ENVIRONMENT

Major Invasive Organisms in Agriculture of China

By Liu Guoliang, Fu Weidong and Liu Kun. 2008. Science Press, 16, Dong-huang-cheng-gen North Street, Beijing 100717, China. 409 pages. 86.00 CNY.

The alien or non-indigenous organisms are those occurring in the areas outside their native range. They may be moved to the new area intentionally, accidentally or move on its own. Many alien organisms are highly beneficial in the area of introduction. However, they can become problematic if they become agricultural pests or invaders. The invasive organisms are the alien organisms that have naturalized or permanently established and self-sustained in non-native areas. The invasive organisms often quickly flourish and dominate in their adopted homes or their new surroundings, and reach higher densities than in the native homes due to a lack of suppression from natural enemies. They may out-compete the native plants or animals in the new area, threaten biological diversity of the new habitats (worldwide, according to the IUCN, the threat to biodiversity from invasive alien species is second only to that posed by habitat destruction), hinder recreational activities, clog waterways, disrupt, damage or degrade the natural ecosystems by displacing the native species, hybridizing with native populations, altering the ecological factors, transmitting diseases and parasites not found in native species, and so on. The damages caused by invasive organisms in their adopted homes are sometimes serious or even disastrous to horticulture, agriculture, fishery, forestry and so on. They can also adversely affect society by causing health problems to humans, causing economic damage or increasing the costs of upkeep such as on railway lines, roads and shorelines. Sometimes, their full effects often are unable to be detected until they become difficult to control.

Agriculture is the most important economic sector in China, with its output being the largest in the world, employing over 300 million farmers and supporting over 20% of the world's population. From this point, the maintenance of the stability and security of agriculture in China is of utmost importance. However, with the fast development of globalization and international trade, many invasive organisms have been increasingly imposing threats to the agriculture of China. IUCN has listed 100 species of most threatening invasive organisms in the world, among which more than 50 species have invaded China. According to the preliminary statistics, more than 400 invasive species in China have caused more than 100 billion CNY losses each year. Obviously, invasive organisms have become a new intractable problem in the Chinese agricultural ecosystem. The more information about the invasive organisms is understood, the more efficient countermeasures can be taken when dealing with the problem. The book *Major Invasive Organisms in Agriculture of China* focuses on the major invasive organisms that affect agricultural production and human health in China. Its timely publication meets current and urgent demands. The book reflects the conscious responsibility of Chinese scientists in raising public awareness and suggesting effective countermeasures for controlling the invasive organisms. It is a systematic summation of the studies of the authors in the related field. As well, it collected and analysed other abundant information in this field at home and abroad.

Introduced are 85 species of invasive organisms that have caused serious damage or would potentially threaten the agricultural production and ecological safety of China. The book generally consists of three parts. These parts introduce the origin, distribution, main morphological characteristics for identification, main biological and ecological characteristics, the ways of invasion and dispersal, and prevention and control measures, the main characteristics of damage or symptoms of 30 malignant species of alien invasive plants and animals, as well as 25 main species of alien invasive pathogen, respectively. The leading invasive species threats to Chinese agriculture are insects, weeds, and pathogens. The best method for combatting the effects of these invasive organisms is to prevent their initial entry into China. But, once they have entered, aggressive strategies are needed to control their establishment and spread.

The book is well written with few errors and strong readability. It may be used as a good reference by persons who engage in agricultural or biological research, education, production and management, or other persons who are interested in these fields.

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Erratum The Canadian Field-Naturalist 126(4)

In response to the review of *Contributions to the History of Herpetology*. CFN 126(3): 344-345, the book's editor Kraig Adler pointed out (personal communication to FRC 12 May 2013): "Only one small correction. Mrs. Martof used a kitchen knife, not a gun. She told the police she slipped while cutting some pizza. But Bernie was stabbed up under his rib cage several times!"

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It has come to our attention that sections of many of the book reviews by Li Dezhi and Qin Aili were copied from sources without attribution. The journal and the authors apologize for this oversight.