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**POPULAR ARTICLE**

**Global agroforestry and its data source**

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Agroforestry globally integrates trees with crops/livestock, covering vast agricultural lands (over 1 billion hectares), and offers climate resilience, biodiversity, and diversified income through systems like shaded coffee, home gardens, windbreaks, and silvopasture (e.g., Spain's dehesas), providing food, timber, and ecosystem services, vital for smallholder farmers and sustainable food security. Key practices range from traditional tropical home gardens with multiple species to modern windbreaks and riparian buffers, balancing production with environmental health.

**Key aspects of global agroforestry**

**Widespread adoption:** It's practiced on over 1 billion hectares worldwide, estimated at 43% of agricultural land, with significant presence in Europe, Asia, and the tropics.

**Diverse systems:** Includes shaded coffee/cocoa, silvopasture (trees with livestock), alley cropping (trees in rows with crops), windbreaks, and complex tropical home gardens.

**Benefits:** Enhances food security, diversifies income, improves soil health, conserves water, boosts biodiversity, and sequesters carbon, helping fight climate change.

**Traditional roots:** Indigenous communities have used these millennia-old practices, now gaining traction globally for sustainability.

**Examples of practices**

**Tropical home gardens:** Small plots with many tree and crop species (e.g., Central America).

**Shade-grown crops:** Coffee and cacao grown under tree canopies.

**Silvopastoral systems:** Sheep grazing under cork oaks (montados/dehesas) in Portugal/Spain.

**Windbreaks/Shelterbelts:** Rows of trees protecting fields from wind.

**Riparian buffers:** Vegetation along waterways to filter runoff and stabilize banks.

**Role in sustainability**

**Climate change:** Carbon sequestration and adaptation by reducing heat stress.

**Resilience:** Creates diversified, resilient food systems for smallholders.

**Ecosystem services:** Protects water cycles and soil integrity.

**Global initiatives**

Organizations like the World Agroforestry (ICRAF) and FAO promote research and implementation, with global offices in many countries, supporting the transformation towards more sustainable agriculture.

**Key components of global agroforestry data**

**Area and adoption:** Agroforestry covers over 40% of agricultural land globally, supporting 900 million people, with 78% in tropics.

**Systems and practices:** Common systems include combining crops with trees (agrisilviculture, agri-horticulture, alley cropping) and integrating livestock (silvopasture).

**Benefits:** Enhances nutrition, biodiversity (mimicking forests), environmental health (carbon sequestration), and rural livelihoods, aligning with Sustainable Development Goals (SDGs).

**Species and tools:** Databases like the Agroforestry Database and Switchboard catalogue tree species by function (timber, food, fodder) for specific sites.

**Market:** The global agroforestry market shows significant growth, projected to reach over \$194 billion by 2033.

**Examples of data source**

**Spherical Insights:** Provides market forecasts (CAGR 6.93%, reaching \$194.5B by 2033).

NITI Aayog Report (India): Details India's 28.42 Mha under agroforestry, varied by agro-climatic zones.

**CEEW (India):** Describes Indian systems like Agri-silvi-horticulture, boundary plantations, etc..

Where to Find "Tables"

**World Agroforestry (ICRAF):** Offers resources and databases for species and practices.

FAO (Food and Agriculture Organization): Provides data on global adoption and recognizes traditional systems like the Amazonian Chakra.

**Scientific papers:** Research articles in journals often present data in tables, analyzing soil carbon, biodiversity, and yield impacts.