

Project Title: Management of Dusky cotton bug (*Oxycarenus* spp. Lygaeidae: Hemiptera): an emerging threat to cotton crop in Pakistan

Role in Project: Co-PI

Sponsor: ALP

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After the introduction of GM cotton insect pest scenario has been changed. More focus given to control sucking insect pests and no spray was targeted towards bollworms. With the change in the spray regime as well as IPM strategies minor pests or less important pests like dusky, red & mealybug became serious threat to cotton. Inadequate information has been published particularly for dusky cotton bug till now because in past this pest including others were considered as minor pest with less economic importance. For the last few years dusky cotton bugs was becoming pernicious and upgraded serious pest and radically contributing in economic losses qualitatively and quantitatively to cotton crop annually. No specific insecticides are known worldwide, its control is therefore very difficult. Similarly until and unless, its extent and nature of damage, biology and ecological behaviour is not known, its management strategies cannot be incorporated as integral part of IPM strategies. This project is launched with aim to determine the missing links of the pest that may lead to develop management strategies for this pest using the basic concepts of integrated pest management (IPM).

- Agro- Ecosystem analysis (AESAs) of dusky cotton bug
- Taxonomy and Biology of the Pest & its natural enemies
- Ecology and Economic Threshold levels
- Monitoring of insecticide resistance in Dusky cotton bugs against the field tested insecticides
- Development of mass rearing technique for potential natural enemies and insecticide resistance studies
- Chemical Control Measures
- Development of Integrated Pest management strategies for the sustainable control of Dusky cotton bug
- Dissemination of management strategies to the extension system, academia and farmer community.