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“Can agroecological farming feed the world?
Farmers’ and academia’s views”

**Effect of aqueous extract of hanzal (*Citrullus coloyntis* L.)
senemeka (*Senna alexandrina* Mill) and ummjelajel (*Aristolochia
bracteolate* L.) on the leaf miners (*Liriomyza* spp.) on the snake
melon crop**

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Abstract

Due to ecological imbalance and hazards caused by insecticides use, plant products or plant extracts were suitable alternative to pesticides. This study was conducted in Agricultural Research Corporation Farm, Gezira, Wad Medani, Sudan, during two seasons to evaluate the effect of water extracts of Hanzal (*Citrullus coloyntis* (L.)), Ummjelajel (*Aristolochia bracteolate* L.) and Sennameka (*Senna alexandrina* Mill) on vegetable leaf miners (*Liriomyza* spp.) infesting snake melon (Snake melon cucumber is one of most important vegetable crop grown in different parts of Sudan and use as important food crop). Randomise Complete Block Design (RCBD) with 4 treatments and 4 replications were used. Snake melon plots were sprayed weekly with water extracts of Hanzal, Sennameka and Ummjelajel at 10 % concentration (w/v) and control was sprayed by water with molasses and gum Arabic. These three plants grow widely in different parts of Sudan and believed to have a insecticidal activity on many harmful insects. The infestation percentage on leaves and mean number of active mines were counted twice weekly. The aqueous extracts of Hanzal, Sannemeka and Ummjelajel reduced the infestation and number of active mines significantly compared to control. No significant differences between Hanzal, Sannemeka and Ummjelajel. Hanzal had lower mean percentage leaf infestation followed by Sannemeka and Ummjelajel (season one). Hanzal recorded lower number of active mines in season two followed by Sannemeka. Also Hanzal recorded the least number of active mines than Sannemeka, season two. From this study it is recommended to use Hanzal at 10 % w/v for control of leaf miner species on snake melon crop.. The results of the study is believed to be a good contribution in integrated pest management on vegetables in Sudan

Keywords: Aqueous Extract, *Citrullus coloyntis* , *Aristolochia*, leaf miners, *Senna alexandrina*, Snake Melon Crop