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Biodiversity Helps Agriculture Combat Climate Change

Climate change influences biodiversity. At the same time, biodiversity and related ecosystem services play a role which cannot be ignored in climate change and its impact.

In the ecosystem, biodiversity allows carbon elements to be stored and cured in biological processes and bio-physical processes. It is estimated that when compared with the carbon stored in the terrestrial ecosystem, the carbon contained in the atmosphere is negligible. The marine ecosystem can sequester large amounts of carbon through plankton on the sea surface, which is approximately 50% of CO₂ of the global ecosystem. Hence the protection of these ecosystems and crucial biodiversity is very important to the maintaining of the global carbon sequestration function.

Despite the current establishment of a number of mitigating strategies, global climate change is still overwhelming. We must establish a comprehensive and effective coping strategy. Biodiversity can provide many crucial ecosystem services such as nutrient cycling, pest management and pollination, which are very important for maintaining sustainable agricultural production. Researching how to strengthen ecosystem relations, promote ecosystem resilience and help the agricultural ecosystem in providing more products and services is still an important challenge.

Reality has shown that sustainable management through ecosystems can increase production effectively. Protecting and increasing biodiversity in the agricultural system, including above the ground and underground, is the foundation of sustainable farming methods. These measures will also improve the biodiversity of neighbouring areas of the farming environment - such as waters and the wider agricultural land.

Apart from having a direct impact on production, in the long run, climate change can also threaten the structure of biodiversity, thereby threatening food security. The loss of wild species undoubtedly brings uncertain factors to future food security issues. Faced with climate change, wild species might not be able to adapt quickly and survive,

hence the use of farm conservation and gene banks are necessary to protect the endangered biodiversity.

People have to implement some measures to protect and improve the relevant of the agricultural ecosystem, and promote a long-term stable development. The government and other stakeholders should provide financial support for the sustainable development of ecosystem services and encourage the use of eco-agricultural methods, fostering an enabling policy environment is the key to the success of these measures.

Encouraging the adoption of ecosystem-based remedies, developing biodiversity as well as related ecosystem services should be the main adjustment plan and method for a wider scale promotion and usage of the sustainable ecosystem management method, raising society's adaptability.

The above method can bring numerous benefits to biodiversity and society, including reducing flooding, increasing carbon deposition and storage, as well as improving the livelihood of local residents.