

# JIA

## Journal of Integrative Agriculture

2018 Vol. 17 No. 7

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## COVER



The oriental armyworm, *Mythimna separata* (Walker), a typical long-distance migratory insect, is a major polyphagous pest of grain crops in China and other Asian countries. With the recent adjustment in agricultural planting structure in China and global climate change, the regularity of occurrence within regions seems to be changing as well. JIA organized this special focus on the progress of population occurrence and migration regularity, including *M. separata* closely related species biology, migration energy from nectar plants, trajectory analysis of migration route, and immigrant habitat environment influence and resistance identification. Several related armyworm species often co-infest fields with *M. separata*, introducing complications in monitoring and forecasting owing to sparse knowledge of their basic biology. Access to nectar plants during migration is a prerequisite for adult long-distance migration and reproduction, and their distribution provides clues to the armyworm migration pathway. Population data and trajectory analysis provide technical support for fine-scale forecasting of outbreaks. Habitat environment such as host plant, weed coverage and temperature affect population abundance and occurrence, and taking them into account can benefit development of new agronomic management tactics. Monitoring insecticide resistance is of immediate importance in developing effective integrated pest management strategies for this insect. Cover photo is provided by Prof. JIANG Xing-fu, Institute of Plant Protection, Chinese Academy of Agricultural Sciences.