COMPARATIVE YIELD PERFORMANCE OF MAIZE VARIETIES FOR CIP IMPLEMENTATION

Christophe Mupenzi 1,2,3 and Li Lanhai 1*

1 State key Laboratory of Desert and Oasis Ecology, Xinjiang Institute of Ecology and Geography, Chinese Academy of Science, 818 South Beijing Road, Urumqi, Xinjiang, 830011, Chine, mupenzic@gmail.com, lilh@ms.xjb.ac.cn
2 University of Chinese Academy of Sciences, Beijing 100049, China
3 University of Lay Adventists of Kigali PO Box 6392, Kigali-Rwanda
*Correspondance: E-mail: lilh@ms.xjb.ac.cn, Tel: +0991-7823125

Abstract

Maize is the primary staple crop in Rwanda and plays an important role in the livelihood of the population. Its availability and abundance determines the level of welfare and food security in the country. Enhanced maize productivity can be achieved by increase use of modern production techniques such as the adoption of improved maize varieties and other inputs. To achieve this objective, the Crop Intensification Program (CIP) has been created where different seeds varieties are imported and supplied to the farmers.

This study compared yield performance of five maize varieties supplied to the farmers for CIP implementation. The five varieties including one OPV (local: ZM 607) and four hybrids (H629, PAN 4M21, SDCO719 and PAN691). The experiment was laid out in Randomized complete block design (RCBD) with five treatments replicated five times. Following parameters were used to evaluate the yield performance of maize: yield per ha, number of cob per plant, height of plant, 1000 grains weight and length of cob was analyzed. Field data was computed with GENSTAT Version 3.

The results show that three parameters (number of cob per plant, cob length, 1000 grains) were associated with yield on a highly significant difference of 0.001. Results indicated that PAN4M21 was the best performing variety in five parameters and ZM 607 shows low results for almost parameters. From results of this study, imported maize varieties must be tested before being spread to local farmers. Hybrids varieties which have been tested locally are of great importance to increase food security in Rwanda.

Keywords: Maize, Varieties, yields performance, CIP