

ORGANIC AGROFORESTRY: CONTRIBUTIONS TO CLIMATE CHANGE ADAPTATION AND MITIGATION

Agroforestry is an agricultural practice that integrates trees and shrubs with crops and/or livestock. Traditional examples include the “dehesa” in Spain, where livestock grazes under oak trees; “Streuobst” orchards in central Europe with tall fruit trees above pasture; or hedges and trees on cropland.

Today, alley cropping is gaining attention as modern agroforestry system that delivers environmental and socio-economic benefits. **Agroforestry is a powerful strategy for both mitigating climate change and adapting farming systems to its impacts.**

Through its systemic and multiple beneficial agroecological functions, agroforestry aligns well with the holistic approach of organic agriculture. It contributes to organic farming goals and principles on farm system level and beyond, adding to its resilience and overall sustainability.



CLIMATE CHANGE ADAPTATION AND BIODIVERSITY

Protects crops and animals from extreme weather events (e.g. drought or heavy rain)

Increases biodiversity by enhancing habitat, combined with the absence of synthetic pesticides in organic farming

Improves natural pest control by fostering beneficial insects and providing natural barriers for pest expansion



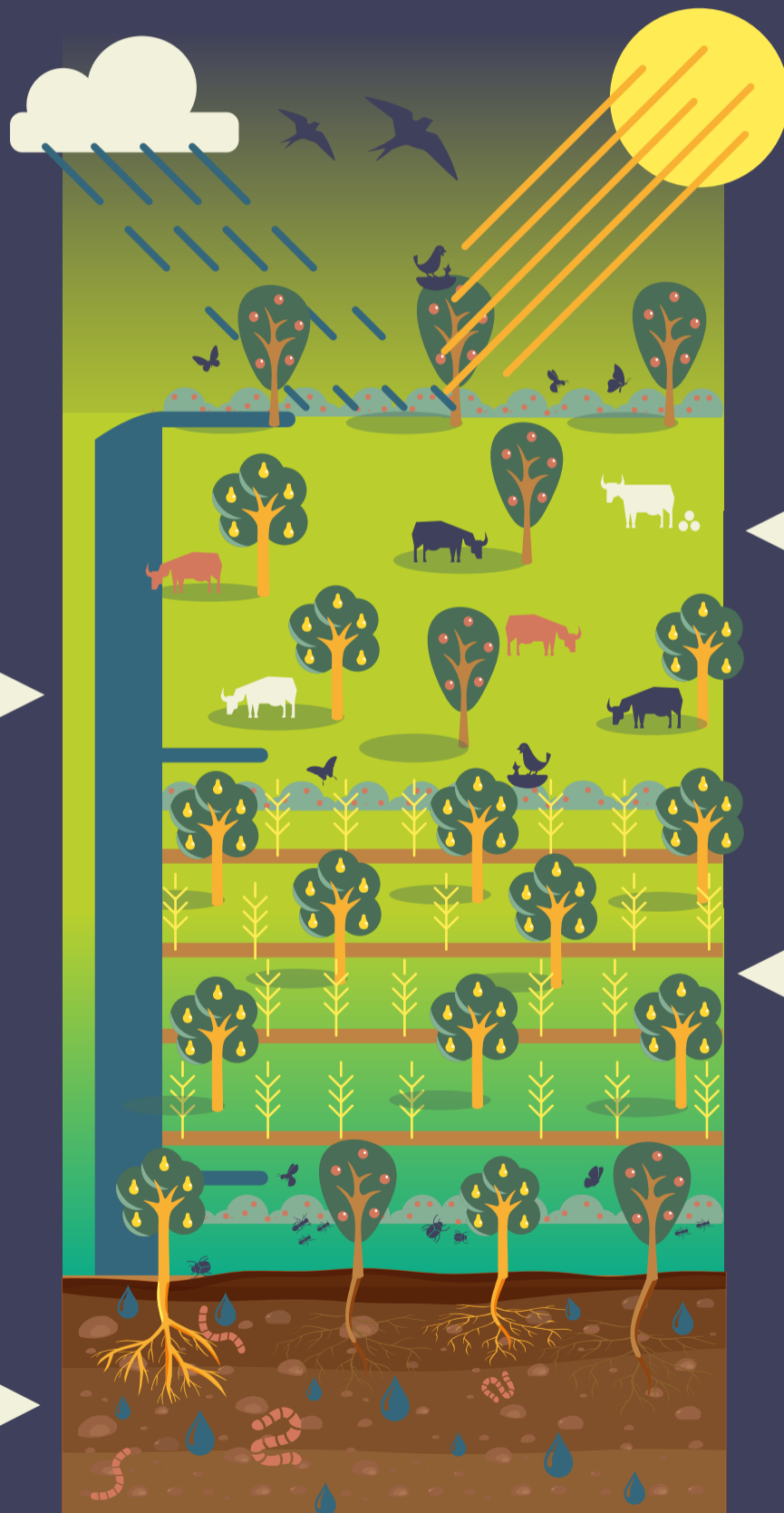
SOIL HEALTH AND CARBON STOCK

Improves soil quality

Increases soil carbon sequestration and carbon stock in tree biomass

Prevents erosion, protecting valuable organic topsoil

Reduces nitrogen leaching and runoffs as well as improves water quality



LIVESTOCK AND ANIMAL WELFARE

Increases animal welfare by providing a more natural environment, in line with organic livestock keeping regulations

Provides diverse forage for livestock from trees on pastures



FARM RESILIENCE AND ECONOMICS

Increases farm resilience through temporal and spatial diversification of products

Helps narrow the yield gap with conventional agriculture by optimal use of limited resources

Adds value through tree products (e.g. fruits and nuts), benefiting from premium prices of organic products and its value chains