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Fostering Local Seed System for Sustainable Horticulture in Myanmar: Perception of Hybrid and Local Seeds Utilization for Sustaining Agroecology in Myanmar

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Abstract

Horticulture sector in Myanmar has seen growing, partly due to the adoption of imported hybrid seeds for higher yields, better disease resistance and market preference. However, their widespread use comes with several ecological risks that could undermine the long-term sustainability of crop production in Myanmar. Long-term impacts on the sustainability including seed sovereignty and agroecosystems including losses of genetic resources and local varieties increased use of agro-chemicals. This study examines the ecological and economic implications of hybrid and local seed adoption in major horticultural regions of Myanmar, including Shan State, Mandalay Region, and the Dry Zone to contribute in promotion of ecological farming practices and advocacy for Sustainable Agriculture Development in Myanmar.

Results indicate that while hybrid seeds significantly increase yields and market demand, their adoption is associated with higher production costs and increased use of chemical fertilizers and pesticides. Statistical analysis shows significant positive correlations between hybrid seed use, increased pest pressure and biodiversity decline. The findings suggest that excessive dependence on imported hybrid seeds may undermine ecological resilience. Strengthening indigenous seed systems and promoting agroecological practices are recommended to ensure sustainable horticultural development in Myanmar.