

AGROFORESTRY



Senepol cattle graze in a silvopastoral system in St. Croix, USVI.

Trees play a vital role in terrestrial ecosystems and forests, providing a wide range of products and services to the rural and urban people that live around them. **Agroforestry** is a system that simulates certain natural conditions in an orderly manner in time and space. In agroforestry systems trees and shrubs are integrated with crops or livestock to provide both supplemental income and increase biodiversity. It is a sustainable land use practice used around the world since the earliest human development.

In the Caribbean Area, different agroforestry systems have coexisted for many years, however, the use of the term “**agroforestry**” is recent.

Examples of Caribbean Agroforestry include:

- Home gardens with breadfruit (*Artocarpus altilis*), mango (*Mangifera indica*), citrus (*Citrus* spp.) or genip/spanish lime (*Melicoccus bijugatus*) trees grown along with medicinal plants, spices and a few chickens; or
- Cattle grazing between black olive or gre-gre (*Bucida buceras*), tamarind (*Tamarindus indica*) or lignum vitae or guaiacum (*Guaiacum officinale*) trees in the semiarid coasts.



Tamarind trees and fruits are common in agroforestry systems in the Caribbean Area.

Agroforestry offers many advantages and can be used in all the islands. In the U.S. Virgin Islands, it is common to observe cattle grazing and looking for shade between trees that serve as biological



Leguminous trees provide shade to coffee shrubs in Puerto Rico.

connectors and provide habitat for wildlife. Other advantages of agroforestry are increasing diversity, reducing soil erosion and sedimentation, and improving soil and water quality.

The practice of agroforestry is most distinctive in the mountainous interior of Puerto Rico, where shaded coffee plantations are found. Tree species such as Guaba (*Inga vera*) and Cabbage-angelina (*Andira inermis*) are

commonly recommended. In these systems, trees not only provide environmental benefits, but offer land users the opportunity to obtain forest products for personal use and for additional income. Cultural uses of forest products include food, crafts, medicines, tools, furniture and musical instruments. You can commonly see the use of trumpet-tree (*Cecropia peltata*) wood as cover for the “Cuatro,” heliconia flowers for decoration, cedar wood (*Cedrela odorata*) carvings; lemongrass tea and gourd ladles made from the calabash tree (*Crescentia cujete*).



Heliconia flowers are part of the agroforestry system.

In urban areas, agroforestry systems provide the environment for cultivating oregano, cilantro, lemongrass, rosemary, basil, mint, chives and other essential ingredients of the Caribbean culinary tradition.

Potential Products in Agroforestry Systems

Fruits such as citrus, tamarind, custard apple, sugar apple, hog plum, west Indian cherry, guava, guavaberry, soursop, genip, mango, avocado, papaya; **cut flowers** such as Heliconia, Anthurium, Frangipani; **medicinal plants** such as marjoram, aloe vera, and **spices** such as oregano, cilantro (recao), rosemary; **raw materials for crafts** such as: wood for carving, seeds for jewelry, lianas for baskets, mats, palm fronds for brooms, baskets, sculptures, coconut husks for purses, hummingbird feeders, arts & crafts; **forages**; **syrups and honey**; **recreation areas**, **photography** and **bird watching**.

For more information on **Agroforestry**, contact Plant Materials Specialist, [Edwin Más](#), at 787-831-3416 x106.



Gourd ladles or “Ditas” made from calabash.



Musical instruments, “Tiple de Oriente” (left) and “Cuatro” (center and right), are built from forest products. The cover of these instruments is traditionally built with trumpet-tree wood. At the bottom, a “Cuatro” under construction.

