BIOEFFICACY OF INSECTICIDES AGAINST CATERPILLAR PESTS ON SOYBEAN CROP.

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Abstract : A Field experiment will be laid out in randomized block design with six treatments including untreated control replicated four times. This crop will be sown on 4th July 2010 in plot size of 25 square meters. In this experiment numbers of caterpillars will be counted in randomly selected three one meter rows in each plot. Observations will be taken 24 hours before the spraying of insecticides and after 24 hours, 3 days, 7 days, 10 days of spraying of insecticides.
Flubendiamide 480 SC was evaluated for bio-efficacy against lepidopteran pests, *S. litura* and *C. acuta*. Flubendiamide 480 SC when applied at the rate of 90 g. a.i./ha was most effective with minimum 1.62 larvae/m row and maximum grain yield of 25.47 q/ha. It was followed by the same insecticide applied @ 72 g.a.i./ha and Triazophos 40 EC with 3.00 and 3.06 larvae per meter row and 23.57 and 21.54 q/ha grain yield. Flubendiamide 480 SC@ 90 g.a.i/ha despite being most effective against the lepidopterous pests was also most economical with 34.82 percent avoidable losses and 1.53:1 benefit cost ratio.

Keywords : *Bioefficacy,* Flubendiamide , *S. litura , C. acuta, soybean* lepidopteran pests, *triazophos*

REFERENCES

Abdullah, M., Sarnthoy, O., Isichaikul, S. and Tantakom, S (2001). Efficacy of cypermethrin, neem extract and *Bacillus thuringiensis* for controlling insect pests of vegetable soybean. *Kasetsari J. Nat. Sci*. **35**(1): 14-22

Anonymous (2001). Miracle bean health, vol. 79, 3, pp-2.

Bae S. D., Choi B. R., Song Y. H. and Kim, H.J. (2003). Insecticide susceptibility in different larvae of tobacco cutworm, *Spodoptera litura* Fabricius (Lepidoptera: Noctuidae) collected in the soybean fields of Milyang, Korea. *Korean J. Appl. Ent*. **42**(3): 225-231.

Chaturvedi, S., Singh, K.J., Singh, O.P. and Dubey, M.P. (1998). Seasonal incidence and damage of major insect pests of soybean in Madhya Pradesh. *Crop Res.*, Hissar. **15**(2/3)**:** 260-264.

Gangrade, G.A. (1976) Terminal Technical Report on The Project "Assessment of effects on yield and quality of soybean caused by major arthropod pests*", Deptt. of Ent. , J. N. Agril., univ. , Jabalpur,* 143 pp.

Hole, U.B., Jadhav, S.R. and Teli, V.S. (2009). Bio-efficacy of Insecticides against *Spodoptera* litura (Fab.) Infesting Soybean. *Annals Pl. Prot. Sci.***17** (2):107-112.

Singh, O.P., Singh K.J. and Singh, P.P. (1988). Effect of date of sowing and varieties on the incidence of major insect pests of soybean in Madhya Pradesh. *Bhartiya Krishi Anusandhan Patrika.* **3**(1): 47-52.

Tatagar,M. H., Mohankumar, H.D., Shivaprasad, M. and Mesta, R. K. (2009). Bio-efficacy of flubendiamide 20 WG against chilli fruit borers, *Helicoverpa armigera* (Hub.) and *Spodoptera litura* (Fb.). ***Karnataka J. Agril. Sci.*** 22(**3**): 579-581.

Yadav, M. K., Matkar, S. M., Sharma, A. N., Billore, M., Kapoor, K.N. and Patidar, G.L. (2001). Efficacy and economics of some new insecticides against defoliators and stem borers of soybean [*Glycine max* (L.) Merrill]. *Crop Res., Hissar*. **21**(1): 88-92.