

ABSTRACT

Dolichos (*Lablab purpureus* L.) is a drought tolerant legume used as food/feed and improvement of soil fertility. The production of *dolichos* in Kenya, Nakuru County is however limited by insect pests like bean aphids, pod borers and whiteflies. Field studies were conducted to determine the effect of cropping systems (*dolichos* monocrop and maize-*dolichos* intercrop) and field margin vegetation on bean aphids and their natural enemies. The experiment was conducted in Njoro (high field margin vegetation) and Rongai (low field margin vegetation) during May–December 2019 and March–November 2020 cropping seasons. Bean aphid percent incidence, severity of damage and abundance was assessed at seedling, early vegetative, late vegetative and flowering *dolichos* growth stages. The populations of natural enemies in the plots and field margin vegetation were monitored using pan traps and sweep nets. Species diversity and composition of the field margin vegetation was determined using a quadrat. Results showed that location and cropping system had significant effects on bean aphid infestations. A high bean aphid incidence (38.13%) was observed in Njoro compared to Rongai (31.10%). *Dolichos* monocrop had significantly higher bean aphid infestation (51.63%) than the maize-*dolichos* intercrop system (24.62%). A highly diverse Shannon-weaver index was observed in Rongai (1.90) compared to Njoro (1.67). *Dolichos* monocrop had a more diverse Shannon-weaver index (1.8) than the maizedolichos intercrop system (1.7). Rongai had the most abundant annual and perennial field margin vegetation species. The field margin species richness and diversity were higher in Rongai (81%) than in Njoro (54%). The findings of this study have demonstrated that a maize-*dolichos* intercrop in Rongai can reduce bean aphid damage in *dolichos*.

Keywords: aphids, *dolichos*, field margin vegetation, natural enemies