Agricultural Mechanization In Kenya Africamechanize

Several Sub-Saharan African nations have experienced increased economic growth and political stability in recent years compared with the stagnation and turmoil of previous decades. Ghana is one of the biggest success stories of the region; the nation has enjoyed an annual average of five percent economic growth for the past 20 years and will probably be the first Sub-Saharan African country to achieve the Millennium Development Goal of cutting poverty in half by 2015.This study examines how Ghana can build on its achievements and possibly serve as a model for other African countries. By drawing on existing literature and applying a highly disaggregated dynamic general equilibrium model to Ghana's experiences, the authors identify certain necessary factors for further economic development in the country. These requirements include continued political stability, growth in manufacturing, improved domestic services such as transportation, and agricultural development that goes beyond past reliance on cash crops such as cocoa to include major staples and livestock. This kind of broad-based growth will benefit the entire economy, thereby reducing poverty. The authors' analysis provides an economic development strategy for Ghana, and possibly other countries in the region, to policymakers, development specialists, and others concerned with Sub-Saharan Africa.

"Conservation Agriculture (the use of no tillage systems) to preserve soil structure and integrity has become an increasingly important step towards sustainable farming. This book brings together conservation agriculture and climate smart decision making processes for the first time, focusing on Africa"--

The dramatic increases in food prices experienced over the last four years, and their effects of hunger and food insecurity, as well as human-induced climate change and its implications for agriculture, food production and food security, are key topics within the field of agronomy and agricultural research. Contested Agronomy addresses these issues by exploring key developments since the mid-1970s, focusing in particular on the emergence of the neoliberal project and the rise of the participation and environmental agendas, taking into consideration how these have had profound impacts on the practice of agronomic research in the developing world especially over the last four decades. This book explores, through a series of case studies, the basis for a much needed 'political agronomy' analysis that highlights the impacts of problem framing and narratives, historical disjunctures, epistemic communities and the increasing pressure to demonstrate 'success' on both agricultural research and the farmers, processors and consumers it is meant to serve. Whilst being a fascinating and thought-provoking read for professionals in the Agriculture and Environmental sciences, it will also appeal to students and researchers in agricultural policy, development studies, geography, public administration, rural sociology, and science and technology studies.

Technological change in agriculture, employment and over-all development strategy; Mechanisation and employed in East African agriculture; Agricultural mechanisation and employment in Latin American; Employment and technological change in Philippine agriculture; Mechanisation of agriculture in India and Sri Lanka (Ceylon); Tractor mechanisation and rural development in Pakistan; Agricultural mechanisation and employment in Southern Italy.

Nothing could be more valuable than creating a new paradigm in economics, particularly in the field of agricultural

development. A notable example is T. W. Schultz's (1964) thesis regarding "efficient but poor" small-scale farmers in low-income or developing countries. No less influential isVernon Ruttan and Yujiro Hayami's thesis concerning the role of induced technical and institutional innovation; arguing that as the scarcity of a factor of production (e.g. labor) increases, technology that saves on the use of the factor is induced to develop, along with supportive institutions,including property rights systems, public-sector research and extension systems, and marketing institutions. In Chapter 2 of this volume, they note that "it became clear that the induced technical change theme could provide the structure needed to integrate a large body of theoretical and empiricalresearch on agricultural development." In fact, their research provided a consistent and effective framework to analyze how markets, technology development and institutional changes interact to facilitate agricultural development. Their perspectives are wide, covering large geographical areas and a thorough analysis of the historical development of agriculture in the United States, Japan, and many other Asian countries. The book collects the most influential papers of Ruttan and Hayami in order to aid readers in understandinghow these highly influential agricultural economists developed their perspectives.

More than 500 million family farms manage the majority of the world's agricultural land and produce most of the world's food. We need family farms to ensure global food security, to care for and protect the natural environment and to end poverty, undernourishment and malnutrition. But these goals can be thoroughly achieved if public policies support family farms to become more productive and

sustainable; in other words policies must support family farms to innovate within a system that recognizes their diversity and the complexity of the challenges faced. The State of Food and Agriculture 2014: Innovation in Family Farming analyses family farms and the role of innovation in ensuring global food security, poverty reduction and environmental sustainability. It argues that family farms must be supported to innovate in ways that promote sustainable intensification of production and improvements in rural livelihoods. Innovation is a process through which farmers improve their production and farm management practices. The 2014 edition of The State of Food and Agriculture, FAO's major flagship publication, considers innovations in family farms and their role in ensuring global food security, poverty reduction and environmental sustainability. Highlights: The world's food security and environmental sustainability depend on the more than 500 million family farms that form the backbone of agriculture in most countries. Family farms are an extremely diverse group, and innovation systems must take this diversity into account. Public investment in agricultural R&D and extension and advisory services should be increased and refocused to emphasize sustainable intensification and close yield and labour productivity gaps. Capacity to innovate in family farming must be promoted at multiple levels.

Individual innovation capacity must be developed through investment in education and training. Effective and inclusive producers' organizations can support innovation by their members.

Sustainable Agricultural Mechanization: A Framework for AfricaFood & Agriculture Org.

This paper is specifically about agricultural mechanisation: the opportunities provided by mechanisation for intensifying production in a sustainable manner, in value addition and agri-food value chain development, as well as the inherent opportunities implied for improved local economies and livelihoods. The establishment of viable business enterprises agro-processors, transport services, and so forth as a result of increased agricultural mechanisation in rural areas, is crucial to creating employment and income opportunities and, thereby, enhancing the demand for farm produce. Mechanisation plays a key role in enabling the growth of commercial agri-food systems and the efficiency of post-harvest handling, processing and marketing operations, and as such can be a major determinant in the availability and accessibility of food, the food prices paid by urban and rural poor, as well as contributing to increased household food security.

Many previous publications on farm mechanization, draught animal power, hand tool technology, etc. have tended to be narrowly focused. The topic of

farm power and mechanization also tended to be separated from the actual process of growing crops. This manual looks at putting the different sources of farm power, mechanization, machines, equipment and tools in a much broader context. Farm power requirements need to be viewed with reference to rural livelihoods and to farming systems as well as to the critical area of labour saving in HIV/AIDS-hit populations. No one particular type of technology is advocated.

The manual work carried out by farmers and their families is often both arduous and time consuming and in many countries this is a major constraint to increasing agricultural production. Such day-to-day drudgery is a major contributoring factor in the migration of people, particularly the young, from the rural countryside to seek the prospect of a better life in the towns and cities. Farm production can be substantially increased through the use of mechanical technologies which both are labor-saving and directly increase yields and production. This document provides guidelines on the development and formulation of an agricultural mechanization strategy and forms part of FAO's approach on sustainable production intensification.

The 'what' and 'why' of no-tillage farming. The benefits of no-tillage. The nature of risk in no-tillage. Seeding openers and slot shape. The role of slot cover. Drilling into dry soils. Drilling into wet soils. Seed depth, placement and metering.

Fertilizer placement. Residue handling. Comparing surface disturbance and low-disturbance disc openers. No-tillage for forage production. No-tillage drill and planter design: large-scale machines. No-tillage drill and planter design: small-scale machines. Managing a no-tillage seeding system. Controlled-traffic farming as a complementary practice to no-tillage. Reduced environmental emissions and carbon sequestration. Some economic comparisons. Procedures for development and technology transfer.

First, this paper shows that rice varietal development in Nigeria has been lagging behind that of other developing countries in Asia and Latin America, due partly to insufficient investment in domestic rice R&D. The paper then illustrates using a household model simulation that impacts of certain policies, such as the seed subsidy, may be greater (smaller) if they are applied to good (poor) varieties. The paper concludes by discussing key policy implications and future research needs.

This bulletin provides principles, practices and procedures for testing machines and also determines aspects of a machine's performance that can be evaluated. It is directed towards those involved in the evaluation of machinery, and primarily towards users on small farms. Evaluation of farm equipment may be appropriate at any stage in its development, from first prototype to batch and series production.

Tillage agriculture has led to widespread soil and ecosystem degradation. This book reviews research and development initiatives in Africa aimed at building resilient farming systems. It summarises the status of conservation agriculture today, discusses prospects for future development and provides case studies showing its performance in Africa

It is a curious situation that technologies we now take for granted have, when first introduced, so often stoked public controversy and concern for public welfare. At the root of this

tension is the perception that the benefits of new technologies will accrue only to small sections of society, while the risks will be more widely distributed. Drawing from nearly 600 years of technology history, Calestous Juma identifies the tension between the need for innovation and the pressure to maintain continuity, social order, and stability as one of today's biggest policy challenges. He reveals the extent to which modern technological controversies grow out of distrust in public and private institutions and shows how new technologies emerge, take root, and create new institutional ecologies that favor their establishment in the marketplace. Innovation and Its Enemies calls upon public leaders to work with scientists, engineers, and entrepreneurs to manage technological change and expand public engagement on scientific and technological matters.

This study analyzes case studies in agricultural development to provide data and guidelines for future planning and development projects.

"Co-organized by Food and Agriculture Organization of the United Nations (FAO), United Nations Industrial Development Organization (UNIDO). Hosted by Centre for Agricultural Mechanization and Rural Technologies (CAMARTEC), 3-5 June 2009, Arusha, Tanzania."

The world's demand for food is expected to double within the next 50 years, while the natural resources that sustain agriculture will become increasingly scarce, degraded, and vulnerable to the effects of climate change. In many poor countries, agriculture accounts for at least 40 percent of GDP and 80 percent of employment. At the same time, about 70 percent of the world's poor live in rural areas and most depend on agriculture for their livelihoods. 'World Development Report 2008' seeks to assess where, when, and how agriculture can be an effective instrument for economic development, especially development that favors

the poor. It examines several broad questions: How has agriculture changed in developing countries in the past 20 years? What are the important new challenges and opportunities for agriculture? Which new sources of agricultural growth can be captured cost effectively in particular in poor countries with large agricultural sectors as in Africa? How can agricultural growth be made more effective for poverty reduction? How can governments facilitate the transition of large populations out of agriculture, without simply transferring the burden of rural poverty to urban areas? How can the natural resource endowment for agriculture be protected? How can agriculture's negative environmental effects be contained? This year's report marks the 30th year the World Bank has been publishing the 'World Development Report'.

The current report—Mechanized: Transforming Africa's Agriculture Value Chains—summarizes the findings of a systematic analysis of what countries at the forefront of progress in mechanization have done right. It analyzes which policy decisions were taken and which interventions were implemented to substantially increase the uptake of mechanization. The report takes a broad perspective on mechanization, including technologies along the entire value chain and how they relate to agricultural development and job creation. The report shows what can be done to sustainably mechanize agriculture to increase production and enhance value addition across value chain segments. The set of policies and practices that are identified, if brought to scale, could have significant impact on agricultural transformation in Africa. The report provides a roadmap for African governments to take concerted action to deliver on the growth and transformation targets set out by the Malabo Declaration and the Sustainable Development Goals.

This framework presents ten interrelated principles/elements

to guide Sustainable Agricultural Mechanization in Africa (SAMA). Further, it presents the technical issues to be considered under SAMA and the options to be analysed at the country and sub regional levels. The ten key elements required in a framework for SAMA are as follows: The analysis in the framework calls for a specific approach, involving learning from other parts of the world where significant transformation of the agricultural mechanization sector has already occurred within a three-to-four decade time frame, and developing policies and programmes to realize Africa's aspirations of Zero Hunger by 2025. This approach entails the identification and prioritization of relevant and interrelated elements to help countries develop strategies and practical development plans that create synergies in line with their agricultural transformation plans. Given the unique characteristics of each country and the diverse needs of Africa due to the ecological heterogeneity and the wide range of farm sizes, the framework avoids being prescriptive.

The purpose of this guide is to provide a better understanding of the concept and practice of entrepreneurship. This guide has been prepared for people who want to start a farm business for the first time and for farmers that want to make changes to their farming systems by introducing high value enterprises directed to the market. This guide can also help extension workers be better able to help farmers develop the skills and spirit of an entrepreneur. Is it part of a series of booklets on farm business management designated to help extension workers support farmers.