



Eco-Libris assessment – First year of Operation (July 2007 – July 2008)

Sustainable Harvest International (SHI)

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1. General Information

- 1.1 Name of organization: [Sustainable Harvest International \(www.sustainableharvest.org\)](http://www.sustainableharvest.org)
- 1.2 Name of President: [Florence Reed](#)
- 1.3 Year of establishment: 1997
- 1.4 Registered in (country): [USA](#)
- 1.5 Countries of operation: [Belize, Honduras, Nicaragua and Panama](#)
- 1.6 No. of trees planted so far: [Total trees planted to date have equaled roughly 2.5 million](#)
- 1.7 No. of trees planted in the 12 months ending on July 1st, 2008: [Total trees planted by SHI in FY08 were 172,418.](#)
- 1.8 Average survival rate of trees: [Survival rate is dependent on a variety of issues; however, the mean for all four countries is 80%.](#)



Young kid from Belize with cacao seedling (Photo courtesy of SHI)

2. Eco-Libris tree planting's operations (these questions refer to the trees planted on our behalf): 13,250

2.1 Out of total number of 13,250 trees and as of July 1st 2008, how many trees have been planted? How many are still growing as seedlings in nurseries and how many are at prior stage (seedlings haven't been purchased yet)?

All 13,250 trees have already been planted and transplanted [the last 3,000 trees were transplanted at the end of September and beginning of October in Belize and Nicaragua]

2.2 In what countries/areas the trees were planted? Please fill in the attached excel and be specific as possible. Belize, Honduras, Nicaragua, and Panama

2.3 Please provide the planting schedule in these areas (when the seedlings are planted in nurseries, what are the months of planting, etc.)

Plantings typically are dependent on the dry and rainy season in each country where we work. The planting season in nurseries for the 4 programs is in December, January and February where they are maintained for at least 3 months, and transplanting begins during the 2nd month of the rainy season which on average is in June or July.

2.4 What species were planted, what is the genetic source (country of origin) of each species?

Species can be broken into four groups:

- Hardwoods - Mahogany, acacia, oak, teak, laurel, kakawate (madre de cacao), and leucaena
- Softwoods – cedar
- Fruit & nut trees – citrics (orange, lemon, mandarins), guaba, avocado, peach palm (pejibaye), breadfruit, soursop, coconut
- Others – cacao, coffee, noni, all spice

Please note that all species with the exception of those planted in Belize, originated from the country where they were planted, for example peach palm planted in Nicaragua were originally harvested either on the Atlantic and/or Pacific coasts of Nicaragua. In the case of Belize, seeds were imported from Honduras.

2.5 How many hectares were planted as mixed forest? Mixed of how many species?

SHI's model is to incorporate trees in already established plots, rather than focus on monoculture techniques. Most of the trees planted were either done so in an agroforestry system or within the framework of alley cropping (i.e. shade grown coffee and cacao). On average hardwoods and softwoods are spaced 3 meters apart, whereas coffee and cacao

approximately 1 to 2 meters. In total roughly 10 hectares of the 13,000 trees planted with Eco-Libris's support have been done within the context of mixed/multi-use forest.

Species varied for each system, however, in Belize, cacao plantations are being mixed with a combination of nitrogen fixing species such as madre de cacao, fruit trees including soursop and oranges, and allspice. Hardwoods are also interspersed in areas where families are currently planting coffee and citrics such as mandarins.

2.6 How many hectares were planted as monoculture?

In general, most of the tree species planted are in mixed forest, or agroforestry systems; however, along the Atlantic coast of Nicaragua, SHI has planted approximately .5 hectares of coconut as a monoculture.

2.7 How many hectares were planted for agroforestry uses? How much of it is inter-planted with crops? What crops?

Please see answer to question 2.5. In general agroforestry systems include a mixture of crops ranging from citric fruits, bananas and plantains, vanilla, sweet potato, nitrogen fixing species such as leucania and madre de cacao amongst others.

2.8 What is the involvement of local communities with these planting activities? What are the social benefits of these specific trees that were planted, in present and in the future?

All tree plantings that SHI programs conduct are required to involve the support of local communities, particularly those families participating in SHI's program. In order to assure quality care of trees, SHI's field extensionists work directly with families to train them on how to build nurseries and care for tree species, including trainings on organic management of pests.

Social benefits vary, though a primary focus of the organization is to diversify the knowledge of participants and aid them in their struggles to overcome poverty. Each species planted has a particular purpose, whether it is to restore nutrients in the soil such as madre de cacao, or generate income such as cacao. Overall each species is directly linked to a social or environmental impact that will benefit the participating families and their communities.

2.9 Are there any specific environmental benefits for the plantings in these specific areas? As was stated in the previous question, all species will directly and/or indirectly benefit the environment, though some species more than others. The primary reforestation technique used is known as multi-story, which mimics the rainforest by planting taller hardwood trees, plantain and bananas under that and then shade coffee, cacao, etc. under them. It has been noted that up to 90% of bird species have returned to these new

forests. The vast majority of these trees have been planted on land degraded by slash-and-burn agriculture and logging. These trees will restore natural water cycles, stabilize microclimate and provide habitat for the flora and fauna of the tropical rainforests.

2.10 What is the management plan for the next five years for the trees that were already planted during the last year? What is the management plan for the next twenty years?

Each family that works with SHI is required to create a farm plan for a minimum of five years, with the anticipation that those plans will continue after they've graduated from our program. In all cases families do implement a management plan in excess of 5 years due to the fact that trees planted are done so either to assist the family in income generation, production of hardwoods for personal needs and infrastructure, conservation of watersheds and wooded areas, and more. Something that makes SHI stand out from other reforestation efforts is that we do a comprehensive program that also involves other sustainable agriculture techniques. Along with extensive training on caring for the trees and their importance, this helps guarantee that the trees will stay on the land and not be cleared years later.

2.11 Do you plant other species, which are not trees, in the same planting area? (Shrubs, Herbaceous, etc.) If you do, which species? What life form?

Of the 13,250 trees funded by Eco-Libris only coffee could potentially be considered a shrub, though for logistical purposes it has been assigned as a tree.

2.12 Out of the trees that were planted: **8,250** (hardwoods and certain fruit & nut trees) trees were in "clean/ new" areas, **0** (number) trees were planted as fillings in areas with former plantations, **5,000** (i.e. coffee, cacao, madre de cacao, etc.) trees were planted as fillings in areas with natural vegetation.

2.13 Did you plant non native species? Which species? How many trees?

No, SHI works to plants principally native species in the area, though in certain cases the organization has planted renaissance species such as moringa due to its nutritional and medicinal values.

2.14 you are most welcome to add more details that you find important or interesting for us and for our costumers.

In the coming months, the organization will be focusing its tree planting efforts on multi-use species such as moringa oleifera and jatropha curcas. Moringa is a renaissance species, native to Indian with nutritional qualities for humans, animals and the soil, in addition to medicinal values and an ability to grow at excessive rates. The species is valued for its high nutritional value in leaves, flowers, roots and bark, in addition to its seeds serving as a means of water filtration. Currently our programs in Honduras and Nicaragua are looking into the

planting of *jatropha curcas*, a non-edible native plant species that has been noted for its fuel properties, particularly converting its seeds into biodiesel.

For this section, you are most welcome to add any supporting material you find relevant to the questions.

3. Ensuring the planting quality

With regards to our collaboration in our first year of operation, please choose for each characteristic shown in the table below the most suitable grade between 1-10 (1- cannot guarantee at all 10 – can fully guarantee) and add an X sign in the suitable cell. These grades should indicate your ability to ensure the quality of these characteristics. Please provide further explanations whenever necessary below the table.

	1	2	3	4	5	6	7	8	9	10
Additionality								X		
Planting the trees primarily as a mixed forest and not monoculture species									X	
Full collaboration with local communities										X
Usage of native species							X			
Planting within one year from the payment							X			

Eco-Libris comments:

We thank SHI for their full cooperation in the preparation of the assessment and their willingness to provide all the requested details. Overall we are satisfied with the performance of SHI and believe that their commitment to high sustainable standards is maintained. We look forward to continuing our work together.