

Toxic Effect of Mustard (*Brassicacampestris*) Seed Oil on Lesser Grain Borer *Rhizoperthadominica* (Fab.)

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Abstract: Wheat is an important component in the food. It suffered during storage by a number of insect pests out of which *Rhizoperthadominica* (Fab.) is the major pest. Synthetic insecticides are used to protect the grains from attack of this noxious pest, but these insecticides pose a serious threat to man, animal and environment. The undesirable effects of synthetic insecticides may be solved with the use of plant origin insecticides. But very few significant contributions have been made to use of vegetable oils so far. In the present study *Brassica campestris* seed oil used as seed protectant against lesser grain borer *Rhizoperthadominica* (Fab.) Result demonstrated that the mustard seed oil was found more effective for adults whereas less effective for larvae giving LD_{50} value (00.5084) and (1.0040) respectively.

Keywords: *Rhizoperthadominica* (Fab.). *Brassica campestris*, wheat grain, lesser grain borer, mustard Oil.

REFERENCES

- [1]. Raju.P. (1984).The staggering storage losses causes and extent pest,18,35-37
- [2]. Zaz, G.M., Bharadwaj, S.C. and Yadav, C.P.S. (1982). Relative susceptibility of some wheat varieties to the lesser grain borer, *R. dominica*. *India J. Ent.* 44 (1): 77-82
- [3]. Fishwick, F.B. (1988). "Pesticide residues in grain arising from post harvest treatments" *Aspects Applied Biology*. 17, 37-96
- [4]. Beye, F. (1978). Insecticides from the vegetable kingdom. *Plant Research Development*. 7, 13-31.
- [5]. Umerie, S.C. and Anaso, H.V. (1998). "Insecticidal potentials of *Ocimum basilicum* leaf extract. *Bio resource Technology*. 64 (3): 237-239.
- [6]. Isman, M.B. (2000). Plant essential oils for pest and disease management. *Crop management*. 19, 603-604.
- [7]. Ho, S.H., Ma, Y. and Huang, Y. (1997). Anethole, a potential insecticide from *Ilicium verum* Hook F. against two stored product insects. *International pest control*. 39,50-51
- [8]. Sarac, A. and Tunuc, I. (1995) Residual toxicity repellency of essential oils to stored product insects. *Journal of Plant Disease Protection*. 102, 429-432.
- [9]. Gupta, H.C. and Ahmed, S.M. (1988). "Evaluation of some non edible oils grain protectants in wheat and their subsequent effect on germination." *Indian Journal of Entomology*. 50(2):147-150.
- [10]. Mohanty, K.K. and Chakraborty, D.P. (1988). Toxicity of oil fraction of the seeds of some leguminous plants against stored grain pests. *Environ, Ecol*. 6(2): 344-354.
- [11]. Chauhan, S.P.S., Kumar, Alok, Singh, Chandrakleha and Pandey, U.K. (1987). Toxicity of some plant extracts against rice moth *Corcyra cephalonica* (Stantion) (Lepidoptera). *Ind. J. Ent.* 49(4):532-534.
- [12]. Persai, S.K., Shaw, S.S., Deshpande, R.R., Verma, R.S., Badaya, A.K. and Mandloi, K.C. (1990). Studies on cooking quality and efficacy of edible oils against *Callosobruchus chinensis* (L) on urd bean *Ind. J. of Pulse Res.* 3(1): 61-65
- [13]. Gupta, A.K., Behal, S.R., Awasthi, B.K. and Verma, R.A. (2000). Efficacy of different vegetable oils against *Sitophilus oryzae* in maize grain. *Ind. J. Ent.* 62(3):301-303.

- [14]. Reddy,SudhakarV.,Babu Ramesh,T.,Hussaini,S.H. and Reddy Murlimohan, B.(1994).Effect of edible and non edible iols on the development of pulse beetle *Callosobruchus chinensis* L.and on viability of mung bean seeds*Pest Manage.and Economic Zool.* 2(1):15-17..