

## Abstract

The world is becoming more crowded place with many more consuming mouths to feed due to ever increasing populations. These are putting increasing pressure on our environment ability to support it. African countries are responding to the challenges through modernization of agriculture. Much of this intensive agriculture is heavily depended on application of agrochemicals. However, the use of chemical fertilizers and pesticides has come with other formerly unforeseen challenges. This study was done to evaluate the use of agrochemicals and their impact on insect pollination in agro-ecosystems. The research was carried out in Mua Hills location in Machakos County in Kenya. Purposive sampling using questionnaires was done to collect data on agrochemicals on farms. Pan traps were used to sample insect diversity and abundance during the field surveys in the farms. The research found out that 80% of the farmers used insecticides and fungicides while 20% of them used foliar fertilizer. Spearman correlation analysis indicated that there was a significant association between type of agrochemicals used and the abundance of insects ( $r^2 = 0.402$ ,  $p < 0.028$ ). This study concluded that the current use of chemical fertilizers and pesticides lead to agro-ecosystem degradation and will should be controlled as it threatens insect pollinator communities. The findings echo the urgent need for environmental management of agro-ecosystems to support ecosystem services and functions.