Food Security and Land Use Change under Conditions of Climatic Variability

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Food security covers aspects at all spatial levels from local to global and from an interdisciplinary and systemic food systems perspective. This book aims to better understand environmental, nutritional, agricultural, demographic, socioeconomic, political, technological, and institutional drivers, costs, and outcomes of current and future food security. Interactions with contextual factors include climate change, urbanization, greening the economy, and data-driven technologies. Agriculture began some 12,000 years ago. Since that time, approximately 7000 plant species and several thousand animal species have been used for human food. Today, however, the worldwide trend is toward changing food habits and dietary simplification, with consequent negative impacts on food and nutrition security (Emadi and Rahmanian, this volume and Burlingame et al. 2012; Boye and Arcand 2012). Agricultural landscapes also suffer from genetic erosion as traditional landraces and “minor crops” are rapidly disappearing, replaced by modern varieties. Such genetic erosion means that future options for domestication, breeding, and evolution could be irreversibly lost, a fact that is being recognized through the development of “red list” for cultivated species. Agrobiodiversity is the subset of biological diversity important to food and agriculture. It is the human element that sets agrobiodiversity apart from “wild” biodiversity. Agrobiodiversity is the outcome of the interactions among genetic resources, the environment, and farmers’ management systems and practices.

Competing interests
The author declares that he has no competing interests.