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Different Approaches to Increase Productivity and Fertilizer Use Efficiency

Patrick K. Mutuo et al.

Sub-Saharan Africa records the biggest yield gap world over. This happens due to a complex combination of factors, ranging from use of poor germplasm, low soil nutrient status, poor agronomic practices, pests and diseases to poor investments in agriculture. Concerted efforts have been made in developing and testing a number of approaches to overcome these challenges in order to increase crop productivity. However, their widespread application has remained limited. There is evidence that technologies such as plant breeding have now become valuable tools in crop improvement for rapid precision breeding for specific purposes. Several climate resilient agricultural approaches such as conservation agriculture and crop rotations help maintain a healthy agroecosystem. The use of right fertilizers for specific crop and site (not national recommendation approach) are needed to increase crop productivity. These approaches need to be combined with effective integrated pest and disease management systems and increasing water use efficiency in rainfed agriculture. Increasing Africa's agricultural productivity will require multidisciplinary investment including in research and extension, infrastructure, value chains' development; and backed by appropriate policies.



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