ABSTRACT

A longitudinal study to identify the species of Liriomyza leafminer, their distribution, relative abundance, and seasonal variation, including their host range, was conducted in vegetable fields at three altitudes in Kenya from November 2011 to November 2012. Three main species were identified: Liriomyza huidobrensis (Blanchard), Liriomyza sativae Blanchard, and Liriomyza trifolii (Burgess), of which L. huidobrensis was the most abundant across all altitudes irrespective of the cropping season and accounting for over 90% of the total Liriomyza specimens collected. Liriomyza species were collected from all infested incubated leaves of 20 crops surveyed belonging to seven families: Fabaceae, Solanaceae, Cucurbitaceae, Malvaceae, Brassicaceae, Amaranthaceae, and Amaryllidaceae. However, more than 87.5% of the Liriomyza species were obtained from only four of these crops: Pisum sativum L., Phaseolus vulgaris L., Solanum lycopersicum L., and Solanum tuberosum, thereby demonstrating that Fabaceae and Solonaceae crops are the most important hosts with regard to Liriomyza species richness and relative abundance. L. huidobrensis had the widest host range (20 crops), followed by L. sativae (18 crops) and L. trifolii (12 crops). Although L. trifolii has been considered the dominant Liriomyza leafminer in Kenya, this study suggests that this may not be the case anymore, as L. huidobrensis dominates at all altitudes. 