

## **Indoor and Outdoor Forest Farming for Year-Round Food and Medicine Production, Carbon Sequestration, Soil-Building, and Climate Change Mitigation**

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**Abstract :** The objective at Central Rocky Mountain Permaculture Institute has been to put in practice a sustainable way of life while growing food, medicine, and providing education. This has been done by applying methods of farming such as agroforestry, forest farming, and perennial polycultures. These methods have been found to be regenerative to the environment through carbon sequestration, soil-building, climate change mitigation, and the provision of food security. After 30 years of implementing carbon farming methods, the results are agro-diversity, self-sustaining systems, and a consistent provision of food and medicine. These results are exhibited through polyculture plantings in an outdoor forest garden spanning roughly an acre containing about 200 varieties of fruits, nuts, nitrogen-fixing trees, and medicinal herbs, and two indoor forest garden greenhouses (one Mediterranean and one Tropical) containing about 50 varieties of tropical fruits, beans, herbaceous plants and more. While the climate zone outside the greenhouse is 6, the tropical forest garden greenhouse retains an indoor climate zone of 11 with near-net-zero energy consumption through the use of a climate battery, allowing the greenhouse to serve as a year-round food producer. The effort to source food from the forest gardens is minimal compared to annual crop production. The findings at Central Rocky Mountain Permaculture Institute conclude that agroecological methods are not only beneficial but necessary in order to revive and regenerate the environment and food security.

**Keywords :** agroecology, agroforestry, carbon farming, carbon sequestration, climate battery, food security, forest farming, forest garden, greenhouse, near-net-zero, perennial polycultures

**Conference Title :** ICFFAP 2017 : International Conference on Forest Farming and Agroforestry Practices

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