

# Novel Perception in Biotic Stress Controlling

U.P.K. Jayamini<sup>1</sup>, D.K. Withanage<sup>2</sup>

Faculty of Information Technology, University of Moratuwa, Sri Lanka

Kaushijaya88@gmail.com<sup>1</sup>, dkwithanage@uom.lk<sup>2</sup>

## *Abstract*

Pest controlling or biotic stress controlling has become a critical issue in modern agriculture since the existence of pests causes crop losses and waste in great numbers. Evolution of pest controlling has its roots in the most primitive agricultural era itself in the human civilization. Therefore in this era of technological revolution, the new developments in Artificial Intelligence and other computing techniques should be deployed to counter the threat of pest infestations in crops. This could pave way for the development of an integrated pest management system with effective pest monitoring, Swarm intelligence and intelligent learning agents it would then act as a global protective shield for the entire field of agriculture against pest infestations. With real time information on biological systems and natural phenomena provided by analytical tools, sensor devices and Swam intelligent, accurate predictions could be made and real time reports could be generated. Swarm intelligence as a new concept has the potential of making accurate decisions with the aid of autonomous learning agents, who communicate via effectors before releasing predictions to the environment. This new approach has more benefits compared to existing approaches and related research concepts.