

# FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology



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## FORESIGHT ON EMERGING TECHNOLOGIES AND THE SCIENCE AGENDA FOR AGRICULTURE IN AFRICA (S3A)

Advances in science have ushered in cutting-edge technologies that transform agriculture and human and animal health with impacts on global economy. In Africa, advances like biotechnology are at infancy mainly due to low resources and capacity. However, the launching of the Science Agenda for Agriculture in Africa (S3A), which outlines the framework for the needed reforms at technical, institutional and systemic levels to deepen the application of Science, Technology and Innovation, will help Africa develop homegrown science driven solutions to transform its agriculture in the context of Comprehensive Africa Agricultural Development Plan (CAADP). The launch of the S3A is an important milestone that will propel investments in science and enable Africa to step up research, develop, breed and reach out to the large number of small-holder farmers with new crop varieties and healthy livestock to increase productivity by easing access to technologies and resolving institutional bottlenecks. The demand for Africa's agriculture underscores the need to produce significantly more food on less land, with less water under conditions of unpredictable climate and markets, less manual labor, reduced wastes and losses, generating nutritious and safe food. With CRISPR-crops, which are exempt from GM regulations set for market, few African crops benefit from even traditional biotech strategies. Challenges hindering the development of these technologies are human and institutional capacities. Here, we outline the challenges that require foresight on emerging technologies following country consultations and continental synthesis for the implementation of S3A. We also present some of the key advances in agricultural biotechnology and the mitigating factors that guide the application of science, technology, extension, innovations, policy and social learning the African countries need to apply these new technologies to meet agricultural development goals of the continent in a world that is increasingly serviced by a global food supply.

### Country or International Organization

Forum for Agricultural Research in Africa

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