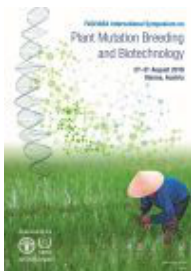


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GENETIC IMPROVEMENT OF COMMON BEAN (PHASEOLUS VULGARIS) IN ZAMBIA

Common bean (*Phaseolus vulgaris*) is an important crop in Zambia. It plays an important role in food and nutritional security of Zambia. Productivity of common bean in Zambia is low, with a national average yield of 500 Kg Ha. Several factors contribute to low productivity including the planting of landraces that have low yield potential, and are susceptible to diseases, pests, low soil fertility, aluminium toxicity and drought. The University of Zambia Bean Breeding and Genetics program is currently developing common bean varieties with multiple resistance to resistance to diseases and pests. Also, varieties with high nitrogen fixation ability and tolerance to aluminium toxicity are being developed. The program is conducting genetic studies using genome-wide association studies and QTL mapping approaches to understand the genetic basis of variation in complex traits such as biological nitrogen fixation, resistance to common bacterial blight, tolerance to drought and aluminium toxicity. The program is using mutation breeding to broaden the genetic base of common bean and create novel genetic variation to support genetic improvement of common bean.

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