

# Carbon Farming

## Agroforestry and Soil Data

Carbon farming is a term for a variety of agricultural practices that sequester and store atmospheric carbon into the soil and in the roots, wood and leaves of plants.

### Central Traits of Agroforestry Practices

**Intentional**  
combinations of trees with crops and/or livestock—a whole unit, rather than as individual elements

**Intensive**  
management—to maintain their productive and protective functions

**Interactive**  
between the components—support the biological and physical interactions among tree, crop and animal components

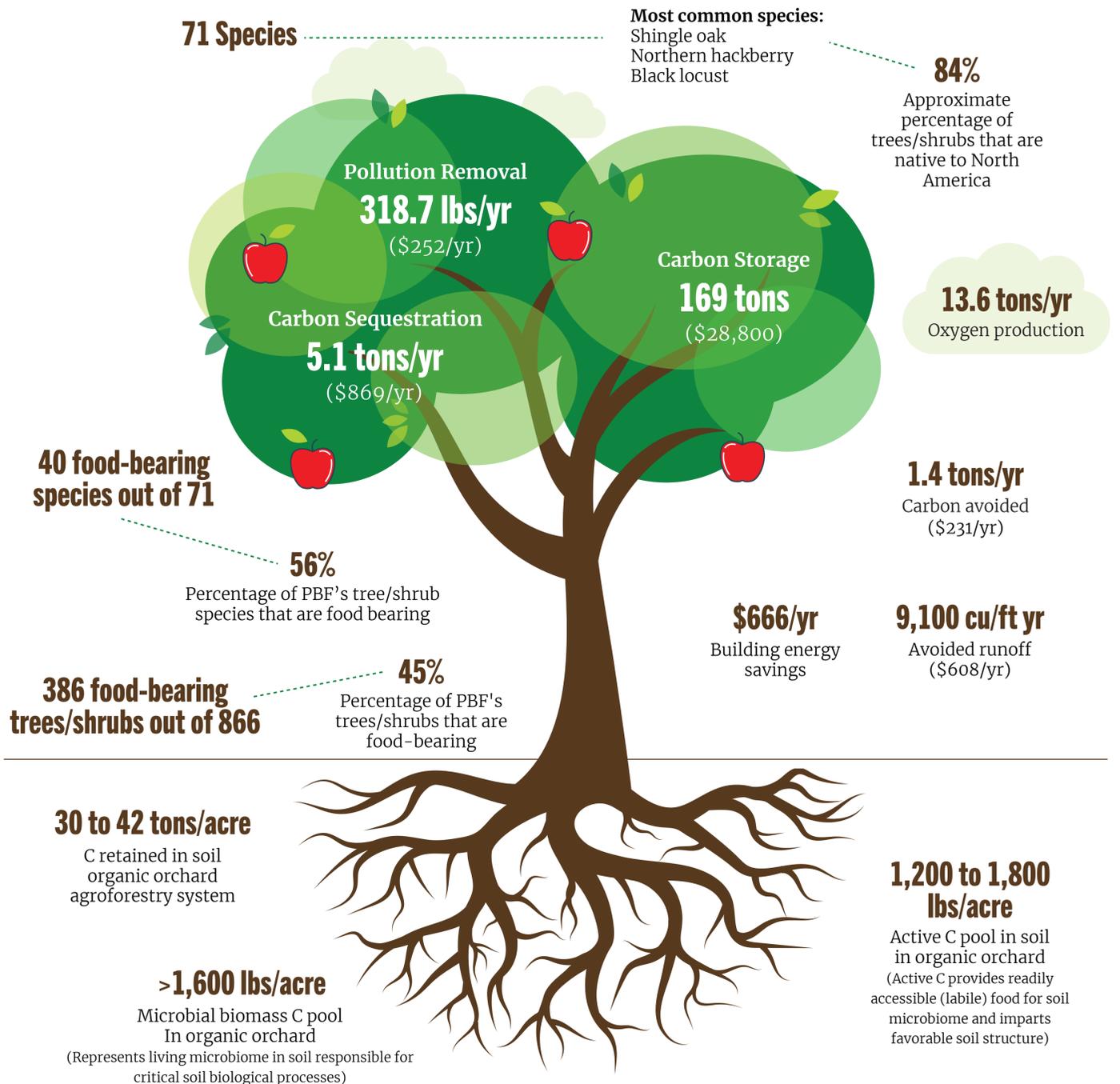
**Integrated**  
agroecosystem—components are structurally and functionally combined into an integrated management system

**Interrelational**  
maintains soil health, promotes soil microbial diversity, cycles nutrients, improves soil structure, assures provision of ecosystem services

## Prairie Birthday Farm (PBF) Key Statistics:

### West Central Missouri, Clay County

**866 trees/shrubs on 14.1 acres**



**Other information to consider:** 1. Biochar amendment in organic orchard enhanced both SOC and AC by about 33%  
2. All C pools were higher in the agroforestry system by about 30% and 50% relative to adjacent unmanaged cool-season grass and row crop field sites, respectively  
3. Active C (AC) and microbial biomass C (MBC) are pools within the total soil organic C (SOC) content



Photos: Pawpaw (*Asimina triloba*), Spicebush (*Lindera benzoin*), Hazelnut (*Corylus americana*), Warren Pear (*Pyrus communis* x), Pecan (*Carya illinoensis*)



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