RESEARCH ARTICLE

Sustainable agriculture through trap cropping : A focus on ecosystem services

■ **Ved Prakash Yadav**

SUMMARY

Insect pests pose significant challenges to crop production. The heavy reliance on insecticides for pest control has led to numerous issues, including pesticide residues in the food chain, phytotoxicity, resistance development, pest resurgence, bioaccumulation, and outbreaks of secondary pests. These issues also negatively impact the environment and non-target beneficial organisms. Trap cropping-a specialized form of companion planting-offers a sustainable alternative by attracting insect pests away from main crops during vulnerable growth stages through the use of more preferred alternative host plants. Beyond pest diversion, trap crops can also attract and conserve natural enemies, providing an ecological benefit that conventional pest control methods often lack. As a component of Integrated Pest Management (IPM), trap cropping can reduce the need for chemical insecticides, thereby lessening environmental disruption and supporting beneficial organisms. Despite its potential, trap cropping remains underutilized and under-researched. This review compiles current knowledge on trap crops used in cereals, legumes, oilseeds, pulses, and fiber crops, highlighting their functions and potential to enhance sustainable pest management strategies globally.

Key Words : Trap crops, Insect-pests, Eco-friendly, Sustainable farming

AUTHOR FOR CORRESPONDENCE

Ved Prakash Yadav, Department of Plant Breeding and Genetics, S.K.N. Agriculture University, **Jobner (Rajasthan) India**
Email : vp_yadav@yahoo.com