b>Coco</b> <i>Cocos nucifera</i> FR M FW W T LF PA FL EF
<b>Croto</b> <i>Croton sp.</i> FR M FW W T LF PA FL EF	<b>Fruta de mono</b> <i>Posoquena latifolia</i> FR M FW W T LF PA FL EF	<b>Guabito cansa boca</b> <i>Inga punctata</i> FR M FW W T LF PA FL EF
<b>Guabito de río</b> <i>Zygia longifolia</i> FR M FW W T LF PA FL EF	<b>Guácimo</b> <i>Guazuma ulmifolia</i> FR M FW W T LF PA FL EF	<b>Guanábana</b> <i>Annona muricata</i> FR M FW W T LF PA FL EF
<b>Gandú, Frijol de palo</b> <i>Cajanus cajan</i> FR M FW W T LF PA FL EF	<b>Guava machete</b> <i>Psidium guajaba</i> FR M FW W T LF PA FL EF	<b>Guayaba criolla</b> <i>Psidium guajaba</i> FR M FW W T LF PA FL EF
<b>Higo</b> <i>Ficus carica</i> FR M FW W T LF PA FL EF	<b>Jagua</b> <i>Gelipa americana</i> FR M FW W T LF PA FL EF	<b>Jamaica</b> <i>Hibiscus sabdariffa</i> FR M FW W T LF PA FL EF
<b>Jobo lagarto</b> <i>Sciadodendron excelsum</i> FR M FW W T LF PA FL EF	<b>Laurel</b> <i>Cordia alliodora</i> FR M FW W T LF PA FL EF	<b>Limón</b> <i>Citrus x. limon</i> FR M FW W T LF PA FL EF
<b>Limón dulce</b> <i>Citrus limetta</i> FR M FW W T LF PA FL EF	<b>Limón mandarina</b> <i>Citrus Aurantifolia</i> FR M FW W T LF PA FL EF	<b>Macano</b> <i>Diphysa americana</i> FR M FW W T LF PA FL EF
<b>Madroño, Harino</b> <i>Calycophyllum candidissimum</i> FR M FW W T LF PA FL EF	<b>Malagueto macho</b> <i>Xylopia frutescens</i> FR M FW W T LF PA FL EF	<b>Mamey, Sapote</b> <i>Pouteria sapota</i> FR M FW W T LF PA FL EF
<b>Mamón</b> <i>Melicoccus bijugatus</i> FR M FW W T LF PA FL EF	<b>Mandarina</b> <i>Citrus reticulata</i> FR M FW W T LF PA FL EF	<b>Mango</b> <i>Mangifera indica</i> FR M FW W T LF PA FL EF
<b>Manzana rosa, Poma rosa</b> <i>Syzygium jambos</i> FR M FW W T LF PA FL EF	<b>Marañón curazao</b> <i>Syzygium malaccense</i> FR M FW W T LF PA FL EF	<b>Marañón nacional</b> <i>Anacardium occidentale</i> FR M FW W T LF PA FL EF
<b>Mirto</b> <i>Murraya paniculata</i> FR M FW W T LF PA FL EF	<b>Nance</b> <i>Byrsonima crassifolia</i> FR M FW W T LF PA FL EF	<b>Naranjo</b> <i>Citrus sinensis</i> FR M FW W T LF PA FL EF
<b>Nispero</b> <i>Martikara zapota</i> FR M FW W T LF PA FL EF	<b>Noni</b> <i>Morinda citrifolia</i> FR M FW W T LF PA FL EF	<b>Orégano</b> <i>Oreganum vulgare</i> FR M FW W T LF PA FL EF
<b>Palma ornamental</b> <i>Roystonea sp.</i> FR M FW W T LF PA FL EF	<b>Palma pacora</b> <i>Aculeata acromonia</i> FR M FW W T LF PA FL EF	<b>Palma real</b> <i>Attalea butyracea</i> FR M FW W T LF PA FL EF
<b>Palo cuadrado</b> <i>Macrocnemum roseum</i> FR M FW W T LF PA FL EF	<b>Palo santo</b> <i>Erythrina fusca</i> FR M FW W T LF PA FL EF	<b>Panamá</b> <i>Sterculia apetala</i> FR M FW W T LF PA FL EF
<b>Papaya</b> <i>Carica papaya</i> FR M FW W T LF PA FL EF	<b>Pixbae</b> <i>Bacris gasipaes</i> FR M FW W T LF PA FL EF	<b>Plátano</b> <i>Musa paradisiaca</i> FR M FW W T LF PA FL EF
<b>Roble</b> <i>Tabebuia rosea</i> FR M FW W T LF PA FL EF	<b>Tamarindo</b> <i>Tamarindus indica</i> FR M FW W T LF PA FL EF	<b>Teca</b> <i>Tectona grandis</i> FR M FW W T LF PA FL EF
<b>Uvita</b> <i>Bactris mayor</i> FR M FW W T LF PA FL EF	<b>Vétiver</b> <i>Chrysopogon zizanioides</i> FR M FW W T LF PA FL EF	<b>Yuca</b> <i>Manihot esculenta</i> FR M FW W T LF PA FL EF
<b>Yuplón, Mangostán</b> <i>Spondias dulcis</i> FR M FW W T LF PA FL EF	<b>Zapote</b> <i>Licania platypus</i> FR M FW W T LF PA FL EF	

Introduced: Native  
 Common name  
 Scientific name  
 FW Firewood  
 PA Physical attribute  
 FR Fruit / human food  
 W Wood  
 T Traditional use  
 LF Living fence  
 M Medicinal  
 FL Food for livestock  
 EF Environmental function