

Editorial Note for Agriculture and Environment

Shankar B Dandin*

Department of Horticulture/Sericulture/Agrofirestry, University of Horticulture Sciences, Bagalkot, Karnataka, India *Corresponding Author: Shankar B Dandin, Department of Horticulture/Sericulture/Agrofirestry, University of Horticulture Sciences, Bagalkot, Karnataka, India. Received: May 18, 2025; Published: May 26, 2025

Agriculture and environment are the two faces of the same coin and one cannot imagine the progress of agriculture without the background canvas of the environment. It is often said that agriculture is a gamble with monsoons, and monsoons in the broader sense is nothing but the environment. Agriculture, the foundation of civilization, must now evolve to meet the urgent challenges of climate change, ecological degradation, and rural distress. Once a harmonious part of natural cycles, modern industrial agriculture has become a major driver of greenhouse gas emissions, soil degradation, and biodiversity loss. However, this same sector can be transformed into a regenerative force for planetary healing if we shift our focus from extraction to restoration.

The majority of the agricultural operations in all the major agroecological zones of India are designed based on environmental considerations. Annual precipitation(water), soil nature, both chemical, physical, biological, and biodiversity provide basic supports for all the agricultural operations. By adopting nature-positive farming such as agroforestry, regenerative agriculture and organic cultivation, farmers can rebuild soil carbon, conserve water, protect pollinators, and enhance biodiversity. One hectare of well-managed regenerative agriculture can sequester more carbon than it emits, turning farmlands into climate solutions. This opens a new door for farmers for additional benefits from carbon credits.

The changing climate and its uncertainty pose a major threat to biodiversity and, intern the agricultural productivity. Environmental changes leading to aberration have become a regular feature in the present context of the environment. Through scientifically verified carbon farming practices, smallholder farmers can participate in emerging green finance markets. Carbon credits reward them for storing carbon in soil and biomass, offering a powerful incentive to restore degraded lands. When combined with biodiversity credits and payments for ecosystem services, these markets can transform rural livelihoods while promoting environmental stewardship.

India's strength lies in its diverse agroecosystems, traditional ecological wisdom and rich agrobiodiversity. By integrating carbon credit mechanisms with nature-based agriculture, we cannot only achieve food and nutritional security but also catalyse a green economic revolution rooted in our soil, our farmers, and our future. Hence, reimagining Agriculture for a Resilient Environment and a Greener Economy assumes importance.