Activity Of Biochar On The Effectiveness And Persistence Of Some Insecticides Against *Spodoptera littoralis* (Boisduval) On Cotton Plants

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Recycling of agricultural wastes (e.g: date Palm fronds) through slow pyrolysis into biochar has many advantages.

- Planted cotton (Giza 86) in Soil free from biochar and 10% biochar

Apply methomyl (Lannate 90% SP), imidacloprid (Confidate 35% SC), indoxacarb (Avaunt 15% SC) and thiamethoxam (Actara 25% WG) with three different concentration as a soil drenching.

- The leaves of the treated cotton plants were collected after 1, 7, 14 and 21 days of treatment, then feeding the newly moulted 2nd and 4th larval instars of *S. littoralis*.

Calculating the mortality
Main Results

Activity of biochar on the Persistence and efficacy of insecticides (three concentrations) against *S. littoralis*

Figure (1): Relation between four type of pesticides with different concentration on Soil -Biochar by time

Figure (2): Percentage how much different factors explained of the variation in the variance component study
Impact and Prospectum

Biochar is well documented as a soil amendment material to improve the physical, chemical and biological properties of the soils.

Now we declare the effects of biochar on the efficacy of soil-applied insecticides.

- Reduce farming costs
- Lower the environment risks
- It resulted in significant increase in the efficacy and persistence of the soil-applied pesticides
- Using the least concentrations of the insecticides
- Smaller numbers of applications to obtain the desirable insect control.
Thank You

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