Biotechnology in Organic Agriculture in Africa: a myth or an over sight

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Abstract

Biotechnology is simply scientific methods and practices based on biological systems or their components. It is applicable to all stages of commodity value chains. Biotechnological applications vary in nature from very simple system or organ based applications to amino acids (deoxyribonucleic acid/DNA, Ribonucleic acid/RNA) based applications. System and organ based applications of biotechnology are very much understood, and seem to have evolved with life. Many of these are indigenous knowledge based. They are also very well articulated by early advances in bio-science.

Current scientific advancements have gone to deeper levels of scientific innovation. Most of these deal with a cell, chromosome, nucleotide, and DNA/RNA or a gene. Genes determine cellular functions which influence organism behaviour and inheritance. Any biotechnological method applied at this level would therefore be very sensitive, since it might result into alterations in organism traits and behaviour. A living example of this method is genetic engineering, which results into genetically modified organisms (GMOs). The terminator gene is a result of genetic engineering, and disables reproductive potential of plant off springs (F1). Such a technology is a cause for worry, and reason for detesting advanced biotechnological innovations among the organic agriculture community in Africa.

The paper explores the possibility for application of biotechnological methods in future development of organic agriculture in Africa.

Key Words: Attitude, IK, Technology Adoption, Genetics, engineering, Organics