ICRAF-INREMP
Brochure No. 1



AGROFORESTRY 101:
Basic principles and practices

What is agroforestry?

Agroforestry is defined as the "sustainable management of land, which increases their productivity by properly combining agricultural crops with forest crops simultaneously or sequentially over time through the application of management practices which are compatible with the local climate, topography and slope." (Philippine Official Reference for Forest–Related Terms and Definition)

Why agroforestry?

It offers many socio-economic benefits for land-users such as:

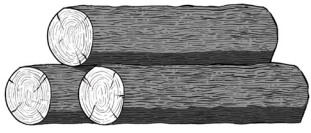
- **Providing basic needs** like food, fuelwood, and medicine





- **Producing outputs that can serve as another livelihood opportunity** for land-users; for example, fruits and timber for sale





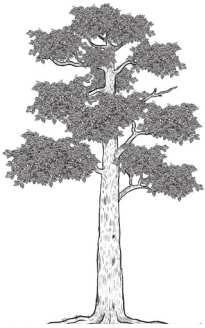
- **Enhancing crop yield** by improving the fertility and productivity of the soil
- **Boosting ecotourism** by adding aesthetic value to the area

Agroforestry also have benefits for the environment since trees integrated on farms can:

- Store carbon, therefore **improving the air quality and temperature**
- **Prevent soil erosion**; and
- **Conserve water** and its quality.

What is in an agroforestry system?

1. **Trees** which may include those that produce fruit, fodder, or timber, or assists in soil fertility replenishment

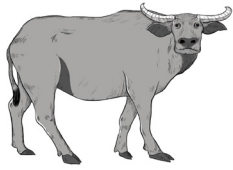




2. **Agricultural crops** like grains, rootstock, and flowers



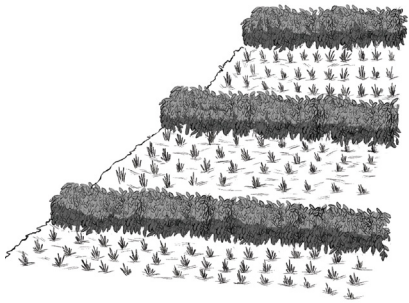
3. **Livestock** which can provide draft power for farm work or those that produce food like meat and eggs



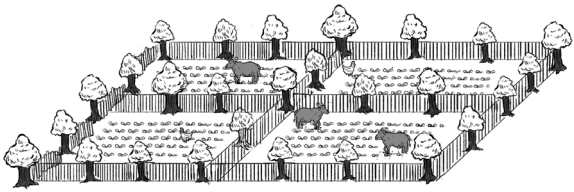
How is agroforestry usually practiced?

Some examples of agroforestry as practiced:

Alley cropping. Contours are established at a certain distance, usually 4 to 6 m, and are planted with grass or woody species. The spaces in between contours, called alleys, are planted with agricultural crops.



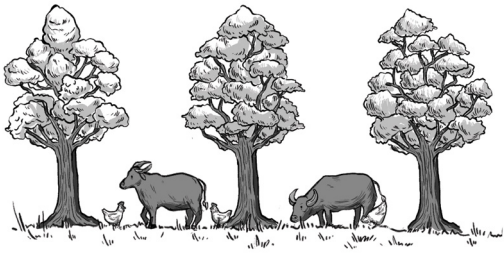
Trees along farm boundaries. Trees are planted along farm boundaries either as markers, live fences, posts for barbed wires, or windbreaks.



Multi-strata system. In this practice, crop components occupy various canopy levels, where the upper layers are occupied by trees which provide partial shade to the lower layers.



Tree-Crop grazing system. Animals like cattle, sheep, and cows, freely graze underneath mature tree plantation, which are composed of either woody or fruit trees.



Other considerations in practicing agroforestry

In designing an agroforestry farm, also consider the following:

Management or function. Ask yourself why you want to practice agroforestry? Is it to provide food for your livestock?

To produce food for your family? To gain additional sources of livelihood?

State or interaction. Determine how the different components of your agroforestry farm will interact. Is it to complement or to supplement the other components? Will certain crops and trees compete for resources?

Arrangement. This includes both spatial or physical arrangement of components and the temporal or time-based arrangement. Will you establish contours and plant the woody species along it while planting agricultural crops in the alleys?

This brochure is brought to you by World Agroforestry for the Integrated Natural Resources and Environmental Management Project (INREMP).

INREMP is an initiative funded by the Asian Development Bank and the Global Environment Facility, with substantial contribution from the Government of the Philippines, which aims to reverse the effects of unsustainable watershed management in four upper river basins (URB) in the country, namely Bukidnon URB, Chico URB, Lake Lanao River Basin, and Wahig-Inabanga River Basin.

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