

Disadvantages :

- Reduce the effective area for production
- Vulnerability to extreme event such as strong winds/typhoons



Acceptance/Adoption :

- Some land-user families have implemented the practice with external material support. The technology is very transparent but there is a little trend towards spontaneous adaptation of technology. The problem is that the farmer wants to be spoon-fed with this technology.

PhilCAT-SLM



Bureau of Agricultural Research



Bureau of Soils and Water Management



“Development of Decision Support Tools on Sustainable Land Management (SLM) as a Key to Address Abiotic Stresses in Areas Vulnerable to Climate Change”



TREES AS BUFFER ZONES

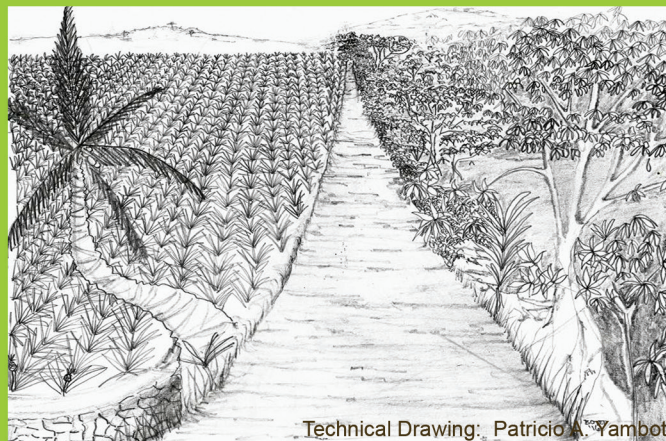
Buffer zones are structures established to prevent pest from crossing in between blocks.

What is Buffer Zone?

Buffer zone is an area that is sustainably managed to facilitate the protection/conservation of threatened resources. It also provides shelter/habitat for wildlife species such as birds and temporary shade for laborer during rest time. It reduces wind velocity, prevents soil erosion, and traps carbon dioxide emission. The buffer zone also adds to the aesthetic value of the plantation.

How to Establish Buffer Zone?

- Search for strategic location (e.g. along roads, between blocks, boundaries or in scattered areas) where you can establish buffer zones.
- Prior to planting, grass brushing is done followed by hole digging.
- Maintenance in the area includes brushing of grasses and pruning of the canopy by 5-6 labourers.



Other Functions :

Main Technical Functions

- control of raindrop splash
- control of dispersed runoff: impede / retard
- stabilization of soil (e.g. by tree roots against land slides)
- increase in nutrient availability (supply, recycling)
- increase of infiltration
- increase / maintain water stored in soil
- increase of groundwater level / recharge of groundwater
- reduction in wind speed
- increase of biomass (quantity)
- improvement in biodiversity

Beneficial Effects :

Production and Socio-Economic Benefits

- Improved conservation/ erosion knowledge
- Improved cultural opportunities

Off-Site Benefits

- Reduced downstream siltation
- Reduced wind transported sediments
- Reduced damage on neighboring fields

Ecological Benefits

- Reduced surface runoff
- Reduced emission of carbon and greenhouse gases
- Increased/maintained habitat diversity
- Improved harvesting/collection of water
- Increased soil moisture
- Improved excess water drainage
- Reduced hazard towards adverse events
- Reduced wind velocity
- Improved soil cover
- Increased biomass above ground Carbon
- Increased soil organic matter / below ground Carbon
- Reduced soil loss
- Increased animal diversity
- Increased plant diversity
- Increased beneficial species
- Serves as temporary shade for laborers/workers

