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Accelerating Food Production in Sub-Saharan Africa

Reviewed by Arthur J. Dommen

John W Mellor, Christopher L Delgado, and Malcolm J Blackie (eds) Baltimore The Johns Hopkins University Press, 1987, 417 pp , $39 50

This volume presents 28 papers delivered at the August 1983 conference at Victoria Falls, Zimbabwe, organized by the University of Zimbabwe's Department of Land Management and the International Food Policy Research Institute (IFPRI), with the financial support of the United Nations Development Program and the Government of the Netherlands The papers deal with broad issues like food production and food policy, and they are followed by brief commentaries The editors have added introductory and concluding chapters

The volume opens with a succinct review of African demographic, production, consumption, and trade trends by Paulino He notes that, despite the deteriorating food situation in per capita terms, over half the countries in Sub Saharan Africa increased their food output by an average 2 percent or more per year from 1961 to 1980 More than half of this growth was in eastern and southern Africa, where Africa's large-scale commercial agriculture is concentrated The largest growth was in maize, followed by rice, millet and sorghum, two major African staples, performed relatively poorly Growth in food production has generally depended more on expansion of cropland and labor force than on yield increases or use of modern inputs (compared with other parts of the world)

The nutritional situation in Sub-Saharan Africa is complex, as Kumar stresses Television has made the world more aware of occasional acute African famine (which may be due to a number of causes besides drought) Undernourishment, however, is persistent and widespread in rural areas, and Kumar highlights some of its less visible dimensions, such as seasonality

Three regional chapters written by authorities with first-hand field experience—Matlon (West African semiarid tropics), Collinson (eastern and southern Africa), and ter Kuile (the humid and subhumid tropics)—are excellent The food problem in each of these regions differs in its manifestations, although perhaps not in its fundamentals Food crops and diets obviously vary, but labor use in food production follows patterns that seem to transcend differences in climate and natural resource distribution Collison's statement that the basic constraints on the development of the local farming system are land availability and soil fertility maintenance apply equally well to the two other regions

The chapters on marketing systems, with case studies in Nigeria and Zimbabwe, are useful They document Africa's notoriously inadequate (with a few exceptions like Nigeria and Cameroon) infrastructure, whose impact on food production and distribution would be difficult to overstate Budget allocations, however, are subject to controversy

The chapters on food policy tackle such perpetual riddles as what effect can policy reforms, price adjustments, and choice of investment strategies be expected to have on producers' response African governments have a spotty record in these areas (often because of donor pressures) The authors pose fundamental questions, but provide few answers Their only unarguable conclusion is that government intervention in Africa is all-pervasive, but it produces results that are often less beneficial than those reported from Zimbabwe Several authors make the point that African food problems cannot be understood apart from structural factors that favor the nonagricultural sectors in the policy process

The core of the volume consists of four studies on various aspects of technology Technological change in African agriculture is considered "a necessary condition for achieving sustained increases in food production," the reader is warned at the outset The search for improved technology that works in farmers' fields has been long and frustrating, as the editors recognize The success of widespread adoption of hybrid corn by Kenyan smallholders appears to have been related to a particularly favorable set of circum-

The reviewer is an agricultural economist with the Agriculture and Trade Analysis Division, ERS

stances and may not be duplicatable elsewhere Where technological packages have been developed by research stations, they run into all sorts of obstacles that anthropologists have understood better than economists Sometimes farmers surprise researchers by adopting one part of a package and not another, as happened in the Sine Saloum project in Senegal The pitfalls of this area of technology transfer make prescription hazardous With regard to fertilizer, the editors warn "We conclude that there is a potential for increased fertilizer use in specific areas, but not everywhere, and that where and when to emphasize improved input delivery systems requires careful diagnosis " Making recommendations on the basis of such analytical conclusions is difficult

The pressure to produce prescriptions for accelerating food production in Sub-Saharan Africa comes from the international foreign aid community (including the World Bank) and from the boards of international agricultural research centers (such as IFPRI) In an obvious attempt to respond to this pressure, the editors come close to prescribing something like India's Intensive Agricultural District Program (IADP) of the sixties for Africa In their search for quantum leaps in agricultural production, the editors seem to argue for concentrating investment in the areas with the most productive soils and dependable water supplies Apart from the political ramifications of such a decision (which goes against the program thrust of the Organization of African Unity) and the eventual cost, this solution has two major drawbacks

- By concentrating resources on the better endowed regions, one forfeits all the demand linkages of a broadly based growth pattern, and one risks unbalanced growth creating sharp inequalities in income The African countries are more preponderantly rural and have less well integrated economies than the Indian states had in the sixties Moreover, in Africa there is a lack of congruence between agricultural resource endowments and population density

- Assuming that an IADP-type development strategy is labor-displacing rather than labor-absorbing (compare the French difficulties with recruiting labor for the Office du Niger irrigation scheme in Mali in the thirties), it will not only fail to alleviate population pressure on the more fragile soils (as the editors claim) but it will likely increase such pressure, thereby accelerating the degradation of the natural resource base (The World Bank has recently set up a unit to monitor the environmental effects of its projects, particularly in Africa)

A disturbing aspect of this book is that the recommendations offered by the editors in the final chapter often ignore, or actually contradict, the evidence presented elsewhere If, as Delgado and Ranade cogently argue in their chapter on technological change and agricultural labor use, Sub-Saharan Africa faces "a fundamental structural problem for growth in labor productivity," one must question the wisdom of forging ahead with the search for land-saving technology of the type that produced the Green Revolution in Asia, where labor was in plentiful supply How do recommendations for a commodity orientation in research and the setting up of input delivery systems accommodate to the problems arising from top-down extension service recommendations designed to boost crop yields that, according to Vallaeys, force farmers to reallocate their inputs of land, labor, and capital on a massive scale? Because Vallaeys was deputy director-general of IRAT, the French agronomic research organization with one of the longest records of work in Africa, his observation carry considerable weight

In spite of these faults, I believe this book is the single most valuable publication on African agriculture to appear in the past 10 years for its breadth of scope and its attempt to draw lessons from evidence that is admittedly very scattered in location and uneven in quality The book illuminates, perhaps unintentionally, the vast agenda for research remaining to be addressed before economists understand African agriculture and learn ways to help African farmers help themselves For now, its title remains more promise than substance