

STUDIES ON THE FORAGING ACTIVITY OF INDIAN HONEY BEE, *APIS CERANA INDICA* FABR. AND OTHER HONEY BEE SPP. ON BUCKWHEAT FLOWERS

Jogindar Singh Manhare*, G.P. Painkra, K.L. Painkra and P.K. Bhagat

Department of Entomology
IGKV, RajMohini Devi College of Agriculture and Research Station, Ambikapur,
Surguja 497001 Chhattisgarh, India
Email: manharejogindar@gmail.com

Received-12.07.2017, Revised-20.08.2017

Abstract: The foraging activity of Indian honey bee, *Apis cerana indica* Fabr. and other honey bee spp. on buckwheat flowers was undertaken at Research cum Instructional Farm of RMD CARS, Ajirma, Ambikapur (C.G.) of Indira Gandhi Krishi Vishwavidyalaya Raipur during year 2016-2017. The activity of *Apis cerana indica* was found higher in third week of December 2016 (69.71 bees/5min/m²). Its maximum visitation was found at 1200 hrs (98.62 bees/5min/m²). The maximum foraging activity of *Apis dorsata* was found at 1200 hrs (61.12 bees/5min/m²). Whereas, the lowest was observed at 1700hrs (1.25 bees/5 min/m²) in *Apis cerana indica* and *Apis dorsata* the lowest was observed at 1700hrs (0.75 bees/5 min/m²). The foraging activity of *Apis florea* was noticed at 1400hrs (3.25 bees/5min/m²) and was found least at 0800hrs (0.57 bees/5min/m²).

Keywords: Foraging behavior, *Apis cerana indica*, *Apis dorsata*, *Apis florea*, Buckwheat

REFERENCES

Chaudhary, D.K., Singh, B. and Singh, P.P. (2002). Population dynamics of honey bees foraging on litchi flowers. *J. Entomological Res.*, **26**(1) :71-75.

Chakrabarty, S.K. and Sharma, S.P. (2007). Foraging behaviour of honeybees in hybrid seed production of sunflower (*Helianthus annuus*). *Indian J. Agril. Sci.*, **77** (9): 629-631.

Chandran, N. and Viraktamath, S. (2010). Foraging behaviour of honeybees on three elite genotypes of niger. *Ecology Pollen & Fungal Spore*, **28** : 33-37.

Dhurve, S.S. (2008). Impact of honey bee pollination on seed producton of niger. M.Sc.(Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).

Gogoi, B., Rahman, A., Rahman, S., and Deka, M.K. (2007). Foraging behaviour and effect of *Apis cerana* pollination on fruit set and yield of Assam lemon (*Citrus lemon*). *Indian J. Agril. Sci.*, **77**(2) :120-22.

Joshi, B. D. and R. S. Paroda, (1991). Buckwheat in India. NBPGR, Shimla Sci. Monogr , No.2 pl17.

Kumar, N. and Singh, R. (2008). Relative abundance of honey bee foragers visiting safflower (*Carthamus tinctorius* L.) and nectar-sugar

concentration in bloom. *Pest-Management & Econ. Zool.*, **16**(2) : 135-141

Lal, M. (2011). Irradiation impact of cell phone on the behaviour, growth and development of honey bee *Apis cerana indica* L. under Northern hills zone of Chhattisgarh. M.Sc.(Ag.) Thesis, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.) INDIA

Painkra, G.P. and Shaw, S.S. (2016). Foraging behaviour of honey bees in niger flowers, *Guizotia Abyssinica* Cass. in North Zone of Chhattisgarh. *International J. P.Protection* **9**(1):100-106

Rajbhandari, B. P. (2010). Buckwheat in the land of Everest. Himalayan College of Agricultural Sciences and Technology (HICAST), Kathmandu, Nepal: 314-316.

Shaw, S.S., Thakur, B.S., Ganguli, R.N. and Nema, S. (2008). Status and prospects of beekeeping in Chhattisgarh State. *National Conference on Pest management Strategies for Food security Raipur*. 2-3 May. pp. 42-53.

Singh, J. (2008). Foraging frequency and pattern of movement of different *Apis spp.* on parental lines of *Brassica napus* L. *Entomon.*, **33**(2) : 91-99.

Selvakumar, P., Sinha, S.N. Pandita, V.K. and Shrivastava, R.M. (2001). Foraging behavior of honeybee on parental lines of hybrid cauliflower Pusa hybrid-2. Standing Commission of Pollination and bee Flora. www.apimondia.org. *Apimondia Journal* .

*Corresponding Author