Preface

In this book Southern Africa region is synonymous with SADC. The book examines food security situation of small-scale producers, particularly those inhabiting poor sections of urban areas and those inhabiting dry lands in Southern Africa. Case studies and examples drawn from throughout the region are used to demonstrate the precarious and challenging situation facing this sector of the population. Recommendations on viable mitigating measures are made in the various chapters.

The introductory chapter presents a global overview of the need for measures to contain food demand by a rapidly increasing world population that topped 7 billion in 2012 and is expected to grow to 8.3 billion by 2050 and 10.9 billion by 2100. A combination of population increase in the developing world and unsustainable consumption levels in the developed world is envisioned to pose a stark challenge to the agricultural sector over and above the challenges from climate change, bioenergy and land degradation. The chapter observes that Southern Africa experiences one of the highest climate variability in the world, a variability that negatively impacts on food security particularly at the level of small-scale agricultural producers. Thus, globally, and more so in Southern Africa, more focused investments have to be directed towards research that would mitigate impacts of climatic variability and climate change as well as stabilize food supply and enhance food security while mitigating malnutrition. Sustainability as a concept and its relevance in reinforcing food security among small-scale agricultural producers in developing countries and those in Southern Africa is discussed. It is reiterated that eradicating extreme hunger and poverty depends on improving agriculture and enacting policies that support small-scale agricultural producers' productivity and strengthening food processing and fortification.

Chapter 2 discusses policies and legislations governing marketing and food trade in Southern Africa and Namibia in particular. Quoting UN conferences held in 1992 and 2002, the chapter shows that mitigations were envisioned to lie in making markets work through adjusting prices that incorporate fully the cost of environmental degradation, pollution control and impose market-based instruments such as taxes and tradable permit systems. Management interventions targeting agrarian reforms to enhance commercialization while strengthening the position of the small-scale

agricultural producers and adequately addressing poverty and food security were recommended at the end of both conferences. Policies mutually beneficial to trade and interests of SADC Member States and linkages to the global economy influenced by international institutions and the globalization process are discussed in the chapter highlighting protocols aimed at catalyzing foreign and intra-regional investment as well as enhancing cooperation, coordination and harmonization of the financial sectors to protect capital and financial markets as well as free flow of capital across the borders of Member States. Trade organs such as COMESA and SACU that promote trade liberalization in the region and policies and enacted legislations that protect, guide and enhance trade in Namibia's agricultural sector are discussed followed by an overview of Namibia's reliance on food trade to enhance food security.

In Southern Africa, urbanization is growing at an alarming rate due to increasing rural–urban migration triggered by dwindling employment opportunities in rural areas and pull factors that lure the young and able-bodied rural population to towns. Chapter 3 of this book looks at the role that urban and peri-urban agriculture play in enhancing food security among small-scale agricultural producers in Southern Africa urban areas. It is shown that although cities will continue to depend largely on rural agriculture, substantial contribution is increasingly coming from within the urban and urban fringe environments to improve food security of the urban poor.

Chapter 4 examines the role indigenous plant resources play in enhancing food security among small-scale agricultural producers in the dry lands of Southern Africa and Namibia in particular. The plant resources found on small-scale producers' land holdings include medicinal products, products from tree barks, a range of vegetables, a wide range of pulses and grains as well as edible wild fruits. The chapter elaborates on the people's earlier rich heritage, coping mechanisms and ability to live harmoniously with their environment wisely stretching resources from years of abundance into lean years. The chapter decries the weakening of coping mechanisms by 'development' interventions and suggests restoration of these mechanisms through research and domestication of indigenous plant resources. Namibia's efforts in mitigating loss of biodiversity threat are discussed in a case study that lays bare the utilization of indigenous plant resources by many small-scale producers to enhance their livelihoods. The chapter recommends strengthening of existing indigenous technical knowledge through scientific research and continuous documentation to gauge the full commercial value of some of these resources having high economic, medicinal and cultural significance to ensure sustainability and curb species extinction. Furthermore, formulation of a domestication program is recommended for targeted species.

Chapter 5 scrutinizes the role that small stock play in enhancing food security for the small-scale agricultural producers in Southern Africa's dry lands and specifically those in Namibia. Many years of experience and folklore handed down over generations had equipped these people with viable adaptations to the unpredictable weather and harsh environment. Long traditional survival techniques included livestock rearing, keeping a few cattle and mostly small stock such as goats and sheep. They harvested wildlife, wild fruits and vegetables to augment products from the animals they kept and crops they cultivated. The chapter illustrates that in Namibia,

small stock (indigenous goats and sheep) play an important role in enhancing livelihoods and food security as well as easing poverty among the small-scale agricultural producers inhabiting the dry lands.

Chapter 6 discusses interventions that improve land productivity and those that enrich dependable food crops such as cassava which is a cheap source of carbohydrates but nutritionally poor protein source through improved processing and fortification methods and thus mitigate food and nutritional insecurity including severe protein malnutrition rampant in many small-scale cassava growing areas. This is occasioned by inadequate access to animal-based proteins by the majority of the people in the small-scale agricultural sector. Most diets of the small-scale agricultural producers in the cassava growing areas derive their proteins largely from traditional vegetable sources, such as beans and leafy vegetables which are inherently low in protein content. The chapter discusses other dependable crops including pearl millet and sorghum. Case studies included in this chapter recommend intercropping cassava and pearl millet with high-protein legumes such as cowpeas and soybeans and incorporating these legumes during flour processing.

Chapter 7 looks at climate-smart agriculture and discusses the advantages of research that employ a participatory approach that enables small-scale producers to understand and incorporate weather and climatic data into farming activities. The chapter demonstrates that since agricultural activities are vulnerable to variable weather and climatic conditions, agricultural decision-making should encompass weather and climatic information into decisions on land use and land management, selection of plant breeds and crop production practices like land preparation, weeding, pest and disease control as well as harvesting and crop storage. Citing a case study carried out in Limpopo, South Africa, the chapter corroborates that consideration of weather risks such as short-term rainfall characteristics and short-term in-seasonal drought can be used effectively in determining the timing of land preparation, sowing, fertilizer application and pest and disease control. The case study explicitly demonstrates the soundness of the participatory approach where the small-scale agricultural producers work closely with the scientists and extension officials. Additionally, the chapter highlights the benefits accruing from knowledge sharing and creating a conducive environment that encourages dialogue between all stakeholders, i.e. researchers, developers, donors and the small-scale growers themselves.

Windhoek, Namibia Josephine Phillip Msangi

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Msangi, J.P.

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