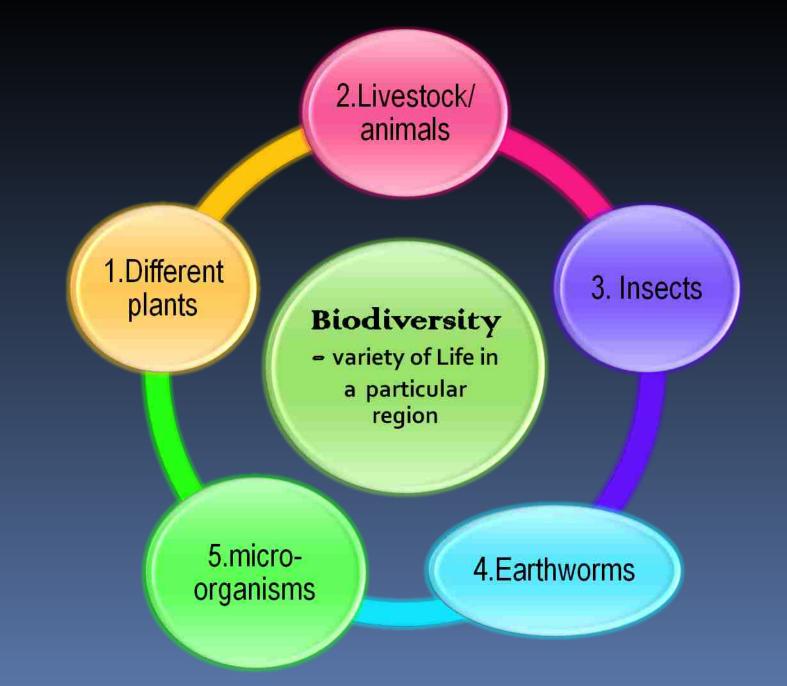
Biodiversity For Sustainable & Self Reliant Farming.

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Biodiversity is the basis of agriculture.

Of the 27,000 species of higher plants, About 7,000 species of plants are cultivated in agriculture.

Today only 30 species of crops only cultivated , In that wheat, rice and maize alone providing about half of the food all over the world.

(FAO)

These figures shows that, how many no of species we have lost, how the food web has broken and the role of these species in the ecosystem ,will not be substituted by any of us Agriculture depends on healthy ecosystems to provide services that include nutrient and waste recycling, pollination from insects, soil erosion control, and clean water. Clearing of native vegetation, doing

monoculture causes huge genetic

erosion& loss of Natural resources

Mr. Ravi with his organic White Ponni in 1996





High Crop density and effective harvesting of sunlight











An Agro forestry Model For enrichment of Biodiversity

Enormous growth of Malaiveambu-Mellia dubia tree around the farm







Components of Biodiversity cum Agro forestry model farm

- Bamboo- used for various purpose & timber value
- Glyricidia- N fixing tree used for Green Manure & also fodder purpose
- Pathimugam- wood used for natural dye Extraction & water purification.

Components of Biodiversity - Banana, sapota, lemon



Selection of trees in the biodiversity farm should give ✓ Adaptability ✓ Productivity ✓ Sustainability in terms of money and fertility of the soil

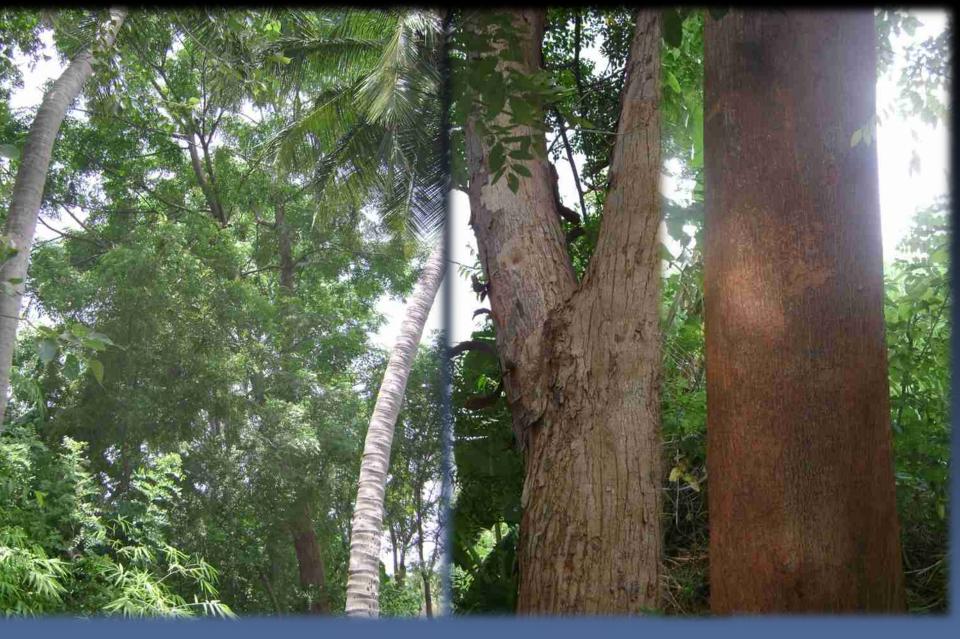






- Pollination is one of the most valuable services provided by ecosystems.
- Pollinators like flies, moths, butterflies, wasps, beetles, bats, and humming birds, bees are the principal agents pollination.
- Pollinators help maintain the diversity of ecosystems by facilitating the reproduction of many plant species.

Kumil Tree - timber value tree is one of the best component of Agro forestry



See the Girth & density of the canopy of Malaivembu timber in a 4 years period

The fundamental component of the agricultural system is the soil.

Soil is one of the most diverse habitats on earth and contains diverse living organisms, including microorganisms such as bacteria and fungi, and macro-organisms such as worms, mites, ants, and spiders.

Mulching of crop waste and residue



Soil organisms provide essential resources for the sustainable functioning of agricultural ecosystems Live mulch inside the farm enriches the organic matter content / humus in the soil

Organic matter is the key component of the soil



One square metre of Soil may contain more than 1000 species of invertebrates and the diversity of microorganisms .

We having 40 species of plants & Tree species in Ravi's farm.

To create this Biodiversity in our farm, everything should be left it as such and effective rainwater harvesting – as like in forest.



Decomposition of Banana crop wastes by the action of Termites

Banana is the crop ,which gives high biomass, for easy & quick decomposition ,due to its succulent plant parts and it is a good source for microbes and it is a good feed for earthworm multiplication





Soil organisms like earthworms, termites and other burrowing organisms mix the upper layers, redistributing nutrients and increasing soil aeration by opening the soil micro & macro pores ,it will also increases water infiltration





Habitat of ants and its population inside the farm to develop below ground biodiversity



Living soil shows the Diversity of organisms in the farm



Habitat for Wild life in the farm shows the Healthy Ecosystem

Creation of forest gives life for various Species-Spiders Web





Integration of various fodder crops to integrate Cattle & Goat rearing

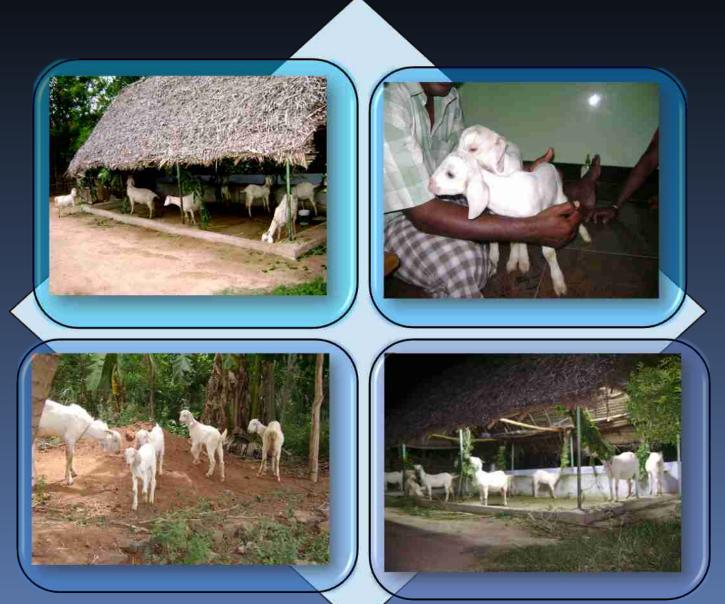
Fodder grasses like cumbu napier grass, muyal masal,vellimasal, Glytoria ternecia in the farm

Selection and rearing of native breed of buffaloes for Sustainable

farming



Telecheri Goat Rearing for Sustainable income



Benefits of Biodiversity rich Agroforestry

Environmental Benefits

- ✓ Needs very less water (i.e) only 1/3 quantity is sufficient for this farming.
- Regulation of pests and diseases;
- More efficient recycling of nutrients by deep rooted trees
- ✓ Better protection of ecological systems
- \checkmark improvement of micro climate inside the farm
- ✓ Improvement of soil organic matter
- \checkmark Maintenance of soil fertility and biota; and
- \checkmark Pollination by bees and other wildlife etc.,

Economic benefits

- No tillage activities so man power requires only for collection of Produce.
- ✓ No incidence of total crop failure, and
- A sustainable income pays way for self reliant farming.
- ✓ Weekly income from fruits & vegetables-Rs.1500 /-
- ✓ Bimonthly Income from coconut Cattle & Goat -Rs. 14 to 16,000/-
- ✓ Timber value of the trees in 6 years period-Rs.4,00000/-

THANK YOU