Effect of Elevated CO_2 on Population Dynamics of Beet Armyworm *Spodoptera Exigua* (Noctuidae: Lepidoptera) on Chickpea

T Divya Bharathi, P V Krishnayya, M Srinivasa Rao, V Prasanna Kumari and Sk Nafeez Umar
Department of Entomology, Agricultural College, Bapatla

ABSTRACT

The potential population dynamics and potential consumption of four successive generations of beet armyworm, *Spodoptera exigua* (Hubner), fed on chickpea foliage grown under ambient and elevated CO_2 conditions in open-top chambers were examined. The larval survival rate and pupation rate were higher under elevated CO_2 compared to ambient CO_2 conditions. Significantly lower potential total eggs laid by all females, potential number of larval numbers and potential total larval consumption were found in the third and fourth generations of *S. exigua* fed on chickpea foliage grown under elevated CO_2 conditions. The integrative effect of higher larval mortality rate and lower fecundity resulted in significant decreases in potential population consumption in the latter two generations.

Key words: *Mortality rate and fecundity, Population dynamics, Spodoptera exigua.*