

Effects of Aflasafe Application and Management Practice Combination on Yield and Aflatoxin Levels in Groundnut

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Low yield and aflatoxin contamination in groundnut are important quantitative and qualitative issues posing a threat to food safety and productivity. Consequently, aflatoxin contamination has become an important precondition for access to global food markets and increasingly for high-value domestic markets in developing countries. Strategies such as biocontrol agents, crop management practices and increased plant densities have been employed to increase kernel yield and to prevent and/or reduce pre-harvest aflatoxin contamination in groundnut. On-site and farmer managed trials were conducted in Central and Northern regions of Malawi in the 2020/2021 cropping season, to evaluate effects of Aflasafe application and management practice combination on groundnut yield and aflatoxin contamination.

The results have shown that management practice combination had a significant effect on yield and yield components ($P < 0.05$) such as plant pod number, dry pod yield, kernel yield, plant biomass and harvest index. The higher number of pod per plant was observed in farmer practice. Double zigzag row only, double zigzag row with inoculant-fertilizer combination, double zigzag row fertilized at planting or with crop residue incorporation dominantly had higher plant biomass, harvest index, kernel and dry pod yield respectively. Additionally, the interaction of aflasafe application and management practice combination had a significant effect on the plant pod number compared to double zigzag row with seed inoculated, fertilized and gypsum applied.