Forest gardens and the importance of trees in agriculture – Part 1 – Farm Kenya

First and foremost, without the water the trees attract human beings cannot work. This is because they require at least two liters of water every day. On the side of economics, trees are the backbone of many activities. From trees we get timber, building poles and Venus plywood. In Kenya, the forest cover is about seven percent of the total landmass, which translates to 200 million hectares which provide the bulk of wood demand for domestic and commercial needs.

Forest gardens

A forest garden is a designed agronomic system based on trees, shrubs and perennial plants. These are mixed in such a way as to mimic the structure of a natural forest, the most stable and sustainable type of ecosystem in this climate. Being in existence for over 30 years, trees for the future is a non-profit organization that has planted an average of 250 million trees, restored 58,000 hectares, and changed the lives of 3,000 farmers.
With the new emerging trends in agriculture, terms like agro ecology, organic farming, sustainable farming and now forest gardening carry almost similar meanings with a very thin line to it.

Agroforestry

Agroforestry it is planting trees together with growing crops. A forest garden has trees all around.
At Waruhiu farm, there are various crops such as indigenous

vegetables, fodders, pumpkins amongst others. An a-frame is used to dig terraces and trenches in the garden because lands are not level.

Where the lands are sloppy, we want to plant things in those slopes that can actually hold the soils and farmers are able to collect the runoff water in their garden. Effective land leveling reduces the work in crop establishment and crop management and increases the yield and quality. Land leveling increases yield to a large extent because it improves weed control. Improved water coverage from better land leveling reduces weeds by up to 40 percent.

Zai pits.

It is recommended to have the zai pit for one and a half to two feet with length of one meter and desired width. A zai pit is a small ditch in which seeds of annual crops are planted. They are beneficial for improving soil fertility almost immediately. This is done as they increase termite activity hence leading to high water infiltration when it rains.

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Creating Zai Pits

To create a zai pit first we need to dig the trenches to separate the top soil and the subsoil. The topsoil is put on one side and the sub soil on the other. The ground is then leveled and then lined with leftover newspaper or calendars on the trench. The newspapers are followed by dry/wet leaves

which are then suppressed with your feet.

After the wet leaves are suppressed, a part of the subsoil is returned into the trench and leveled. Another layer of leaves is added followed by the subsoil. This is followed by the dry/wet leaves again which are leveled and followed by some part of the top soil. Manure/compost is placed on the top soil followed by charcoal dust, ashes and egg shells. Add the top soil followed by dry/wet leaves, which will act as mulch.
Pour water uniformly around the trench and place a stick at the middle to measure the temperatures of the trench. This is because you can’t plant anything on that trench immediately due to the heat levels, you have to wait for one to two weeks for the level of heat to suppress.

Vertical gardens

A forest garden tries to solve three issues that is hunger, poverty and soils. Vertical gardens are mainly aimed at solving the hunger issue. If the farmer has less water in the farm he/she can make use of the vertical garden since it doesn’t use a lot of water. If the farmer doesn’t have a large land space, he or she can make use of the vertical garden. The vertical garden is also good as it incorporates a lot of crops and you don’t have to grow one type of crop. A vertical garden is also manageable and labor intensive as it is not big.

Composting

Composting is one way of enriching our soil and making it fertile. Forest gardens basically take care of three objectives that is eradicating hunger, poverty and revitalizing degraded soil in addition to taking care of the environment. The forest garden design is kind of a map to guide the farmer as a blueprint to arrange the farm so that at one place you are growing vegetables another part you are growing perennials another part you are growing another section with livestock and where you live. That kind of a

pattern will allow you work in a sequence. This sequence allows the farmer to have something that they are harvesting, something they are eating and something they are selling.