

Soils

My garden planification:

For the plant selection I decided to include three criteria in order to guarantee the benefit and health of the plants according to my routine and characteristics of the place where I live (Mérida, Yucatán, México).

I noticed that I require a soil with a considerable capability of absorption, but fortunately my backyard has those features. As it's known, Merida's climate is hot and wet, because of that, rain and rapid winds are recurrent above all in spring and autumn.



Annex: Place where I will locate my garden.

Attributes of each plant:

- *Cicer arietinum* – chickpea



Why I am planting chickpeas: This species comes from the legume family, and in addition it's appreciated in Mexican culture because of the great amount of uses in the kitchen (fiber, carbohydrates, magnesium and vitamins).

- *Medicago sativa* – alfalfa



Why I am planting alfalfa: *Alfalfa has a space in the planification because it has a high demand in the livestock industry as it's used for the cattle alimentation. With this I pretend to make a proposal in natural commercialization without imports from other parts of the republic.*

- *Otatea acuminata*. – bamboo plant



Why I am planting bamboo: Bamboo has an interesting property named “kun” which gives the plant protection against microorganism and plagues. I expect that with the plantation of bamboo there is less impact of plagues in my garden. Bamboo is also a nice provider of oxygen: it's estimated it produces 80% more oxygen than other plants in the process of photosynthesis

- *Arachis hypogaea* –peanut, *Phaseolus vulgaris* – beans, *Vicia faba* – broad bean



Why I am planting legumes: The theory behind my plant selection is the utility that the legumes have over the soils. The nodules of this type of plants have the capability to fixate the nitrogen. The reason why this process happens is because the radicular system of a legume (roots) activates a symbiotic relationship between the plant and rhizobium bacteria, which are committed to fixate the nitrogen of the plant.

Having in mind that this process is necessary for an optimum composition of the soil, with this action other plants will get benefited. Besides of the previous, this action will not only be great for the soils benefit if not it will contribute a lot for a project of circular economy that I have in mind.

Agricultural and climate-friendly practices I will take into account

- 1.- Reuse of the rain drops for watering the plants, placing buckets in strategic points.
- 2.- Make my own compost with the reuse of my organic waste and use of my garden's land.
- 3.- Use of ecological alternatives for insecticides, such as: natural predators for plagues and planting of species with a contribution for the nitrogen of the soil
- 4.- Promote the consume of local products with the sale of organic legumes.
- 5.- Donation of seeds in an inclusive program where everyone can start planting legumes in their gardens.

Sketch of my proposed garden:



SCREENSHOT:



yaax_ajene GREENEST- DAY 11- SOIL. Having in mind that this process is necessary for an optimum composition of the soil, with this action other plants will get benefited. Besides of the previous, this action will not only be great for the soils benefit if not it will contribute a lot for a project of circular economy that I have in mind

Have you ever wondered about the benefits of a garden in your house? As it's known legumes are great species in order to contribute to the nitrogen fixate, so we decided to make a representative sketch of the plantation order. We are planting: peanuts, bamboo, beans, chickpeas, alfalfa and broad beans.

With this activity we not only expect the social consciousness about actions to increase the health of our soils, but also we trust that this project can help communities and reduce our carbon footprint.