

Indian agriculture: Trends in food grain production

by Trinadh Nookathoti

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Indian agriculture, just as the broader Asian agriculture, has always provided insights into the key challenges of the peasant or smallholder farming that predominates in the developing world and the policy imperatives for its transformation. Recent global initiatives, including the Millennium Development Goals and its successor Sustainable Development Goals, as well as regional and national programmes, have shed more light on why change is inevitable. The focus on poverty reduction (or its complete eradication) and food security reflects the anxiety over the myriad problems associated with conditions of extreme deprivation. Its sheer size, in both land and population, makes India an important test case for the workability or otherwise of some of the thematic issues around which global action has been deployed for some decades now.

The book has emerged from what is clearly a rigorous and systematic and evidently focused doctoral study of the trends in food grain production to help explain the causes of hunger and malnutrition in rural India and what elements allow for effective remedial actions to be taken. In seven chapters, the author has attempted to provide an exhaustive profile of Indian Agriculture and Indian society at large. Evoking the timeless insights of the legendary father of India's constitution, Dr BR Ambedkar, the author makes a case for expanding the definition of democracy to embrace improvements of individual welfare which includes having adequate food and nutrition. But even constitutional protection has not prevented India from the ignoble distinction of being the only Asian country to experience severe food shortages as far as collective memory goes.

An introductory chapter traces the definitions of food security in all its ramifications and from the perspectives of both national and international policy makers. A clear link is thus made between poverty and food insecurity with very interesting, if disturbing, statistics about current and prospective situations. The concern that recent growth rates are not making much impact on malnutrition highlights the extreme inequalities in the country but also reflects some international developments that range from changes in energy prices and patterns of international trade as well as changes in weather patterns occasioning climate change. In some way, it emerges that chronic hunger that is frequently experienced is more pernicious than the worst natural disasters, of which there are also many. The chapter provides several examples of the role of international commitments and how historical facts such as the Green Revolution and national policies that came before and

after defined the path taken by Indian agriculture. All these lead to the identification of a research gap, specification of research objectives and methodology, data sources and analytical procedures that students and policy makers will definitely find very helpful.

Chapter 2 is devoted to an elaboration of the conceptual framework for examining the country's food insecurity. The diverse and multiple elements that are implicated in food insecurity are explored by means of a very comprehensive literature review and document analysis, drawing from the time-tested insights of such notable authorities as Amartya Sen, Jean Drez, MS Swaminathan, among others. A concept of food security that considers food availability, household entitlement, stability of food supply year-round and protection against malnutrition, is proposed. Everything considered, a compelling case is made that expansion in grain production has not translated to improved nutrition due to structural shortcomings that have hurt the poorer segments of the population, including women.

Chapter 3 focuses on the question of agricultural growth and its implications for food security. The primal role of agriculture in Indian's development is stressed. The complex terrain of Indian agriculture is described with robust statistical details that present its major characteristics, its key outputs and how these have changed over time, its contribution to the GDP and how this has evolved, and growth rates at different epochs and what seems to have influenced them. Attention is paid to the unique cultural base of India and how this continues to show up in wider national issues and continues to influence and be influenced by the policy.

In chapter 4, the main theme of the book is examined in terms of the trends in food grain production and what it means for self-sufficiency, a goal that has pre-occupied national policy for much of the country's existence as a sovereign state. Key questions addressed are what factors are implicated in the observed trends over time and how these differ for individual commodities such as rice, wheat, pulses, etc. Again, the role of global and national, including regional, policies, are examined. The role of globalization is explicitly x-rayed in terms of the challenges it poses and the opportunities it offers to equalize access for the generality of the Indian population.

Chapter 5 introduces the quantitative techniques employed in the literature to perform projections of future demand and supply, factoring in anticipated changes in dietary patterns and other developments both within and outside India. Unless something drastic happens, there is nothing in the projections that holds out much promise that tomorrow will be better for India's agriculture within existing technological and policy configurations.

Chapter 6 presents actual data analysis and their interpretations. Using simple non-parametric statistics, the book presents average area cultivated, gross production and yield aggregated for the system as a whole and broken down by enterprise. Growth rates are also presented and gaps that need to be filled in order to

make the system more supportive of the needs of the population are identified. More robust but accessible statistical procedures are also described and applied to yield insights on which policy interventions can be safely anchored.

Chapter 7 winds up with findings and suggestions that build on the notion that India's future is intimately linked with its agriculture whose prosperity sets the tone for what happens to the broader economy. Ultimately, the hard data will make the difference between practical realities of dealing decisively with the severe shortages that countries confront and whether or not they can reverse the trends from destitution for the many, to prosperity for all. This book is a first in many respects. It combines historical antecedents with contemporary conditions of food insecurity, deprivation and shortages,

as well as practical steps for computing national food balance sheets using simple techniques. From that point of view, it straddles the entire knowledge value chain from the primary didactic levels where it has the potential to fill in existing gaps in essential resource books that address practical hands-on training needs of beginners, to the policy advisory and intervention levels. This makes it an indispensable companion for a wide constituency, be they beginning students, mature scholars or policy makers. Whether or not one is interested in Indian agriculture *per se* is immaterial. The concepts are without borders and are as timeless as they are topical and will remain worthwhile for sometime.

Ajuruchukwu Obi

University of Fort Hare