

**A MODEL BASED REFLEX AGENT FOR SMART FARMING IN FERTILIZER
APPLICATION TO MAIZE CROP IN KENYA**

R. W. Mwangi and A. M. Kamau

*Department of Computing, Jomo Kenyatta University of Agriculture and Technology,
Nairobi, Kenya*

Email: *waweru_mwangi@icsit.jkuat.ac.ke*

Abstract

A smart system is an entity that processes internal information in order to perform a certain task. One such system is an intelligent agent which is an artificial autonomous smart application. This paper seeks to provide a model-based smart agent that is able to reason through a knowledge base and produce advice to Kenyan maize farmers on what type and amount of fertilizers to use in their farms. Data was collected from large scale and small scale farmers in some of the maize growing regions in Kenya such as Eldoret and Kirinyaga. Search and planning techniques have been incorporated in the reasoning process in order to maximize on efficiency.

Key words: Intelligent agent, first order logic