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Editorial Note on Ecological Intensification

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Editorial

Because it helps control populations of pests and diseases that thrive on plants, plant diversity is crucial. Because resources like light, water, and nutrients are utilised more effectively when species with differing resource requirements grow together, diversity also has a tendency to increase productivity. It is crucial for vegetation to be perennial because long-lived plants not only prevent soil erosion but also create and collect organic materials. Deep-rooted perennial plants get access to water and nutrients that annual plants cannot. The Land Institute seeks to combine the advantages of diversity found in nature through the intercrop systems, often known as polycultures. By utilising ecological processes, ecological intensification eliminates the need for synthetic inputs like pesticides and fertilisers [1].

The combination of perennially and variety in grain agriculture, according to researchers, would enable degrees of ecological intensification that were previously impossible. These challenges include catastrophic pest outbreaks, soil erosion, nutrient leakage, and soil organic matter loss. Sub-Saharan Africa's (SSA) woodlands and forests make a substantial contribution to the continent's economic development and environmental security. These ecosystems' resources are important sources of income for the rural populations of Africa. Woodland and forest ecosystem degradation has been on the rise as a result of unsustainable farming methods and an increase in population in SSA. The creation and use of sustainable models are necessary to address the existing unsustainable exploitation of woody resources, and ecological intensification (EI) offers a foundation for that exploitation [2].

Through habitat modification and landscape homogenization, human ownership of ecosystems is affecting plant-pollinator communities and pollination function globally. Semi-natural habitats are being destroyed and degraded by conversion to agriculture, and landscape structure and quality are homogenised by traditional land-use intensification (such as industrial management of large-scale monocultures with heavy chemical inputs). Together, these anthropogenic processes lessen population connection, deplete floral and nesting resources, and threaten pollinator diversity and abundance, which in turn threatens pollination services. By encouraging biodiversity beneficial to agricultural production through management practises like intercropping, crop rotations, farm-level diversification, and lessened agrochemical use, ecological intensification of agriculture represents a strategic alternative to mitigate these drivers of pollinator decline and support sustainable food production [3].

We assess its potential for addressing and reversing land use and management patterns that are now harming pollinator communities and might be resulting in widespread pollination shortages. Numerous ecological intensification strategies, according to our research, can help to mitigate the factors that are causing pollinator decrease. We explore strategies for promoting ecological intensification in agricultural policy and practise in light of our findings, which suggest it as a potential remedy for pollinator losses. Three production elements were substantially to blame for the higher production that farmers were able to attain, even if suitable government policies and social conditions were also necessary to encourage intensification. These included I brand-new "miracle" wheat and rice varieties introduced in the middle to late 1960s that had higher harvest indexes (HI; the ratio of grain to total crop biomass), shorter statures, and increased stalk tensile strength that reduced susceptibility to lodging, as well as steady advancements in maize hybrids; (ii) increased application of N fertiliser, which allowed greater net primary production without worrying about lodging; and (iii) significant investments in irrigation [4].

Landrace genotypes only permitted one crop harvest annually, but early maturation permitted two, and occasionally three, cereal crop harvests on the same plot of land. Where soil, climate, and water permit intensified farming, annual double-crop systems with rice, wheat, and maize are now the predominant cropping system. Therefore, there is little room to raise cropping intensity further. The rate of continued irrigated area expansion has significantly reduced recently, and water resources and environmental concerns are also limiting future opportunities for expanding irrigated land [5].

Conflict of Interest

None.

References

1. Brockerhoff, Eckehard G. "Role of eucalypt and other planted forests in biodiversity conservation and the provision of biodiversity-related ecosystem services." *Forest Ecol Manag* 301 (2013): 43-50.
2. Bonnesoeur, Vivien. "Impacts of forests and forestation on hydrological services in the Andes: A systematic review." *Forest Ecol Manag* 433 (2019): 569-584.
3. Miranda, Alejandro. "Native forest loss in the Chilean biodiversity hotspot: Revealing the evidence." *Reg Environ Change* 17 (2017): 285-297.
4. Gómez-González, Susana. "Portugal and Chile: Longing for sustainable forestry while rising from the ashes." *Environ Sci Policy* 81 (2018):104-107.
5. Ojeda, Fernando. "Pine afforestation, herriza and wildfire: A tale of soil erosion and biodiversity loss in the Mediterranean region1." *Inter J Wildland Fire* 29 (2020):1142-1146.

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