Effect of Aqueous Extracts of Handal {(Citrullus colocynthis (L. Schrel)}, Sanna mekka (Sanna alexandrina Mill) and Umm Galagil (Aristolochia bracteolate Lam.) on control of Leafminer (Liriomyza spp.) in Snake Cucumber.

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### Introduction

Snake Cucumber(Cucurbitaceae) is an is one of the most popular and important vegetable crop. It used in the worldwide as daily diet variance and it can be eaten fresh, salad or cooked.

> The crop in the field suffers from attacked by many pests and disease; leaf miner is a major insect pest on the vegetable.

Data collection and analysis:

The parameters: Infestation(%) of leaves mean number of mines (active mines) data transformed when necessary before analysis of All

(Anova) Genstate Analysis and (DMRT) was used for means separation. SAS programme were used

Results

### Results

Table 1: Mean infestation (%) and number of active mines on snake cucumber leaves by leaf miner *Liriomyza* spp. for 2 seasons treated by some natural products.

> The damage caused by *Liriomyza spp*. can be direct, caused by larval feeding can reduce the photosynthetic capacity of the plant, heavy infestation causes desiccation and premature fall of leaves.



Liriomyza sativa





Liriomyza trifolii



Treatment	Means			
	Infestation % ( season 1)	No. of active mines ( season 1)	Infestation % (season 2)	No. of active mines (season 2)
Citrullus colocynthis	5.3	2.6	5.8	1.9
	(31.8)	(7.0)	(21.32)	(4.2)
	5.6	2.4	6.4	2.1
Senna alexandrina	(36.35)	(6.0)	(20.74)	(5.2)
Aristolochia bracteolate	5.6	3.1	6.9	2.6
	(35)	(10.4)	(23.28)	(8.0)
	ГО	1 7	07	2 C

damage of *Liriomyza* spp.

#### Cucumber

The objectives of this study:

To evaluate the effect of the extractions of the natural products Handal (Citrullus colocynthis (L. Schrel), Umm Galagil (Aristolochia bracteolate Lam) and Sanna mekka (Senna alexandrina Mill) on vegetable leaf miner infesting snake Cucumber plan



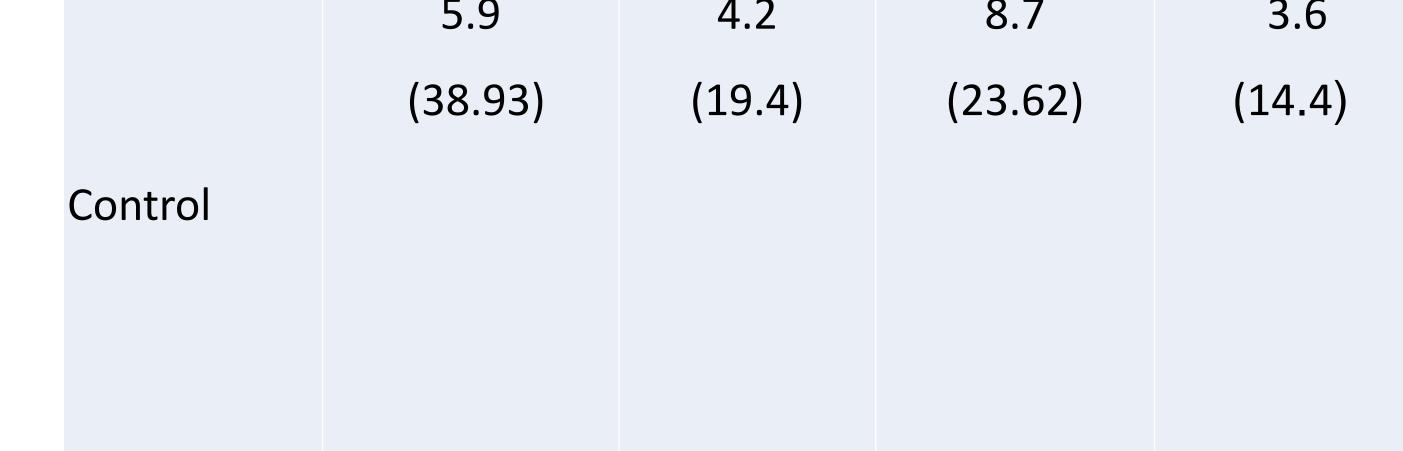


Ciriullus colocynth's alexandrina

Aristolochia bracteolate

Senna

#### Materials and methods:



## CONCLUSIIONS

The application of 10% aqueous extract of *Citrullus* **Colocynthis fruit, Senna alexandrina plant and Aristolochia bracteolate** plant on snake Cucumber had significantly reduced the damage of the leafminer compared to the untreated snake cucumber.

### Suggestions

\*The aqueous extracts of Citrullus colocynthis and Senna

The study was conducted in the Agricultural Research Corporation Wad Medani, Sudan.

Three natural products were used in study; Handal (*Ciriullus*) colocynthis (L.), Senameka (Senna alexandrina) and Umjulajel (Aristolochia bracteolate).

10% prepared by mixing 15 grams of the plant powder with 150 ml distilled water in oil container. 1.5 grams of Gum Arabic and 3.75 grams of molasses. The snake Cucumber variety "Silka" was used. Design: (RCBD) with 4 replications. The mixture was shaken for 2 -3 hrs., stored at 20°C and filtered

ready for application. All treatments were used in same dose (10% WV).

• Control was treated by distilled water mixed by gum Arabic (1%) and mulases (2.5%) only.

Alexandrina showed promising insecticidal effect on *Liriomyza* spp. on snake cucumber

# \*Further investigations to assess the effects of these extracts on other insect pests of snake cucumber pests.