

Finca La Esperanza



Anselmo Rodriguez Umaña

Overview of the farm

- Finca La Esperanza has belonged to Anselmo since 1974.
- It is 6 1/2ha
- It was originally a farm to produce grass. In 1992, he switched to organic produce with the goal of recuperating the soil. Anselmo had experience with cattle and began feeding them Morera (*Morus alba*).
- Later he started raising pigs and producing vegetables and organic fertilizers using worms.
- One of the main attractions of the farm is the efficient management and recycling of waste.
- Anselmo's farm is truly a model for farmers all over the world. He wastes almost nothing (his motto is "sell more, buy less") and his produce is high quality. He has been awarded farmer of the year in Costa Rica and is recognized for his role as an example for farming in the future.

Organic Agriculture

- Everything used and produced at Finca La Esperanza is completely organic
- Anselmo is the first farmer to be 100% organic in Costa Rica
- To be certified as an organic farm, \$800 must be paid annually to Ecologica and certain measures must be taken for each product
- For example, to produce organic milk, meat and cheese, cows must eat a certain amount of food each day (a 75kg mixture of morera, grass, salt, honey, corn per cow)
- Other produce, such as beans and potatoes, are in such demand that they are often sold before they are even grown. Because of their organic label, Anselmo makes close to twice the amount he would if the produce was inorganic.

Cattle

- Each cow produces 30kg of manure per day (500kg total)
- Every 3 months each cow produces 20kg of useable compost
- In addition to compost, cows produce cheese and milk



Pigs



- Raised completely organically (no medicines or additives in feed) except for a single shot of iron at birth
- Pigs: whey and morera (protein) and sugar cane (calories)
- 60 pigs on farm, each eats 1K morera, 1 stem sugar cane (3Kg) and 2L of whey
- The pigs don't eat the fiber of the sugar cane. This is later mixed with cow manure to produce organic fertilizer to grow the morera.

Biodigestor

- 11m long
- A mixture of 30kg manure and 150L water is fed into the biodigestor
- This produces methane gas when microorganisms decompose the manure. The leftover material can be used as organic fertilizer.
- It produces 10 hours of gas a day from 150L of liquid.

How the Biodigestor Works

- Can be used for 15 years
- The gas produced is used to fuel the kitchen and to pasteurize milk and cheese- it produces 10 hours of gas a day
- A proportion of 50kg pig excrement to 150L water is used



- A pipe connects the pig pens to the holding tank to the biodigestor
- Temperature must be hot to encourage decomposition
- After a month, the left over waste is collected as biofertilizer.

Making Compost



1. Cow manure is collected.



2. Manure is set in beds, put in layers every 8 days to be processed by worms.



3. The soil is then sifted through this machine. Fine humus is packaged for sale while rougher material Anselmo uses on his own farm.



4. The finished product, compost humus, is 100% organic and is sold to farmers and gardeners.

Natural Remedies

- A mixture of gabilana and hot pepper functions as a fungicide
- Manicillo beans with a yellow flower give cheese a yellow coloration
- Ajillo is a natural repellent
- Euphorbia replenishes milk in nursing mothers
- Gotas Amargas (“bitter drops”) helps nausea and diarrhea
- Saucó helps sore throats, also used to feed animals
- Botón de Oro (“golden button”) is used to feed animals and also fixes phosphorus in the soil

The Trail



Anselmo has a river on his property and a trail that students can use to learn about how he's been using natural resources without producing any pollution or negative impacts.

Anselmo's Projects

- Pigs
- Cattle
- Compost
- Cheese
- Biodigestor
- Organic Agriculture
- In the future: organic eggs (from hens eating worms that feed on organic fertilizer)
- Trail