



## A Study on the Effect of two Agrochemicals on the Fecundity of a Soil Collembolan *Cryptopygus Thermophilus*

**P. Vinod and M. G. Sanal Kumar**

P.G. & Research Department of Zoology, N.S.S. College, Pandalam, Kerala, India – 689501.

Email: [vinod7175@yahoo.co.in](mailto:vinod7175@yahoo.co.in)

### Abstract

*Agrochemicals play a significant role in increasing the productivity of crops but it has very serious effect on the fauna and flora of the soil ecosystem. Soil micro arthropods especially Collembolans help in increasing the soil fertility by decomposing the litter. Collembola is a group that function as a bio- indicator of the soil condition. The normal fecundity of *Cryptopygus thermophilus* and the effect of a herbicide Glyphosate and the fungicide Indofil on the fecundity was studied. The studies revealed that both the agrochemicals has a profound effect in reducing the fecundity of *Cryptopygus thermophilus*, but the effect of Glyphosate is high when compared to Indofil.*

**Key words:** Collembola, Fecundity, Agrochemicals, Glyphosate, Indofil.

### References

1. APHA, 2012. Standard methods for the examination of water and waste water.
2. Butcher, J.W., Snider, R.J. 1971. Biology of edaphic Collembola and Acarina. *Annu.Rev. Entomol.* 16.249-288
3. Chahartaghi, M., Langel, R., Scheu, S., Ruess, L. 2005. Feeding guilds in Collembola based on nitrogen stable isotope ratios. *Soil Biol.Biochem.* in press.
4. Mebes, H., Filser, J., 1998. Does the species composition of Collembola affect nitrogen turnover. *Appl.Soil Ecol.* 9.241-247.
5. Petersen, H., Luxton, M.1982. A comparative analysis of soil fauna population and their role in decomposition process. *Oikos* 39, 287-388.
6. Sanal Kumar, M.G. and Nair, R.K.G. 1994. Effect of Malathion on the population density of some soil micro arthropods, *J.Zool.soc.Kerala* 4(1&2)23-26.
7. Veltcamp, P. 2012. Soil chemical factors and Arthropods, *J.Envl.Tox* 2 (3):31-37.
8. Zahir Hussain and Hawwa Zahira, 2010. Longivity of soil Proturans. *J.Ecol.Env* 4(2):31-41.