

## COLORED PAN TRAPS FOR INSECT POLLINATORS/VISITORS DIVERSITY IN MUSTARD ECOSYSTEM IN AMBIKAPUR OF CHHATTISGARH

G.P. Painkra\*, P.K. Bhagat<sup>1</sup> and K.L. Painkra<sup>2</sup>

IGKV, All India Coordinated Research Project on Honey Bees and Pollinators, Department of Entomology, RMD, College of Agriculture and Research Station,

Ambikapur 497001 Chhattisgarh, India

<sup>1,2</sup> Department of Entomology, RMD, College of Agriculture and Research Station, Ambikapur 497001 Chhattisgarh, India

Email: gppainkrarmd@gmail.com

Received-11.02.2019, Revised-05.03.2019

**Abstract:** A field experiment was undertaken at Rajmohini Devi College of Agriculture and Research Station, Ambikapur Surguja (Chhattisgarh) during 2017-18 to study the insect pollinators diversity in mustard ecosystem using different fluorescent colored pan trap *i.e.* White, blue and yellow at onset of bloom, full bloom and end of bloom of mustard crop in two different habitats. In habitat-I various insect visitors *i.e.* *Apis dorsata*, *A. indica*, *A. florea*, syrphid fly, house fly, black pants and small ants were recorded. In the colored pan traps maximum population was noticed in yellow pan trap (14.31 insect/trap) followed by blue trap (13.99 insect/trap) and minimum in white (6.3 insect/trap) at onset of bloom. However, at the full bloom highest population was recorded in yellow pan trap (24.65 insect/trap) followed by blue pan trap (20.98 insects/trap) and lowest in white trap (20.65 insects/trap). Similarly at the end of bloom higher population was recorded in yellow pan trap (14.32 insects/trap) followed by blue pan trap (13.99 insects/trap) and the lowest in white pan trap (5.99 insects/trap). Habitat-II During the onset of bloom higher population was recorded in yellow pan trap (21.66 insect/trap) followed by in blue trap (21.65 insect/trap) and lower population was recorded in white pan trap (8.32 insect/trap). At the full bloom period maximum population was noticed in blue pan trap (18.65 insect/trap) followed by in yellow pan trap (16.65 insect/trap) however the lowest population was recorded in white colored pan trap (9.98 insect /trap). Similarly, at the end of bloom higher population was recorded in yellow pan trap (24.99 insect/trap) followed by blue pan trap (24.98 insect/trap) and the lower population was noticed in white colored pan trap (8.65 insect/trap).

**Keywords:** Diversity, Colored pan trap, Habitat, Pollinators, Mustard ecosystem

### REFERENCES

Devi, Manju, Sharma Harish,

K., Sharma, P.L. and Rana, Kiran (2016). Impact of Habitat on Insect Pollinator Diversity on Coriander (*Coriandrum sativum* L.) Bloom. *International Journal of Bio-resource and Stress Management*. 7(6):1372-1376.

Devi, Manju, Harish, Sharma Kumar, Thakur, Raj K., Bhardwaj, Satish K., Rana, Kiran, Thakur, Meena and Ram, Budhi (2017). Diversity of Insect Pollinators in Reference to Seed Set of Mustard (*Brassica juncea* L.). *International Journal of Current Microbiology and Applied Sciences*. 6(7): 2131-2144.

Joshua, W. Campbell and Hanula, J. L. (2007). Efficiency of Malaise traps and colored pan traps for collecting flower visiting insects from three forested ecosystems. *J Insect Conserv* 11:399-408.

Khan, M.R. and Khan, M.R. (2004). The role of honey bees *Apis mellifera* L. (Hymenoptera: Apidae) in pollination of apple. *Pakistan Journal of Biological Sciences* 7:359-362.

Nuttman, Clive V., Mark Otieno, Kwamong, Peter, K., Combey, Rofela, Pat, Willmer and Potts, Simon G. (2011). The Utility of Aerial Pan-Trapping for Assessing Insect Pollinators Across Vertical Strata. *Journal of the Kansas Entomological Society*. 84(4):260-270.

Painkra, G.P. (2018). Role of Colored Pan Traps for Insect Pollinator Diversity in Bitter Gourd Ecosystem in Surguja of Chhattisgarh. *International Journal of Current Microbiology and Applied Sciences* 7(12): 3116-3119.

Vrdoljak, Sven, M. and Samways, Michael, J. (2012). Optimising coloured pan traps to survey flower visiting insects. *J Insect Conserv*. 16:345-354.

\*Corresponding Author