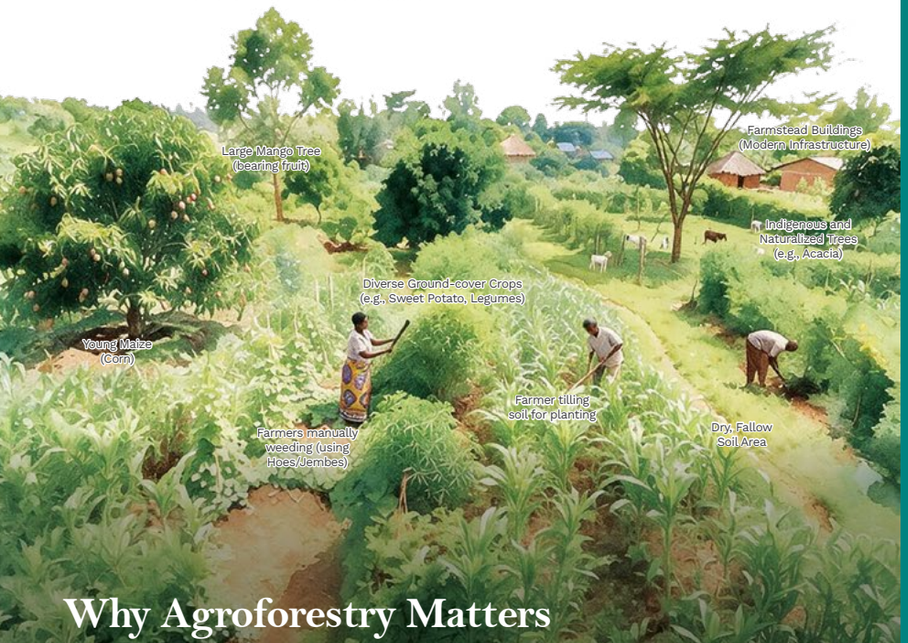
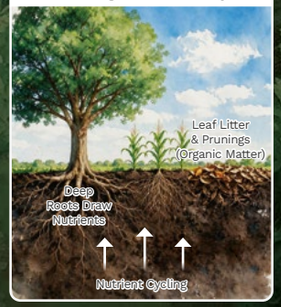
What Is Agroforestry?

Agroforestry is the practice of integrating **trees, shrubs**, and **crops** on the same land to improve productivity and environmental health.

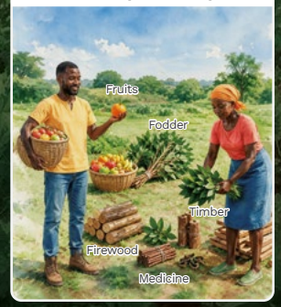


Why Agroforestry Matters

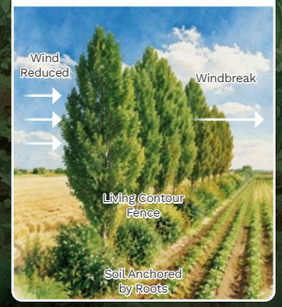
1. Provides long term soil fertility



2. Produces multiple valuable products



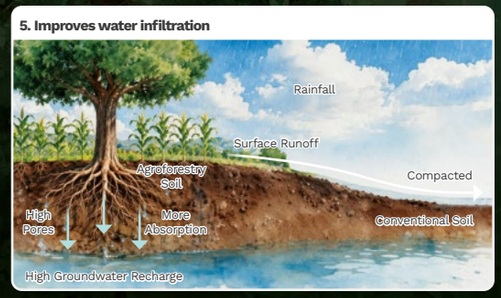
3. Reduces wind and water erosion



4. Creates habitat for beneficial insects and birds



5. Improves water infiltration



Common Agroforestry Tree Options

NITROGEN FIXING

Improve Soil Fertility, Provide Green Manure & Fodder



Gliricidia sepium *(Madre de Cacao)*



Sesbania sesban *(Egyptian Rattle Pod / Sesbania)*



Leucaena *(Leucaena leucocephala)*

- Green Manure
- Fast-growing Biomass
- High Protein Fodder
- Good for Reforestation
- Fuelwood
- Living Fence

FRUIT TREES

Provide Fresh Food, Income, and Ecological Benefits



Mango *(Mangifera indica)*



Avocado *(Persea americana)*



Citrus *(Rutaceae)*



Banana *(Musa × paradisiaca)*

- Sweet edible fruit for local consumption
- Nutritious
- High-Value Crop

BOUNDARY TREES

Define boundaries, create windbreaks, and useful products



Grevillea robusta *(Silver Oak / Roble australiano)*

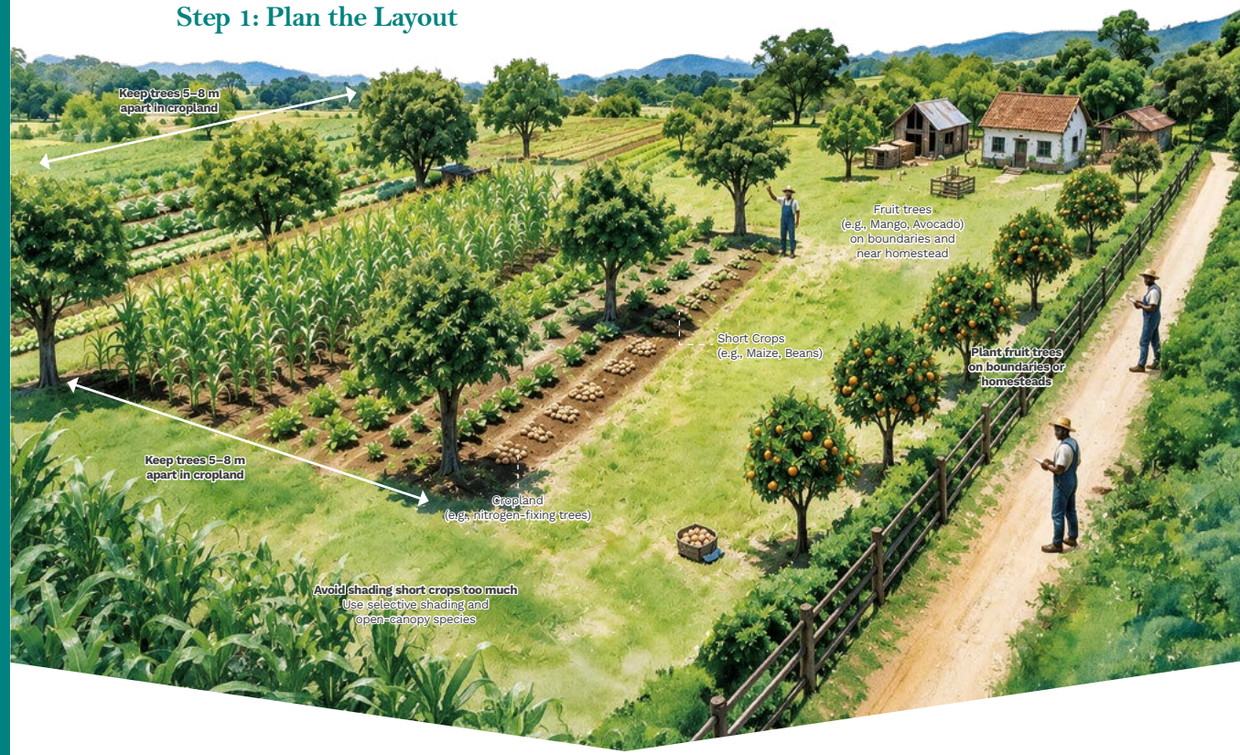


Moringa oleifera *(Miracle Tree / Árbol milagroso)*

- Timber production (Construction & Furniture)
- Windbreak
- Firewood
- Highly Nutritious Leaves & Pods
- Medicine
- Water Purification
- Living Fence

How to Establish Agroforestry (Step-by-Step)

Step 1: Plan the Layout



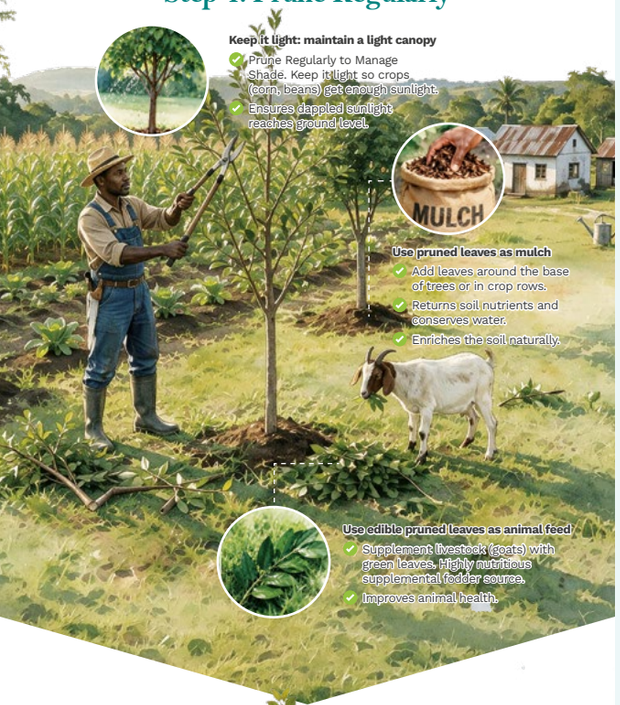
Step 2: Prepare Planting Holes



Step 3: Plant the Tree Seedlings



Step 4: Prune Regularly



Keep it light: maintain a light canopy

- Prune Regularly to Manage Shade. Keep it light so crops (corn, beans) get enough sunlight.
- Ensures dappled sunlight reaches ground level.

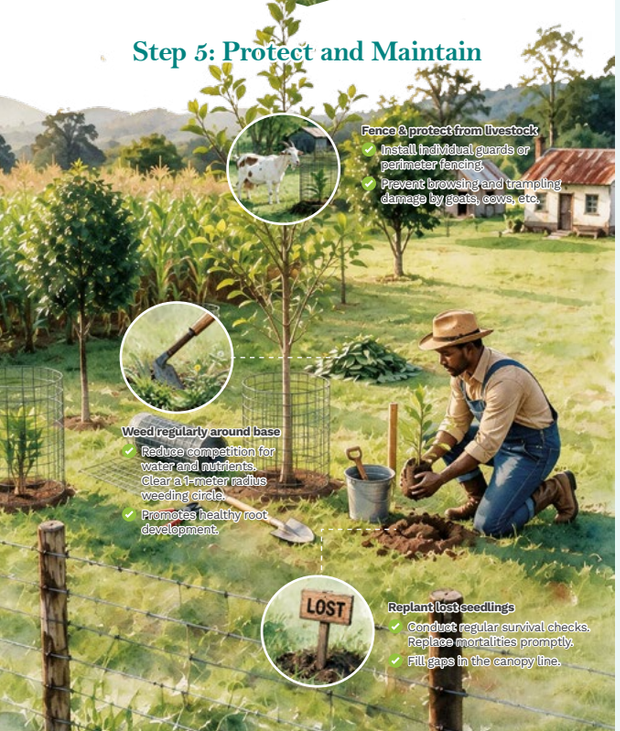
Use pruned leaves as mulch

- Add leaves around the base of trees or in crop rows.
- Returns soil nutrients and conserves water.
- Enriches the soil naturally.

Use edible pruned leaves as animal feed

- Supplement livestock (goats) with green leaves. Highly nutritious supplemental fodder source.
- Improves animal health.

Step 5: Protect and Maintain



Fence & protect from livestock

- Install individual guards or perimeter fencing.
- Prevent browsing and trampling damage by goats, cows, etc.

Weed regularly around base

- Reduce competition for water and nutrients. Clear a 1-meter radius weeding circle.
- Promotes healthy root development.

Replant lost seedlings

- Conduct regular survival checks. Replace mortalities promptly.
- Fill gaps in the canopy line.

Community Roles for Management

TREE COMMITTEES/CFAs

Maintain a **community nursery** (grafted fruit; N fixers like Gliricidia/Sesbania/Leucaena); coordinate seedling distribution and training on pruning/grafting



GRAZING GROUPS

Agree on **seasonal grazing plans** to protect young trees (e.g., cut and carry fodder near seedlings)



WOMEN & YOUTH ENTERPRISES

Lead **fruit processing**, tree seed sales, and pruning service groups

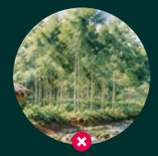


LOCAL LEADERS

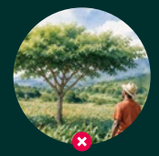
Enforce **no-cut zones** and permit systems for fuelwood pruning (not trunk cutting)



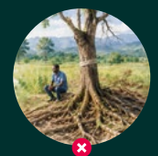
What not to do



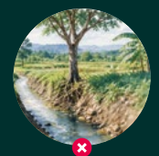
Do not plant dense, fast growing **exotics that become invasive** or dry soils (e.g., eucalypts in sensitive water zones).



Do not skip **pruning**—excess shade will depress crop yields and cause rejection of trees by farmers.



Do not ring bark or top severely in dry seasons (tree stress/ mortality).



Do not plant trees directly on irrigation canals/terraces where **roots undermine structures.**

Community Success Indicators



>80% seedling survival after the first dry season



Regular **harvest of prunings/ fodder/fuelwood** without degrading tree vigor



Increased soil organic matter (richer, darker topsoil; more leaf litter)



Reduced wind damage and **less topsoil** loss across fields



New or improved **household income** streams from fruits, poles, or tree products

Monitoring & Maintenance Checklist

QUARTERLY (FIRST 2 YEARS)

- Count **survival** per block; replant where survival <80%.
- Check **browse damage**; repair guards/fences.
- Inspect **pruning quality** (retain central leader if needed; balanced canopy).



PRE & POST RAINY SEASON

- Mulch top up; basin weeding; termite checks.
- Audit **species mix**—add N fixers if leaf litter is low.



ANNUALLY

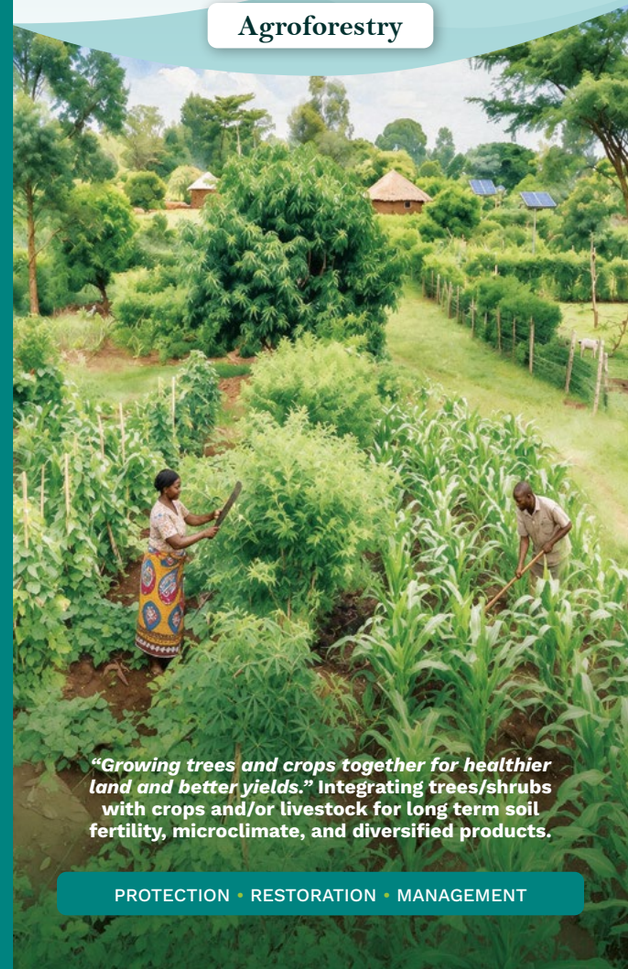
- Track **yields** (fruit/ fuelwood/fodder) and **crop performance** under/near trees.



The Nature Conservancy

Community Practical Field Guide for Agricultural BMPs

Agroforestry



"Growing trees and crops together for healthier land and better yields." **Integrating trees/shrubs with crops and/or livestock for long term soil fertility, microclimate, and diversified products.**

PROTECTION • RESTORATION • MANAGEMENT