

Abstract

A field survey was conducted in four major potato growing areas in Kenya (Kiambu, Nyandarua, Meru and Molo Districts) during January and February, 2008 (short rains crop) and June 2008 (long rains crop) to determine the occurrence of predators, parasitoids and pathogens of the aphids *Myzus persicae* Sulzer and *Aphis gossypii* Glover in potato crops. In each of the four areas, 30 potato farms distributed in different parts of the survey area were selected at random for the surveys. Insects collected were brought to the laboratories at the International Centre of insect physiology and Ecology (icipe), Nairobi, for identification and fungal infection. For isolation of fungal pathogens, dead aphids were transferred on moist filter paper placed on sterile Petri dishes to allow the growth of the fungus on the surface of the cadaver, after which fungus was transferred on artificial media for isolation. Four aphid species, *M. persicae*, *A. gossypii*, *Macrosiphum euphorbiae* Thomas and *Aulacorthum solani* Kaltenbach were identified in all the four survey areas. Sixteen predator species of the aphids were identified. The most prevalent were the ladybeetles *Harmonia axyridis* (Pallas) and *Hippodamia convergens* Guérin-Méneville (Coleoptera: Coccinellidae), followed by the minute pirate bugs, *Orius* spp. (Heteroptera: Anthocoridae) and the aphid eating gall midge *Aphidoletes aphidimyza* Rondani (Diptera: Cecidomyiidae). Three hymenopteran parasitoid species (Braconids followed by Chalcids then the Ichneumonids) and four fungal pathogen species, *Beauveria bassiana* Balsamo (Ascomycota: Hypocreales), followed by *Verticillium lecanii* Zimmermann (Hypocreales: Incertae sedis), *Metarhizium anisopliae* (Metsch.) Sorokin (Deuteromycotina: Hyphomycetes) then *Pandora neoaphidis* (Remaudière & Hennebert) Humber (Zygomycetes: Entomophthorales) were identified in all four areas of the field survey.