

Agroforestry: An Introduction

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The United States Department of Agriculture (USDA) defines Agroforestry as “the intentional integration of trees or shrubs with crop and animal production to create environmental, economic, and social benefits” (USDA, 2019). Agroforestry practices allow farmers and landowners to produce additional products helping to diversify their operations. Many agroforestry practices are intended to develop healthy soils, improve water quality, and increase biodiversity.

Agroforestry Criteria

There are four criteria that characterize agroforestry and are used to determine if a practice is considered an agroforestry practice. The criteria are Intentional, Intensive, Integrated and Interactive. If a practice adheres to the 4 ‘I’ criteria, then it may be considered an agroforestry practice (University of Missouri, 2018).

Intentional

The mixture of trees, plants and/or livestock varieties that is purposefully chosen due to their ability to work together to produce a mutual benefit or be managed collectively is key to successful practices.

Intensive

Agroforestry practices are typically intensively managed to sustain productivity and meet the intended purpose of the landowner. Maintenance of agroforestry practices could include regular pruning, thinning, irrigation and fertilization to ensure optimal functionality.

Integrated

The aspects of the practice are physically and functionally joined into a seamless management practice, designed specifically for each site. Sharing the productive capacity of the land among all crops or animals produced is a critical component in resource management and an indicator of a successful agroforestry practice.

Interactive

The aspects of the agroforestry practices are actively being arranged and manipulated to promote productivity and a healthy ecology among the selected trees, crops and/or animals. Agroforestry practices encourage stewardship, increase biodiversity and provide conservation benefits.

Accepted Agroforestry Practices

There are 5 accepted agroforestry practices, each has a corresponding factsheet providing additional information. They are briefly listed and defined below:

Forest Farming – incorporating high value specialty crops that are cultivated under the forest canopy. These are typically shade tolerant plants such as: mushrooms, ginseng, pawpaws, etc.

Silvopasture – the combination of cultivated trees and pastureland for livestock. This can be done with either trees for timber or fruit and nut bearing trees.

Alley Cropping – creates alternating rows of trees and crop production. The cultivated trees are grown in wide alleys that provide space for crops production.

Windbreaks – are designed and managed to create 'living' barriers between agricultural activities or to protect agricultural activities from wind, snow livestock, etc.

Riparian and Forest Buffers – are established vegetation areas adjacent to river and streams or in upland areas that are designed to reduce erosion/runoff by stabilizing stream banks and creating areas that excess water may be absorbed.



- The practice includes the production of at least two products.
- The practice is considered perennial and occurs over the course of more than one year.
- It is inherently more ecologically diverse in comparison to singular agricultural activities.
- It is ultimately valued greatest by the landowner or steward.

Characteristics of Agroforestry Practices

- The chosen practice is intentionally included into the farm operation.
- The practice is functionally a good fit for the locality and the human manager.
- The practice is actively managed.

Agroforestry practices can be beneficial to both the landowner and the greater environment as they are holistic in nature and adhere to ecologically sound principles. Any landowner looking to derive greater value from their lands whether through improved economic livelihood or local biodiversity, should consider learning more about and possibly implementing these types of land stewardship practices. (3)

Sources

1. U.S. Department of Agriculture. (2019). Agroforestry Strategic Framework.– Fiscal Years 2019-2024. Retrieved from <https://www.usda.gov/sites/default/files/documents/usda-agroforestry-strategic-framework.pdf>.
2. University of Missouri – The Center for Applied Agroforestry. (2018). Training Manual for Applied Agroforestry Practices 2018 Edition. Retrieved from http://www.centerforagroforestry.org/pubs/training/FullTrainingManual_2018.pdf
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