



Organization of American States
in cooperation with the Mayan Reserve Foundation,

FACT SHEET FUNCTION OF PLANTS

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Project title

Development of sustainable land use system on degraded tropical pastures in Belize, Central America, as a model for Mesoamerica and the Caribbean.

Function of trees

Trees can provide many products, including: (timber, food, medicines, fibers, oil, cosmetics, fuel-wood, fodder, fruits, nuts, poles, resins and mulch etc...) of the farmers, and is based on the understanding of the interaction between the woody perennial and the other plant components of the production system. And service, such as: Providing food security, enhancing soil fertility, carbon sequestration, biodiversity protection, weed control, providing living fences, conserving soils, improving microclimates, stabilizing water-shade and reclaiming degraded land. The previous definition is consistent with formal definition of agro-forestry. Agro-forestry is defined as a form of land use where woody perennial interacts biologically and economically in the same area with crops and/or animals.

Utilities and uses of each species of tree

<i>Swietenia macrophylla</i> (Mahogany)	Mahogany is one of the most valuable furniture timbers in the world due to the decorative and attractive timber with good technical characteristics. It is widely planted in the tropics in reforestation and a-forestation programs. In agro-forestry system it is used for shade and fuel wood.
<i>Cedrela odorata</i> (Cedar)	The timber is famous for its use in making cigar boxes and it is also used for musical instruments, light construction, veneers, plywood. The insect repellent smell makes it suitable for wardrobes. In cocoa and coffee plantation it is planted for shade and as wind break
<i>Tectona grandis</i> (Teak)	It is one of the most durable timbers in the world and used for all conceivable purposes. Eminently suitable for house, furniture, paneling, joinery, plywood and many others uses. The demand for this timber is so much, therefore, has become today, one of the most expensive timbers of the whole world.
<i>Sweetia panamensis</i> (Billy Webb)	Extensive uses by many peoples, including as medicinal, also timber tree locally used for construction and is a nitrogen fixation species.
<i>Lonchocarpus castilloi</i> (Black Cabbage Bark)	Heavy construction, flooring, furniture components. Durable species and is an excellent nitrogen fixation, is one of the most successful legume species.
<i>Jatropha curcas</i> (Physic Nut)	For quick establishment of hedges and plantation for erosion control. As and alley crop in the conventional sense where the effect of nutrient pump is of interest, the non-leguminous physic nut is not appropriate. But under certain circumstances physic nut alley could function as windbreaks for annual cultures during their establishment phase. At the same time an energy component could be integrated into the cropping system. The press seed of physic nut it is valuable as organic manure since it has nitrogen content similar to that of the press seed of castor-bean and chicken manure. The nitrogen content range from 3.2 to 3.8%.
<i>Azadirachta indica</i> (Neem) <i>Zea mays</i> (Corn) Will be used as natural Barriers	Boundary plantings are trees used to delineate plots or farms. The trees forming the boundary can also provide wood, fodder or other products. Contour hedges are planted to prevent insects attack, erosion and form biological terraces. Living hedges, live fences and woody strips are all variations on the technique of using shrubs or bushes to form a continuous barrier. They are used to form animal paddocks, but they can provide feed and various other products as well. These techniques also conserve soil moisture, give shelter to the farm home and beautify the landscape.
<i>Carica papaya</i> (Papaya)	<i>Carica papayas</i> produce a high value of product or multiple high value products and have an acceptable local market. Be relatively is a fast growing tree and adaptable to any type of soil and conditions. Produce appropriate shade for the companion crops and have a minimal root at the surface to minimize competition with crops in agro-forestry system.