Biotechnology as Solutions for Agriculture and Conservation

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Abstract

Increasing population and consumption are placing unprecedented demands on agriculture and nature. To meet the global food security and sustainability needs, agriculture must grow substantially while, at the same time, agriculture's environmental footprint must shrink dramatically. The potential contribution from new biotechnology can close 'yield gaps', increasing cropping efficiency, shifting diets and reducing waste. Together, these strategies could double food production while greatly reducing the environmental impacts of agriculture. With increasing yields, we can produce more food from fewer lands and thereby retain larger areas under natural habitats. I will review some of the most promising biotechnology for sustainable agricultural intensification with making space for nature.

Keywords: global food security, sustainable agriculture, agriculture's environmental footprint