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Concept of agroecology in protecting, promoting and conserving natural resources

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DESCRIPTION

Agroecology is a promising integrated and holistic approach to food system transformation, addressing food and agricultural production and commercialization issues systemically within an enabling political environment. Agroecology is the study of how to apply the most efficient ecological processes to agricultural production systems. It is similar to sustainable farming, which is a scientific framework that incorporates human socioeconomic systems and ecological concepts into agricultural operations. Rather than improving unsustainable agricultural practices agroecology seeks to transform agricultural systems by addressing the underlying causes of problems in a holistic manner and providing effective and long-term solutions. Crop diversification, maintaining local genetic diversity, animal integration, soil organic management, water conservation and harvesting and other agro-ecological strategies that reduce vulnerabilities to climate variability understanding the agro-ecological features that underlie traditional agro-ecosystem resilience is critical because they can serve as the foundation for the design of adapted agricultural systems.

The central concept of agroecology is to protect, promote and conserve nature's resources in order to increase agricultural yields in a sustainable manner for our growing global population. Agroecological practices seek to improve the relationship between plants, animals, people and the environment as a whole while also addressing the social and cultural issues required to build a just food system. Sustainable agricultural operations can help preserve and restore critical habitats, protect watersheds and improve soil health and water quality. Increase ecological resilience, particularly in the face of volatile weather conditions.

Improve health and nutrition by eating more diverse, nutritious and fresh foods as well as lowering the incidence of pesticide poisonings and pesticide-related diseases. Conserve biodiversity and natural resources like soil organic matter, water, crop genetic diversity and natural pest enemies increase economic stability by diversifying income sources, spreading labor needs and production over time, and decreasing vulnerability to commodity price swings and reduce reliance on fossil fuels and fossil fuel-based agricultural inputs as well as increase carbon sequestration and water capture in soil to mitigate the effects of climate change. Recycling use local renewable resources whenever possible and keep nutrient and biomass resource cycles as close as possible. Reduce or eliminate reliance on bought-in inputs. The heath of the soil secure and improve soil health and function for better plant growth, particularly by managing organic matter and increasing soil biological activity.

CONCLUSION

Ensure the health and welfare of animals. Many traditional and organic farmers use organic materials on a regular basis to improve soil quality such as animal manures, composts, tree leaves, cover crops and rotation crops that leave a lot of residue etc. Soil Organic Matter (SOM) and its management are central to developing healthy soils with active biological activity and good physical and chemical properties. Small-holder farmers have devised practices that maximize long-term productivity rather than short-term productivity. Inputs are sourced locally, and farm work is done by family members or animals that are fed by local sources. Working within these energy and spatial constraints, smallholder farmers have learned to recognize and use locally available resources for agricultural production. Traditional farmers are innovative, managing and valuing a wide range of products and farming system characteristics (e.g., resilience, food availability) in addition to the yield of a single commodity. This entails

farming that provides not only food, jobs, and economic well-being but also cultural, social, and environmental benefits. Agroecology also safeguards and supports ecosystem services such as pollination, natural pest control, nutrient and water cycling, and erosion control.