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Special Issue: Crop Diversity and Sustainable Agriculture

FRONT COVER

Crop diversity is one of the important pathways for sustainable agricultural development and can be achieved by simultaneously growing a range of crop species or other plant species on farmland. Crop diversity can be improved by farmers locally through intercropping, crop rotations and cover crops, as well as by increasing plant diversity in non-crop habitats through tree lines, agroforestry, grasslands and flower strips. Crop diversity enhances agroecosystem functioning via increasing crop yields, stabilizing interannual yields, using resources efficiently, controlling crop diseases and pests, and enhancing aboveground and belowground biodiversity of other biological taxa when crop species are appropriately combined. The efficient use of resources can save mineral fertilizer inputs, reduce environmental pollution risks and greenhouse gas emissions caused by agriculture, thus mitigating global climate change. Increased above- and belowground biodiversity of other taxa can benefit ecosystem services (i.e., protection of pollinators and other beneficial insects) and can promote soil health via improved diversity of soil macro- and microorganisms. Intercropping can benefit human food security and agricultural sustainability. Thus, if intercropping is widely used globally, it will make a strong contribution to the achievement of the sustainable development goals (SDGs) of United Nations in the agricultural production sector.

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