

MODERN AGROFORESTRY SYSTEMS

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What are agroforestry systems?

They are a combination of woody vegetation (trees and / or shrubs) in agricultural or livestock production systems. The objective is to obtain benefits from ecological and economic interactions (AGFORWARD, 2017).

Main types of agroforestry systems

- Silvoables: annual or perennial agricultural crops
- pasture forestry (trees in pasture or pasture under the trees)

Basics of agroforestry systems

- a) More efficient and integrative use of available resources (electricity, water, soil) throughout the year.
- b) Positive interactions between agriculture, livestock and woody vegetation (microclimate improvements, indirect fertilization) more relevant than the negative ones (shadow).

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Productive and economic evaluation of agroforestry systems

Globally (cumulative production): more productive and profitable than simple systems.

Increase in productivity: 20-30% (Graves et al, 2007; Colomb, 2009).

Environmental evaluation of agroforestry systems

- Filtered agricultural leach (-46%; Palma et al, 2006).
- Less erosion by wind and rain (-78%; Palma et al, 2006).
- Sequestration and carbon fixation in the soil; more organic matter.
- More resilient and connected agrosystems (Rollin et al, 2013).
- More floral diversity and fauna (Woodcock et al, 2010).
- Prevention of forest fires with silvopasciculture.
- Compatibility (very interesting) with ecological production.

Social evaluation of agroforestry systems

- Improvement of the farmer's perception.
- Increase in the heritage value of the land.
- Landscape improvement.

Legal framework increasingly favorable

Growing consideration in the CAP since 2005.

Main institutions, to know more:

European agroforestry federation (www.agroforestry.eu)

Spanish association of agroforestry systems (www.agfeagroforestry.eu)

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