



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**An Annotated Bibliography  
of the  
Sub-Sahara African Grain Economy**

*by*

*Hamath Alassane Sy*

*and*

*Merle D. Faminow*

**Occasional Series No. 17**

**Department of Agricultural Economics and Farm Management  
Faculty of Agricultural and Food Sciences  
The University of Manitoba  
Winnipeg, Manitoba  
R3T 2N2**

**August, 1991**

In 1970, the Department of Agricultural Economics and Farm Management, University of Manitoba, initiated a formal procedure for departmental publications. The purpose of the procedure is to ensure that publications are readable and available, and for those that are reviewed by peers, meet the standards of refereed publications elsewhere.

The categories of departmental publications are:

1. **RESEARCH BULLETINS:** Publications which communicate methodological and/or research information, and report on analytical techniques. Such publications are viewed as making new or substantial contributions to knowledge on problems or analytical techniques, and would have relevance primarily to professional audiences and teaching activities. Research Bulletins are subject to a formal professional review process and should be considered as refereed publications.
2. **EXTENSION BULLETINS:** Publications which communicate information and research results of a general or specific nature to the general public. These bulletins are reviewed for their contribution to extending knowledge of research.
3. **OCCASIONAL SERIES:** Publications which are not primarily concerned with methodological, research, or extension information, but which do make a contribution to knowledge on problems relevant to the field of Agricultural Economics. Review is limited to standardization of format and readability.
4. **WORKING PAPERS:** Manuscripts which have been prepared for submission to learned journals and periodicals and have not yet been assessed by reviewers. Manuscripts in this category are copied and distributed in limited number to promote early communication of new ideas and study results to enhance timely availability of new research and receipt of useful suggestions for revision prior to formal publication.

**An Annotated Bibliography**  
**of the**  
**Sub-Sahara African Grain Economy**

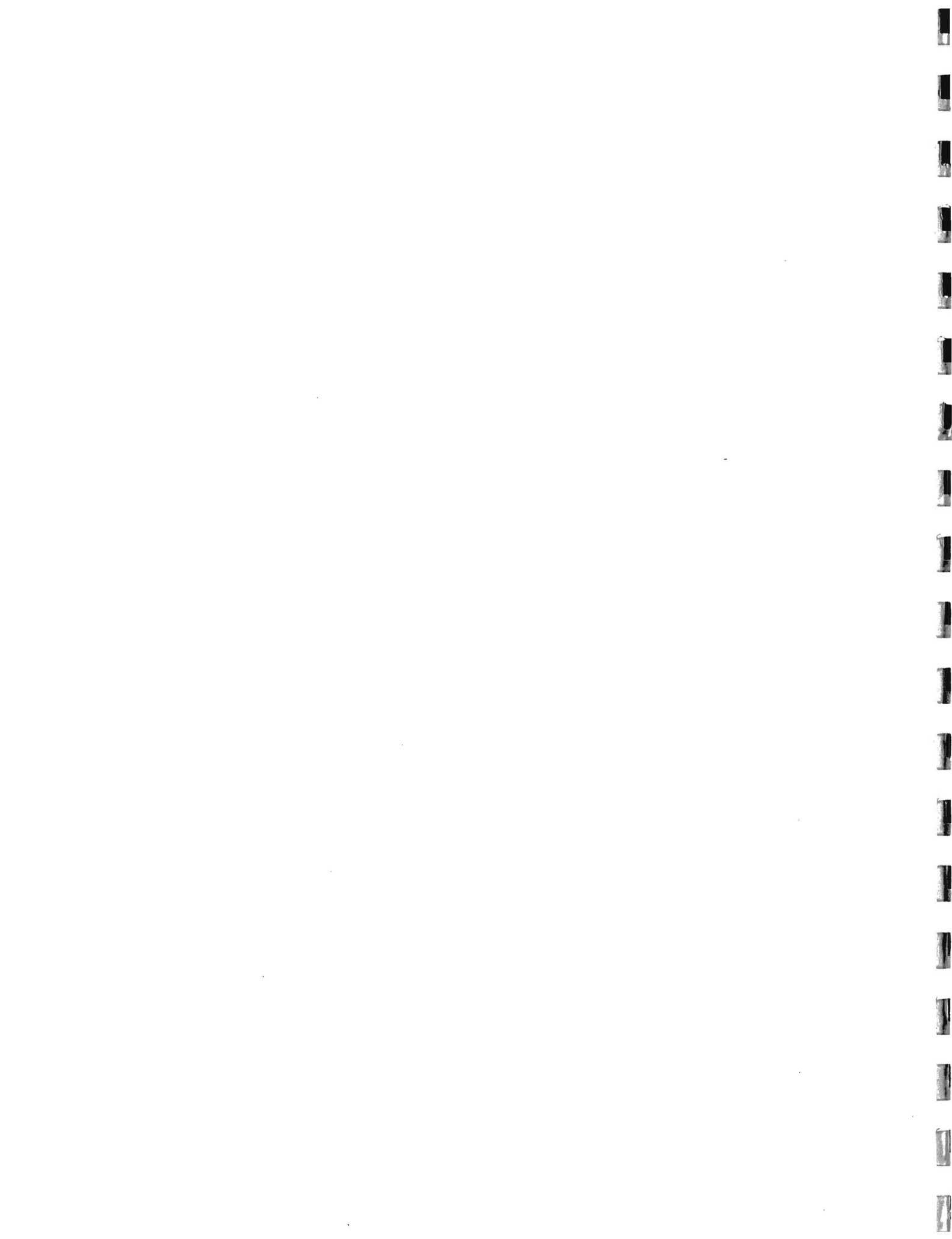
by  
Hamath Alassane Sy  
and  
Merle D. Faminow

Occasional Series No. 17  
Department of Agricultural Economics and  
Farm Management

University of Manitoba  
Winnipeg, Manitoba R3T 2N2

August, 1991

Acknowledgement: The authors are grateful to the Schwartz Fund  
and the University of Manitoba for financial  
support for this report.



## INTRODUCTION

This annotated bibliography describes publications related to the grain economy in Sub-Sahara Africa. All aspects of the Sub-Sahara grain economy such as consumption, production, imports, exports, policy, technology, finance, income, development, resources, stabilization, food security, demand projections and supply projections were eligible for inclusion. The major criterion used for inclusion was that reports, in either a general or specific manner, relate to some aspect of the grain economy of one or more Sub-Saharan countries.

A search of the three primary libraries in Winnipeg (Universities of Manitoba and Winnipeg, Canadian Wheat Board) was conducted to locate relevant publications. The bibliography, therefore, is not exhaustive. However, it likely reflects a wide and representative cross-section of publicly available research reports of major organizations. Confidence in the breath of the bibliography comes from inclusion of documents available at the Canadian Wheat Board library, possibly one of the most extensive collections of publications relating to the grain sector.

The initial impetus for this bibliography stemmed from frustration in collecting agricultural information on African countries. Standard searches often reveal only a limited subset of relevant literature. This is especially the case with publications of major research organizations such as the U.S. Department of Agriculture, Food and Agriculture Organization of the United Nations and the World Bank (among others). Therefore, the primary focus of the annotated bibliography is publications of organizations and institutes dealing with international and development issues. Publications such as books and scientific journal articles which can be easily located through computer searches are not included here. Exception has been made for material collected from University of Winnipeg where a computer index is available for material published after 1975.

Whenever possible, abstracts provided by the authors of the publications were used. In cases where no abstract was provided, reports were quickly perused and abstracts constructed. Due to the length and large number of publications it was not possible to read all closely. However, it is believed that the contents are reflected accurately.

Publications are organized into categories according to Winnipeg libraries in which they were found. In some cases, reports are available in more than one Winnipeg location. When applicable all call numbers are provided to assist local readers. Sufficient bibliographical detail is provided so that publications can be located at all other outside libraries. An index is provided at the end of the manuscript. The procedure from wordperfect 5.0 was used to construct the index.

The authors give special thanks to the librarians of the three libraries for their collaboration.

**An Annotated Bibliography  
Of the Sub-Sahara African  
Grain Economy Available in Manitoba**

**DAFOE LIBRARY**

D'Silva, Brian and McKaig, N. "Changing Cropping Patterns in Sudan's Gezira Scheme: A Means of Raising Food Production During Drought." U.S.Department of Agriculture. Sub-Saharan Africa: Outlook and Situation Report. July, 1985. pp. 38-42.

In 1984, Sudan suffered its worst drought in recent history, requiring unprecedented food imports of over 1 million tons. Sudan's irrigated Gezira Scheme could be used to increase domestic production, especially during drought. However, as drought would also affect irrigation water availability, increasing food production would require changes in cropping area allocations away from water-hungry cotton. This analysis shows that reducing cotton area by 200,000 acres could lead to increases in cereal output between 240,000 and 390,000 tons, depending upon the assumptions followed. Reallocating area would also lead to savings in water on both an annual and a seasonal basis.

**Keywords:** Sudan, drought, irrigation, Blue Nile, Gezira Scheme, crop production, Water use.

~~~~~

Shapouri, Shahla. "Per Capita Food Availability in Sub-Saharan Africa: Possible Developments." U.S.Department of Agriculture. Sub-Saharan Africa: Outlook and Situation Report. July, 1985. pp. 34-37

For 10 Sub-Saharan African countries with high dependence on food aid, calculations were done on the probability that per capita food availability will fall below trend between now and 1990. For 6 of the 10, food availability is more likely to fall 6 percent or more below trend than it is to fall only 5 percent or less. The likely future food gap for the 10

countries was figured for three scenarios: base, optimistic, and crisis. Under the optimistic scenario, results showed that some small policy changes to encourage agricultural production, plus a better export market and normal weather, could raise per capita food availability 7 to 35 percent by 1990 for several of the countries. On the other hand, under the crisis scenario, drought in 1989 and 1990 would lower per person food availability by 10 to 58 percent from the base--resulting in famine worse than any actually experienced so far.

**Keywords:** Sub-Saharan Africa, food aid, consumption patterns, agricultural policies, famine.

~~~~~

Riley, Peter A. and Missiaen, M. "An Analysis of Rising Grain Imports in Sub-Saharan Africa: The Outlook for Wheat and Rice." U.S.Department of Agriculture. Sub-Saharan Africa: Outlook and Situation Report. July, 1985. pp. 29-34

Grain imports by Sub-Saharan Africa reached a record 10.7 million tons in 1984. Chronic weaknesses in agricultural production, along with periodic food emergencies, have fuelled the increases in imports. The fact that grain imports have not decreased, despite severe foreign exchange shortages in recent years, suggests that less money is available for other sectors of the economies. These factors have important implications for import behaviour over the rest of the 1980's. Without changes in production patterns, total grain imports by 1990 are projected to rise by 40 percent and possibility by as high as 70 percent over the average of 1980-84. Further dietary shifts toward wheat and rice are likely to accompany greater reliance on imports.

**Keywords:** Sub-Saharan Africa, grain imports, wheat, rice, per capita production, and consumption.

~~~~~  
Vocke, Gary. "Corn Production Lags Behind use in Developing Countries." U.S. Department of Agriculture. World Agriculture: Situation and Outlook Report. May, 1988 pp. 37-44

Although corn production in developing countries is increasing with more widespread planting of higher-yielding varieties, output lags behind use and imports are rising. Generally, corn imports appear unlikely to be offset by increases in domestic production due to improved varieties as with the Green Revolution for Wheat. Recently, however, demand for corn in some countries has been stymied because incomes are not growing as in the 1960's and 1970's, and because severe indebtedness is affecting ability to import.

**Keywords:** Corn, developing countries, production, consumption, trade, technology, hybrids.

~~~~~  
Vocke, Gary. "The Green Revolution Lags Rising Wheat Consumption in the Developing World." U.S. Department of Agriculture. World Agriculture: Situation and Outlook Report. May, 1988. pp. 32-36

Wheat imports by developing countries have doubled since the early 1960's even though wheat output in the developing world rose more than 150 percent. Most countries of the developing world have become more dependent on wheat imports to meet rising demands. The Green Revolution has allowed some wheat importing countries to achieve self-sufficiency.

**Keywords:** Green Revolution, wheat, developing countries, agricultural policy, high-yielding varieties.

~~~~~  
Vocke, Gary. "Higher Income Developing Countries Increasing Coarse Grain Imports." U.S. Department of Agriculture. World Agriculture: Situation and Outlook Report. May, 1988. pp. 23-28.

During the past two decades, the upper-middle-income developing countries have shifted from being net exporters of coarse grains to net importers. A key factor underlying this trend is that consumers in these higher income developing countries are including more meat and poultry products in their diets. The derived demand for coarse grains created by this increased demand for animal products is increasing faster than production. The resulting shortfall has created large and growing markets of coarse grains.

**Keywords:** Coarse grains, developing countries, livestock feeding.

~~~~~  
Vocke, Gary. "Trends for Grain Consumption, Production, and Trade in the Developing Countries." U.S. Department of Agriculture. World Agriculture: Situation and Outlook Report. May, 1988. pp. 21-23

The developing countries' rapidly accelerating growth in demand for food is exceeding their capacity to expand domestic production. Their increasing dependence on foreign supplies may create growing markets for U.S. exports of food grains and coarse grains.

**Keywords:** Developing countries, grain, production, consumption, trade, dependency.

~~~~~  
Stallings, David and Shane, M. "Third World Debt and U.S. Agricultural Trade." U.S. Department of Agriculture. World Agriculture: Situation and Outlook Report. May, 1988. pp. 9-13

World debt has become an increasingly serious constraint to growth in world trade. The rate of gross domestic capital formation has declined, threatening many developing countries with economic stagnation. Prospects for significant renewed trade with debt-impacted countries are likely to remain bleak for the rest of the 1980's.

**Keywords:** International debt, trade, agricultural trade, monetary policy, financial constraints, monetary transmission, interest rates, exchange rates.



Ballenger, Nicole and Mabbs-Zeno, Carl.  
"Government Intervention in Agriculture:  
The Case of Developing Countries."  
U.S. Department of Agriculture. World  
Agriculture: Situation and Outlook  
Report. May, 1988.

Developing countries play an increasingly important role in world agricultural trade, and they represent growth markets for agricultural exports. In spite of this, their role in current trade negotiations has not been clearly defined. This article examines the nature and implications for world trade of government intervention in agriculture in developing countries.

**Keywords:** Developing countries, less developed countries, agricultural trade, subsidies, PSE's.

U.S.D.A. (United State Department of Agriculture). The Agricultural Economy of Nigeria. U.S. Department of Agriculture Washington D.C. 1972. pp. 46

A93.21/2: 329

Nigeria, the most populous country in Africa, has an economy based on production of raw materials, chiefly agricultural commodities and petroleum. Important agricultural exports include cocoa, peanuts, palm kernels, rubber, cotton, and hides and skins. Major food imports include wheat, milk and cream, and sugar.

**Keywords:** Nigeria, agricultural economy of Nigeria, raw materials, petroleum, agricultural exports.

U.S.D.A. (United State Department of Agriculture). Indices of Agricultural Production in Africa and The Near East. U.S. Department of Agriculture. Washington, D.C. 1973. pp. 55

A93.21/2:265

The report provides indices for various agricultural products, including all major cash crops and subsistence crops for which current estimates of production are obtainable. Each country indices are calculated by laspeyre's basewighted aggregative formula.

**Keywords:** Africa, agricultural products, indices, subsistence crops, productions.

-----  
Franzin, Hossein Y. Food Import Dependence in Somalia: Magnitude, causes, and Policy Options. World Bank Discussion Papers, No. 23, Washington, D.C. 1988. pp. 35

GovDocs IBRD1 ad4.8 w46 No.23

This paper has three main objectives (a) to examine in detail the trends in food import, its composition and the degree of food import dependency in Somalia, (b) to analyze various micro and macro economic channels through which both foreign food aid as well as imprudent domestic policies have resulted in Somalia's excessive reliance on imported food, and (c) to highlight main policy options that both Somalia decisionmakers and her foreign aid donors should consider in order to arrest Somalia's accelerating trend in food import dependency.

**Keywords:** Somalia, food import, policy options, foreign food aid, domestic policies.

-----  
Pryor, Frederic L. Income Distribution and Economic Development in Malawi. World Bank Discussion Papers, No. 36, Washington, D.C. 1988. pp. 83

GovDocs IBRD1 Ad4.8 W46 NO. 36

This discussion paper covers important statistics of Malawi from the 1950s through 1986. It also discusses the various data sources, analyzes particular data problems, and presents a number of new estimates. Topics include land usage, population and labour force, agriculture, manufacturing, national accounts, foreign trade, price and exchange rates, wages, distribution of family income, education and health, government expenditures and finance, and other financial statistics.

**Keywords:** Malawi, income distribution, land usage, labour force, exchange rate, price, family income.

-----  
The World Bank. Accelerated Development in Sub-Saharan Africa: An Agenda for Action. Washington, D.C. World Bank, 1981.

GovDocs IBRDI D4.6 Ac 34

This report highlights the severity and complexity of the problems facing many of the countries of Sub-Saharan Africa in their efforts to raise the living standards of their people. The central theme of the report is that more efficient use of scarce resources- human and capital, managerial and technical, domestic and foreign-is essential for improving economic conditions in most African countries. Due to the diversity of the countries, the report does not offer general prescriptions. Programs action must be formulated by each country, and these programs must include the external financial and technical assistance which will be required to support them.

**Keywords:** Sub-Saharan Africa, human capital, external finance, food aid, living standards.

~~~~~  
Cohen, Michael A. Urban Growth and Economic Development in the Sahel. World Bank Staff Working paper No. 315. Washington, D.C. World Bank 1979. pp. 121

GovDocs IBRD1 ad4.8 w57 No.315

Past urban bias in public investment, and inadequacy of rural development efforts in harsh natural conditions, have made Sahelian cities relatively privileged consumers in an environment of extreme scarcity and deprivation. More equitable allocation of national resources between rural and urban areas is essential if the Sahel countries are to improve their incomes.

**Keywords:** Sahel, urban growth, public investment, development, harsh conditions, consumers.

~~~~~  
Collier, Paul. Poverty and Growth in Kenya. World Bank working paper No. 309. Washington, D.C. World Bank 1980.

GovDocs IBRD1 ad4.8 w57 No.303

Chapters 1 and 2 of this paper provide an empirical investigation of trends in poverty and income distribution in Kenya between 1963 and 1974, differentiated by region and occupation. Chapter 3 provides a framework for explaining these trends in terms of the pattern of growth, and in particular emphasizes the two way rural-urban interactions which largely

explain the "spread" effects of growth in Kenya. Chapter 4 derives some policy conclusions on how future growth could be made to yield even higher degrees of poverty redressal.

**Keywords:** Kenya, poverty, growth, rural-urban interactions, income distribution.

~~~~~  
Bruce, Colin and Scandizzo, P. L. Methodologies for Measuring Agricultural Price Intervention Effects. World Bank Staff Working Paper No. 394. Washington, D.C. World Bank 1980. pp. 96

GovDocs IBRD1 d4.8 w57 No.394

This paper describes the use of micro-economic, informal methodologies in six country case studies (Argentina, Egypt, Kenya, Pakistan, Thailand, and Yugoslavia) and in subsequent additional analysis. The research has confirmed that there is extensive intervention with market forces by governments in LDCs, which has turned the domestic terms of trade against agriculture and has significant efficiency and income distribution effects.

**Keywords:** Developing countries, Kenya, market forces, government intervention, income distribution.

~~~~~  
Reutlinger, Shlomo and Knapp, K. Food Security in Food Deficit Countries. World Bank Staff Working Paper No. 393. Washington, D.C. World Bank, 1980. pp. 32

GovDocs IBRD1 d4.8 w57 No.393

The central proposition of this paper is that periodic shortfalls in aggregate food consumption in the developing countries are primarily related to poor harvests in the countries and not short world grain supplies. A simulation model is used to evaluate the stability of food consumption under alternative trade and stock policies. A stabilizing trade policy is shown to be by far the most effective and economically preferred instrument for achieving food security. Aside from political consideration of placing reliance on highly fluctuating levels of imports, which are not discussed in the paper, such policies are feasible only, however, if countries are able and willing to cope with highly fluctuating import bills.

**Keywords:** Developing countries, food security, food consumption, poor harvest, trade policy.

~~~~~  
Clay, Edward et al. Food Policies Issues in Low-Income Countries. World Bank Staff Working Paper No. 473. Washington, D.C. World Bank 1981. pp. 115

GovDocs IBRD1 d4.8 w67 No.473

The paper considers food policy issues in Zambia, Bangladesh, and India from viewpoints of short-term adjustment to the energy crisis and the longer-term effects of food policy on poverty, malnutrition, and food security. As a general conclusion, the paper suggests that external pressures during the 1970s intensified problems of agricultural production and food supply, but that in none of the countries studied were such external pressures the cause for a serious food supply problem.

**Keywords:** Low-Income countries, Zambia, energy crisis, malnutrition, food security.

~~~~~  
Carr, Stephen J. Technology for Small-Scale Farmers in Sub-Saharan Africa: Experience with Food Crop Production in Five Major Ecological Zones. World Bank Technical Paper No. 109. Washington, D.C. World Bank, 1989.

GovDocs IBRD1 ad4.8 T43 No.109

The study draws together information on the technology which is available to small-scale farmers in Africa and assesses its applicability in the context of the financial, economic and managerial constraints which face rural households. The paper highlights the need for greater sensitivity on the part of extension and research staff to the constraints which prevent farmers from adopting the techniques which they are promoting. Its overall conclusion is that the challenges facing farmers, extension staff and research workers are not insuperable but the last two groups should be well aware there is still a lot more work to be done to produce new technology which is really applicable by the majority of small-scale farming families.

**Keywords:** Sub-Saharan Africa, food crop production, technology, small-scale farmers, rural households.

Falloux, Francois and Mukendi, A. ed. Desertification Control and Renewable Resource Management in the Sahelian and Sudanian Zones of West Africa. World Bank Technical paper No.70. Washington, D.C. World Bank 1988. pp. 119

GovDocs IBRD1 ad4.8 T43 No.70

This volume is a compendium of papers presented at the "Workshop on Desertification Control and Renewable Resource Management" held in Oslo, Norway in June 1986. A recurring theme is that smaller organizational units (e.g., village or pastoral associations), for which a tradition exists in Africa, are better equipped - psychologically, physically, and legally - to manage their own resources. This belief is shared by all the authors and underlies the strategies for improving production systems and land use.

**Keywords:** West Africa, desertification, resources, land use, sahel.

~~~~~  
Gorse, Jean E. and Steeds, David R. Desertification in the Sahelian and Sudanian Zones of West-Africa. World Bank Technical paper No. 61. Washington, D.C. 1987. pp. 62

GovDocs IBRD1 ad4.8 T43 No.61

Desertification is defined as the sustained decline of the biological productivity of arid and semi-arid land. It is the result of pressures both human (increased population) and climatic (variable rainfall and long-term changes in climate). Strategies for better resource management depend on the balance between the rural population and the carrying capacity of the land. Such strategies include increasing research on production systems, training staff and farmers, reducing the population through child spacing and resettlement, increasing the stock of fuelwood, reforming land laws, and providing incentives for increased agricultural and forestry production.

**Keywords:** Desertification, West Africa, sahel, fuelwood, land laws, forestry production.

~~~~~  
Reutlinger, Shlomo. Eaton, D. and Bigman, D. Should Developing Nations Carry Grain Reserves? World Bank Staff working paper No. 244. Washington, D.C. World Bank 1977. pp. 25

This paper develops a method to simulate an investment in a grain reserve and calculate its efficiency, equity, trade, and stabilization impacts on a less developed nation. In summary, a decision by a less developed nation to carry buffer stocks may find limited justification on traditional economic grounds, such as profitability and economic efficiency. The strongest rationale for a reserve may rest, therefore, on its effect on a government's financial ability to secure minimally adequate consumption of grain for the entire population at all times and its incremental stabilization effects for prices, supplies and the balance of trade, which are not priced by the market.

**Keywords:** Developing countries, grain reserve, financial ability, balance of trade, price stabilization.

-----  
Braverman, Avishay. Agrarian Reforms in Developing Rural Economies Characterized by Interlinked Credit and Tenancy Market. World Bank Staff working paper, No. 433. Washington, D.C. 1980.

The paper concentrates on a model of linkage between land, labour and credit transactions in the context of sharecropping. One major result of the paper is valid both in the context of interlinked credit and tenancy contracts and in that of sharecropping contracts alone. It states that, as long as the landlord can vary the size of the plot given to a tenant and there are enough potential tenants, the equilibrium will be characterized by the "utility-equivalent" contracts even if the landlord does not control any other term of contract such as crop share, interest rate on credit, etc. That is, in equilibrium, a tenant's utility obtained through sharecropping will be the same as that which he could have obtained as a full-time wage labourer.

**Keywords:** Developing countries, sharecropping, landlord, wage labourer, tenancy contract.

-----  
Burki, S. J. A perspective on the Foodgrain Situation in the Poorest countries. World Bank Staff working paper No. 251. Washington, D.C. World Bank, 1977. pp. 73

This paper provides some basic data and information on the food situation in developing countries, its past trends and future prospects. It then lays out in broad terms the strategies that seem most appropriate for solving the food problem of the low income countries. Finally, the paper gives an estimate of the additional domestic and foreign resource requirements of the low income countries necessary to meet food output targets and the role played by the World Bank in this regard.

**Keywords:** Developing countries, food grain, food problem, foreign and domestic resources, World Bank.

-----  
Hadler, Sandra and Yan, M. Developing Countries Food Grain Projections for 1985. World Bank Staff working paper No. 247. Washington, D.C. World Bank, 1976. pp. 46

The paper presents base-line projections of the developing country food grain situation in 1985. The objective is to gain some insight into the dimensions and incidence of the long-run foodgrain problems so as to provide a basis for long range planning and the World Bank lending program. The projections indicate that with population growing by 2.7% per annum and without substantial improvement over the historical (1961-74) performance of their agricultural sectors, the developing countries could be faced with a net deficit of 75 million tons of grain in 1985 - compared with 17 million tons in 1969-71 and 9 million tons in 1961-65.

**Keywords:** Developing countries, food grain problems, World Bank, population growth.

-----  
Feber, Gerson. Economic growth, Foreign loans and Debt Servicing Capacity of developing Countries. World Bank Staff working paper No. 274. Washington, D.C. World Bank 1978. pp. 47

The paper links a simple aggregate model of growth-cum-external debt with an empirical formula for debt-servicing capacity. Through simulations of growth and debt patterns, using data related to two groups of LDCs, the underlying conditions and the pattern of debt service problems which emerge are studied. Simulation of policies designed

to alleviate debt-service problems allows an assessment of the efficiency and suitability of different policies. The time dimension of debt problems and its relevance to policy are considered as well. The study raises doubts regarding the applicability of accepted beliefs and rules of thumb related to external debt management.

**Keywords:** Developing countries, foreign loan, debt servicing capacity, external debt management.

~~~~~  
Brook, Ezriel M., Grilli, Enzo R., and Waelbroeck, J. Commodity Price Stabilization and the Developing Countries: The Problem of Choice. World Bank Staff working paper, No. 262. Washington, D.C. World Bank 1977. pp. 32

This paper deals with the problem of choosing those primary commodities whose price stabilization at the international level would benefit most the developing countries as producers or consumers. It focuses on the welfare and income effects of price stabilization as criteria for choice.

**Keywords:** Developing countries, price stabilization, welfare, income effect.

~~~~~  
UNICEF. "Africa: The Land is Growing Old What will the Children Inherit?" UNICEF news 1984, Issue 120.

This issue of UNICEF news examines that crisis in some of the countries most affected, and identifies some of the responses with which Unicef is associated.

**Keywords:** Africa, children, UNICEF, food supply, agricultural production.

~~~~~  
World Bank. Accelerated Development in Sub-Saharan Africa: An Agenda for Action. Washington, D.C. World Bank 1981.

The report discusses the factor that explain slow economic growth in Africa in the recent past, analyzes policy changes and program orientations needed to promote faster growth, and conclude with

the set of recommendations to donors, including the recommendation that aid to Africa should double in real terms to bring about renewed African development and growth in the 1980s.

**Keywords:** Sub-Saharan Africa, economic growth, development aid, food production.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). FAO Rice Report 1974/75. Rome: FAO 1974

The report provides the rice situation in 1974 and the outlook in 1975. In addition, the report contains bibliography on rice economics and list of statistical tables and charts.

**Keywords:** West Africa, Rice production, bibliography, statistics.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Rice Development and Rainfed Rice Production. FAO plant production and protection paper No.41. Rome: 1982. pp. 101

Rice supplies a larger proportion of the world's dietary than any other food. It is of supreme importance in the food supplies, the agricultural production, and indeed the entire rural economy of a large number of developing countries, in particular some of the poorest and most heavily populated ones. Thus, the main overall objective of the long-term strategy of rice development proposed here is greater sufficiency in the developing countries, both individually and collectively. The FAO study comes to the encouraging conclusion that the rice production of the developing countries could be more than doubled, so as to provide from their own production for the almost 200 million tons (paddy) of additional demand projected between 1974-76 and the year 2000.

**Keywords:** Rice, developing countries, paddy, rainfed rice production, FAO, food supply.

~~~~~  
Perisse J., Stoces, F., and Paci, C. National Food and Nutritional Programme, Zambia. The Food Economy of Zambia. Technical Report No. 1. Rome: FAO 1974

Urbanization in Zambia has brought rapid changes in the country's food consumption and further evolution is foreseen. While food exports remain stationary, imports have increased in response to new demands, and if the present trend continues will increase even further. Recommendations made on the basis of the results of the projections include using the rapid increase in food demand generated by the urban market to create incentive for agricultural production by subsistence population, and so bring them into the money economy and achieve redistribution of income. Policies on 14 commodities are suggested, particularly on the storage of maize, diversification of staple foods and increase in the supply of fish, groundnuts and oilseeds.

**Keywords:** Zambia, nutrition, urbanization, food import, food export, staple food.

-----  
Bunting, Edward and Bunting, A.H., ed. The Future of Shifting Cultivation in Africa and the Task of Universities. Sponsored by F.A.O. and the Faculty of Agriculture and Forestry, University of Ibadan, Nigeria. Rome: F.A.O 1984.

To agricultural observers accustomed to the more stable and continuous farming systems of the industrialized countries and of the densely settled regions of Asia, shifting cultivations seem perverse and wasteful. In July 1982, FAO and the faculty of Agriculture and Forestry in the University of Ibadan joined forces to mount an international workshop on shifting cultivation, with particular reference to teaching and research at university level. This volume which is the product of the workshop contains the edited texts of 22 of the paper presented. The recommendations are largely directed to university research workers and teachers, but they are concerned above all with the 'fertility' of the agricultural environment, measured in terms of sustained production of commodities which rural people need and can sell, and which other people, and governments, want and will buy.

**Keywords:** African, Nigeria, farming systems, shifting cultivation, sustained production.

FAO (Food and Agriculture Organization of the United Nations). World Grain Trade Statistics. Rome: FAO, 1975.

This present issue follows the general pattern of previous issues. It presents data for 1973/74 and the latest revised figures for the previous years (July/June season). Some of the trends and changes in the volume and structure of the international trade in grains have been illustrated in graph form.

**Keywords:** World grain statistics, Africa, grain supply.

-----  
FAO (Food and Agriculture Organization of the United Nations). The State of Food and Agriculture 1974. Rome: FAO, 1975.

This annual report provides information on agricultural production, trade, consumer food prices, development assistance, in various regions of the world, including Africa.

**Keywords:** Africa, food, agriculture, consumer food price, development assistance.

-----  
FAO (Food and Agriculture Organization of the United Nations). Inter-Country Comparisons of Agricultural Production Aggregates. FAO Economic and Social Development Paper No. 61, Rome: FAO 1985. pp. 59

International comparisons of purchasing powers of currencies and real GDP constituted the subject matter of a number of investigations, by international organizations and individual researchers, during the last three decades. The purpose of the paper is to present the first results of FAO's research in the area of international comparison of agricultural GDP and other production aggregates. The paper will document both the progress already achieved and give indications of the problems yet to be solved, especially concerning the accuracy and comparability of agricultural GDP data.

**Keywords:** Developing countries, agricultural production, international comparison, agricultural GDP.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Rice: Selected aspects of production, trade and price policies. FAO Economic and Social Development Paper No.54. Rome: FAO, 1985. pp. 83

This publication brings together a selection of analytical papers on rice prepared in FAO's Commodities and Trade Division. The papers examine a variety of policy questions and were discussed at recent sessions of the FAO Intergovernmental Group on Rice. The first two are of a more general nature, one reviewing major developments and issues in the world rice economy since 1970 and the other looking at the importance of government-to-government trade in rice. The remaining papers review national policies for rice in six important producing and trading countries, including Egypt, Ivory Coast, and Senegal.

**Keywords:** Senegal, Ivory Coast, Egypt, rice production, trade and price policies, national policies.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Land, Food and People. "Based on the FAO/UNFPA/IIASA report Potential population-supporting capacities of lands in the developing world." Rome: FAO, 1984. pp. 96

By the end of this century, the entire lands of developing countries would barely be sufficient to feed their expected populations if traditional methods of farming continued to be used. No less than 64 countries - 29 of them in Africa - would be unable to feed their projected population from their own land resources. The study carried out by FAO in collaboration with the United Nations Fund for Population Activities and the International Institute for Applied Systems Analysis reveals, however, that many of the 64 critical countries would be able to feed their expected populations from their own lands if they could raise the level of farming or slow down their rates of population growth. It also demonstrates a huge potential for food self-sufficiency in four out of five developing regions - and in the developing world as a whole.

**Keywords:** Developing countries, capacity of land, Africa, land resources, population growth.

~~~~~  
Abbott, J.C. Marketing Improvement in the Developing World: What happens and what we have learned. FAO. Rome: FAO, 1986.

This book is concerned with food and agricultural marketing improvement in practice. It draws directly on FAO experience in assisting Member nations in the developing regions over the period 1955-80. The book is also designed for the use of policy-makers and marketing leaders in the developing countries, and to assist aid agencies and other organizations and institutions concerned with the development process. Officers of banks, commercial enterprises and other institutions engaged in developing country operations will also benefit from the experience assembled in this text.

**Keywords:** Developing World, agricultural marketing, policy-makers, marketing leaders, commercial enterprises.

~~~~~  
Blanckenburg, Peter V. Agricultural Extension Systems in Some African and Asian Countries. FAO Economic and Social Development Paper No.46 Rome: FAO, 1984. pp. 75

This study deals with agricultural extension systems in African and Asian countries and is based primarily on a number of country reports prepared for different purposes. The core of the material consists of eight country analyses of agricultural extension systems which has been specially commissioned by FAO and had been executed in 1981/82. Also included is a number of country papers from the workshop on Agricultural Extension for Small Farmers which had been held under the sponsorship of the Commonwealth Secretariat in Kuala Lumpur in May 1982.

**Keywords:** Africa, agricultural extension, small farmers, food production, technological transfer.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Temporal and Spatial Agricultural Development in the Sudan. FAO Economic and Social Development Paper No.81 Rome: FAO, 1989. pp. 93

This document presents the proceedings of the Round Table on Medium-and Long-Term Agriculture Development Strategies and Policies in the Sudan held in Khartoum, March 1987. The main objective of the Round Table was to discuss agricultural development strategies and policies in the Sudan with particular emphasis on the integration of the spatial and temporal dimensions of the development process. The Round Table drew a comprehensive set of recommendations for the attention of the Government of the Sudan. Among the major recommendations, the following may be noted: To formulate medium-term agricultural development plans within a national framework of long-term strategies; To review the "feasible" scenario presented at the meeting in the light of latest developments in the economy, and recast it in terms of action plans and programmes.

**Keywords:** Sudan, agriculture, spatial and temporal development, agricultural policies, Khartoum.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Cereals: Selected Aspects of Production, Trade and Price Policies. FAO Economic and Social Development Paper No. 36. Rome: FAO, 1983. pp. 113

This publication brings together a selection of analytical papers prepared in FAO's Commodities and Trade division, in some cases with the assistance of consultants. The papers, three of which refer to grains and seven to rice, were prepared to assist the examination of a variety of commodity policy questions at recent sessions of the Inter-governmental Groups of Grains and Rice.

**Keywords:** Developing countries, cereals, trade and price policies, rice commodity policy.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Irrigation in Africa South of Sahara. FAO Investment Centre Technical Paper, No. 5. Rome: FAO, 1986. pp. 175

The study reviews the present state of irrigated agriculture in Sub-Saharan Africa with special reference to its contribution to food production. It examines the results of the past investments in irrigation schemes and from the results it seeks to identify the

various forms of irrigation development which are likely to be most appropriate to regional needs in the future.

**Keywords:** Sub-Saharan Africa, irrigation, food production, schemes, land productivity.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). Consultation on Irrigation in Africa. FAO Irrigation and Drainage Paper No. 42. Rome: FAO 1986. pp. 206

The consultation was to provide an opportunity for senior officials of the governments of FAO Member Nations on the African continent and representatives of international and donor agencies to exchange views on three principal issues, the present and future role of irrigation in food production in Africa, policy options and strategies to attain irrigation development objectives, and follow-up action.

**Keywords:** Irrigation, Africa, drainage, food production, policy options, follow-up action.

~~~~~  
FAO (Food and Agriculture Organization of the United Nations). The Dynamics of Rural Poverty. Rome: FAO 1986.

This book provides answers to disturbing questions about famine: How many rural people in the world today continue to subsist in absolute poverty, suffering daily the pangs of hunger and living with the threat of famine and disease? What are the roots of this crippling rural poverty and what factors are responsible for its perpetuation? And the most crucial question - how can the vicious poverty trap be destroyed, and the creative potential of a large proportion of humanity released? It explores the present dimensions of rural poverty, its characteristics, the causal process behind it, and the anti-poverty strategies and policies needed to eliminate it.

**Keywords:** Africa, poverty, famine, anti-poverty strategies, policy, food supply, income, agriculture.



-----  
Barwell, Cyril. Farmer Training in East-Central Southern Africa. FAO, Training for Agriculture Special Supplement. Rome: FAO 1975.

The purpose of the manual is to provide guidance to the extension staff of all agencies concerned in rural development, with special reference to the principals and teaching staffs of training centres, and the informational and training needs of the small farmer. A comprehensive bibliography is included to assist further reading.

**Keywords:** Africa, extension, rural development, small farmers, training needs.

-----  
**CANADIAN WHEAT BOARD LIBRARY**

Faeth, Paul. Determinants of Performance of Irrigation Projects in Developing Countries. U.S. Department of Agriculture. Washington, D.C. 1984. pp.47

S 616 D48 F33

Irrigation development in developing countries is very expensive and most irrigation development projects experience large cost-overruns. In addition, many projects are not as productive as planned. This report provides some insight into the key factors which cause cost escalation and performance degradation, and describe policies which may help to remedy these problems.

**Keywords:** Irrigation, developing countries, cost-effectiveness, simulation, modelling.

-----  
Josling, Tim and Barichello, R. "International Trade and World Food Security: The role of developed countries since the world food conference." Food Policy Nov. 1984. Butterworth & Co. 1984. pp. 317-330

Pamphlet 0386

No mechanism is in place for the international coordination of grain stocks. World market stability is largely dependent upon the actions of major grain trading countries. These countries have avoided the exportation of their domestic supply variations onto world markets over the past decade, but have been reluctant

to allow domestic consumption to respond to world shortages and surpluses. Improvement in the sensitivity of domestic storage and consumption to world conditions could increase their contribution to world food security.

**Keywords:** Food security, International trade, Grain stocks.

-----  
U.S.D.A (United States Department of Agriculture). Food Policies in Developing Countries. U.S. Department of Agriculture. Washington, D.C. 1983. pp. 69.

USDA ERS FAER 194

Developing nations find national food policies a necessary but not sufficient, condition for economic development, according to this survey of 21 nations, including case studies of Kenya, Tanzania, and Senegal. Use of such policies does not affect development as much as the extent to which they are used. Increasing farmer welfare and achieving national food self-sufficiency were the two food policy objectives most often claimed by the developing nations. Also claimed were consumer welfare, stable prices, conservation of foreign exchange, and food security. Government budget constraints formed the greatest roadblocks to effective food policy.

**Keywords:** Food policies, agricultural policies, food production, food consumption, food self-sufficiency, food security, marketing controls.

-----  
Vollrath, Thomas. Dynamics of Comparative Advantage and the Resistance to Free Trade. U.S. Department of Agriculture. Washington, D.C. 1985 pp. 20

USDA ERS FAER 214

The income gap between developed and developing countries could narrow if developing countries' economies become more responsive to market forces. Primary manufacturing has become the fastest growing component of many developing countries' export growth. The author cites 26 developing countries which have built industries to produce and export basic manufactures, such as clothing, footwear, furniture, electrical machinery, and nonmetal mineral manufacturing. The United States has an interest in developing countries' economic growth because it can provide much of their rapidly growing food import needs.

**Keywords:** international trade, comparative advantage, development, growth, developing countries. U.S. agricultural exports, U.S. agricultural trade policy.

-----  
Vollrath, Thomas. Developmental Consequences of Unrestricted Trade. U.S. Department of Agriculture. Washington, D.C. 1985. pp. 12

USDA ERS FAER 213

International trade, unencumbered by protectionism, stimulates economic growth in both developed and developing countries. This study examines the fundamental economic forces which determine how trade affects development and growth. Undistorted trade is a catalyst to economic growth because it unleashes market forces which promote development.

**Keywords:** international trade, comparative advantage, development, growth, developing countries. U.S. agricultural exports, U.S. agricultural trade policy.

-----  
Trueblood, Michael A and Horenstein, N. R. The Ivory Coast: An Export Market Profile. U.S. Department of Agriculture. Washington, D.C. 1986. pp. 32

USDA ERS FAER 223

The Ivory Coast, a West African coffee and cocoa exporter, has import market potential based upon on the highest rates of real economic growth on the African continent. Because of this income growth, as well as a higher than average population growth rate and increasing urbanization, imported agricultural commodities have risen to meet the nation's growing food needs. In 1983, Ivorians spent \$310 million for agricultural imports, up from \$133 million in 1973. France now dominates agricultural trade. However, the United States can expand its sales, which since 1970 have represented 2-7 percent of Ivory Coast's total agricultural imports, if it adopts innovative marketing approaches such as labelling in French and packaging in metric quantities.

**Keywords:** Ivory Coast, Debt situation, cocoa, coffee, agricultural production, food imports, market shares, food import projections.

-----  
Burfisher, Mary E. Cameroon: An Export Market Profile. U.S. Department of Agriculture. Washington, D.C. 1984. pp. 32

USDA ERS FAER 206

Cameroon is a Central African oil-exporting country with good prospects for continued strong economic growth and development, making it an attractive market for increased U.S. agricultural exports. Because Cameroon's food import demand is increasing, the United States is in good position to increase its sales, currently worth \$6-\$8 million annually and representing about 5 to 8 percent of Cameroon's total agricultural imports. By 1990, with high income growth or increased urbanization, demand for wheat could lead to imports of over 570,000 metric tons, up more than fivefold from 112,715 tons annually in 1978-80. Rice imports could exceed 135,000 tons by 1990, up almost fivefold from 28,020 tons annually in 1978-80. Fish imports could more than double from 14,613 tons in 1978-80 to almost 38,000 tons by 1990. Imported tinned meats should more than double to about 2,800 tons by 1990.

**Keywords:** Cameroon, agricultural imports, agricultural policies, import policies, import projections.

-----  
Shapouri, Shahla, Dommen, A.J. And Rosen, S. Food Aid and the African Food Crisis. U.S. Department of Agriculture. Washington, D.C. 1986. pp. 103

USDA ERS FAER 221

Nine out of eleven low- and medium-income Sub-Saharan African countries may face even greater problems feeding their populations if recent trends continue. These countries rely on food imports and, increasingly, on food aid to meet minimum nutritional requirements for their populations. Food production is hampered by droughts which hit about once every 3 years. Recurrent food emergencies, such as those recently affecting Ethiopia and the Sahel countries, may raise total food aid in 1990 by five to eight times the actual receipts annually in 1981-83. Improved policies and increased foreign exchange earnings could help about half of the study countries satisfy their consumption needs from domestic production.

**Keywords:** African food crisis, food production, food imports, food gap, projected food aid needs.

Abbott, Philip C. Foreign Exchange Constraints to Trade and Development. U.S. Department of Agriculture. Washington, D.C. 1984. pp. 52

USDA ERS FAER 209

Many less developed countries (LDC's), facing huge trade deficits and shortages of foreign exchange, reduced their agricultural imports over the past few years from the United States and others. Unless cash-short LDC's increase their exports and obtain food and financial aid, agricultural imports by LDC's will grow much more slowly in the next decade than in the last. While many LDC's face long-term problems, others appear to be in short-term liquidity crises; if their export growth resumes, so will their agricultural imports. China, Brazil, Mexico, Nigeria, and India are key to world cereal trade. Those projections are based on a two-model applied to 31 LDC's.

**Keywords:** Less developed countries, agricultural trade, economic development, trade deficits.

Shane, D. Mathew and Stallings, D. Financial Constraints to Trade and Growth: The World Debt Crisis and its Aftermath. U.S. Department of Agriculture. Washington. D.C. 1984. pp 30

USDA ERS FAER 211

The debt problems of developing countries will severely limit their ability to purchase goods in the world market for at least the next 5 years. Resolutions of these debt problems could increase potential U.S. agricultural exports by as much as 20 percent. The large debts of the developing countries became serious problems with the shifts to tighter monetary policies by the developed countries in the late seventies and consequent slowing of the inflation and credit flows. Eighteen countries which are major markets for U.S. agriculture hold more than 60 percent of the problem debt. Both current debts and national economic policies in the developing countries must be restructured to begin the strengthening of those countries' economies. Developed countries can help the economic recovery of developing nations by providing markets for their export commodities.

**Keywords:** International debt, trade, growth, financial constraints to trade, developing countries, U.S. agricultural exports, U.S. agricultural trade policy.

Shane, Mathew and Stallings, D. The World Debt Crisis and its Resolution. U.S. Department of Agriculture. Washington. D.C. 1987. pp 39

USDA ERS FAER 231

Forgiving some of the indebtedness of developing countries may stimulate mutually beneficial trade among all nations. Many developing countries have reduced imports to cope with repayment difficulties, a policy which reduced per capita income and often limited domestic industrial investment. Reduced world trade has limited growth in developed countries, further constraining export markets. High interest rates, declining commodity prices, and currency devaluations have thrust the greatest burden of the world economic problems on debt-dependent developing countries. Increasingly frequent debt rescheduling has lengthened the crisis for many countries, often making repayment even more burdensome. This report studies 79 developing countries and suggests ways to reduce their debt and improve the global economy.

**Keywords:** International debt, trade, agricultural trade, monetary policy, financial constraints, monetary transmission, interest rates, exchange rates.

Shapouri, shahla and Rosen, S. Effect of Fiscal Austerity on African Food Imports. U.S. Department of Agriculture. Washington. D.C. 1987. pp. 59

USDA ERS FAER 230

Export earnings and credit are the key economic factors that will affect African countries' ability to import food, according to this econometric analysis. Projections for 1994 indicate that the region's low-income countries would suffer the most from any declines in export earnings or credit. Choices between food and raw materials imports would favour food, hurting the economies of import-dependent countries in the long term. A continuing pattern of credit withdrawal from these developing nations would spell reduced trade for the world's food-exporting nations.

**Keywords:** Developing countries, imports, food imports, foreign credit, foreign exchange earnings.

U.S.D.A (United States Development of Agriculture). Agricultural Policy, Trade, Economic Growth, and Development. U.S. Department of Agriculture. Washington. D.C. 1989. pp 188

HD 1780 D3 A37

The paper provides an overview of the salient domestic agricultural policies that have affected agricultural trade, development, and growth in six countries. The overview identifies common themes in agricultural policies that contribute to an explanation of six countries' growth and development performances. The report is useful to policy planners concerned with broad development themes, including the role of agricultural trade in the development strategy, the problems associated with the transformation of agriculture, concern over food security, the influence of colonial agricultural policy, and relations between large- and small-scale agriculture.

**Keywords:** Agricultural policies, agricultural trade policy, economic growth, development, developing countries.

-----  
Mabbs-Zeno, Carl. Nigeria: An Export Market Profile. U.S. Department of Agriculture. Washington. D.C. 1986. pp. 54

USDA ERS FAER 218

Nigeria's agricultural imports have grown more rapidly since 1974 than those of most other countries. About one-quarter of these imports have come from the United States, including almost all Nigeria's imported grains, principally corn and wheat. By 1990, Nigeria may import almost 2.2 million tons of wheat annually, up from just over 400,000 tons in 1983. Short-term debt repayment obligations limit immediate prospects for greater growth rates, but the large population (more than 90 million), established petroleum industry, and slowly developing agricultural sector assure substantial import demand for many years to come. New competitors for this market will challenge the U.S. market share, although the United States should remain a major supplier.

**Keywords:** Nigeria, agricultural imports, agricultural policies, import policies, import projections.

Shane, Mathew D. and Stallings, D. Trade and Growth of Developing Countries Under Financial Constraint. U.S. Department of Agriculture. Washington, D.C. 1984 pp. 79.

HJ 8899 S52

International trade and growth will be severely affected by the debt problems of the developing countries for at least the next 5 years. International trade will not significantly increase for the United States or other nations unless both the developed and developing countries find fundamental solutions and take aggressive action to overcome this situation. The accumulation of international debt by the developing world was initiated after the first oil shock in 1973-74 when OECD countries accommodated the first increases in oil prices by allowing international liquidity to increase accordingly. The recirculation of this liquidity led to the debt buildup. The contractionary monetary policy response to the second oil shock of 1979-80 led to the current debt payment problem.

**Keywords:** International debt, trade, growth, financial constraints to trade, developing countries, U.S. agricultural exports, U.S. agricultural trade policy.

-----  
Vocke, Gary. The Green Revolution for Wheat in Developing Countries. U.S. Department of Agriculture. Washington. D.C. 1986. pp. 18

S 494.5 I 5 V 64

The green revolution has greatly increased the wheat supply in the developing world. The experiences of Mexico, India, Pakistan, Turkey, and Argentina are reviewed here. Governments of these countries, except Argentina, used procurement programs and input subsidies to maintain high profits for wheat production as long as domestic production substituted for imports. As these countries achieved self-sufficiency, incentives for wheat production versus other crops were reduced. In contrast, Argentina taxed wheat exports and protected its high-cost fertilizer industry. Argentina increased wheat output by adopting semi-dwarf varieties double-cropped with soybeans using a small amount of fertilizer.

**Keywords:** Green revolution, wheat, developing countries, agricultural policy, high-yielding varieties.

~~~~~  
U.S.D.A. (United States Department of Agriculture). Long-run Changes in World Food Supply and Demand: Implications for Development Assistance Policy. U.S. Department of Agriculture. Washington. D.C. 1984. pp. 38

HD 9000.6 H36

A steady growth in food production in the developing countries since 1950 was accompanied by increased use of land and water resources and by the application of new technologies in agricultural production. Rapid population growth in the developing countries, growth in per capita income, relative stability of food prices--except during the 1970's--and government policies influenced world food demand. Malnutrition continues to be a problem for many vulnerable groups in the developing countries. U.S. development assistance policy should focus attention on the followings: nutrition and other aspects of wellbeing in relation to U.S. security interests in developing countries, agricultural policies, development and dissemination of technology, and U.S. aid in relation to international lending programs.

**Keywords:** World food production, food imports, resources, technology, food demand, population, income, prices, food trade, food aid, future trends, development assistance.

~~~~~  
CIMMYT (International Maize and Wheat Improvement Center). Maize production Regions in Developing Countries. Mexico, 1988. pp. 135

SB 191 M2 C46

The most prominent distinguishing characteristics of maize-growing regions in developing countries are given here in tabular form, along with salient features of each region. Each region is designated by a number, which appears as a column head in the table and is also recorded on the accompanying map. Major cities and selected experiment stations are indicated on each country map.

**Keywords:** Developing countries, maize, maize-growing regions, agriculture, maize production.

~~~~~  
Christensen, C. et al. Food Problems and Prospects in Sub-Saharan Africa: the Decade of the 1980's. U.S. Department of Agriculture. Washington. D.C. 1981. pp. 293

USDA ERS FAER 166

Sub-Saharan Africa is the only region in the world where per capita food production declined over the past two decades. In most Sub-Saharan countries, per capita calorie intake is below minimal nutritional standards. Demand for food imports is increasing at a time when grain prices are rising and many African governments face acute balance of payments and foreign exchange problems. This study examines the long-term trends in food production, consumption, and trade in Sub-Saharan Africa, the structure of both demand and production, and policies designed to improved productivity in this region.

**Keywords:** Sub-Saharan Africa, tropical Africa, food demand, food consumption, production, imports, food supply, crop yield, labour, irrigable land, mixed cropping, food gap, food policy, agricultural policy, marketing.

~~~~~  
Shapouri, Shahla. Corn and Wheat Markets in South Africa. U.S. Department of Agriculture. IED Staff Report. Washington. D.C. 1983. pp. 31

HD 9044 A37 S52

Corn is the major crop in the agriculture of the Republic of South Africa, and wheat plays an important role in the country's diet. Using appropriate economic information and econometric models, the factors affecting production and consumption of these two crops are identified and analyzed, and forecasts of supply and demand are made through 1985.

**Keywords:** South Africa, Corn production, wheat production, corn consumption, wheat consumption.

~~~~~  
D'Silva, Brian C. and Hassan, K. I. Debt and Drought: Uncertain Adjustments Facing African Agriculture A case Study of the Sudan. Paper prepared for XIX International Conference of Agricultural Economists. August 26-September 4, 1985 Malaga, Spain. pp. 6

Pamphlet 466

The current drought in African has seriously affected 24 countries and over 150 million people. In addition to the drought, external debt burden is a major problem facing African economies. The Sudan which is the largest country in

Africa, is facing a severe crisis due to drought and debt; a country which only recently exported food now has a cereal deficit of 1 million tons. Sudan's foreign exchange earnings (which are primarily derived from agriculture) are insufficient to meet imports or debt service. Over the past 4 years, policy reforms have been enacted in the country focusing on (a) exchange rate adjustments, (b) improving the structure of incentives for agricultural producers, and (c) removing consumer subsidies on major imported items. However, these policies have not achieved their desired objective because they were either partial in scope or their effect was blunted by the drought. The lesson of Sudan's experience for other African countries are: (a) macroeconomic policy reform should be undertaken with a thorough understanding of the different institutional structures which exist in the economy and the agricultural sector, and (b) a 'safety net' such as donor-provided food aid should be available for African countries undertaking major reforms to be used to overcome effects of unforeseen occurrences such as drought.

**Keywords:** Sudan, drought, debt, Africa, agriculture, food aid, safety net, consumer subsidies.

~~~~~  
Schneider, Hartmut. Meeting Food Needs In a Context of Change. Paris, OECD, 1984.

HD 9000.6 S36

This report reviews some critical issues for the food systems and policies of developing countries who, as a group, find it increasingly difficult to meet the needs of their populations. It suggests a systematic reconsideration of priorities and policy options, paying increased attention to socio-economic differences among the people affected.

**Keywords:** Developing countries, food systems, policy options, socio-economic differences.

~~~~~  
D'Silva, B. and Hunt, Doug. "Go and Stop" Agricultural Development in Nigeria: Prospects for the Fourth Plan Period (1981-1985). U.S. Department of Agriculture. IED Staff Report. Washington. D.C. 1982. pp. 31

HD 2145.5 H86

The farmers of Nigeria's Fourth National Development Plan have made assumptions about the country's oil production and

price projections that appear to be unrealistic at this point in the period covered by the plan (1981-85). The consequences on the financial resources available for expenditure on agricultural development may be severe. The experience of a similar misjudgment, in 1978, is traced to analyze the likely impact of the revenue shortfall in 1982 and 1983.

**Keywords:** Nigeria, development planning, food production, food imports, government finance, national budget.

~~~~~  
Sivakumar, M.V.K. Drought Spells and Drought Frequencies in West-Africa. Research Bulletin No. 13. ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) Sahelian Center. India, ICRISAT-1991

QC 929 D8 S58

Recurring droughts and decreased agricultural productivity during the last two decades in West Africa point to the need for a clearer understanding of the length of dry spells, their frequencies and probabilities. A comprehensive review of various definitions of droughts has been presented to develop the basis for analysis of droughts. The relationships between mean annual rainfall and average frequency of dry spells for selected locations in West Africa showed distinct patterns and permit the prediction of the frequency of dry spells from annual rainfall totals. Applications of the dry spell analysis for the choice of a crop/variety, supplemental irrigation and crop water requirements have been described with examples.

**Keywords:** West-Africa, drought spells, Panicle phase, flowering phase, rainfall, frequency.

~~~~~  
Jones, Stephen F. North/South Countertrade: Barter and Reciprocal Trade With Developing Countries. The Economist Intelligence Unit. Special Report No. 174 London, The economist Publications Ltd 1984. pp. 97

HF 1413 J66

This report deals almost exclusively with developing countries, in recognition of the fact that it is countertrade in this sector that has substantially increase in the 1980s. In particular, the report examines the phenomenon from the

viewpoint of exporters in Europe and North America and it contains a mixture of background information about countertrade transaction; some short case studies; an examination of the issues as viewed by certain multilateral organizations and governments of various countries; information about the countertrade positions adopted by particular developing countries; a review of published information about particular deals; some advice for Western companies on approaches to countertrade; an analysis of the benefits of the practice; and finally a view of the way countertrade with developing countries may develop in the future.

**Keywords:** Developing countries, countertrade, multilateral organizations, Western companies.

-----  
Menyonga, Joseph M., Bezuneh, T., and Youdeowe, A. ed. Food Grain Production in Semi-Arid Africa. Country reports and Research programmes, Presented at the International Drought Symposium. Organization of African Unity 1987.

SB 110 I57

The food grains, namely sorghum, millet, maize, cowpea and groundnuts are the staple food items of the people who live in the semi-arid regions of Sub-Saharan Africa. Production of these food grains in sufficient quantities to meet the increasing demands of the rapidly expanding rural and urban human populations there continues to face many constraints, including the hostile and harsh climate, serious and continuous degradation of the fragile agricultural resource base and recurring droughts. This publication is a collection of the 12 country reports which were presented together with records of the discussion of some of the reports, and the full list of participants at the Nairobi International Drought Symposium in 1986.

**Keywords:** Food grain, semi-arid, drought, dryland, Nairobi, harsh climate.

-----  
Harrison, P. The Greening of Africa: Breaking through in the Battle for Land and Food. London, International Institute for Environment and Development 1987. pp. 371

S 934 A26 H37

Africa, trapped in a human and environmental tragedy of vast proportions, presents the greatest challenge to world development for the rest of this century. The author provides a lively and authoritative survey of the roots of Africa's problems, from chronic debt to food deficits, from land degradation to deforestation and desertification. He also surveys the groundbreaking ventures that have mobilized peasants to boost food production, conserve soil, water and forests- and thus reduce their vulnerability to drought.

**Keywords:** Greening of Africa, environmental tragedy, food deficits, deforestation, desertification, drought.

-----  
Kennedy, Eileen T. and Cogill, B. Income and Nutritional Effects of the Commercialization of Agriculture in Southwestern Kenya. Research report 63. International Food Policy Research Institute, 1987. pp. 60

HD 2126.5 K46

This report aims to evaluate the effects of a shift from maize to sugarcane on agricultural production, income, expenditures, consumption, and health and nutritional status. Under normal climatic conditions, maize usually produces a larger return to land than sugarcane. The picture is dramatically different, however, when the return per day of household labour are analyzed. The return to labour for sugar is three times the daily agricultural wage rate and significantly higher than the return to maize. The positive effect of the sugarcane scheme on income is apparent and should not be understated. However, the data suggest that one of the major pathways to improving nutritional status is improvement of health and the sanitation environment. The health care infrastructure must be taken into consideration when policymakers are trying to anticipate the effects of agricultural policies and programs. Low-cost, low technology innovations with a preventive focus can have a high payoff in child health.

**Keywords:** Agriculture, Economic aspects, Kenya, food supply, sugarcane industry, corn industry, agricultural wages, agricultural laborers, cost and standard of living, nutrition policy.

Tshibaka, B. Tshikala. The Effects of Trade and Exchange Rate Policies on Agriculture in Zaire. Research report 56. International Food Policy Research Institute, 1986. pp. 65

HD 2135.5 T73

This study covers not only policies directed specifically to agriculture but also those enacted to assist other sectors. Policies directed at nonfarm sectors may have more effect on agricultural incentives than those explicitly aimed at the farm sector. The effects of trade and exchange rate policies on relative prices have substantial impact on the structure of incentives. The domestic price of farm and nonfarm nontradable goods relative to all exportables would increase by about 0.52 percent as a result of a 1 percent rise in the domestic price of all importables relative to exportables.

**Keywords:** Agriculture, Agriculture and state, Foreign exchange problem, Zaire,

-----

Tshibaka, Tshikala B. Food Production in a Land-Surplus, Labour-Scarce Economy: The Zairian Basin. Research report 74. International Food Policy Research Institute, 1989. pp. 70

HD 2135.5 T73 1989

Most agricultural projects initiated by the government of Zaire in the small-farm sector during the last two decades to improve a worsening food supply situation have failed mainly as a result of limited knowledge about constraints affecting the development of the sector. The study was undertaken to fill this gap. The study points up two basic facts: The amount of resources, particularly labour, allocated to farming in Zairian Basin is small, even by African standards, and the productivity of these resources is also low. The study also reveals that only a small amount of capital was allocated to farming, and this was limited to a few hand tools and rice and maize seeds produced on-farm. The analysis also indicates that, despite the small area cultivated, the amount of labour input per hectare was high compared with other parts of Sub-Saharan Africa and Asia.

**Keywords:** Agriculture, Zaire, agricultural laborers, supply and demand, rice, maize.

-----

Paulino, Leonardo A. Food in the Third World: Past Trends and Projections to 2000. Research report 52. International Food Policy Research Institute, 1986. pp. 76

HD 9000.6 P38

Domestic production shortfalls and rising food imports leading to widening trade imbalances in developing countries have given cause for concern since 1960s. The study finds that food production outpaced population growth in most countries during the period 1961-80. Production of major food crops in developing countries grew an average of 3.1 percent a year, compared to a 2.4 percent average growth rate of population. In assessing the overall food situation of the Third World and identifying geographical areas and particular developing-country groups, this study has relied on the relative stability of the trends drawn from aggregate data of countries and commodities. Complementary research would be needed to examine prospective situations of specific countries and commodities before policy recommendations at these levels could be addressed.

**Keywords:** Food supply, developing countries, forecasting, agriculture

-----

Hazell, Peter B.R. and Roell, Alisa. Rural Growth Linkages: Household Expenditure Patterns in Malaysia and Nigeria. Research report 41. International Food Policy Research Institute, 1983. pp. 64

HD 6053.6 H39

The principal objective of this study is to estimate the relationships between income and consumption for different commodities and to establish how these change with the income and socioeconomic characteristics of the households. These relationships are estimated for individual commodities and for interesting commodity groups, such as total foods, locally produced nonfoods, and total nontradables. The analysis suggests that households on the larger farms in both regions have the most desired expenditure patterns for stimulating secondary rounds of growth in the local economy. In Gusau, Nigeria, the larger farms have the stronger links to the local economy, but less links are mostly to other agricultural households producing horticultural and livestock products.



**Keywords:** Nigeria, income, consumption, households, nontradables, larger farms, Gusau

~~~~~

Schulter, Michael. Constraints on Kenya's Food and Beverage Exports. Research report 44. International Food Policy Research Institute, 1984. pp. 115

HD 9017.K42 S35

Although Kenya lacks the industrial raw materials and skilled workers required to promote industrial export, it has excellent potential for producing a wide variety of agricultural commodities. Eight possible exports from Kenya are examined to analyze the international and domestic constraints that might prevent Kenya from realizing its export potential to these markets. The report concludes that an agricultural export strategy should concentrate on high value, low-volume crops, as this minimizes demands on high-cost domestic infrastructure. Vertical linkages between exports markets and the farmer will also have to be developed. Finally, it will be important to increase price incentives and persuasion through the input supply and extension agencies.

**Keywords:** Kenya, agricultural exports, low-volume crops, vertical linkage, price incentive.

~~~~~

McIntire, John. Food Security in the Sahel: Variable Import Levy, Grain Reserves, and Foreign Exchange Assistance. Research report 26. International Food Policy Research Institute, 1984. pp. 65

HD 9017. M32 F66

This study is intended to add some new insights to the ongoing discussion about consumption stabilization. In particular three on the most promising policy responses for stabilizing grain consumption are evaluated in terms of their cost effectiveness and their income distribution effects. The study is unique in three ways. First, it attempts to evaluate rigorously a food insurance scheme for the Sahel region. Second, it tries to identify and compare the effects of different policies responses applied jointly rather than analyzing each policy instrument in isolation. Finally, the study uses stochastic simulation as the basic methodological tool.

**Keywords:** Sahel, consumption, stabilization, grain, food insurance, stochastic.

~~~~~

Koester, Ulrich. Regional Cooperation to Improve Food Security in Southern and Eastern African Countries. Research report 53. International Food Policy Research Institute, 1986. pp. 87

HD 9017.A26 K63

Food security continues to be a major concern in developing countries, particularly in Africa. This report investigates whether regional cooperation can improve food security. It identifies the determinants of successful cooperation schemes, and it develops a methodology for quantifying the potential benefits. The study finds that it would be most reasonable for the region to cooperate in risk-reducing activities because fluctuations in cereal production, cash crop production and export earnings are smaller on the regional than national level.

**Keywords:** Southern Africa, eastern Africa, developing countries, regional cooperation, food security, risk-reducing activities.

~~~~~

Burk, Marguerite C. Analysis of Food Consumption Survey Data for Developing Countries. F.A.O. Food and Nutrition Paper 16. Food And Agriculture Organization of the United Nations, Rome, 1980.

HD 9000.4 B87

The aim of this manual is to contribute to national, regional and project planning, programming, implementation of plans and evaluation of programmes for nutritional improvement among particular population groups. This manual complements other FAO manuals on the planning and conducting of such surveys. It assumes that the survey data are ready for analysis, having been checked and validated.

**Keywords:** Developing countries, nutrition, surveys, agriculture, population.

~~~~~

U.S.D.A. (United States Department of Agriculture). Agriculture in the Uruguay Round: Analyses of Government Support. U.S. Department of Agriculture. Washington, D.C. 1988.

HD 9000.5 A37 C.2.

Current negotiations under the General Agreement on Tariff and Trade (GATT) are considering proposals to eliminate government programs affecting agriculture in the member countries. Key to the negotiations are measures to assess the economic effect of such programs on trade. The producer and consumer subsidy equivalents (PSEs and CSEs) are such measures. Subsidy equivalents, by summarizing the effects of a wide variety of government policies into one parameter, allow comparisons to be made of government support across countries, commodity markets, and types of policies. This report presents several analyses of government intervention in agriculture as measured by PSEs and CSEs.

**Keywords:** Agriculture, GATT, PSEs, CSEs, intervention, negotiations.

~~~~~  
Bachman, Kenneth L. and Paulino, Leonardo A. Rapid Food Production Growth in Selected Developing Countries: A Comparative Analysis of Underlying Trends, 1961-76. Research report 11. International Food Policy Research Institute, 1979. pp. 98

HD 9000.5 B23

The present study examines the growth components of production in developing countries where food output has expanded rapidly during the past 15 years. It attempts to identify the important contributors to the rapid growth of food production and touches on its implications for nutrition, trade, and other factors in the development of these countries. The findings emerging from this analysis can be of interest and significance to many developing countries in formulating policies that are designed to achieve faster rates of growth in food production.

**Keywords:** Developing countries, food production, nutrition, policies.

Ball, Nicole. World Hunger. England: Nicole Ball 1981. PP. 386

HD 9000.5 B34

Ball guides the reader toward those studies which examine hunger as a function of poverty and poverty as a function of fundamentally inequitable power structures both within and between nations... an important tool for examining how the allocation of power influences scholastic itself. More than 3,000 citations to the literature of worldwide hunger. Supplementing her bibliography with critical introductions to each section, Nicole Ball presents world hunger as a problem to be solved by political and economic means.

**Keywords:** Hunger, poverty, developing countries, food supply, bibliography.

~~~~~  
IFPRI (International Food Policy Research Institute). Meeting Food Needs in the Developing Countries. Research report 1. International Food Policy Research Institute, 1976. pp. 64

HD 9000.5 I57 M43

This report is concerned with the food needs of more than half the people on earth--those who live in developing countries classified as developing market economies (DME), as distinct from those in the people's Republic of China and other Asian Centrally Planned economies. By 1985, their number will exceed 2.5 billion people, of whom 2.2 billion may well be living in food deficit countries, if production performance since 1960 is repeated in the next decade. For most, their present situation is precarious. It is likely to turn much more alarming, unless actions are taken to forestall it.

**Keywords:** Developing countries, food needs, food deficit countries, food needs.

~~~~~  
Meilke, Karl D. A Comparison of the Simulation Results from six International Trade Models. Working paper series 87/3. University of Guelph Department of Agricultural Economics and Business, Ontario Canada 1987

HD 9000.5 M44

Predicting the impact of various exogenous shocks and alternative policy regimes on the agricultural sector is a task increasingly asked of economists.

To perform this task economists often make use of formal mathematical representations, e.g. models of the agricultural sector. Unfortunately, different economic models often produce surprisingly different answers to the same question. The purpose of this paper is to compare the predictions from several different models, to a common set questions, to highlight where similarities and contradictions exist. As such, the results should be of interest to both model builders and model users.

**Keywords:** Agricultural sector, mathematical representation, economic models.

-----  
Svedberg, Peter. Food Insecurity in Developing Countries: Causes, Trends and Policy Option. United Nations Conference on Trade and Development (UNCTAD), 1984. pp.79

HD 9000.5 S83

This study undertakes a number of statistical tests of whether there have been changes over time in various parameters that determine the food security position in the developing world. Moreover, the study raises many questions which require further research and analysis.

**Keywords:** Food security, Developing world, international food trade, consumption.

-----  
Valdes, Alberto and Castillo, del Anne. The Role of Food Trade in the Food Security of Developing Countries. United Nations Conference on Trade and Development (UNCTD), 1984. pp.42

HD 9000.5 V34

Many developing countries have dissatisfaction with the operation of the international commodity markets, and with the international economic system in general. This discontent is not only with the commodity markets, but also with the international financial assistance, and with the international monetary order, especially fluctuating exchange and interest rates. Welfare in the third world depends increasingly on the international commodity and capital markets, over which developing countries have little control and, in a distressingly large number of cases, very

little understanding. This report focuses on that dimension of food security which is the interface between the national and world food economies. In our discussion of food security we are concerned mainly with how international trade, international policies, and domestic trade policies support or retard the attempts of the developing countries to meet food consumption targets on a year-to-year basis.

**Keywords:** Developing countries, international commodity markets, welfare, capital markeHx

-----  
Valdes, Alberto and Zietz, J. Agriculture Protection in OECD Countries: Its Cost to Less-Developed Countries. Research report 21. International Food Policy Research Institute, 1980. pp. 58

HD 9000.5 V34

This study examines the effect a reduction in agricultural trade restrictions of selected OECD countries would have on the export earnings and import expenditures of developing countries. The findings are clear. A major reduction in trade restrictions on agricultural commodities by the OECD countries would provide substantial additional foreign exchange earnings to less-developed countries; in fact, earnings that are slightly larger than current foreign aid flows to agricultural development. In addition, the resulting expansion of production in LDC's would raise the level of income and employment in agriculture in developing countries.

**Keywords:** Developing countries, OECD countries, trade restrictions, export earnings, foreign exchanges.

-----  
Paulino, Leonard A. and Tseng, S.S. A Comparative Study of FAO and USDA Data on Production, Area, and Trade of Major Food Staples. Research report 19. International Food Policy Research Institute, 1980. pp. 78

HD 1425 P33

This comparative study examines the differences between the estimates published by the Food and Agriculture Organization of the United Nations (FAO) and the U.S. Department of Agriculture (USDA) on production and area of major

cereal and noncereal staple food crops and their statistics on cereal trade. The FAO data system is an international information network that collects agricultural statistics from member governments and thus includes a wide range of countries and commodities. The USDA international data system covers relatively smaller number of countries and commodities and appears to emphasize those that are important to U.S. trade. Differences also occur because the two agencies define their time reference periods in different ways. For data on cereal trade, FAO and USDA statistics are widely divergent at all levels of aggregation.

**Keywords:** FAO, USDA, magnitudes, data collection, statistics.

~~~~~  
Woodhams, Richard. The Third World: A Commercial Reality. Presented to 6th Journalists' Course, Winnipeg 1990. International Wheat Council. London: 1990 pp.10

HD 1780 D3 W66

The study concludes that the prospect of a modest expansion in the trade in grains, particularly coarse grains, but the basis of that trade, and its financial underpinning, are going to be very different in the past. The fragile economies of developing countries must be supported by suitable policies at home and liberal trade policies among the developed countries. The alternative, where developing countries could neither afford the inputs required to boost their own production, nor keep up even their present levels of grain imports, is too horrible to contemplate. Fortunately, there is no evidence that the world in general, and developing countries in particular, have exhausted their capacity to meet such new challenges.

**Keywords:** Grains, developing countries, liberal trade policies, imports.

~~~~~  
Koester, Ulrich and Bale, M. D. The common Agricultural Policy of the European Community: A Blessing or a Curse for Developing Countries. World Bank Working Paper No. 630. Washington, D.C. 1984

HD 1920.5 K63

The European Community is the major player in Global agricultural trade. Not only is it the leading importer of agricultural goods, it is also the dominant exporter of a number of agricultural products. Further, its export dominance is growing over time. It is, therefore, imperative that policymakers in developing countries and those that advise them on agriculture matters understand the implications of the EC's common agricultural policy on them. This paper spells out which commodities fit into each category in addition to explaining how the common Agriculture Policy operates. Where possible magnitudes of the gains and losses are given. Finally, some recently proposed options for modifying the CAP are given.

**Keywords:** European Community, agricultural trade, developing countries, agricultural policy.

~~~~~  
Oyejide, T. Ademola The Effects of Trade and Exchange Rate Policies on Agriculture in Nigeria. Research report 55. International Food Policy Research Institute, 1986. pp. 61

HD 2145.5 O93

This study focuses on the effects of Nigeria's trade and exchange rate policies on agricultural incentives during 1960-82, especially during the 1970s, the period of the oil boom. It attempts to determine the degree of protection granted to agriculture compared with other sectors, and it assesses how these policies affected the allocation of resources both within agriculture and among the other sectors. The study concludes that the oil boom adversely affected Nigeria's agriculture. But changes in detrimental trade and exchange rate policies alone will probably not bring about a sufficient expansion of agricultural output. Nor is agricultural price intervention alone likely to solve agriculture's problems.

**Keywords:** Nigeria, agriculture, exchange rate, oil boom, trade, agricultural policies, agricultural output.

~~~~~  
International Wheat Council (IWC). Long-Term Outlook for Grain Imports by Developing Countries. Secretarial paper No. 17. London: International Wheat Council, 1988. pp. 37

This study considers the factors underlying changes in grain use and output. It suggests what the resulting trends in consumption, production and, in particular, trade might be up to the end of the century. The assessments are based on many assumptions which, although seemingly reasonable at present, may not be borne out by events. Projections which accompany the text are therefore included for illustrative purposes only and do not represent forecasts by the secretariat.

**Keywords:** Developing countries, grain consumption, projections, grain import.

International Wheat Council (IWC). Grain Handling and Transportation Facilities in Developing Countries. Secretarial paper No. 15. London: International Wheat Council, 1985. pp. 243

IWC SP 015

Most developing countries have experienced a very rapid increase in their grain imports in recent years. Despite continuous improvements, especially in their ports, the volume of imports and domestic grain that has to be distributed to their consumers has put their handling and transportation facilities under tremendous strain. This paper highlights difficulties which may occur at all stages of the import process, from the purchase of grain in the exporting country to its delivery to the final user.

**Keywords:** Developing countries, grain imports, transportation cost, volume of import.

FAO (Food and Agriculture Organization of the United Nations). Agriculture From the Perspective of Population Growth: Some Results from "Agriculture: Toward 2000". FAO Economic and Social Development Paper, No. 30. pp. 97

HD 9000.6 A42

The world as a whole has recently witnessed high rates of population growth. While it took 130 years after 1800 to add the second billion to the world's population, it took only 15 years after 1960 to add the fourth billion. Population growth has been especially high in developing countries and it has been generally considered an obstacle to

economic and social development. This report proposes to examine the significance of population growth in the developing countries by juxtaposing alternative prospects for population and for food and agriculture and tracing the results of the end of the century. Two questions relating to population and agriculture are germane in this study. First, what will be the size of future populations? Second, what if population growth rates were different?

**Keywords:** World population, developing countries, social development, food, agriculture.

Hopper, David W. To Conquer Hunger: Opportunity and Political Will. Text of a lecture delivered in the John A. Hannah International Development Lecture Series, Michigan: 1975. pp. 24

HD 9000.6 H66

Dr. Hopper argues that, despite grave food shortages in recent years and prophecies of more widespread famine to come, mankind has never before been faced with such an opportunity to create an agricultural system that will assure an abundance of food for all. The "green revolution," he suggests, was mainly notable for demonstrating that a traditional farmer will respond to the economic opportunities of new technologies, if the returns seem to him to merit the risk involved, and if he finds an organizational structure that can support him as he changes. Dr Hopper suggests it is among the donor institutions and governments that the greater need exists to alter attitudes toward agricultural development. Piecemeal and bilateral aid must be transformed into concerted international programs.

**Keywords:** Food shortage, developing countries, green revolution, bilateral aid, famine.

IFPRI (International Food Policy Research Institute). Food Needs of Developing Countries: Projections of Production and Consumption to 1990. Research report 3. International Food Policy Research Institute, 1977. pp. 157.

HD 9000.6 I57 F66

Longer term food prospects in food deficit countries with developing market economies remain unfavourable, despite good crops the last two years. Under the conditions assumed in this study, production of staple food crops in these countries would fall short of meeting demand in the 1990 by 120-145 million metric tons. This is over three times the shortfall of 37 million metric tons in the relatively good production year 1975. The study indicates an urgent need for programs to rapidly increase food production in low income, food deficit countries. Even then, food imports, perhaps necessarily in the form of aid, well in excess of recent levels are likely to be necessary to prevent further deterioration of already inadequate diets.

**Keywords:** Developing countries, food prospects, staple food, food imports, aid.

~~~~~  
Oram, Peter and el., Investment and Input Requirements for Accelerating Food Production in Low-Income Countries by 1990. Research report 10. International Food Policy Research Institute, 1979. pp. 179.

HD 9000.6 I57 I58

Heroic measures will be required in many low-income countries to prevent or reduce the gaps between supply and demand for food that are projected for 1990 if production rises no faster than in recent years. Meeting increased demand for food will require a wide variety of measures tailored to the specific needs of individual countries. The report estimates overall capital investment of \$98.7 billion will contribute an additional production of 187 million tons. This represents an investment of \$528 to produce a flow of one ton of food per year for an extended period of time.

**Keywords:** Underdeveloped areas, food supply, agriculture and state, supply and demand for food, capital investment.

~~~~~  
IFPRI (International Food Policy Research Institute). Recent and prospective Developments in Food Consumption: Some Policy Issues. Research report 2. International Food Policy Research Institute, 1977. pp. 61.

HD 9000.6 I57 R42

This report provides additional dimensions to the food problem; estimates of the numbers of people who are underfed and the amount of foodgrains that would be needed to provide them with the required energy standard. It also discusses basic policy issues at the national and international levels which would need to be resolved if there is to be progress in alleviating hunger and malnutrition.

**Keywords:** Developing countries, underfed, foodgrain, energy standard, hunger.

~~~~~  
Konandreas, Panos, Huddleston, B. and Ramangkura, V. Food Security: An Insurance Approach. Research report 4. International Food Policy Research Institute, 1978. pp. 96.

HD 9000.6 K63 F66

This paper suggests an approach by which the international community can contribute to the food security of food deficit, developing countries without having to create large buffer stocks and stabilize world grain prices. A scheme based on insurance principles specifically designed to assist food deficit, developing countries is suggested in this study. The objective of such a scheme would be to permit developing countries to stabilize cereal consumption within a range of projected demand at a relatively stable cost.

**Keywords:** Food security, developing countries, buffer stocks, grain prices, insurance.

~~~~~  
Timmer, Peter C. Pearson, S. and Falcon, W. Food Policy Analysis. U.S.: The World Bank 1983. pp. 299

Hd 9000.6 T55

The solutions to the problem of hunger lie in understanding the food system- the processes that produce agricultural commodities on farms, transform these commodities into foods, and market them to satisfy the nutritional as well as the social and esthetic needs of consumers. In *Food Policy Analysis* the authors describe how food systems function in different environments and discuss policy interventions that can improve the access of the hungry to food.

**Keywords:** Food supply, Government policy, underdeveloped areas, hunger, market.

~~~~~

Worthman Sterling, and Cummings, R. To Feed this World: The Challenge and the strategy. The Johns Hopkins University Press. Baltimore and London: 1978 pp. 440

HD 9000.6 W67 T6

Great numbers of people in the world are poverty-stricken and malnourished. As the number grows every day, the time has come to move past descriptions of suffering to plan a strategy for combatting world hunger. The authors, two agricultural specialists, systematically review past thinking on the world food crisis- the problem, its causes, and potential solutions-and propose a means of attacking the problem at its source by boosting food production, especially in developing countries.

**Keywords:** Developing countries, poverty, malnourished, world hunger, food crisis, boosting food production.

~~~~~

IFPRI (International Food Policy Research Institute). Potential of Agricultural Exports to Finance Increased Food Imports in Selected Developing Countries. Occasional paper 2. International Food Policy Research Institute, 1977. pp. 72.

HD 9000.6 V34 P67

During 1960-74 the volume of food imports into developing countries grew 4.4 percent each year. During the last four years of that period, at a time of rising prices, they grew 6.2 percent annually. Thus, food's share of the import bill rose substantially during 1970-74. At the same time, the oil import bill, as a share of total imports increase even more dramatically. These developments suggest that the problem of financing adequate food imports may become a major barrier to adequate consumption in many developing countries.

**Keywords:** Developing Countries, food imports, rising prices, oil import, consumption.

~~~~~

The Royal Society of Canada. Symposium on Canada and World Food. Sponsored by the Royal Society of Canada and The Agricultural Institute of Canada. Ottawa, Canada: 1977 pp. f-2-1

HD 9014.C36 R69

This symposium arose from a suggestion in 1974 that the Royal Society of Canada might consider some aspect of the world problem of food and population for a symposium topic. The symposium proceeded through five sessions, identifying first the magnitude of the problem in terms of supply of, and need for, food and types of food on regional and global bases. Secondly, the geography of food and food resources. Thirdly, a wide variety of issues, including land and water was discussed. Fourthly, under Toward a Balance some of the impacts of selected technological developments were presented. Finally, Canada role beginning with a review of the Canadian International Development Agency programs and policies were examined.

**Keywords:** Royal Society, symposium, world food, Canada, food aid, agriculture.

~~~~~

FAO (Food and Agriculture Organization of the United Nations). Expanding Agricultural Commodity Trade Among Developing Countries. FAO Economic and Social Development Paper No. 29. Rome: FAO 1983 pp. 117

HD 9018 E96

The concept of economic cooperation among developing countries has been receiving increasing attention in intergovernmental discussion of trade and development issues in recent years. This report brings together the working papers for wider circulation with the aim of increasing awareness of the extent of trade among developing countries in these important commodity sectors, the potential for further expansion and the constraints which stand in its way.

**Keywords:** Developing countries, intergovernmental discussion, trade.

~~~~~

CIMMYT ( International Maize and Wheat Improvement Center). Wheat Producing Regions in Developing Countries. Mexico: 1985

HD 9018 W43

The report provides maps and data related to 22 of the 25 developing countries which produce over 100, 000 has. of wheat. They are based on contributions by national programs and CIMMYT staff and are the result of a series of exchanges as impressions about wheat regions were blended and improved over time.

**Keywords:** CIMMYT, developing countries, wheat maps, import, agricultural production.

**Keywords:** Developing countries, EC grain policy, grain production, policy options, world grain, trade.

-----  
Byerlee, Derek and Winkelmann, Donald. Accelerated Wheat Production in Semi-Arid Developing Regions: Economic and policy Issues. CIMMYT Paper Presented at the International Wheat Conference, Madrid, Spain 1980. pp. 35

HD 9049 W4 B93

-----  
Huddleston, Barbara. Closing the Cereals Gap with Trade and Food Aid. Research report 43. International Food Policy Research Institute, 1984. pp. 107

HD 9030.6 H82

This report presents a method for estimating the value of food aid, based on the c.i.f. value of cereal imports into developing countries. It also gives separate values for the elements of total cereal imports, namely commercial imports, grant aid, and concessional imports. The grant aid element of concessional import is also estimated, so that the true foreign exchange cost of cereal imports for the recipient country can be estimated using the value of commercial imports and the commercial value of concessional imports.

**Keywords:** Developing countries, cereal imports, concessional import, grant aid, commercial imports.

This paper focuses on wheat production in the semi-arid regions (SARs) of selected developing countries. It begins by providing a perspective on what has happened in wheat production in the recent past, particularly in SARs and follow with evidence on projected demand increases and the potential for increasing wheat production in these areas. The second section then analyses economic considerations affecting farmer's choice among alternative technologies again with particular reference to the SARs. The report concludes by drawing some implications for agriculture research policy.

**Keywords:** Developing countries, wheat production, alternative technologies.

-----  
Josling, Timothy. Developed-Country Agricultural Policies and Developing-Country Supplies: The Case of Wheat. Research report 14. International Food Policy Research Institute, 1980. pp. 67

HD 9049 .W4 J67

-----  
Koester, Ulrich. Policy Options for the Grain Economy of the European Community: Implications for Developing Countries. Research report 35. International Food Policy Research Institute, 1982. pp. 90

HD 9045.E85 K63

This study analyses four policy options of the EC grain economy from the developing countries' points of view. The first option is for past policies of high protection to continue. The second policy option assumes complete liberalization of EC grain trade. The effects of the EC grain policy on the stability of the world grain market are analyzed under the third and fourth policy options. The study indicates that the EC could contribute to stabilizing world grain production by allowing producer prices to vary with production.

In recent years the agricultural policies of developed countries have often been accused of having a potentially destabilizing effect on world prices. This report examines the wheat sectors of Australia, Canada, the European Community, Japan, the United Kingdom, and the United States. It concludes that developing countries have a strong interest in the way in which stock and price policies interact in developed countries and in pursuing agreements to ensure that such policies do not result in further variations in the price and availability of foodgrains on the world market.

**Keywords:** Developing countries, wheat, foodgrains, world market, price policies.



Project Int/75/p13. FAO: Rome 1983. pp. 139

~~~~~  
Hazell, Peter and Anderson, J. Variability in Grain Yields: Implications for Agricultural Research and Policy in Developing Countries. USA: International Food Policy Research Institute, 1989. pp. 394.

HB 884 P67

The report describes a methodology developed for the determination of physical potential 'population supporting capacities' of lands and records the results of application of the methodology, at a 1:5 million scale, to five regions of the developing world. The main conclusion of the study is the lands of the developing world as a whole (excluding East Asia) are capable of producing sufficient food to sustain twice their year 1975 population and one and a half times their year 2000 population, even with low level of inputs. These aggregated developing world findings presuppose massive and unrestricted movement of surplus potential food production and labour within and between all five regions.

HD 9049 W5 V37

Many countries have achieved impressive rates of growth in national food-grain production in recent years. Much of this growth can be attributed to new technologies, especially improved varieties, and the increased use of irrigation, fertilizers, and pesticides. In view of the importance of these issues to policymakers, to national breeding programs, and to the international agricultural research centers, this book attempts to bring together a significant body of empirical evidence on production variability, drawing on work in several disciplines, including plant breeding, agronomy, and economics.

**Keywords:** Developing countries, supporting capacity, food production, unrestricted movement.

**Keywords:** Wheat trade, developing countries, seasonal variations, wheat trade, government policy.

~~~~~  
The World Bank. Desertification in the Sahelian and Sudanian Zones of West Africa. Washington, D.C. 1985 pp. 53

~~~~~  
Muscat, Robert, et al. Rapid Population Growth and Human Carrying Capacity: Two Perspectives. World Bank Staff Working Papers, No. 690. Washington, D.C. 1984. pp. 89

GB 611 D47

HB 884 R36

Desertification is a process of sustained declined of the biological productivity of arid and semi-arid land; the end-result is desert, or skeletal soil that is irrecuperable. This process is now at work in many parts of the West African Sahelian and Sudanian Zones (SSZ). The report concludes that within the SSZ heartland, no significant change in carrying capacities is possible without a technological breakthrough. Locally, however, the desertification threat may be arrested by selecting appropriate anti-desertification actions and working with communities that are interested, and empowered, to use their land in a sustained-yield manner.

The papers cover a range of topics, including the effects of population growth and change on economic development, the determinants of fertility and mortality, the links between population growth and internal and international migration, and the management, financing, and effectiveness of family planning programs. They include several country and regional studies of fertility change and population policy.

**Keywords:** Population growth, mortality, fertility, international migration.

**Keywords:** Desertification, SSZ, desert, skeletal soil, carrying capacities, sustained-yield.

~~~~~  
Higgins, G.M. et al. Potential Population Supporting Capacities of Lands in the Developing World. Technical Report of

~~~~~  
Bale, Malcolm D. and Duncan, R.C. Prospects for Food Production and Consumption in Developing Countries. World Bank Staff Working Papers, No. 596. Washington, D.C. 1983. pp. 40

HD 1417 B34

This paper analyses recent trends in world food production and consumption with special reference to developing countries. It continues by outlining the World Bank's approach to projections of food production and consumption providing results to the years 1995. It is shown that levels of consumption of various food items have improved in developing countries and are expected to continue to improve. Moreover, the results indicate favorable prospects for food production in developing countries.

**Keywords:** Underdeveloped areas, agriculture and state, nutrition policy, food consumption, food supply, food prices.

~~~~~  
MacDnald, David. No More Famine: A Decade for Africa. Canadian Emergency Coordinator/African famine. Canada 1986 pp. 34

HV 696 F6 M32

This report provides an update of the famine and on the continuing African and international responses to it. It focuses on the long-term and fundamental nature of the African crisis.

**Keywords:** Africa, Canadian government, food supply, food needs.

~~~~~  
OECD. External Debt of Developing Countries: 1983 Survey. Paris, OECD 1984. pp. 222

HJ 8899 073

This survey presents the latest data on the external debt of developing countries, including estimates for 1983. Its analysis covers: total debt, debt structure and debt service, the cost of external finance, debt by major categories of country, the largest individual debtor countries, exposure of private banks, debt rescheduling. An overview traces the evolution of current debt problems since 1978. The present structure of debt is explained against the volume and pattern of financial flows since 1970, and some of the problems of interpreting aggregate debt statistics are described.

**Keywords:** Developing countries, external debt, debt servicing, debt rescheduling.

~~~~~  
Hines, Colin and Dinham, B. Agribusiness in Africa. London, Earth Resources Research Ltd. 1983 pp. 224

HD 2117 D56

This book provides, for the first time, a detailed analysis of the role of big business in Africa's agriculture. It exposes the past and present activities of foreign companies in the diversion of much of Africa's food potential to the cash crop demands of Europe. Most aspects of company activity are illustrated with examples and there is a detailed description of trade and investment in coffee, sugar and the newer luxury crops such as flowers and vegetables. The attitude of Tanzania and Kenya towards agribusiness investment are contrasted and the book ends with a look at perhaps the most ominous of recent developments-Africa's increasing dependence on transnational supplied, large scale food production schemes.

**Keywords:** Agriculture, economic aspect, Africa, International business enterprises, food demand, luxury crops.

~~~~~  
U. S. Department of Agriculture. Nigeria: Agricultural and Trade Policies. U.S Department of Agriculture, Washington, D.C. 1981. pp. 25.

US FAS FASM 303

This report provides an overview of Nigeria's agricultural and trade policies. It covers the scope of Nigerian Government policies and discusses their effects on the supply and demand for agricultural commodities. The report also focuses on Nigeria's trade relations with the United States and on the opportunities that abound for expansion in U.S. agricultural exports to Nigeria. Such an expansion would help to reduce the large U.S. trade deficit with Nigeria. This trade deficit totalled \$10 billion in 1980, nearly matching our deficit with Japan.

**Keywords:** Nigeria, demand for agricultural commodities, trade, United States, exports.

U. S. Department of Agriculture. Import and Plantings of High-Yielding Varieties of Wheat and Rice in the Less Developed Nations. U.S. Department of Agriculture, Washington, D.C. 1971. pp. 43.

USDAg FEDR 08

The use of high-yielding varieties of wheat and rice has expanded sharply in recent years. The purpose of this bulletin is to provide statistical data on imports of seed and area planted in individual nations. There is no one standard definition of high-yielding varieties; this report refers largely to the dwarf and semi-dwarf types of wheat and rice developed, respectively, in Mexico and Philippines.

**Keywords:** Wheat, rice, green revolution, seed, import, crop statistic data, research and development, Asia, developing nations.

U. S. Department of Agriculture. Development and Spread of High-Yielding Varieties of Wheat and Rice in the Less Developed Nations. U.S. Department of Agriculture, Washington, D.C. 1974. pp. 77.

USDA ERS FAER 095

The use of high-yielding varieties (HYV's) of wheat and rice has expanded sharply in developing nations in recent years. This report reviews the development of these varieties and documents their yearly spread in statistical terms. Major emphasis is placed on semi-dwarf (1) wheat varieties developed at the International Maize and Wheat Improvement Center (CYMMIT) in Mexico, and (2) rice varieties developed in the Philippines at the International Rice Research Institute (IRRI). Nearly all of the HYV area was in Asia. Within Asia, over half of the HYV area was in India. Altogether, the HYV's accounted for nearly 35 percent of the total wheat area and 19.5 percent of the total rice area in non-Communist Asia. Elsewhere, nearly 2.5 million acres of HYV wheat were planted in North Africa; some HYV rice was beginning to be planted in the remainder of Africa.

**Keywords:** Wheat, rice, green revolution, high-yielding varieties, seed, research, agricultural development, developing countries.

U. S. Department of Agriculture. Global Food Assessment, 1980. U.S. Department of Agriculture, Foreign Agricultural Economic Report No. 159. Washington, D.C. 1980. pp. 119

USDA ERS FAER 159 c.1

World food production fell nearly 2.5 percent in 1979, the first decline in 7 years. Although output increased in South and Central America, it declined in most African countries and South Asia. Greatest food needs exist in the sub-Saharan African regions and South Asia, but certain Central American, Caribbean, and South American countries will also require assistance. The report presents data on food production and 1980 outlook for 79 low- and middle-income countries, reviews the 1979 food situation, and describes international and U.S. food aid policies.

**Keywords:** Developing countries, Food, Policies, International trade, Global.

Jabara, Cathy L. Terms of Trade for Developing Countries; A commodity and Regional Analysis. U.S. Department of Agriculture, Foreign Agricultural Economic Report No. 161. Washington, D.C. 1980. pp. 30

USDA ERS FAER 161

The terms of trade at which developing countries exchange their agricultural and mineral exports for imported goods vary by commodity and country. Terms of trade for the lowest income developing countries in Asia and Africa (exporters of jute, tea, sisal, and peanuts) deteriorated while the terms of trade for higher income developing countries (exporters of cocoa, coffee, fishmeal, palm oil, and minerals) improved. International programs therefore (like the new International Economic order) aimed at raising the value of developing countries' exports might be more successful if they concentrate only on specific commodities or specific countries or both, but not on all exports of developing countries, indiscriminately.

**Keywords:** New International Economic Order; Commodity trade; Developing countries; International trade.

U. S. Department of Agriculture. Consortium on Trade Research. Agricultural Import Demand in Low-Income, Middle-Income, and Centrally Planned Countries. U.S. Department of

Agriculture, Foreign Agricultural  
Economic Report No. 173. Washington, D.C.  
1982. pp. 30

USDA ERS FAER 175

During the seventies, demand for agricultural imports increased substantially in low- and middle- income countries and the centrally planned countries. Future growth in such demand will depend on internal policy decisions and domestic and international economic conditions of these countries. State trading, food reserves, and bilateral agreements are becoming increasingly important in international agricultural trade. The third meeting of the consortium on Trade Research focused on agricultural import demand in the developing and centrally planned countries and the policies and conditions affecting that demand.

**Keywords:** Trade, import demand, projections, state trading, food reserves, stockholding, bilateral agreements, low-income countries, middle-income countries, centrally planned countries.

U. S. Department of Agriculture.  
Government Intervention in Agriculture:  
Measurement, Evaluation, and Implications  
for Trade Negotiation. U.S Department of  
Agriculture, Foreign Agricultural  
Economic Report No. 229. Washington, D.C.  
1987. pp. 50

USDA ERS FAER 229

This study analyzed government intervention in the agricultural sectors of the market-oriented countries most active in trade. Levels of assistance or taxation to agricultural producers and to consumers in the form of domestic farm programs and agricultural trade barriers, which are measured by parameters known as producer and consumer subsidy equivalents, were calculated for 1982-84. Findings reveal a tendency for less-developed countries to assist consumers and for developed nations to assist producers. Assistance to producers of food grains, dairy products, and sugar tended to be higher than assistance to other producers. results for individual countries and individual commodities gauge the mission facing the new facing of multinational trade negotiations to reduce protectionism.

**Keywords:** Agricultural policy, agricultural trade, consumer subsidy equivalent, General Agreement of Tariffs and Trade, government intervention, multilateral trade negotiations, producer subsidy equivalent.

Jabara, Cathy L. Trade Restrictions in  
International Grain and Oilseed Markets :  
A Comparative Country Analysis. U.S  
Department of Agriculture, Foreign  
Agricultural Economic Report No. 162.  
Washington, D.C. 1981. pp. 41

USDA ERS FAER 162 c.1

State trading practices and variable levies, which protect administrated price levels set in importing countries, as well as tariffs, taxes, quotas, bilateral agreements, and other policies, tend to restrict the level of competition in international markets. In addition, many exporting countries implement similar types of policies that restrict or subsidize exports. Quantitative estimates of the degree of protection provided by trade and domestic policies of 18 major importing and exporting countries indicate that wheat and rice markets are the more heavily protected, followed by corn and soybeans. The importance of nontariff barriers in wheat, rice, and corn markets indicates difficulty in enhancing competition in these markets.

**Keywords:** Grain trading, nontariff trade barriers, wheat, rice, corn, soybeans, trade restrictions.

Mukhoti, Bela. International Monetary  
Fund and Low-Income Countries. U.S  
Department of Agriculture, Foreign  
Agricultural Economic Report No. 224.  
Washington, D.C. 1987. pp. 42

USDA ERS FAER 224

Low-income countries' (LIC's) debt service payments exploded and their export markets collapsed when interest rate increases in 1982-82 triggered the worst global recession in 50 years. Higher oil prices and shifts in industrialized countries' monetary policies drove up the interest rates, severely worsening LIC's balance of payment problems. This report discusses the LIC's financial difficulties, IMF adjustment programs and the theoretical controversies surrounding them, and contributes toward a medium-term adjustment program for LIC's.

**Keywords:** International Monetary Fund, low-income countries, Sub-Saharan Africa, conditionality, structural adjustment, exchange rates, devaluation, interest rates, subsidies, monetary policy, fiscal policy.

-----  
U.S. Department of Agriculture. The Marketing Challenge: Distributing Increased Production in Developing Nations. U.S. Department of Agriculture, Foreign Agricultural Economic Report No. 95. Washington, D.C. 1970. pp. 96.

USDA ERS FAER 96

Inadequate transportation and storage, poor market information, lack of capital, and other chronic marketing problems in developing countries have been dramatized by recent production increases. Major topics covered include key considerations in marketing policies, marketing enterprises and the flow of resources into marketing functions, nutrition and marketing food for the needy, efficiency in the marketing system, regional experiences in marketing problems and priorities and approaches to technical assistance. There was a consensus that marketing problems need to be dealt with on an integrated national bases which serves producers, consumers, and national development goals.

**Keywords:** Marketing, food distribution, marketing in developing countries, technical assistance in marketing.

-----  
Barichello, Richard, and Josling, T. "International Trade and World Food Security: The Role of Developed Countries Since the World Food Conference." Food Policy. November 1984. Butterworth & CO. 1984. pp. 317-330.

PAMP 386

No mechanism is in place for the international coordination of grain stocks. World market stability is largely dependent upon the actions of major grain trading countries. These countries have avoided the exportation of their domestic supply variation onto world markets over the past decade, but have been reluctant to allow domestic consumption to respond to world shortages and surpluses. Improvement in the sensitivity of domestic storage and consumption to world conditions could increase their contribution to world food security.

**Keywords:** Food security, international trade, grain stocks.

FAO (Food and Agriculture Organization of the United Nations). World Food Security: The Need for Balance of Payments Support to Meet Exceptional Variations in Food Import Bills. Prepared jointly by the Secretariats of the Food and Agriculture Organization of the United Nations and the World Food Council. Rome, FAO 1979. pp.31

PAMP 137

The present proposal is not aimed at closing the developing countries' nutritional gap, for which other, long-term measures are needed and programmes are underway; nor does it have the objective of gradually raising their per caput food supplies. Instead, it addresses the more limited but crucial problems of survival under unusually adverse conditions which occur from time to time caused by domestic food production shortfalls, natural or other disasters or high international food prices. The FAO Council, in June 1979, recommended that the IMF be invited to consider within the context of its financing facilities the feasibility of providing additional balance of payments support for meeting the rise in food import bills of low-income food deficit countries, particularly in the event of domestic food shortages and rising import prices, a recommendation subsequently endorsed by the World Food Council's Fifth Ministerial Session in Ottawa.

**Keywords:** Developing countries, production shortfalls, food prices, FAO, balance of payments.

-----  
Mellor John W. Food Prospects for the Developing Countries. Reprinted From the American Economic Review Vol. 73, No. 2, May 1983. International Food Policy Research Institute. pp. 239 - 243

PAMP 173

The paper concludes that given the uncertainty, prudent action for developing countries is to search assiduously for cost-reducing technological change in agriculture. To the extent that policies in developed countries generate more than adequate surpluses, marginal investment in agriculture in developing countries will be justified by cost-decreasing technological change in agriculture. Because of the relative size of agriculture in developing countries, equity and income distribution concerns

may still press for added emphasis on agriculture. Failure by developing countries to develop policies and investment allocations favorable to expansion of agriculture runs the risk of suboptimal resource allocation if import bills and food costs are rising and the certainty of a narrow base of participation in development.

**Keywords:** Developing countries, cost-reducing technology, income distribution, resource allocations, import, food prospects.

~~~~~  
Barbara, Huddleston. World Food Security and Alternatives to a New International Wheat Agreement. International Food Policy Research Institute: Reprinted from New International Realities Volume 6, No. 2, March 1983. pp. 4

PAMP 1

This article considers the means by which international actions can contribute to more efficient and effective food security programs within countries and provide a special mechanism for reacting on a short-term basis to political upheavals and natural disasters.

**Keywords:** World food security, natural disasters, world food prices, livestock producers.

~~~~~  
Saleh, Abdullah and Goolsby, H. O. Institutional Disincentives to Agricultural Production in Developing Countries. U.S. Department of Agriculture. Washington, D.C. 1977. pp. 16

PAMP 292

The paper concludes while it is beyond the scope of this report to present a quantitative evaluation of the net effect of various policies in different countries, a general indication about each country's need to expand its agricultural output is provided. For the two-thirds of the countries included in this study, containing 1.6 billion people, the long-term rate of growth (1952-72) in domestic demand for food exceed that for food production. The nine disincentives discussed here are of course only some of the factors affecting total world food production. But it seems

reasonable that food production could be substantially increased if these restrictive policies were replaced with incentives for farmers.

**Keywords:** Developing countries, disincentives, quantitative evaluation, food production, domestic demand.

~~~~~  
Bhatia, Rattan. The West African Monetary Union: an Analytical Review. International Monetary Fund. Washington, D.C. 1988. pp. 59

IMFOP 35

The aim of this study is to analyze the implementation of monetary policy in the West African Monetary Union area since 1963, as an interesting experiment in what Machlup aptly describes as complete monetary integration. It also reflects the role a central bank may play in developing countries. The study concludes that for a union to be successful, initially cohesive policies among members may not be essential since a currency area may lead to an integration of major economic policies. What is fundamental to such a union is the political will to integrate.

**Keywords:** West Africa, monetary union, monetary integration, economic policies, political integration.

~~~~~  
Jabara, Cathy L. "Research Review: Cross-Sectional Analysis of Wheat Import Demand Among Middle-Income Developing Countries." Agricultural Economics Research. Vol. 34, No. 3 July 1982. pp 34-37

PAMP 7

Polling may not greatly advance import demand estimation; however, it may be particularly helpful and cost-efficient when there is little information about a group of small importers, such as the developing countries. It is not strictly valid to aggregate developing countries in modelling research. Wheat import demand behavior among middle-income countries differs by the internal policies of governments and by the importance of wheat in the economy.

**Keywords:** Developing countries, import demand, middle-income, cost-efficient, wheat.

-----  
Byerlee, Derek and Singh, A.J. Relative Variability in Wheat Yields Across Countries and Over Time. CIMMYT. Mexico 1989

HD 1780 D3 S56

Wheat yield variability is analyzed in light of recent concern that rapid technological change has caused increased instability in world cereal production. The coefficient of variation of wheat yields is estimated for 57 countries from detrended data for the period 1951-86. Relative variability of wheat yields across countries is shown to be determined by country size, moisture regime and temperature. Technological variables, such as level of adoption of high-yielding varieties and fertiliser dose, had no effect on differences in yield variability across countries. Analysis of yield variability for the same countries for three periods from 1951 to 1986 shows a consistent decline in yield variability since 1975 in developing countries.

**Keywords:** Developing countries, wheat, high-yielding varieties, technological change, coefficient of variation.

-----  
Central Intelligence Agency (CIA). Trends in LDC External Debt, 1983-89. Washington, D.C. 1989. pp. 35

PAMP 891

This reference Aid provides recent data on the magnitude and trends in LDC debt as compiled from World Bank, OECD, IMF, and Bank for International Settlements sources. Data for 113 LDCs are provided on aggregate LDC external debt, individual country external debt position, and IMF credit outstanding. Although no set criteria exist by which a country's creditworthiness can be measured, this aid presents several indicators used by financial analysts as a means of defining a country's debt problem.

**Keywords:** Less developed countries, OECD, IMF, external debt.

-----  
Jabara, Cathy L. Wheat Import Demand Among Middle-Income Developing Countries: A Cross-Sectional Analysis. International Economic Division, U.S.

Department of Agriculture. Washington, D.C. 1982. pp. 15

HD 9049 W5 J32

Middle-income developing countries have an important role in international grain trade. This paper examines wheat import demand relationships for 20 middle-income developing countries. Parameters for hypothesized relationships are estimated through econometric analysis. Key variables which appear to affect wheat import are population, foreign exchange earnings, wheat production and stocks, and the level of consumer prices.

**Keywords:** Developing countries, wheat import, international grain trade, middle-income countries, econometric.

-----  
U.S. Department of Agriculture (USDA). International Food Policy Issues, A Proceedings. USDA Foreign Agricultural Economic Report No. 143. Washington, D.C. 1977 pp. 103

USDA ERS FAER 143

This document contains 10 papers and commentary presented at the Conference on International Food Policies Issues, held in Washington, D.C., April 28 and 29, 1977. The conference focused on important international trade and development issues under discussion in such international fora as the World Food Council, the Multilateral Trade Negotiations, the United Nations Conference on Trade and Development, and the International Wheat Council. Issues surrounding international food security, food needs of developing countries, and food aid and malnutrition and delineated and alternative solutions to problems are suggested.

**Keywords:** Agricultural trade, development countries, food aid, food self-sufficiency, grain reserves, international food policy, malnutrition, world food problems.

-----  
Food and Agriculture Organization of the United Nations (FAO) Dimensions of Needs: Statistics of Some of the World's Food and Agricultural problems.

PMP 348

This booklet illustrates some of the principal dimensions of world food and agricultural problems as seen by FAO at the beginning of the 1980s. It draws extensively on the perspective study of Agriculture: toward 2000.

**Keywords:** Agriculture, food aid, FAO food supply.

~~~~~  
Mahar, Dennis J. et al., ed.. Rapid Population Growth and Human Carrying Capacity: Two Perspectives. World Bank Staff Working papers No. 690. Washington, D.C. 1985.

HB 884 R36

The most dire consequences of rapid population growth are thought by some to emerge in places where the size of the human population exceeds the carrying capacity of the land. This paper explores the possible meanings of the idea of carrying capacity under developing country conditions, looks at historical and present-day cases of alleged overpopulation in relation to carrying capacity, examines some of the systems and effects where such situations may be present, reviews some of the dynamic adaptations made by populations living under such pressures, and suggests some of the consequences for economic development and some of the options for public policy.

**Keywords:** Developing countries, population, economic aspects, food supply, carrying capacity, overpopulation, public policy.

~~~~~  
Josling, Timothy. Developed-Country Agricultural Policies and Developing-Country Food Supply: The Case of Wheat. Research Report No. 14. International Food Research Institute, 1980. pp. 67

HD 9049 W4 J67

In recent years the agricultural policies of developed countries have often been accused of having a potentially destabilizing effect on world prices. Wheat is the most significant food commodity exported by the developed world to developing nations. It is therefore important to determine to what extent the wheat policies of the industrial nations have caused problems for the developing countries that purchase wheat on the world market. The report discusses

possible future changes in these policies and recent international initiatives aimed at improving the performance of the world wheat market. The study concludes that developing countries have a strong interest in the way in which stock and price policies interact in developed countries and in pursuing agreements to ensure that such policies do not result in further variations in the price and availability of foodgrains on the world market.

**Keywords:** Developing countries, wheat trade, food policies, wheat import, stock, price variation, foodgrains.

~~~~~  
Paulino, Leonard A., and Sarma, J.S. Analysis of Trends and Projections of Food Production and Consumption in Brazil and Nigeria. International Food Research Institute, 1988. pp. 71

HD 9016 B6 P38

This study attempts a detailed analysis of food trends in Brazil and Nigeria by using data from the national systems of these countries to supplement food statistics available from international sources. It aims to use these trends to improve the assessment of the future food situation in Brazil and Nigeria that were made in an earlier food gap study by the International Food Policy Research Institute (IFPRI) and to examine the policy implications of the observed trends and food projections. The Nigeria portion of the study examines the production trends of major food crops at both regional and state levels and projects these to 2000; output projections are then matched with three assumed scenarios of country-level demand projections.

**Keywords:** Nigeria, Brazil, food production, consumption, food crops.

~~~~~  
World Bank Poverty and Hunger. Washington, D.C. World Bank, 1986. pp. 68

HD 9018 D44

This report outlines the nature and extent of food security problems in developing countries, explores the policy options available to these countries in addressing these problems, and indicates what international institutions such as the World Bank can and should do to help



countries solve their food security problems. It suggests policies to achieve the desired goal in cost-effective ways. It also identifies policies that waste economic resources and fail to reach the target groups.

**Keywords:** Developing countries, poverty, hunger, food security, target groups, policy actions.

~~~~~

Williams, Douglass, and Young, R. Noth-South Papers: Taking Stock: World Food Security in the Eighties. Noth-South Institute, Canada 1981. pp. 75. pp. 75

HD 9000.5 W54 T34

This paper focuses on both food production and trade policies, and attaining the world food security. The report concludes that the issues of hunger and malnutrition in developing countries are linked to other factors apart from climatic variation and rising populations. The food production and distribution system in developing countries is affected by no less complex a set of factors than it is elsewhere. For developed countries, the report concludes that their involvement in contributing to world food security should not be confined to the provision of development assistance.

**Keywords:** Developing countries, food security, developed countries, food imports, hunger, North-South.

~~~~~

Huddleston, Barbara et al. International Finance for Food Security. Published for the World Bank. The Johns Hopkins University Press, Washington, D.C. 1984.

HD 9018 I57

National Food Policies in developing countries are increasingly influenced by global events and international policies beyond the control of individual governments. This study uses a simulation model to analyze the probable benefits and the pursuant demands on an internationally sponsored scheme for insuring against high food import bills. The simulation experiments yielded a set of predicted changes in food security that would result from new financial arrangements. Since the results are sensitive to the domestic food policies

of the individual governments, the predictions are only conditional.

**Keywords:** Developing countries, food policies, food import, agriculture, simulation model.

~~~~~

Sverdberg, Peter. Food Insecurity in Developing Countries: Cause, trends and Policy Options. UNCTAD 1984

HD 9000.5 S83

This study has been prepared in accordance with the work programme under Conference resolution 105 to maintain under regular review all matters regarding international food trade. This study undertakes a number of statistical tests of whether there have been changes over time in various parameters that determine the food security position of developing world. The tests are conducted on data for 45 developing countries for which the required statistical information is available.

**Keywords:** Developing countries, food security, statistical tests, food production.

**UNIVERSITY OF WINNIPEG LIBRARY**

Hutchful, Eboe. The IMF and Ghana. London, Eboe Hutchful 1987. pp. 298

HG 3881.5 I58I38 1987

In this opening essay, Professor Hutchful presents an overview of modern Ghanaian history. He poses the central question: why did Ghana's economy, following the IMF-prescribed austerity programme of 1966, enter a period of stagnation and deepening underdevelopment from which it has not recovered to this day? He show why the IMF set out to destroy whatever fragile bases for self-sufficiency and development had been created under Nkrumah. He argues that the 1966 coup was an historic turning-point opening the way to 20 years of right-wing petty-bourgeois rule that transported the country back in ideological and structural time.

**Keywords:** Ghana, International Monetary Fund, Economic conditions.

~~~~~  
Garritsen de Vries, Margaret. Balance of Payments Adjustment, 1945 to 1986: The IMF Experience. Washington, D.C., International Monetary Fund, 1987 pp. 336

HG 3890 D4 1987

The book traces chronologically the development of the policies and activities that the Fund has pursued since 1945 to help its members achieve balance of payments adjustment. Footnote references to the Fund's other publications, particularly to the History of the Fund, are included to guide the reader to fuller descriptions of related activities and policies.

**Keywords:** IMF, balance of payments, developing countries, technical assistance, policies.

~~~~~  
Bird, Graham. International Financial Policy and Economic Development: A Disaggregated Approach. New York, St. Martin's Press, 1987. pp. 348

HG 3881 B536 1987

This book focuses on the international financial problems of developing countries and the ways in which international financial policy might be used to help alleviate them. However, an attempt is made throughout to maintain a sharp distinction between considerations of equity and efficiency. Conclusions are drawn on the basis of underlying economic analysis rather than from a desire simply to 'throw more money' at Less Developed Countries in the belief that this will miraculously bring about their economic development.

**Keywords:** International finance, less developed countries, financial policy, equity, efficiency.

~~~~~  
O'Cleireacain, Seamus. Third World Debt and International Public Policy. New York, Praeger, 1990. pp. 224

HJ 8899 025 1990

The author concludes that the crisis showed that development strategies being followed in some countries in the late 1970s and early 1980s were

unsustainable. A combination of overvalued real effective exchange rates, internal inflation, and large public sector borrowing proved incompatible with an external environment of volatile commodity prices, interest rates, and exchange rates. The crisis also showed that there are major costs to all parties when international public policy is incompletely formulated.

**Keywords:** Third World debt, overvalued currency, internal inflation, real exchange rate.

~~~~~  
Havnevik, Kjell J. ed. The IMF and the World Bank in Africa : Conditionality, Impact and Alternatives. Seminar proceeding. Sweden, The Scandinavian Institute of African Studies, 1987. pp. 175

HG 3881.5 I58I59 1987

Most Sub-Saharan African countries have, during the 1980s, implemented a program of structural adjustment in conjunction with the IMF and the World Bank. These international institutions have thus had a decisive role in the formulation of economic policies in these countries. In this book the character of the conditionality requirements attached to these programs were investigated by a group of international experts and their impacts were analyzed on a macro-level and through specific studies of Nigeria, the Sudan, Tanzania, Mozambique, South Africa, the Ivory Coast and India for comparative purposes. The conference also aimed at suggesting alternative and improved conditionality in the African context.

**Keywords:** Sub-Saharan African countries, structural adjustment, IMF, the World Bank, economic policies.

~~~~~  
Wolf, Martin and Lal, D. ed. Stagflation, Saving, and the State: Perspectives on the Global Economy. Oxford University Press, World Bank, 1986. pp. 402

HG 229 S74 1986

Many of the papers in the book summarize the historical record and the theoretical debates on the economic performance and policies of industrial and developing countries; they should be of considerable general interest. Others are based on

original research done at the World bank and should interest the research community worldwide.

**Keywords:** Stagflation, global economy, developing countries, industrial countries, economic performance.

~~~~~  
Lele, Uma. The Design of Rural Development: Lessons From Africa. Washington, D.C. International Bank for Reconstruction and Development, 1975. pp. 246

HN 773.5 L34

How to raise productivity among the rural poor in developing countries is one of the two or three most urgent questions confronting the international development community today. This book represents an important element of our research in this direction. It results from a major study of rural development policies and programs in sub-saharan Africa. From that experience, it attempts to draw lessons to guide our current and continuing operations in support of government programs to raise the productivity of the rural poor.

**Keywords:** Rural development, productivity, developing countries, Sub-Saharan Africa.

~~~~~  
Onimode, Bade. ed. The IMF, The World Bank and the African Debt: The Economic Impact. Individual contributors, 1989. pp. 244

HJ 8826 I54 1989

Debt poses the greatest threat to the incomes and general welfare of countless numbers of people in the Third World, as well as to the prospects for development and democracy. To date, most regional analyses have focused on Latin America, with little specific attention paid to Africa. These two volumes redress the balance. They not only confirm the World Bank's assessment, but show the real situation to be far worse. The essays in the two volumes originate from a conference organized by the Institute for African Alternatives where African scholars and public officials confronted representatives of the IMF and the World

Bank with grim evidence of their failed programmes.

**Keywords:** African debt, IMF, the World Bank, general welfare, economic impact.

~~~~~  
Carvounis, Chris C. The Foreign Debt/National Development Conflict: External Adjustment and Internal Disorder in the Developing Nations. New York, Quorum Books 1986. pp. 243

HJ 8899 C38 1986

This book examines the adjustment experience of indebted developing countries from August 1982 to the present. Before and during this period, dozens of developing nations failed to repay their international creditors on a timely basis. These external debt-service problems were the proximate and most pressing cause of the adjustment programs undertaken by the same group of sovereign borrowers. Much of the analysis focuses on the debtor countries of Latin America. Accounting for more than two-fifths of total developing countries external liabilities, Latin American nations are clearly the most critical geographical group by virtue of the sheer magnitude of their unpaid borrowings.

**Keywords:** Foreign debt, developing nations, adjustment experience, external debt service.

~~~~~  
Keller, Peter M. and Weerasinghe, Nissanke E. Multilateral Official Debt Rescheduling: Recent Experience. World Economic and Financial Surveys. Washington, D.C. IMF 1988. pp. 22

HJ 8899 K47 1988

This paper describes developments in multilateral official debt renegotiations over the 18 months through December 1987. Persistent debt-servicing problems have manifested themselves in recent years in the large number of low-income countries that have been seeking debt relief year after year from official creditors. These countries at the same time frequently even had difficulty in adhering to the already stretched out payments schedule or previous debt relief

agreements. The result was often a need for more comprehensive debt relief in subsequent rescheduling agreements.

**Keywords:** Debt rescheduling, low-income countries, debt servicing, creditors, payments schedule.

-----  
International Monetary Fund (IMF). Multilateral Official Debt Rescheduling: Recent Experience. World Economic and Financial Surveys. Washington, D.C. IMF 1990. pp. 24

HJ 8899 K84 1990

This paper reviews recent developments in multilateral official debt restructuring during 1988 and 1989. This period was marked by two significant trends: debtor countries increasingly relied on debt reschedulings through the Paris Club and official creditors further adapted their policies in response to protracted problems in the most heavily indebted low-income countries.

**Keywords:** Debt rescheduling, debtor countries, Paris Club, low-income countries.

-----  
Food and Agriculture Organization of the United Nations (FAO). Agriculture: Toward 2000. Rome, 1981. pp. 134

HD 1415 A37 1981

This study analyses the challenges and proposes a strategy for development of world agriculture to the end of the century, with particular reference to developing countries. The study is expected to help our Member Governments by providing a global view of the requirements of the food and agricultural sector, and a long-term framework for their own national plans and policies, within the framework of a new international economic order. The major finding of the study is challenging: over the next two decades the developing countries could double their food and agricultural production. The eradication of hunger and undernourishment requires not only increased food production, but also better distribution of the produce.

**Keywords:** Agriculture, developing countries, food, national plans, agricultural production, hunger.

-----  
Strauss, John, Squire, L., and Singh, I., ed. Agricultural Household Models: Extension, Applications, and Policy. Washington, D.C. The World Bank, 1986. pp. 335

HD 1542 A34 1986

The book consists of two parts: part I provides an overview of empirical result, policy conclusions, and methodological issues; Part II contains a series of recent applications of agricultural household modelling that expands the range of policy issues subject to investigation within this general framework and explores several critical methodological issues.

**Keywords:** Household, extension, empirical result, household modelling.

-----  
Culpeper, Roy. Beyond Baker: The Maturing Debt Crisis. North-South Institute. Ottawa, Canada: 1987. pp. 23

HJ 8899 C34 1987

This briefing reviews the maturing international debt crisis as of early 1987 and its implications for both debtor and creditor countries, including Canada. Within this context, it offers an assessment of the 'Baker Initiative' as an important international policy response to the crisis. It also reviews some other key developments which have taken place since the Baker announcements, and which offer some promise of improving the debt situation.

**Keywords:** Debt maturity, Baker Initiative, creditor, debtor.

-----  
Nishimizu, Meiko, Shetty, Y.T., and Segura, L. E., ed. Fertilizer Producer Pricing in Developing Countries: Issues and Approaches. Industry and Finance Series Volume No. 11. Washington, D.C. the World Bank, 1986. pp. 247

HD 9483 D44F4 1986

This report presents the proceedings of the *International Seminar on Fertilizer Pricing Policies* sponsored by the Industrial Department of the World Bank in March 1984. It contains three analytical papers on the economic issues raised by fertilizer pricing policies, case studies of actual pricing policies in 10 developing countries and a summary of the seminar discussions.

**Keywords:** Fertilizers, developing countries, price policy, International seminar, producer.

~~~~~  
Heller, Peter S. et al., The Implications of Fund-Supported Adjustment Programs for Poverty: Experiences in Selected Countries. Occasional Paper No. 58. Washington, D.C. The IMF 1988 pp. 37

HC 59.72 I5I46 1988

The objective of this study is to examine in the impact on poverty groups of the policy measures adopted under Fund-supported adjustment programs in seven countries. The present study examines the implications for the various poverty groups of the broad objectives, targets, and policies of the programs in the specific economic settings of the countries concerned. It focuses on specific adjustment programs for fairly limited periods and is aimed largely at analyzing in the short-run implications of the policy measures.

**Keywords:** Adjustment program, poverty, developing countries, short-run implications.

~~~~~  
The World Bank. Poverty and Hunger: Issues and Options for Food Security in Developing Countries. Washington, D.C. the World Bank, 1986. pp. 69

HD 9018 D44 P68 1986

This report outlines the nature and extent of food security problems in developing countries, explores the policy options available to these countries in addressing these problems, and indicates what international institutions such as the World Bank can and should do to help countries solve their food security problems. It suggests policies to

achieve the desired goal in cost-effective ways. It also identifies policies that waste economic resources and fail to reach the target groups. It is in that sense as much about what should not be done as about what should be done.

**Keywords:** Food supply, developing countries, world bank, food security, economic resources, target groups.

~~~~~  
Food and Agriculture Organization of the United Nations, FAO. Population and Agricultural Development: Selected Relationships and Possible Planning Uses. Development Research and Training Service, Policy Analysis Division. Rome, FAO 1977. pp. 123

HD 9000.5 F54 1977

The report synthesizes a number of contributions by different authors on selected agriculture-specific topics and case studies in the area of population-development relationships. It addresses itself mainly to agricultural planners and policy makers.

**Keywords:** Agricultural development, population development, rural-urban migration.

~~~~~  
Mackintosh, Maureen. Gender, Class and Rural Transition: Agribusiness and the Food Crisis in Senegal. London, Maureen Mackintosh, 1989. pp. 218

HD 9017 S42M3 1989

This book shows how commercial estates can irreversibly undermine local farming, reducing food production and creating permanent dependence on waged labour. The author argues that this destruction can be understood only if the notion of the household farming unit--so fondly held by agricultural economists--is abandoned. In its place, Dr. Mackintosh traces the complex intra- and cross-household economic relations, including those between men and women, that hold the mixed farming system together. She shows how their disintegration produces a fragmented, individualized farming system, unable to sustain the farmers and their families.

**Keywords:** Senegal commercial estates, food production, intra-household, cross-household, farming system.

-----  
Lawrence, Peter., ed. World Recession and the Food Crisis in Africa. London, James Currey, 1986. pp. 314

HB 9017 A2 W67 1986

The persistent recession in the world economy has seriously aggravated the crisis of food supply throughout Africa. Assistance from international lending agencies, like the IMF and the World Bank, is an important weapon against famine for countries which cannot feed themselves or which are afflicted by drought. The domination of these institutions by the monetarist orthodoxy makes such aid available only on even tighter conditions. This c% '+( n examines in Part One the nature of the current depression, places it in historical perspective and highlights the direct and indirect effects on Nigeria and the economies of the Southern Africa Development Coordination Conference. Part Two describes the nature of aid from the IMF and the World Bank and its conditionality. Part Three, the particular problems of food supply are discussed.

**Keywords:** Africa, food crisis, IMF, World bank, famine, monetarist, Nigeria.

Yukawa, Setsuko and Urrutia, M., ed. Economic Development Policies in Resource-Rich Countries. Japan, Tokyo: The United Nations University, 1988. pp. 166.

HC 59.7 E26 1988

Using comparative case-study analysis, *Economic Development policies in Resource-Rich Countries* examines some of the elements common to resource-rich countries and indicates the main determinants of their poor growth rates. And of special interest in this volume, in addition to the principal economic issues involved, the authors also consider the political complications often associated with policy decisions needed to correct the antigrowth effects peculiar to resource-riche economies.

**Keywords:** Economic development, resource-rich countries, poor growth rates, antigrowth..

Kamarck, Andrew M.. The Topics and Economic Development: A Provocative Inquiry into the Poverty of Nations. Washington, D.C. The World bank, 1976. pp. 111

HC 695 K25

Why have the countries of the developing world lagged behind in the process of modern economic growth? The author claims that many widely held theory addressing this question fly in the face of facts and neglect the real problem in Third World Countries. *The Topics and Economic Development* presents a nontechnical examination of relevant research from many disciplines-economics, agronomy, pharmacology, and mineralogy among them-and points out many of the ways in which obstacles to development in the Tropics can be and are being overcome, especially through joint effort. The author also discusses important areas in which more research, and more funding for research, are urgently needed.

**Keywords:** Economic development, economic growth, tropics, underdeveloped areas. World bank.

-----  
United Nations. Transfer and Development of Technology in Developing Countries: A Compendium of Policy Issues. United Nations Conference on Trade and Development, Geneva. New York, 1990. pp. 64

HC 59.72 T4 U38 1990

The conference concludes that significant changes have taken place in international economic relations since the early 1970s, and more recently, in 1980s, technological developments have accelerated in an unprecedented fashion. These changes are affecting the pace and patterns of technology transfer to developing countries, prompting these countries to search for novel approaches in setting their development and international trade objectives, as well as to evolve imaginative institutional modalities for building up their technological capacities and capabilities, and facing the new challenges in trade and development.

**Keywords:** Developing countries, technology transfer, international economic, trade.

~~~~~  
International Monetary Fund, IMF. Foreign Private Investment in Developing Countries: A Study by the Research Department. Occasional Paper No. 33. Washington, D.C. IMF, 1985. pp. 44

HC 59.72 S3 I57 1985

Since the early 1970s, foreign direct and portfolio equity investment flows into developing countries, although continuing to increase in absolute terms, have been relatively less important than in previous years, as foreign private capital flows have been dominated by debt-creating bank credit. This paper examines the causes and consequences of the decline in the relative importance of direct and portfolio equity investment since the early 1970s, and discusses the modifications in policies in both lending and borrowing countries that might encourage larger flows.

**Keywords:** Developing countries, portfolio, private investment, bank credit.

Gifford, R.C. Agricultural Mechanization in Development: Guidelines for Strategy Formulation. Agricultural Engineering Service, Agricultural Services Division. FAO Agricultural Services Bulletin. No. 45 Rome, 1981. pp. 77.

HD 1459 G53 1981

By the end of this century world population will surpass 6 billion, against less than 3 billion twenty years ago and 4.3 billion today. A substantial increase in agricultural productivity will be required to meet the future food needs of the world and, historically, such increases have been clearly linked with technological change. The conclusions include that the most suitable type, level and role of mechanization in agriculture is determined by the farming situation which is specific to individual village, or conditions within a country; Agricultural machinery should be manufactured locally to meet local market demands in conformity with a realistic appraisal of technical and financial capabilities; And importation of machinery, spares and supplies for agricultural mechanization should be systematically organized in accordance with foreign exchange priorities.

**Keywords:** Agricultural mechanization, agricultural productivity, technological change, spares, foreign exchange.

~~~~~  
McNamara, Robert S., Pre. The Assault on World Poverty: Problems of Rural Development, Education and health. London, The World Bank, 1975. pp. 425.

HC 60 A835

The collection of papers in this volume, while dealing with five related subjects, share a common theme. They seek to analyze the causes of that poverty, to examine ways in which it can be alleviated, and to outline programs in which the World bank plans to help. While they do not pretend to provide final answers for the questions they raise, and they will, encourage a more intensive search among governments for feasible solutions to the massive problem of absolute poverty.

**Keywords:** Developing countries, World poverty, rural development, food supply.

~~~~~  
McMillan, Della E. and Hansen, A., ed. Food in Sub-Saharan Africa. Boulder, Colorado. Lynne Rienner Publishers, Inc. 1986. pp 410

9017 S82 F66 1986

Although the entire book is an integrated statement, it is divided into five parts. In the first part, political scientists and economist provide a general overview at the level of policy. The second part is written by historians, anthropologists, and a meteorologist to provide an introduction to Africa. The third part gives readers from the socioeconomic and policy sciences an opportunity to appreciate the empirical and analytical concerns of technical scientists. The fourth part rectify another common imbalance in discussions of African food and famine. The book concludes that Africa has problems, both acute and chronic, and these problems must be addressed by Africans in order for any meaningful policies to be formulated and implemented

**Keywords:** Sub-Saharan Africa, food supply, nutrition policy, agriculture, famine.

-----  
Pritchard, Anthony P. Lending by the  
World Bank for Agricultural Research: A  
Review of the Years 1981 Through 1987.  
World Bank Technical paper No. 118.  
Washington, D.C. 1990. pp. 38

S 542.3 P75 1990

In the period 1981-1987 the Bank invested about 97.7 billion in 21 "free standing" research projects and 209 agricultural and rural development projects with research components. The "free-standing" research projects were successful in institution-building and financing productive research programs. Problems in implementing research components in agricultural and rural development project were sometimes severe and the limited success of these components is a cause for concern. The recommendations proposed include, evaluation of the effectiveness of policy based lending in the development of agricultural research, training for Bank staff for increasing skills in supervision and appraisal of research projects, and expansion of the time-frame of research projects.

**Keywords:** Agriculture, research, developing countries, finance, World Bank, national agricultural research.

-----  
Mohan, Rakesh. Urban Economic and  
Planning Models. The Johns Hopkins  
University Press, Baltimore and London,  
The World Bank, 1979. pp. 179

HT 169.5 M63 1979

Investment in developing countries has been biased, it has been alleged, toward urban areas at the expense of the countryside, but economic research may well suffer from the opposite bias. *Urban Economic and Planning Models* takes as its themes the central question: How can these methods be transferred to cities in developing countries? What are the possibilities of applying current urban modelling techniques to these cities? Several varieties of model are evaluated on the basis of their usefulness as predictive and planning tools and in light of the rapidly changing conditions of these cities.



# Index

## A

adjustment experience 38  
Adjustment program 31, 40  
Africa 2-6, 8-12, 16-20, 28-31, 33, 37, 38, 41, 42  
African 1, 2, 5, 8-11, 13, 14, 16-20, 28-30, 33, 37, 38, 42  
African debt 38  
African food crisis 13  
agricultural production 13  
agricultural development 10, 11, 17, 22, 24, 30, 40  
agricultural economy of Nigeria 4  
agricultural export 20  
agricultural exports 4, 13-15, 20, 26, 29  
agricultural extension 10  
agricultural GDP 9  
agricultural imports 13-15, 31  
agricultural laborers 18, 19  
agricultural marketing 10  
Agricultural mechanization 42  
agricultural output 23, 33  
agricultural policies 2, 11-13, 15, 16, 18, 23, 27, 35  
Agricultural policy 3, 15, 16, 23, 31  
agricultural production 2, 4, 6, 8, 9, 16, 18, 27, 33, 39  
agricultural productivity 17, 42  
agricultural products 4, 23  
Agricultural sector 15, 17, 21, 22, 39  
agricultural trade 3, 4, 13-15, 22, 23, 31, 34  
agricultural trade policy 13-15  
agricultural wages 18  
Agriculture 2-5, 8-27, 29-36, 39, 40, 42, 43  
agriculture and state 19, 25, 29  
aid 2, 4, 5, 8, 10, 13, 14, 16, 17, 22, 24-27, 30, 34, 35, 41  
alternative technologies 27  
anti-poverty strategies 11  
antigrowth 41  
Asia 9, 19, 28, 30

## B

Baker Initiative 39  
balance of payments 16, 32, 37  
balance of trade 7  
bank credit 42  
bibliography 1, 2, 8, 12, 21  
bilateral agreements 31  
bilateral aid 24  
boosting food production 26  
Brazil 14, 35  
buffer stocks 7, 25

## C

Cameroon 13  
Canada 21, 26, 27, 29, 36, 39  
Canadian government 29  
CANADIAN WHEAT BOARD LIBRARY 12  
capacity of land 10  
capital investment 25  
carrying capacities 28  
carrying capacity 6, 28, 35  
centrally planned countries 30, 31  
cereal imports 27  
cereals 11, 27  
CESSs 21  
children 8  
CIMMYT 16, 26, 27, 34  
cities 5, 16, 43  
Coarse grains 3, 23  
cocoa 4, 13, 30  
coefficient of variation 34  
coffee 13, 29, 30  
commercial enterprises 10  
commercial imports 27  
Commodity trade 26, 30  
comparative advantage 12, 13  
concessional import 27  
conditionality 31, 37, 41  
consumer food price 9  
consumer subsidies 17  
consumer subsidy equivalent 31  
consumers 3, 5, 8, 24, 25, 31, 32  
consumption 2, 3, 5-7, 9, 12, 13, 16, 18-20, 22, 24-26, 28, 29, 32, 35  
consumption patterns 2

corn 3, 15, 16, 18, 31  
corn consumption 16  
corn industry 18  
Corn production 3, 16  
cost and standard of living 18  
cost-effectiveness 12  
cost-efficient 33  
cost-reducing technology 33  
countertrade 17, 18  
creditor 39  
creditors 38, 39  
crop statistic data 30  
crop yield 16  
cross-household 40

## D

DAFOE LIBRARY 2  
data collection 23  
debt 3, 7, 8, 13-18, 29, 31, 34, 37-39, 42  
Debt maturity 39  
Debt rescheduling 14, 29, 38, 39  
debt servicing 7, 8, 29, 39  
debt servicing capacity 7, 8  
Debt situation 13, 39  
debtor 29, 38, 39  
debtor countries 29, 38, 39  
demand for agricultural commodities 29  
dependency 3, 4  
desert 28  
Desertification 6, 18, 28  
devaluation 31  
developed countries 4, 12, 14, 22, 23, 27, 31, 32, 34-37  
Developing countries 11  
developing countries 3-10, 12-30, 32-43  
developing countries, 3-10, 12, 14-30, 32-43  
developing nations 6, 12, 14, 30, 32, 35, 38  
Developing World 3, 10, 15, 22, 28, 36, 41  
development 2, 4, 5, 8-19, 21, 22, 24, 26, 28, 30, 32-43  
development aid 8  
development assistance 9, 16, 36  
development countries 34  
development planning 17  
disincentives 33  
domestic demand 33  
domestic policies 4, 31  
drainage 11  
drought 2, 16-18, 41  
dryland 18

## E

eastern Africa 20  
EC grain policy 27  
econometric 14, 16, 34  
economic aspect 29  
economic aspects 18, 35  
Economic conditions 5, 31, 36  
Economic development 4, 5, 12, 14, 28, 35, 37, 41  
economic growth 7, 8, 12, 13, 15, 41  
economic impact 38  
economic models 22  
economic performance 37, 38  
economic policies 14, 33, 37  
economic resources 36, 40  
efficiency 5, 7, 8, 32, 37  
Egypt 5, 10  
empirical result 39  
energy crisis 6  
energy standard 25  
environmental tragedy 18  
equity 7, 32, 37, 42  
European Community 23, 27  
exchange rate 4, 17, 19, 23, 37  
exchange rates 3, 4, 14, 31, 37  
export earnings 14, 20, 22  
exports 2-4, 9, 13-15, 20, 26, 29-31  
extension 6, 10, 12, 20, 39  
external debt 7, 8, 16, 29, 34, 38  
external debt management 8  
external debt service 38  
external finance 5, 29

## F

family income 4

famine 2, 11, 24, 29, 41, 42  
 FAO 8-12, 20, 22-24, 26, 28, 32, 34, 35, 39, 40, 42  
 FAO food supply 35  
 farming system 40  
 farming systems 9  
 fertility 9, 28  
 Fertilizers 28, 40  
 finance 2, 4, 5, 17, 26, 29, 36, 37, 39, 43  
 financial ability 7  
 financial constraints 3, 14, 15  
 financial constraints to trade 14, 15  
 financial policy 37  
 fiscal policy 31  
 flowering phase 17  
 follow-up action 11  
 food 2-36, 39-42  
   consumption 16  
 food aid 2, 4, 5, 13, 16, 17, 26, 27, 30, 34, 35  
 food consumption 5, 6, 9, 12, 20, 22, 25, 29  
 food crisis 13, 26, 40, 41  
 food crop production 6  
 food crops 19, 23, 25, 35  
 food deficit countries 5, 21, 25, 32  
 food deficits 18  
 food demand 9, 16, 29  
 food distribution 32  
 food export 9  
 food gap 2, 13, 16, 35  
 Food grain 7, 18  
 food grain problems 7  
 food import 4, 9, 12, 13, 32, 36  
 food imports 2, 4, 13, 14, 16, 17, 19, 25, 26, 36  
 food insurance 20  
 food needs 13, 17, 21, 24, 29, 30, 34, 42  
 Food policies 6, 12, 34-36  
 food policy 6, 12, 16, 18-28, 32-35  
 food prices 9, 16, 29, 32, 33  
 food problem 7, 25  
 food production 2, 8, 10-13, 16-19, 21, 25, 26, 28-30, 32, 33, 35, 36, 39, 40  
 food prospects 25, 32, 33  
 food reserves 31  
 Food security 2, 5, 6, 12, 15, 20, 22, 25, 32-36, 40  
 food self-sufficiency 10, 12, 34  
 Food shortage 24  
 food supply 6, 8, 11, 16, 18, 19, 21, 25, 26, 29, 35, 40-42  
 food systems 17, 25  
 food trade 16, 22, 36  
 foodgrain 7, 25  
 foodgrains 25, 27, 35  
 forecasting 19  
 foreign credit 14  
 foreign and domestic resources 7  
 Foreign debt 38  
 foreign exchange 2, 12-14, 16, 17, 19, 20, 22, 27, 34, 42  
 foreign exchange earnings 13, 14, 17, 22, 34  
 Foreign exchange problem 19  
 foreign exchanges 22  
 foreign food aid 4  
 foreign loan 8  
 forestry production 6  
 frequency 17  
 fuelwood 6

## G

GATT 21  
 General Agreement of Tariffs and Trade 31  
 general welfare 38  
 Ghana 36  
 Global 14, 23, 26, 30, 31, 36-39  
 global economy 14, 37, 38  
 government finance 17  
 government intervention 4, 5, 21, 31  
 government policy 26, 28  
 grain 1-3, 5-7, 9, 12, 16, 18, 20, 23-25, 27, 28, 31, 32, 34  
 grain consumption 3, 20, 24  
 grain import 24  
 grain imports 2, 3, 23, 24  
 grain prices 16, 25  
 grain production 18, 27, 28  
 grain reserve 7  
 grain reserves 6, 20, 34  
 grain stocks 12, 32  
 grain supply 9  
 Grain trading 12, 31, 32  
 Grains 3, 9, 11, 15, 18, 23, 31  
 grant aid 27  
 green revolution 3, 15, 24, 30

Greening of Africa 18  
growth 3-5, 7, 8, 10, 12-16, 19, 21, 24, 28, 31, 33, 35, 41  
Gusau 19, 20

## H

harsh climate 18  
harsh conditions 5  
high-yielding varieties 3, 15, 30, 34  
Household 18, 19, 39, 40  
household modelling 39  
households 6, 19, 20  
human capital 5  
hunger 11, 21, 24-26, 35, 36, 39, 40  
hybrids 3

## I

IMF 31, 32, 34, 36-42  
import 2-5, 9, 12-15, 20, 22, 24, 26, 27, 30-36  
import demand 13, 15, 30, 31, 33, 34  
import projections 13, 15  
imports 2-5, 9, 13-17, 19, 23-27, 30, 31, 36  
income 2-9, 11-14, 16, 18-20, 22, 25, 30-34, 38, 39  
income distribution 4, 5, 20, 32, 33  
income effect 8  
indices 4  
industrial countries 38  
insurance 20, 25  
interest rates 14  
interest rates 3, 14, 22, 31, 37  
intergovernmental discussion 26  
internal inflation 37  
International business enterprises 29  
international commodity markets 22  
international comparison 9  
international debt 3, 14, 15, 39  
international economic 22, 30, 31, 34, 39, 41  
international finance 36, 37  
international food policy 18-28, 32-35  
international food trade 22, 36  
international grain trade 34  
international migration 28  
International Monetary Fund 31, 33, 36, 37, 39, 42  
International seminar 40  
international trade 9, 12, 13, 15, 21, 22, 30, 32, 34, 41  
intervention 4, 5, 21, 23, 31  
intra-household 40  
irrigable land 16  
Irrigation 2, 11, 12, 17, 28  
Ivory Coast 10, 13, 37

## K

Kenya 5, 12, 18, 20, 29  
Khartoum 11

## L

labour force 4  
land laws 6  
land productivity 11  
land resources 10  
land usage 4  
land use 6  
landlord 7  
Less developed countries 4, 14, 34, 37  
liberal trade policies 23  
livestock feeding 3  
livestock producers 33  
living standards 5  
low-income countries 6, 14, 25, 31, 38, 39  
low-volume crops 20  
luxury crops 29

## M

magnitudes 23  
maize 9, 16, 18, 19, 26, 30  
maize production 16  
maize-growing regions 16  
Malawi 4  
malnourished 26  
malnutrition 6, 16, 25, 34, 36

market 2, 5, 7, 9, 12-15, 21, 25-27, 31, 32, 35, 42  
market forces 5, 12, 13  
market shares 13  
Marketing 10, 12, 13, 16, 32  
marketing in developing countries 32  
marketing leaders 10  
mathematical representation 22  
middle-income 3, 30, 31, 33, 34  
middle-income countries 30, 31, 33, 34  
mixed cropping 16  
modelling 12, 33, 39, 43  
monetarist 41  
monetary policy 14  
monetary integration 33  
monetary policy 3, 15, 31, 33  
monetary transmission 3, 14  
monetary union 33  
mortality 28  
multilateral organizations 18  
multilateral trade negotiations 31, 34

## N

Nairobi 18  
national agricultural research 43  
national budget 17  
national plans 39  
national policies 10  
natural disasters 33  
negotiations 4, 21, 31, 34  
New International Economic Order 30, 39  
Nigeria 4, 9, 14, 15, 17, 19, 20, 23, 29, 35, 37, 41  
nontariff trade barriers 31  
nontradables 19, 20  
North-South 36, 39  
nutrition 9, 16, 18, 20, 21, 29, 32, 42  
nutrition policy 18, 29, 42

## O

OECD 15, 17, 22, 29, 34  
OECD countries 15, 22  
oil boom 23  
oil import 26  
overpopulation 35  
overvalued currency 37

## P

paddy 8  
Panic phase 17  
Paris Club 39  
payments schedule 38, 39  
per capita production 3  
petroleum 4, 15  
policies 2, 4-23, 26, 27, 29-42  
policy 2-6, 8, 10-29, 31-37, 39-43  
policy actions 36  
policy options 4, 11, 17, 27, 35, 36, 40  
policy-makers 10  
political integration 33  
poor growth rates 41  
poor harvest 6  
population 4, 6, 7, 9, 10, 13, 15, 16, 19, 20, 24, 26, 28, 34, 35, 40, 42  
population development 40  
population growth 7, 10, 13, 16, 19, 24, 28, 35  
portfolio 42  
poverty 5, 6, 11, 21, 26, 35, 36, 40-42  
price 4, 5, 7-11, 17, 19, 20, 23, 27, 31, 35, 40  
price incentive 20  
price policies 10, 11, 27, 35  
price policy 40  
price stabilization 7, 8  
price variation 35  
prices 7, 9, 12, 14-16, 19, 25-27, 29, 31-35, 37  
private investment 42  
producer 21, 27, 31, 39, 40  
producer subsidy equivalent 31  
production 2-4, 6, 8-13, 15-30, 32-36, 39, 40  
production shortfalls 19, 32  
productions 4  
productivity 6, 11, 16, 17, 19, 28, 38, 42  
projected food aid needs 13  
projections 2, 7, 9, 13-15, 17, 19, 24, 29, 31, 35  
PSE's 4  
PSEs 21

public investment 5  
public policy 35, 37

## Q

quantitative evaluation 33

## R

rainfall 6, 17  
rainfed rice production 8  
raw materials 4, 20  
real exchange rate 37  
regional cooperation 20  
research 2, 5, 6, 9, 17-33, 35, 38, 40-43  
research and development 30  
resource allocations 33  
resource-rich countries 41  
resources 2, 5-7, 10, 16, 17, 19, 23, 26, 29, 32, 36, 40  
rice 2, 3, 8, 10, 11, 13, 19, 30, 31  
rice commodity policy 11  
rice production 8, 10  
rising prices 26  
risk-reducing activities 20  
Royal Society 26  
Rural development 5, 12, 38, 42, 43  
rural households 6  
rural-urban interactions 5

## S

safety net 17  
Sahel 5, 6, 13, 20  
schemes 11, 20, 29  
seasonal variations 28  
seed 30  
semi-arid 6, 17, 18, 27, 28  
Senegal 10, 12, 40  
Senegal commercial estates 40  
sharecropping 7  
shifting cultivation 9  
short-run implications 40  
simulation 5, 7, 12, 20, 21, 36  
simulation model 5, 36  
skeletal soil 28  
small farmers 10, 12  
small-scale farmers 6  
social development 9-11, 24, 26  
socio-economic differences 17  
Somalia 4  
South Africa 16, 37  
Southern Africa 12, 20, 41  
soybeans 15, 31  
spares 42  
spatial and temporal development 11  
SS2 28  
stabilization 2, 7, 8, 20  
Stagflation 37, 38  
staple food 9, 18, 23, 25  
state trading 31  
statistical tests 22, 36  
statistics 4, 8, 9, 23, 29, 34, 35  
stochastic 20  
stock 5, 6, 27, 35, 36  
stockholding 31  
structural adjustment 31, 37  
Sub-Saharan Africa 2-6, 8, 11, 16, 18, 19, 31, 38, 42  
Sub-Saharan African countries 2, 37  
subsidies 4, 15, 17, 31  
subsistence crops 4  
Sudan 2, 10, 11, 16, 17, 37  
sugarcane industry 18  
supply and demand 16, 19, 25, 29  
supply and demand for food 25  
supporting capacity 28  
surveys 18, 20, 38, 39  
sustained production 9  
sustained-yield 28  
symposium 18, 26

## T

target groups 36, 40

technical assistance 5, 32, 37  
technical assistance in marketing 32  
technological change 32, 34, 42  
technology 2, 3, 6, 16, 18, 33, 41  
technology transfer 41  
tenancy contract 7  
the World Bank 2, 7, 25, 28, 29, 35-43  
Third World debt 3, 37  
Trade 3-7, 9-17, 19, 21-24, 26-32, 34-36, 41  
trade and price policies 10, 11  
trade deficits 14  
trade policy 5, 6, 13-15  
trade restrictions 22, 31  
training needs 12  
transportation cost 24  
tropical Africa 16  
tropics 17, 41

## U

U.S. agricultural exports 13-15, 29  
Underdeveloped areas 25, 26, 29, 41  
underfed 25  
UNICEF 8  
United States 12-16, 21, 27, 29  
UNIVERSITY OF WINNIPEG LIBRARY 36  
unrestricted movement 28  
urban growth 5  
urbanization 9, 13  
USDA 12-16, 22, 23, 30-32, 34

## V

vertical linkage 20  
volume of import 24

## W

wage labourer 7  
welfare 8, 12, 22, 38  
West Africa 6, 8, 17, 28, 33  
West-Africa 6, 17  
Western companies 18  
wheat 2-4, 12, 13, 15, 16, 23, 24, 26-28, 30, 31, 33-35  
wheat consumption 3, 16  
wheat import 33-35  
wheat maps 27  
wheat production 15, 16, 27, 34  
wheat trade 28, 35  
World Bank 2, 4-8, 23, 25, 28, 29, 34-43  
world food 12, 16, 22, 26, 29, 30, 32-36  
world food prices 33  
world food problems 34  
World food production 16, 29, 30, 33  
World food security 12, 32, 33, 36  
World grain statistics 9  
world grain 5, 9, 25, 27  
world hunger 21, 26  
world market 12, 14, 27, 32, 35  
World population 24, 42  
World poverty 42

## Z

Zaire 19  
Zambia 6, 8, 9

