

Abstract

A study was conducted at Katumani, Kiboko and Ithookwe, in the semi-arid Eastern Province of Kenya for four seasons (short rains 1996-long rains 1998), to confirm the major stemborers of maize, and to introduce and monitor the colonisation of *Cotesia flavipes* Cameron (Hymenoptera: Braconidae) in these stemborers. About 6750 adults of *Cotesia flavipes* were released at each site, from 'release stations', starting one week after plant emergence and repeated fortnightly up to harvest. Pre-release parasitism of the stemborers was determined, for two seasons prior to release of *Co. flavipes*, during the season of release and one season after the release of this parasitoid. Parasitism was assessed from developmental stages of the stemborers recovered through destructive sampling of 100 plants, starting one week after plant emergence. This was repeated weekly at Katumani, and fortnightly at Kiboko and Ithookwe until harvest. The stemborers recovered from maize were *Chilo partellus*, *Sesamia calamistis*, *Cryptophlebia leucotreta* and *Busseola fusca* in descending order of abundance, with *Ch. partellus* being the most widespread stemborer. *Cotesia flavipes* parasitised and successfully colonised *Ch. partellus* and *S. calamistis* in the three sites during the season of release and one season post-release of the parasitoid. Parasitism by *Co. flavipes* ranged from 7.14–25.80 %. The colonisation rate of *Co. flavipes* in the two major stemborers in the semi-arid Eastern Province of Kenya suggests the high potential of this parasitoid in regulating populations of stemborers that attack maize in this region.