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Improving Cereals and Legumes Productivity

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Abstract

Although roughly 60 % to 70 % of the continent’s population is engaged in agriculture, its production cannot feed all Africans. The population of Africa will double in the next centuries to reach 2.5 billion by 2050. Hence, in 2013 alone, Africa imported 56.5 million tons of wheat, maize, and soybean at the cost of 18.8 billion USD. Crops production in Africa play a vital role in their contribution to food security. However, yields are inferior compared to those in other parts of the world. For instance, yield gaps for maize in the different production situations for four selected locations reveal 76 % in Ethiopia, 34 % in China and 48 % in USA. Low productivity in Africa is also related to poor soil fertility and scarce moisture, as well as a variety of insect pests, diseases, and weeds. While moisture scarcity is responsible for up to 60 % of yield losses in some African staple cereals, insect pests inflict annually substantial crop losses. Weather extremes and scarce moisture require more resilient farming systems, and promoting diverse types of cereal and legume crops will help to buffer farming systems. However, improved crop varieties alone will not boost crop productivity unless supplemented with optimum soil, water, and plant management practices as well as the promotion of policies pertaining to inputs, credit, extension, and marketing. Furthermore, biochar and African Dark Earths have been found to improve soil properties and to enhance productivity besides to traditional fertilisers, although their availability and affordability to African farmers remains to be explored. The concept of Integrated Soil Fertility Management (ISFM) has been successfully implemented in some African countries in the Great Lake Region. Some other innovative technologies favourably accepted by farmers are the “Push-pull System” and the System of rice Intensification (SRI) were successfully developed. Our presentation gives some information on the situation of cereals and legumes productivity in Africa in general as well as some strategies developed by stakeholders on field in order to positively impact on productivity and ultimately improves the livelihood of farmers.

Keywords: Agriculture, cereals, legumes