would also have been useful. In the long run, the economic returns to investment in such databases depends very much on their upkeep and the extent to which national researchers have both the capacity and incentives to conduct research in an integrated fashion.

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Famine In Africa: Causes, Responses, and Prevention

Famine remains a disturbingly real threat in this era of plenty, perhaps nowhere more so than in Africa south of the Sahara. The devastating famines in the Sahel and the Greater Horn in the mid-1970s and again in the mid-1980s and mid-1990s induced unprecedentedly intensive research across the social sciences on the etiology of widespread severe undernutrition and private and public responses to such episodes. Amartya Sen’s 1998 Nobel Prize in economics partly reflects the quality of scholarship in this area over the last quarter century. Scholars’ understanding of the causes of and appropriate ex ante and ex post responses to famine has progressed markedly. Yet, scholars with more than just an academic interest in undernutrition and famine must confront the ongoing need to improve laypersons’ and policymakers’ understanding of concepts, models and empirical regularities now familiar to serious students of food security and famine. This new volume by von Braun, Teklu and Webb takes a significant step toward meeting that need.

The considerable virtue of this book lies in its clear presentation of core issues and principles in relatively uncomplicated language and with a wealth of well-chosen examples. It directly debunks traditional myths surrounding famine—that it largely reflects adverse climate shocks, that crop failure is the proximate cause, or that it is the natural, Malthusian result of growing human populations—using both intuitive and empirical arguments. The authors emphasize that famine reflects unsettled socio-political systems characterized by endemic poverty and risk, and that famine must be understood as the conjunctural consequence of accumulated structural weaknesses and a social or natural shock. Famines neither arise nor retreat suddenly. Concerted efforts by communities, national governments and international donors to remedy structural deficiencies ex ante, in advance of famine, are universally acknowledged to be the preferred approach, but are terribly difficult to achieve in practice.

In the main, this difficulty arises because famine typically strikes where markets, states, and production technologies are all weak. Variability in local, rainfed agricultural production would be less of a problem if markets with ample supporting infrastructure ensured sufficient food availability in times of local shortage. Equally, segmented and thin food markets would threaten less if agricultural production technologies in use insured ample local food supply. And these two interdependent problems commonly stem in part from government errors of nonfeasance or misfeasance. Governments at war with their own people prove especially unable to guard against famine, and in some egregious cases use food as an instrument of aggression against the state’s internal enemies. One empirical weakness in this volume is that the authors understate the effect of civil conflict on the incidence, severity and duration of famine, including in places like Ethiopia, Sudan and Zimbabwe, which the authors discuss in considerable detail.

Most famine strikes in rural areas, although famine’s effects impact urban areas through migration and marketing links. Since their own labor power is often the poorest’s only asset, increased and less variable rural labor productivity is perhaps the single most important intermediate objective in the struggle to end famines. This point might have been given a bit more attention in the fourth chapter, on production failures. Likewise, the importance of child health, nutrition, and education—which raise these
individuals’ adult labor productivity-to the long-run prevention of famine is somewhat underemphasized. This underemphasis may feed economists’ unfortunate propensity to treat nutritional status solely as an outcome, not as a state variable influencing future productivity and welfare. Chapter 7, on individual households’ natural preventive and responsive behaviors in the face of varying degrees of food insecurity, drawing heavily on the authors’ own field experiences in Ethiopia, Sudan and Zimbabwe, offers a good synthesis of the literature on coping strategies available. The authors do an excellent job of capturing the dynamism of the food insecure’s endogenous responses to threat without overstating the limited capacity of the poor to resolve fully these problems themselves.

Although the authors indicate they wish to “enhance the theoretical basis of the debate [on famine] . . . and enrich the theory through empirical fact finding”, it is apparent that neither sophisticated theorizing nor methodologically advanced empirical inquiry were their priority. One can easily pick holes in the relatively simplistic and dated empirical methods employed in the chapters on agricultural production and food marketing, where typographical errors in several equations may also frustrate readers who want to learn the models for the first time. And the vast majority of the empirical findings have been previously reported elsewhere. This book is not a map to the formal, methodological or theoretical research frontier on famine. But the authors usefully identify key areas in need of further advanced research, notably improved understanding of the functioning of rural labor and food markets, effective targeting strategies, the cost-effectiveness of relief operations, and capacity to predict the onset of complex humanitarian emergencies that increasingly absorb the human and financial resources of development agencies.

The strength of this volume lies in its compact and clear presentation of a mass of useful concepts and findings scattered across the disciplines and often buried in an inaccessible grey literature. The authors focus heavily on policy and program issues. The chapter on that subject is as long as the book’s first five chapters combined, underscoring the intended audience. von Braun, Teklu and Webb’s volume deserves to be widely read by activists, policymakers, practitioners and students looking for a lucid synthesis of the complex and disturbingly current reality of famine in Africa.

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Agricultural Biotechnology and the Environment

Over the past decade biotechnology has evolved from a research area to an industry. Applications of biotechnology in agriculture are second only to uses related to human health, and the rate of innovation is such that even an attentive bystander easily becomes confused. This book responds to an obvious need for a wide ongoing survey of biotechnology used in agriculture.

The scope of the subject matter is very broad, comprising herbicide tolerant crops, insect resistant plants, disease resistant crops, transgenic plant products, microbial pesticides, frost-inhibiting bacteria, animal growth hormones (especially Bovine Somatotropin), and transgenic animals. Economic and cultural aspects are also addressed.

The diverse topics are linked in this book by a question that pervades the whole discussion: will biotechnology fulfill its early promise of ameliorating the environment by providing substitutes for artificial chemicals as herbicides and insecticides, and by reducing the burden of harmful wastes by increasing feed conversion efficiency? Given the infancy of the industry, any conclusion on this score must be premature. But the early promise of unambiguous reduction in chemical use has not been fulfilled in the evolution of the industry to date, as described in this book. Herbicide tolerance genes in crops directly increase use of the relevant herbicide; whether this is more than fully