

**Project Title:** Systematics of mite pests of stored grains and their control by using non conventional acaricides and botanicals from Punjab, Pakistan  
**Principal Investigator:** Dr. Muhammad Hamid Bashir, Associate Professor, Department of Entomology, University of Agriculture, Faisalabad  
**Funding Agency** HEC

The present project was carried out with the objectives to find out the mites infesting stored grains in Punjab, the nature of damage caused by these mites and to find out safer compound for their management. As a result of a through survey, 27 species belonging to two families Acaridae and Histiosomatidae were identified. Among these, 21 species were new to science. In the second part of this study, impact of *Rhizoglyphus tritici* was estimated after definite period of storage. The results revealed that these mites had negative impact on thousand kernel weight, protein, crude fat and nitrogen free extracts while, little proportionate gain was obtained in the fiber contents of all tested commodities i.e. wheat, maize, mung, gram and rice. For their control, five insecticides viz., azocyclotin, chlorfenapyr, bifenthrine, fenpyroximate and Pyridaben; and some botanicals viz., Chillies, Clove, Gardenia, Garlic, Kanair, Termaric, Tobbacco, Tulsi, Dhatura, Eucllytus, Tuma, Neem leaves and Kernals in different solvents i.e., water, ethanol, methanol and ether were tested for population inhibition of *Rhizoglyphus tritici*. All the insecticides and some of the plant extracts were proved to be effective and they had negative impacts on the population buildup of the test species. This research laid the foundation for future research on the isolation and synthesis of more effective compounds present in these extracts.