

1. SUBJECT CLASSIFICATION	A. PRIMARY Bibliography	Z-AA00-0000-G326
	B. SECONDARY Food production and nutrition--Agriculture--Jamaica	

2. TITLE AND SUBTITLE
 An annotated bibliography of agricultural development in Jamaica

3. AUTHOR(S)
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4. DOCUMENT DATE 1979	5. NUMBER OF PAGES 203p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS
 LAC/DR/RD

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)
 (In Working document series: Jamaica) (Financial support rendered under USDA/AID Resource Services Support Agreement no.: 12-17-07-5-2193)

9. ABSTRACT

10. CONTROL NUMBER <i>PN-AAG-364</i>	11. PRICE OF DOCUMENT
12. DESCRIPTORS Agricultural economics Small farmers Agricultural products Rural sociology Agricultural technology Jamaica Marketing	13. PROJECT NUMBER
	14. CONTRACT NUMBER LAC/DR/RD
	15. TYPE OF DOCUMENT

AN ANNOTATED BIBLIOGRAPHY
OF AGRICULTURAL DEVELOPMENT IN JAMAICA

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Development Planning Group
Organization for International
Cooperation and Development
U. S. Department of Agriculture

January 1979

Secretarial and Editorial Assistance
Maria E. Reed
Nancy Bizier

This bibliography constitutes Reports 2 and 3 under
Contract No. 12-17-07-5-2198 (ERS-288-B-77)

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INTRODUCTION

This bibliography covers selected aspects of agricultural development in Jamaica. The work involved a search of sources available in the U.S. from October 1977 by the senior author and visits to Jamaica in December and February. Assistance was provided by Elizabeth Erickson during the February trip and subsequent phases of the work.

It should be pointed out that the bibliography does not provide a complete coverage of all aspects of agriculture, nor of all sources. Thus, most material is 1962 or later, certainly all is post 1945. Further, only a selection of the technical literature has been made, with those considered narrowly agronomic omitted. Lack of time and the purpose of the bibliography made this decision necessary though regrettable. Also a full listing of articles from Farmer, the publication of the Jamaican Agricultural Society could not be included, again due to time constraints. Finally, given time and locational constraints some works will have been inadvertently omitted. We make our sincere apologies to the authors.

The form of the entries is based on guidelines provided in the University of Chicago Manual of Style, 12th Edition; although a number of modifications have been made. Where circulation of material is restricted, it is so noted. Library locations in Jamaica, where known, are listed at the end of each entry. Only one location is usually given although it may also be found in other libraries. Lack of such an annotation does not indicate that the material is not available in Jamaica, especially in the case of journals researched in the U.S. In some cases LC call numbers and a U.S. location are noted. The abbreviations used are:

FDS/AID/JAM	Rural Development Shelves, AID, Jamaica
PO/AID/JAM	Project Office, AID, Jamaica
U.S. Embassy Lib/JAM	U.S. Embassy Library, Jamaica
MOA/JAM	Ministry of Agriculture Library, Jamaica
UNDP/JAM	U.N. Development Project Library, Jamaica
UWI/ISEP	University of West Indies, Institute of Social and Economic Research Library

UWI/WIC University of West Indies, West
Indies Collection, Main Library
GD/UWI/JAM Geography Department, University
of the West Indies, Jamaica

The bibliography is organized according to the subject classification listed below (with the appropriate abbreviations).

- J Jamaica and Region: Overall Economy and
Regional Agriculture
- S Agriculture: Socio-Economic Characteristics,
Overviews
- SC Agriculture: Surveys, Censuses, Statistics
- E Agriculture: Extension, Education, Organiza-
tions
- LC Agriculture: Land, Natural Resources, Credit
- M Agriculture: Markets, Marketing
- T Agriculture: Technology, Techniques, Research
- P Agriculture: Policy and Planning
- Pr Agriculture: Projects
- C Agriculture: Commodities
- N Agriculture: Nutrition
- B Bibliographies and Proceedings

Each item is entered in its major subject matter category. To the right of each entry is the abbreviation for this primary category, followed by other subject matter areas to which it applies. Thus the search for material on a particular topic requires reference to the appropriate subject sub-division, plus material cross-classified in other sections. Within each subject category or sub-division, entries are listed alphabetically.

Work on this bibliography was carried out under Contract No. 12-17-07-5-2198 (EPS-288-9-77).

JAMAICA AND REGION: OVERALL ECONOMY AND REGIONAL AGRICULTURE

ABDULAH, Norma. The Labour Force in the Commonwealth Caribbean: A Statistical Analysis. Occasional papers, Human Resources 1, St. Augustine, Trinidad: Institute of Social and Economic Research, June 1977.

J

Provides analysis and comparison of labour force data from recent population censuses, by country. Looks at participation rates, dependency between and characteristics of working population and unemployed. Provides information on available non-census sources, and assesses quality of data.

ANDIC, Fuat; ANDIC, Suphan; and DOSSET, Douglas. A Theory of Economic Integration for Developing Countries: Illustrated by Caribbean Countries. London: George Allen and Unwin Ltd., 1971. Pp. 176.

J, M

Develops a theory on benefits and costs of trade area creation. Measures losses due to lack of free trade for alternatives suggested or present unions (CARIFTA, EEC associates, CACM), and simple protection for several Caribbean countries including Jamaica. Price and income elasticities were estimated for rice, flour and a number on non-agricultural products (1959-67) and used with export elasticities to estimate losses from the various trade alternatives. Results showed present situation represents a substantial loss of trade compared to free trade and that alternative groupings would do little to ameliorate this loss.

BARLOW, Frank D. "CARIFTA Changing to Common Market, Seeking Strong Ties with EEC." Foreign Agriculture 11, No. 18, (April 30, 1973): 8-9, 12.

J, M

BECKFORD, George (Editor). Caribbean Economy, Institute of Social and Economic Research, University of the West Indies, 1975. [UWI/WIC: HC155.B43]

J, S

Essays on nature of West Indian society and economy stressing the theme of dependence. Includes articles on rural and mineral economy, public policy, and labor, plus a reading

list on Caribbean economic problems.

---. "The Problem of Integration and CAPIFTA." Farmer 74, No. 2/3 (February/March 1969): 89-92, 94-98, 100. J,M

--- and GUSCOTT, M. "Intra-Caribbean Agricultural Trade." Institute of Social and Economic Research, University of West Indies, 1967. [UWI/ISEP] J,M

BERNPAUM, Maurice M., et al. Report of the U.S. Economic and Social Development Commission to Jamaica. March 1971. Pp. 52 + 8 Appendices. [3DS/AID/JAM] J,P

Provides recommendations on needed projects and policy changes to further development. Includes an introductory history of the economy and major sections on agriculture and rural development, manpower training, financial institutions, planning and trade relations.

BLUMF, Helmut. The Caribbean Islands. London: Longman Ltd., 1974. Pp. 464 Illus. Maps. J

BOURNE, Compton (ed.). Inflation in the Caribbean. Mona, Jamaica: Institute of Social and Economic Studies, University of West Indies, 1977. Pp. 166. [UWI/ISEP] J

Contains a series of articles on the topic from the Seventh Annual Conference of the Regional Programme of Monetary Studies, October, 1975. Papers relating to Jamaica are listed in separate entries.

--- and PEPSAUD, Wilberne. "Financial Variables in the Inflationary Process: Two Caribbean Cases." In Inflation in the Caribbean, Compton BOURNE (ed.) Mona, Jamaica: Institute for Social and Economic Studies, 1977, pp. 1-27. [UWI/ISEP] J,LC

Develops a multi-equation model for price determination (using both aggregate demand and cost-push framework), and uses it to analyse Jamaican and Trinidad-Tobago data. Found for Jamaica that import prices and the price of bank credit were the most significant factors affecting inflation.

BREWSTER, H. and THOMAS, C.Y. "Dynamics

of West Indian Economic Integration." Institute of Social and Economic Research, University of West Indies, 1967, Chap. 4. [UWI/ISER]

BROWN, Adlith and BREWSTER, Havelock. "A Review of the Study of Economics in the English-Speaking Caribbean." Social and Economic Studies 23, No. 1 (March 1974). 48-68. Bibliography. [MOA/JAM; UWI/ISER] J,P

Reviews economic research from 1940's to end of 1960's. Official reports etc. of 1940's and early 1950's stressed agriculture productivity, land reform, crop diversification. In late 1950's and 1960's academic research increased, and article reviews work on dependence, the effect of size, the nature of the plantation economy, and studies on inflation and consumption and savings functions, input/output work etc. Gives recommendations for empirical research. Useful summary and analysis of hypotheses and work on West Indies (including Jamaica).

BUCKMIRE, G.F. "Rationalization as an Instrument for Development of Caribbean Agriculture." Proceedings of the Eighth West Indian Agricultural Economics Conference, Port-of-Spain, Trinidad, April 1-7, 1973. St. Augustine, Trinidad: Dept. of Agricultural Economics, University of the West Indies, 1973. [UWI/ISER] J

This paper discusses the current efforts in CARIFTA to promote closer co-operation in agricultural production and marketing and some of the problems inherent in developing such a strategy. Suggests that given the common historical experiences, the national aspirations, the similarities in the physical and climatic conditions in the region, co-operation in agricultural activities will probably depend in the final analysis on political considerations and the degree of commitment to regional economic integration.

CARTER, Nicholas G. "A Macro-Economic Model of Jamaica 1959-1966." Social and Economic Studies 19, No. 2 (June 1970): 178-201. [MOA/JAM; UWI/ISER] J,M

Provides a 33 equation model to

describe the structure of the economy over that period. Author categorizes the model as descriptive (to help understand the economy), rather than for use for forecasting or policy purposes. Model shows how economy reacts to exogenous factors such as exports and tourism. Has elasticities for food imports which are considered by author to be very high (1.11) and indicative of 'overall inadequacy' of agricultural sector.

CHODOS, Robert. The Caribbean Connection. Toronto: J. Lorimer, 1971. Pp. 269. [HF1480.15.C37C46]

J

Discussion of Canadian/Caribbean relations.

COLEY, Basil. "A Comparative Analysis of Some Factors Affecting Economic Growth in Jamaica and Puerto Rico, 1957-67." Unpublished Ph.D. dissertation, University of Illinois, 1971.

J, M, C

Jamaica's growth was much lower than Puerto Rico during 1957-67. Suggests that terms of trade deteriorated for Jamaica and not Puerto Rico, because of high proportion of primary exports, sugar and bananas. Estimates price elasticities of demand for bananas, sugar cane and citrus. Results indicated they were inelastic.

COOKE, Buxton W. "A Description of the Recent Development and Trade Pattern of Jamaica." M.A. Thesis, Howard University, Washington, D.C., 1964.

J, M

CUMPER, G.E. "Dependence, Development, and the Sociology of Economic Thought." Social and Economic Studies 23, 3 (Sept. 1974): 465-482. [MOA/JAM; UWI/ISEF]

J, S

A critique of 'Development of Dependence in Latin America and the Caribbean' by N. Girvan, claiming that Lewis had a more effective analysis than Girvan suggests, that Seers has analysis of the open-economy and that reference to the evidence of the Cuban experience would be relevant. Also questions Ahiram's 1958 conclusion that Jamaica has an unusually unequal income distribution. 1963 study by Cumper gave

a lower coefficient than 1958, and thus is no higher than ECLA estimates for eight Latin American countries. Admits that data limitations make conclusions difficult to reach.

- . "Incomes of Upper 2.5 Percent and 8.5 Percent of Income Tax Payers in Relation to National Income, Jamaica, 1951-65." Social and Economic Studies 20, No. 4 (1971): 362-68. [MCA/JAM; UWI/ISEP]

J,S

Although there are cross-sectional studies of income distribution, there is no reliable published information on how income distribution in Jamaica has changed over time. On basis of reports on Commissioner of Income Tax, study looks at data on relation of incomes at top of scale to national income. Analysis only permits limited conclusions but suggests that unless tax machinery has become more efficient, no substantial shift at the upper end of the income distribution occurred over the time period.

- . "Lewis' Two-Sector Model of Development and the Theory of Wages." Social and Economic Studies 12, No. 1 (1963): 37-50. [MCA/JAM; UWI/ISEP]

J,S

Discusses the Lewis model and suggests a modification on reservation wage, which is related to household 'level of propensity to share.' This is dependent on the number supported, the level of income guaranteed and the proportion of income which is redistributed.

- . "Preliminary Analysis of Population Growth and Social Characteristics in Jamaica, 1943-60." Social and Economic Studies 12, No. 4 (1963): 393-431. [MCA/JAM; UWI/ISEP]

J,S

Looks at Census data for 1963 and 1960; develops fertility ratio; evaluates estimates; looks at gaps in data.

- DAVISON, F.B. West Indian Migrants: Social and Economic Facts of Migration from the West Indies. London: Institute

J

of Race Relations, Oxford University Press, 1962.

DEMAS, William. Essays on Caribbean Integration and Development. Mona, Jamaica: Institute of Social and Economic Research, University of West Indies, 1976.

J, M

Contains 12 papers written between 1960 and 1975, and reprinted from elsewhere. A number relate to trade and common market issues within the Commonwealth Caribbean, but also includes valuable comments on employment, and Lewis' analysis of Caribbean development.

---. The Economics of Development in Small Countries with Special Reference to the Caribbean. Montreal: McGill University Press, 1965.

J

DOXEY, George V. "Survey of the Jamaican Economy," 1969. Pp. 54. (Mimeo)
[MOA/JAM: 338]

J

DUNKLEY, D. "Role of Railways in Jamaica: History and Impact." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975.
[GD/UWI/JAM]

J

ECONOMIC COMMISSION FOR LATIN AMERICA (ECLA). Caribbean Community Countries: Economic Activity 1976. Port of Spain, Trinidad and Tobago, 1977. Economic Survey of Latin America 1976. Santiago, Chile, 1977.

J

ECONOMIST INTELLIGENCE UNIT LTD. Quarterly Economic Review of the West Indies, Belize, Bahamas, Bermuda, Guyana. London. [NAL]

J

Published quarterly giving up-to-date statistics and summary of economic and political events in Jamaica. Also an annual supplement provides a more in-depth review of economic situation and prospects.

ELVIS, Dawn. "The Monetary Sector of Jamaica." Unpublished Ph.D. dissertation, University of Michigan, 1972.

J, LC

Attempts to evaluate to what extent the Central Bank of Jamaica can control banking system, given a dependent environment. Develops an econometric

model of the monetary sector showing interrelations to the foreign sector. Suggests Bank of Jamaica policy 1961-69 had significant effect.

- EMOCHIAN, Robert Vaughn. Prospects for Agriculture in the Caribbean. Washington: U.S. Govt. Printing Office, 1970. Pp. 31. [NAL] J
- GALLOWAY, Lloyd George. "Planning and Growth in the Jamaican Economy between 1944 and 1964." Unpublished M.A. Thesis, Howard University, Washington, D.C., 1967. J
- GIPVAN, Norman P. "Foreign Investment and Economic Development: The Case of Jamaica since World War II." Unpublished Ph.D. Dissertation, University of London, 1966. J
- . Foreign Capital and Economic Underdevelopment in Jamaica. Kingston: Institute of Social and Economic Research, University of West Indies, 1971. J, S
- Contains 3 chapters on the role of bauxite in the economy, but also has chapters on foreign capital in the finance of development plans, contribution and costs of foreign loans, the role of foreign capital in the financial system, and foreign capital and the performance of the Jamaican economy 1950-1968. The role of foreign loans in agriculture is discussed in these four later chapters, at least briefly. The book seems valuable as a historical study of foreign loans in agriculture vis-a-vis other sectors, and for setting up some theoretical hypotheses.
- . "Foreign Investment and Economic Development: The Case of Jamaica since World War II." Unpublished Ph.D. dissertation, University of London, 1966. J
- . "The Development of Dependency Economics in the Caribbean and Latin America: Review and Comparison." Social and Economic Studies 22, No. 1 (March 1973): 1-33. [MOA/JAM; HWI/ISEP] J
- Reviews the views of the development process in Caribbean and Latin America in post war period, covering Prebisch, Lewis arguments for industrialization; the

importance of dependency outlined by Furtado, Best and Beckford, plus Demas argument for the effect of small size requiring a greater role for exports and more dependency. Suggests alternative of trade between socialist countries, but points out this has not changed nature of exports in case of Cuba. Suggests alternative concepts of consumption goals are also required.

GIRWAP, S.N. "The Common Agricultural Policy of the EEC and the Commonwealth Caribbean." World Agriculture 25, No. 4 (1976): 33-35.

J,M,C

When Britain entered the Common Market in January, 1972, the Commonwealth Sugar Agreement came to an end December 1974, and the Lome Agreement was signed in February, 1975. A comparison is made between the provisions of the Lome Convention regarding sugar and those of the Commonwealth Sugar Agreement. Author considers new system works against the high cost production of the Commonwealth Caribbean.

GYLES, J.P. "The 'CARIFTA' Agreement." Farmer (Kingston) 74, No. 2/3 (February/March 1969): 69-73. [MOA/JAM]

J,M

HALL, Marshall. "An Analysis of the Determinants of Money Wage Changes in Jamaica 1958-64." Social and Economic Studies 17, No. 2 (June 1968): 133-146. [MOA/JAM; UWI/ISER]

J,S

Develops estimates of productivity, wages, etc. over time and uses for regression analyses. Finds strong association money wage and productivity.

HARWOOD, Jack (ed.). Human Resources in the Commonwealth Caribbean. Report of the Human Resources Seminar, University of West Indies, Mona, Jamaica, August 1970. St. Augustine, Trinidad: Institute of Social and Economic Research. University of West Indies, 1972.

J,S

Contains a series of fairly short conference papers with data on employment, unemployment and skills etc. Has a useful summary article by Cumper relating to work attitude in Jamaica.

HARRIS, Donald J. "Notes on the Question

J,S

of a National Minimum Wage." In Essays on Power and Change in Jamaica, ed. Carl STONE and Aggrey BROWN. Kingston: Jamaica Publishing House, 1977. Pp. 106-114. [UWI/WIC]

Marxist interpretation of minimum wage and its effects on agriculture and industry.

- . "Savings and Foreign Trade as Constraints in Economic Growth: A Study of Jamaica." Social and Economic Studies 19, No. 2 (June 1970): 147-177. [MOA/JAM; UWI/ISEF] J, M

Reports on construction and estimation of an aggregate macro-economic model of the Jamaican economy (57 equations and 63 variables) using data for the period 1950-1965. Main purpose is to make projections of future resource requirements of the economy in terms of the potential export-import and saving-investment gaps, based on trends of past performance in the economy. Includes estimates of income demand elasticities for aggregate imports (food is 1.1) and for exports (including bananas and sugar). Assumes Jamaica cannot affect price, and industry structure monopsonistic.

- HODGKINSON, E. (Editor). Development Prospects and Options in the Commonwealth Caribbean. Report of the conference jointly sponsored by the British-North American Research Association and the Overseas Development Institute at Ditchley Park, Oxfordshire, February 20-22, 1976. London, Overseas Development Institute/British-North American Research Association, 1976. Pp. 85. J, B

The conference brought together representatives of the Commonwealth Caribbean and of traditional bilateral and multilateral donors to discuss the current development situation in the area. The area's prospects and its options in the next 5 to 10 years were also discussed and the contribution which external agencies might make. The report is divided into 7 main chapters by different authors one of which, Prospects for agricultural growth--

the Commonwealth Caribbean for the next ten years, is referenced below.

HUBBARD, Raymond. "The Evolution of the Jamaican Road Network--A Geographical Analysis." Unpublished M.Sc. thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM] J

INTER-AMERICAN DEVELOPMENT BANK. Socio-Economic Report: Jamaica 1977. Washington, D.C. (In Process.) J

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT Economic Memorandum on Jamaica Washington, D.C.: IBRD, May 26, 1978 [RESTRICTED] [RDS/AID/JAM] J

Outlines economic developments during 1976 and 1977 and outlines public sector investment program to 1981.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. Latin American and the Caribbean Regional Office. Current Economic Situation and Prospects of Jamaica. Report No. 967a-JM, March 8, 1976. Pp. 33 + 3 annexes + 9 sets of tables. [RDS/AID/JAM] J,S

The report of a Summer 1975 economic mission study. Covers recent growth and constraint analysis, income distribution, agricultural policy. Provides a comprehensive set of statistical economic indicators.

INTERNATIONAL DEVELOPMENT ASSOCIATION, INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. Current Economic Position and Prospects of Jamaica (In three volumes), Volume II: Annex I: Population, Labor Force and Employment in Jamaica; Annex II: Tourism Sector Report. Pp. 41 + 34 tables. Report No. 257a-Jm, February 21, 1974 (RESTRICTED). [PO/AID/JAM] J

An insightful discussion of each factor as well as relevant data is provided.

JAMAICA. Economic Report: Jamaica. (Monthly) Kingston: Atlas Publishers Ltd. Approx. 25 pp. [U.S. Embassy Jam] J,S

Contains economic analyses/newsletters by several banks and the owner-editor. Also publishes major economic indicators for all sectors of the economy.

JAMAICA. Ministry of Finance and Planning. Town Planning Department. United Nations Special Fund Project. A National Physical Plan for Jamaica, 1970-1990. October 1971. Pp. 116. [FDS/AID/JAM]

J

A survey of needs and growth trends for eleven sectors of the economy and a mapped plan to guide investments and development for a 20 year period. Contains many useful tables and graphs suggesting trends and future patterns.

---. ---. ---. National Atlas of Jamaica. Kingston, November 1971. Pp. 70. [AID/LA/RD/WASH]

J,S,C

An excellent source of information on agriculture. Contains intermediate scale maps of each major crop and a discussion of its production in Jamaica. Also has good information on marketing and transportation.

---. National Planning Agency. Economic and Social Survey (Annual). Pp. 262. [RDS/AID/JAM]

J,S

Contains 19 sections of summary statistics covering all major sectors of the economy. Figures for basic output, facilities and descriptions of programs given for each economic or social sector.

JEFFERSON, Owen. "Is the Jamaican Economy Developing?" New World, Vol. 5 No. 4 (1972): 4-11.

J,S

---. Post-Ware Economic Development of Jamaica. Mona, Jamaica: Institute of Social and Economic Research, University of West Indies, 1972. [MOP/JAM; UWI/ISER]

J,S

Has introductory chapters on economic background and development history, population and growth of income. Evaluates five principal sectors for period 1950-1968: agriculture, manufacture, mining,

tourism, and foreign trade. Agriculture chapter has separate sections on sugar--bananas, cocoa, coffee and citrus. Suggests policies will lead to stagnation, unemployment and maldistribution of income in sector.

- . "The Economic Situation of the Commonwealth Caribbean." Caribbean Quarterly 18, No. 1 (1972): 87-99. [UWI/WIC]

J,S

Provides an overview of the area's economic problems. Characterizes the region as having growth without employment, and growth which has re-inforced inequalities. Stress has been on capital intensive manufacture rather than on needed structural change for supply increase in agriculture, eg. land redistribution (though subsidies paid to agriculture). Import substitution is limited in small economy. Tourist industry becoming growth industry but requires control to limit disruption of economy and dislocation of society.

- and BOYCE, Darcy. "The Effect of Inflation on Caribbean Economies." In Inflation in the Caribbean, Compton BOUPNE (ed.). Mona, Jamaica: Institute for Social and Economic Studies, 1977, pp. 1-27. [UWI/ISER]

J

Compares data on inflation in Jamaica, Barbados and Dominica with import growth, trade growth, tourist growth, and also looks at likely consumption, investment, public sector policy, income distribution and output of each sector. Results suggest that initial impact of imported inflation was on the balance of payments though for Jamaica this was somewhat offset by world sugar prices and higher bauxite taxes.

- JOEFIELD-NAPIER, Wallace. "Inflation, Inflationary Expectations and Monetary Behaviour in Jamaica." In Inflation in the Caribbean, Compton BOUPNE (ed.). Mona, Jamaica: Institute for Social and Economic Studies, 1977, pp. 1-27. [UWI/ISER]

J,M

Author estimates the actual and expected rates of inflation with expected prices revised in proportion to the difference between the actual rate of change in prices and the expected rate. Also breaks down prices by category (with rural price increases being more rapid than urban).

The income velocity of circulation was determined to have fluctuated widely over the period.

JOLLY, Desmond Ansel. "Sectorial Growth and Employment in the Jamaican Economy, 1959-1968." Unpublished Ph.D. dissertation, University of Oregon, 1973. J

Develops econometric model of key macroeconomic variables using 1959-68 data. This is used to evaluate feasibility of alternative growth rates. Growth is limited by savings and foreign exchange. Takes constrained growth rate of 4 percent and develops sectoral labor and capital coefficients and sectoral growth to reduce unemployment. This involves emphasis on agriculture and construction.

KAPLAN, Irving; et al. Area Handbook for Jamaica. Washington, D.C.: U.S. Government Printing Office, 1976. Pp. 331. Bibliography, index. [U.S. Embassy Lib. Jam] [F1868.A7] J

An up-to-date general survey of all aspects of national life. Extensive bibliography.

KUPEP, Adam. Changing Jamaica. London: Poutledge and Kegan Paul, 1977. xi, Pp. 163. Bibliography. [U.S. Embassy/Jam; UWI/WIC] J,S

Account by anthropologist based on report to Jamaican Government on tendencies for social change in Jamaica. Provides a basically sociological and political analysis but also an excellent introductory overview of population and the economy based on a review of past studies and his own analysis. Unemployment figures are broken down by sex and age group. Section on agriculture hypothesizes economic reasons for lack of labor in sugar cane. Provides also an overview of a 1950's work on social structure. A rural community near Christiana, and a slum in W. Kingston form case studies. Does not provide detailed economic data for these communities, but looks at role of political parties in local decision making. States farmers do not divide land, so only one son

stays on land. Has a useful chapter on the role of interest groups and political parties in policy making.

- LEVI"TT, Kari and GULATI, Iqbal. "Income Effect of Tourist Spending: Mystification Multiplied: A Critical Comment on the Zinder Report." Social and Economic Studies 19, No. 3 (September 1970): 326-343. [MOA/JAM; UWI/ISER] J

Reports very critically on study done on Eastern Caribbean, but sets out method of ad hoc estimation of the tourist multiplier for an open economy. Calculates it to be 1 for Eastern Caribbean rather than the 2.3 of report which assumed a closed system. Part of a continued discussion of the effects of tourism.

- LEWAPS, A. and PERSAUD, W.H. The Jamaican Economy: Agriculture and Industry. Mona, Jamaica: Extra-mural Center, University of West Indies, 1976? Pp. 36. [UWI/WIC: HC 157.J2L38] J,S

- McLEOD, Donald. "The Personal Income Tax in Jamaica." Social and Economic Studies 18, No. 3 (September 1969): 254-262. [MOA/JAM; UWI/ISER] J

Describes Jamaica's income tax structure, notes its administrative honesty and suggests changes for greater income redistribution. Argues that though personal savings are low (3 to 6 percent of income in 1959-64) changes in income will reduce consumption as external and internal demonstration effects are reduced.

- MANHEP"Z, Huntley G. "An Exploratory Econometric Model for Jamaica." Social and Economic Studies, 20 No. 2 (June 1971): 198-226. [MOA/JAM; UWI/ISER] J

Uses 1959-1967 data to fit a 42-equation (24 stochastic) structural model of the Jamaican economy covering consumption, private investment, foreign trade sector; monetary sector, government sector, tax functions, employment, manufacture production function and retail price determination.

- . "The Price Determination Process in a Small Open Economy - the Jamaican Experience." In Inflation in the Caribbean, Compton BOUPNE (ed.). Mona, Jamaica, Institute for Social and Economic Studies, 1977, pp. 1-27. [UWI/ISER] J, M

Examines the movements of consumer prices in Jamaica, looking at rural and urban prices separately. Develops a mark-up-model for empirical analysis. Due to limited data author was unable to quantify all appropriate variables for his equations. Concludes that the two most important factors affecting price determination are import prices and the long-run normal cost of labor. Supply variation were of minor importance. Higher mark-ups for food exist in rural areas, and the effect of a change in import prices is greater.

- MATALON, A. "Agricultural Representations and 'CARIFTA'." FaEmer 74, No. 2/3 (February/March 1969): 74-79. [MCA/JAM] J, M

- O'LOUGHLIN, C. "Longterm Growth of the Economy of Jamaica." Social and Economic Studies 12, No. 3 (1963): 246-287. [MOA/JAM; UWI/ISER] J

Projections based on 1958 input output table and trend of informed production estimates.

- ORGANIZATION OF AMERICAN STATES. Inter-American Economic and Social Council CIAP Subcommittee on Jamaica. Final Report on Jamaica. Washington, June, 1974, OEA/Ser.H/XIV, CIAP/665, 50 pp. [PDS/AID/JAM] J

The initial section reviews economic performance, development strategy, and technical assistance. Then statements about Jamaica policy and economy are annexed by the Ministry of Finance, IDB, IBFD, IMF and AID.

- ORGANIZATION OF AMERICAN STATES/CEPCIES. Situation, Principal Problems and Perspectives for the Economic and Social Development of Jamaica. Washington, D.C., May 1974. J

- PILMER, Pansford W. The Jamaican Economy. New York: Praeger, 1968. Pp. 185. J, S

Bibliography.

A description of each major sector of the Jamaican economy. For the agricultural sector there is a short discussion of economic structure of the export and domestic sector and gives brief outline of his suggested scheme for putting underutilized farms into large co-operative or state farms.

- PHELPS, O.W. "Rise of the Labour Movement in Jamaica." Social and Economic Studies 9, No. 4 (December 1960): 417-467. [MOA/JAM; UWI/ISEF] J,S

An account of the history of trade unionism in Jamaica and its relation to political independence, to 1954. Useful background to understanding of role of unions.

- PONCE, J.M. "Expansion of Agricultural Trade in Groupings of Developing Countries." In Current Problems of Economic Integration: Agricultural and Industrial Co-operation among Developing Countries. New York: U.N. Commission on Trade and Development, 1971, viii+ 126 pp. J,M

Existing inter-country trade groupings, and their relevance for agricultural trade are discussed. A chapter of this study is devoted to the Caribbean Free Trade Association.

- PPEISWEK, Poy. "The Relevance of Latin America to the Foreign Policy of Commonwealth Caribbean States." Journal of Inter-American Studies II, No. 2 (1969): 245-71. J

Discusses possible economic trading access with Latin America in general terms.

- PROUDFOOT, Malcolm Jarvis. Population Movements in the Caribbean. New York: Negro Universities Press, 1970. Pp. 187 + viii. [JV 7322. P76] J,S

- RICHARDSON, B.C. "The Agricultural Dilemma of the Post-Plantation Caribbean." Inter-American Economic Affairs 26, No. 1 (1972): 59-70. J,C

The effect of British entry into EEC on Caribbean cane growers is discussed in the light of diversification programmes. The main theme suggests that the plantation is so deeply embedded in the culture of the West Indies that structural changes in the farm economy will be difficult. Small farms for example are not farmed by an indigenous peasantry like Central America. However, plantation economy also results in a greater awareness of outside world. Most discussion is in regional terms. Refers to a few Jamaican examples among others.

POACHE, K.I. "Prospects for Agricultural Growth in the Commonwealth Caribbean for the Next Ten Years." Development Prospects and Options in the Commonwealth Caribbean. Report of the conference jointly sponsored by the British-North American Research Association and the Overseas Development Institute at Ditchley Park, Oxfordshire, February 20-22, 1976. London: Overseas Development Institute, 1976. Pp. 21-29.

J,S

The paper aims to isolate some of the prospective growth areas for agriculture in the Commonwealth Caribbean (CARICOM) and to discuss constraints to growth. Suggests stress on national specialization rather than regional specialization involving narrow range of plantation crops which are dependent on protective tariffs. The livestock sector is identified as an area of priority. Impediments to its development include price control, land tenure and marketing. Suggests that growth prospects also exist in vegetables and fruit processing if an export market can be found.

ROBERTS, G.W. and MILLS, D.O. "Study of External Migration Affecting Jamaica, 1953-55." Supplement to Social and Economic Studies 7, No. 2, June 1958.

J,S

In the period skilled workers left at much higher rate than unskilled (including farmers). This was also true of the sugar industry.

SCOTT, Wolf. Report on a Study of the Levels of Living in Jamaica. United Nations for Government of Jamaica, 1966.

J,S

SKEETE, C.A. "Association and the Agricultural Policies of the EEC." In Proceedings of the Eighth West Indian Agricultural Economics Conference, Port-of-Spain, Trinidad: April 1-7, 1973. St. Augustine, Trinidad: University of the West Indies, 1973.

J

This analysis of possible association between CARIFTA and the EEC argues the need for a dispassionate examination of the barriers to access to the EEC market rather than pre-occupation with judgements as to the desirability or otherwise of the various forms of Association. In the final analysis, from an EEC point of view, the form of Association appropriate to CARIFTA objectives could hinge not necessarily on a list of products, long or short, but on a single product.

SMITH, Michael. The Plural Society in the British West Indies. Berkeley: University of California Press, 1965.

J, S

A collection of articles published in 1953 and 1960 on aspects of societal structure in Caribbean. Articles of particular significance are listed separately for original source.

SMITH, Shirley. "Industrial Growth, Employment Opportunities and Migration within and from Jamaica, 1943 to 1970." Unpublished Ph.D. dissertation, University of Pennsylvania, 1975.

J, S

Migration estimates are derived from duration of residence tables of three censuses, and three decades of vital statistics. These are related to parish populations by size and age. Factors associated with internal movement are explored. Estimates of legal and illegal emigration are made.

SPFAGUE, Howard B. "CARICOM Regional Mission of World Bank: Back to Office Report of Field Tour November 6-December 9, 1973." Washington, December 1963. (Mimeo) [FDS/AID/JAM]

J, S

Report has country visit section, regional aspects of development, and crop by crop outlook. The section on Jamaica relates to crop potentials, agricultural education

and agricultural research initiatives taken. Regional sections of interest are agricultural research, extension and education (which have economies of scale). There are some ideas in crop section (which has recommendation on specific crops).

- STONE, Carl and BROWN, Aggrey. Eds. Essays on Power and Change in Jamaica. Kingston: Jamaica Publishing House, 1977. Pp. 207
1st Essays. (U.S. Embassy Library Jam; UWI/WIC] J,S

This collection has two parts: 1) essays on political economy including agrarian relations, and 2) policies for change with tenant farming on state lands and sugar co-ops. Discussion is within varying types of socialist framework.

- TAYLOR, Leroy. "Money, the Balance of Payments and Income Determination in Jamaica (1950-1970)." Social and Economic Studies 21, No. 2 (June 1972): 171-183. [MOA/JAM; UWI/ISEP] J

Suggests that other econometric models of economy do not look at role of money. Estimates standard monetary model (IMP or Polak) and simple Keynesian 'depression' model in which money has no effect. Both models have similar explanatory power.

- THEAKSTON, F.H. "Caribbean Agriculture in Transition." Agriculture Institute of Canada Review 25, No. 3 (May/June 1970): 27-28. J,S

- THOMAS, F.D. "Local Government Financing in Jamaica, 1944-59." Social and Economic Studies 12, No. 2 (1963): 141-159. [MOA/JAM; UWI/ISEP] J,P

Provides data and discussion of parish council revenues (and their tax and other sources) and expenditures.

- TIDFICK, Gene. "Some Aspects of Jamaican Emigration to the United Kingdom, 1953-62." Social and Economic Studies 15, No. 1 (March 1966): 22-39. J,S

Estimates effects of emigration during period of very rapid GDP growth. Total population was probably 200,000 less in

1962 than it would have been without emigration with a somewhat lower dependency ratio. Author makes estimates of balance payments, production and employment effects. Concludes that emigration aided economic development.

UNITED STATES. Department of Agriculture. J, M
Economic Research Service. Agriculture
and Trade of the Caribbean Region, ERS
Foreign No. . May 1971. [MOA/JAM]

Covers data 1960-68, so is out of date but may be useful for historical change.

----. ----. Foreign Regional Analysis J, S
Division, Western Hemisphere Branch.
Indices of Agricultural Production for
the Western Hemisphere, Excluding the
United States and Cuba. ERS Foreign
264. Washington, April 1971. Pp. 31.

----. ----. Foreign Agricultural Service. J, S
Prospects for Agriculture in the
Caribbean. FAS, No. 8, Washington,
D.C., April 1970.

WALSH, B. Thomas. "The Effects of J
Alternative Population Trends on
Economic Growth in Jamaica." Unpublished
Ph.D. dissertation, University of
Pittsburgh, 1970. Pp. 246.

WELIFF, Robert H. "A Historical Analysis J, S
of Female Labour Force Participation
in Puerto Rico." Social and Economic
Studies 17, No. 1 (March 1968): 60-69.

Makes some comparison in article with Jamaica. Unlike U.S. with a rising percent of women in labor force (1870-1960) both Puerto Rico and Jamaica have had dropping percentages, as less opportunity for traditional, domestic, etc. occupations.

WORRELL, Rupert Delisle. "Comment on Three J
Econometric Models of the Jamaican
Economy." Social and Economic Studies 22,
No. 2 (June 1973): 272-286. [MOA/JAM;
UWI/ISER]

Suggests models used do not incorporate the theory of working of Caribbean economies, and that aggregates used hide some important inter-relationships related to

income distribution, export bias, sectoral investment bias, etc. Considers disaggregated analysis of sectors more useful.

- . "The Theory of Optimal Foreign Exchange Reserves in a Developing Country (with Empirical Application to the Economy of Jamaica)." Unpublished Ph.D. dissertation, McGill University, 1975. J,1

Optimal reserves are assumed to depend on the security afforded by each level, and on the comparative costs of balance of payments adjustment and of reserve stocks. For Jamaica, the growth rate foregone over planning period is estimated for each reserve level and the costs of a balance of payment adjustment policy if there is short-run external disequilibrium and insufficient reserves. is estimated. Suggest Jamaica pursued rather conservative reserve policies.

AGRICULTURE:
SOCIO-ECONOMIC CHARACTERISTICS, OVERVIEWS

ADAMS, Nassau A. "Internal Migration in Jamaica." Social and Economic Studies 18, No. 2 (June, 1969): 137-151. [MOA/JAM; UWI/ISER]

S, J

Uses 1960 census data to fit migration function where the dependent variable is the rate of migration (of specified age and sex), and the independent variable is road distance between major population centres; average income; proportion of population in towns over 2,000, proportion of acreage in farms greater than 100 acres; proportion 6 or more years school; proportion unemployed. For adult males distance and wage income differential are the most significant effects. The rate of unemployment, degree of industrialization of origin region, level of education in destination and average size of land ("push factors") are also significant. For females, income was not significant; degree of urbanization was significant.

AHIRAM, E. "Distribution of Income in Trinidad-Tobago and Comparison with Distribution of Income in Jamaica." Social and Economic Studies 15, No. 2 (June 1966): 103-120. [MOA/JAM; UWI/ISER]

S

Lorenz curves and Giannini coefficients show income distribution in Jamaica more unequal than Trinidad-Tobago. More unequal distribution in rural than urban in Jamaica while opposite true in Trinidad-Tobago.

---. "Income Distribution in Jamaica, 1958." Social and Economic Studies 13, No. 3 (1964): 333-369. [MOA/JAM; UWI/ISER]

S, SC, J

Makes estimates of income distribution using Household Expenditure Survey (1958), Labour Force Survey (1957), an establishment survey and the national accounts and reports of the Commissioner of Income tax. Outlines methodology and

use of data clearly and in detail. Assumptions and data problems are also reported. Index of concentration based on Lorenz curve was estimated at 53. Note, however, also comment by Cumper (1964) and the author on the estimates.

AHIRAM, R. "Income Distribution in Jamaica and Trinidad-Tobago." In The Caribbean in Transition, ed. F.M. ANDIC and T.G. MATHEWS, Institute of Caribbean Studies, University of Puerto Rico, 1965, pp. 1-11. S,J

---. "The Jamaican Family: Village and Estate." Social and Economic Studies 7, No. 1 (March 1958): 1-60. [MOA/JAM; UWI/ISER] S,SC

Discusses characteristics of family with regard to labor force in Porter's Mt. (Westmoreland) and Caymanes sugar estate, with discussion of life cycle and role of female in workforce. Suggests less female participation than other studies.

AIKEN, D. "Small Farming in Avocat--A Socio/Economic Study." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

---. "Small Farming in Avocat--A Socio/Spatial Study." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

ALLEN, B. "Hillside Agriculture in Upper Yallahs." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM] S,m

---. "Steep Hillside Farming in St. Thomas." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM] S

APONSON, Robert L. "Labour Commitment among Jamaican Bauxite Workers: A Case Study." Social and Economic Studies 10, No. 2 (June, 1961): 156-182. S,J

Workers at an alumina works were surveyed (via personnel records) and 94 interviewed workers. Most workers had rural background, but had earlier urban work

experience; turnover was no greater than in non LDC's; lists some consumption items purchased. Concludes that no problem of labor commitment.

BARRETT, Leonard E. The Pastafarians, A Study in Messianic Cultism in Jamaica. Caribbean Monograph Series No. 6, Institute of Caribbean Studies, University of Puerto Rico, 1968. Pp. 238. Bibliography. [U.S. Embassy Library/JAM] S,J

---. The Pastafarians: Sounds of Cultural Dissonance. Boston: Beacon Press, 1977. Pp. 257. [BL 2530] S,J

BAXTER, Ann. "The Diffusion of Innovations: Soil Conservation Techniques in the Yallahs Valley." Unpublished M.Sc. thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM] S

BECKFORD, George L. "Peasant Movements and Agrarian Problems in the West Indies, Part II. Aspects of the Present Conflict between the Plantations and the Peasantry in the West Indies." Caribbean Quarterly 18, No. 1 (March 1972): 47-58. [UWI/WIC] S

Presents thesis that development of peasantry is circumscribed by plantation system, using Jamaica as example. Land distribution is unequal and worst land sold for redistribution. Unemployed labor hired by estates and higher productivity elsewhere is reflected in high labor wage rates for other production. Credit is available for plantations from metropolitan source and other export producers also have credit access. Government credit to peasants is insufficient and involves surrender of land titles, which are confused due to joint ownership, etc. Research is in export crops.

---. Persistent Poverty: Underdevelopment in Plantation Economies of the Third World. New York: Oxford University Press, 1972. Pp. 303 + xxvii. Bibliography. S,P

A much quoted study which provides detailed theoretical framework and empirical data for concept of the

'plantation economy.' Provides historical development of such an economy pre- and post-slavery, stressing the growth and concentration of corporate capital. Analyses metropolitan plantation enterprise, including two case histories (one of Tate and Lyall in W. Indies) and their horizontal and vertical integration. Chapters 6 & 7 provide an important economic model for evaluating efficiency of resource use in the plantation economy including social costs; and setting out structural factors facing the small-farm sector. Suggests a general policy to remove development obstacles. Admits that process of transformation envisaged will not be easy. Essential background reading.

- . "The Dynamics of Growth and the Nature of the Metropolitan Plantation Enterprise." Social and Economic Studies 19, No. 4 (December 1970): 435-465. [MOA/JAM; UWI/ISEP]

This paper forms one chapter of Beckford's Persistent Poverty. Describes metropolitan firms with plantation using several detailed explanations including Tate and Lyall for Jamaica and suggests economic and political effects of these structures.

- . "The Economics of Agricultural Resource Use and Development in Plantation Economics." Social and Economic Studies 18, No. 4 (December 1969): 321-347. [MOA/JAM; UWI/ISEP]

Material later incorporated into Persistent Poverty. Analyzes multi-national vertically integrated plantation firm. Suggests that though resource allocation is efficient for the firm, it may be inefficient for the country. Low raw material profit may give higher final product profits; resource rigidity varies with vertical integration (non-farm investments are large and specific); land can be under-utilized dependent on productivity and cost of securing it. Risk leads to geographical dispersion so that an increase in price can lead to an overall supply increase but not in all countries; and foreign exchange earnings are modified by unfavorable terms of

trade, high import demands and second round consumption of imports, etc.

BEST, L.A. "Outlines of a Model of a Pure Plantation Economy." Social and Economic Studies 17, No. 3 (September 1968): 283-326. [MOA/JAM; UWI/ISFF]

S

Develops alternative models for hinterland production. Suggests that for the plantation model first phase production is efficient but at later stages there are cuts at the extensive margin and rising wages as labor moves to independent use of abandoned land. Technology can not be effectively introduced to raise labor productivity because of lack of capital, hence metayage is used to encourage labor to work on plantations.

BINNENDIJK, A.L. and L.J. HUNTER "Implications for Rural Development from a Long-Range Planning Model", an Illustration for Jamaica". Proceedings of the Ninth West Indies Agricultural Economics Conference Kingston, Jamaica, 1974. St. Augustine, Trinidad: University of the West Indies, Department of Agricultural Economics, 1974. pp. 166-194

S,J

Attempts to provide a model framework to look at interaction of demographic, social and economic variables, and provides illustrative example.

BLAIR, I.A. "Some Problems of Small Farming in South St. Elizabeth." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1970. [GD/UWI/JAM]

BLAKE, Judith. Family Structure in Jamaica. New York: The Free Press of Glencoe, 1961. [HQ 584.B55]

S,ST

Provides results of 1953 study of reproduction and family make-up in Jamaica, based on results of survey taken in four rural areas (sugar, bananas, small farming) and West Kingston using 83 women between 15 and 45 with at least one child and 16 couples at birth control. Does not look at economic role of single

or married women, though does provide data on economic role of children-- considered a cost rather than benefit by large majority because of desire for education and non-agricultural occupation. Ideal family size is quite low.

BLAUT, James; et al. "A Study of Cultural Determinants of Soil Erosion and Conservation in the Blue Mountains of Jamaica, Progress Report." Social and Economic Studies 8, No. 4 (December 1959): 403-420. [MOA/JAM; UWI/ISER]

S,LC,M

Field studies in Blue Mountains Community showed attitudes towards erosion revealed little awareness of the problem and actions which were of a conservation nature were generally undertaken for other reasons. P. 411 describes higgler's marketing partnerships not elsewhere noted. P. 412 notes that close proximity to Kingston (12 miles) eliminates the marketing middleman. In Mt. Chester, men market the export crops (banana, citrus) and women market domestic crops.

BRAITHWAITE, L.F. "Social and Political Aspects of Rural Development: the Jamaican Experience." Social and Economic Studies 17, No. 3 (September 1968): 264-275. [MOA/JAM; UWI/ISER]

S,J

A discussion on social and political problems in rural development. Considers important factors to be centralized administration, no all inclusive village or community concept, cultivators' bias against agriculture. Suggests settlements failed for a number of reasons including no collaboration with farmers, i.e. planning from top.

BREWSTER, Havelock. "Wage, Price and Productivity Relations in Jamaica, 1957-62." Social and Economic Studies 17, No. 2 (June 1968): 107-132. [MOA/JAM; UWI/ISER]

S,J

Uses Department of Statistics data on employment and earning in large establishments (greater than 15 persons and farms greater than 500 acres) to develop wage, price, real-wage, productivity and inter-industry wage differentials over time period. For part of

agriculture covered: sugar had productivity raises, while the rest of agriculture increased at the rate of price increases; other sectors had up to 3 times the wage of agriculture and the wage differential grew over the time period.

BROOM, L. "The Social Differentiation of Jamaica." American Sociological Review 19, No. 2, 1954. 115-25. S, J

Discusses the development and 1950 character of social differentiation in Jamaica with respect to race and color. Education considered a precondition for vertical mobility. Blacks were rural and agricultural and few blacks had more than primary school education. However, darker colored Jamaicans were better represented in civil service and parliament.

BROWN, E.J. "Settlement and Land Use in Rural Jamaica--A Case Study of Bamboo, St. Ann." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1969. [GD/UWI/JAM] S

---. "Settlement and Land Use in Rural Jamaica--A Case Study of Bamboo, St. Ann." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM] S

BROWN, H. "The Impact of the Tourist Industries on the Agricultural Sectors: The Competition for Resources and the Market for Food Provided by Tourism: The Case of Jamaica." Proceedings of the Ninth West Indies Agricultural Economics Conference, Held at the Pegasus Hotel, New Kingston April 3-6, 1974 and at the Jamaica School of Agriculture, Twickenham Park, April 7-10, 1974. St. Augustine, Trinidad: Dept. of Agricultural Economics, University of West Indies, 1974. pp. 129-142. [UWI/ISEP] S, J, M

Analyses data for the period 1965 to 1972 on tourist and agricultural sectors. Concludes that the development of the tourist industry: (1) has not been a major influence on the availability of cultivable lands on the agricultural sector; (2) was an important factor in the migration of population from key

agricultural areas to the urban centres; (3) has placed agriculture at a disadvantage on account of low rates of return in a number of major activities within the sector. It is also suggested that a market strategy which helps local producers to sell to the tourist industry would be important.

BUCKMIRE, George. "Emergence and Resilience of the Jamaican Peasantry." Proceedings of the Fifth Annual West Indian Agricultural Economics Conference, Roseau, Dominica, April 1970. St. Augustine, Trinidad: University of West Indies, Dept. of Agricultural Economics, 1970. [MOA/JAM]

Gives brief history of plantation and peasant development. Concludes historical land settlement patterns are a major source of problems today. Attributes to these small size of farms, fragmentation, low productivity and relatively high cost of rural services (e.g. irrigation, conservation, etc.).

CALLAM, M. "Functional Study of Christiana." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

CANADIAN INTERNATIONAL DEVELOPMENT AGENCY. Caribbean Division. Canadian Development Co-operation with the Commonwealth Caribbean Agriculture. Sector paper 1. Report prepared by Agricultural Economics Council of Canada, September 1976, Pp. 198. [PDS/AID/JAM]

Broad ranging discussion of agricultural development problems and programs. Pp. 144-198 section on Jamaica. Provides general discussion of role of agriculture in economy and its economic importance, plus a statement on needs for irrigation and its role in expanding food production. A brief summary of the trends and situation of each major product is provided. There is brief discussion of marketing of agricultural produce, a note about inadequacies of slaughter house facilities, and favorable comment on adequacy of the road network.

Agricultural credit is discussed, especially

role of JDB and ACB.

Institutional arrangements, rather than land or climate are considered constraints, although lack of irrigation and inefficient use of water are also important. Constraints to effective extension for small farmer are considered lack of transport, poor salaries, conflict with board agents.

Comments are made on small farmer dairying and needs for milk marketing services.

CENSUS RESEARCH PROGRAMME. University of the West Indies. Recent Population Movement in Jamaica. Kingston, 1974. S,SC,J

CLAFKE, Edith. My Mother Who Fathered Me: A Study of the Family in Three Selected Communities in Jamaica. Second Edition. London: G. Allen and Unwin, 1966. Pp. 229. (1st Edition 1957). [U.S. Embassy Lib/JAM] S,SC,LC

Study done in early 50's based on survey of three rural communities (one sugar related, one in citrus and one with hill farming). Has excellent (and important) chapter on traditional land tenure versus legal land tenure, with a detailed description of the concept and practice of family land (with joint right of use) and bought land. Provides data on single parent headed households. A little over 30 percent in each community with one parent (usually female) about half of these had grandparents. In hill farming areas women who lived on family land had some subsistence plot, and did get some help from kin. In citrus area women were widowed and family helped with income. In plantation area there were few income sources for single parents.

COHEN, Yehudi A. "Four Categories of Interpersonal Relationships in the Family and Community in a Jamaican Village." Anthropological Quarterly 3, No. 4 (1955): 121-47. S

Economic and property relations in the highland village were considered competitive and based on amount of land controlled. Land is never lent or exchanged. Community is composed of isolated independent nuclear families rather than wider kin or community

groups. In a family the woman's land and output thereof is considered hers rather than her husband's or a joint enterprise. Separate accounts are kept by husband and wife.

- . "The Social Organization of a Selected Community in Jamaica." Social and Economic Studies 2, No. 4 (March 1954): 104-133. [MOA/JAM; UWI/ISEE] S

Describes village community of 277 in Central Jamaica.

- COMITAS, Lambros. "Occupational Multiplicity in Rural Jamaica," Work and Family Life: West Indian Perspectives, Edited by Lambros COMITAS and David LOWENTHAL. New York: Anchor Books, 1973. S

Cites evidence of Edwards and of authors study of fishing villages to indicate high proportion of persons with multiple occupations. Suggests also that multiple jobs correlate with age.

- , and LOWENTHAL, David (eds.). Work and Family Life: West Indian Perspectives. New York: Anchor Books, 1973. XVII Pp. 422. Bibliography. S,J

Peprints a series of important articles on rural labor activities: farming, cane plantation, higglering. A very good introduction to socio-economic aspects of workforce. Has also a series of articles on family organization.

- COOPE, L. "The Growth and Development of Central Village, St. Catherine--A Service Centre." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

- CRATON, Michael and WAIVIN, James. A Jamaican Plantation, the History of Worthy Park 1670-1970. London: W.H. Allen, 1970. Pp. 343. [U.S. Embassy Lib/JAM] S,J

Index, bibliography, 2 appendices. One chapter of twelve deals with the post-war period.

- CRISP, R.E. and POPENOE, H. "Jamaica and S

Martinique: Contrasting Aspects of Folk Agriculture and Non-Folk Agriculture." Etudes de géographie tropicale offertes à Pierre Gourrou. The Hague, Netherlands: Mouton, 1972.

Authors suggest that the typical Jamaican rural peasant farms mainly for subsistence with the aim of security taking precedence over that of profit. In Martinique with a similar physical environment but different cultural patterns and colonial influences, peasant farmers practice commercial market orientated farming. Martinique is cited as a model for countries seeking to develop their economy on an agrarian base.

CUMPER, George E. "A Modern Jamaican Sugar Estate." Social and Economic Studies 3, No. 3 (September, 1954): 119-160. [MOA/JAM; UWI/ISER]

S, SC, C

Provides historical account of sugar in the Frome area and reports settlement and some social and economic characteristics of Frome estates and surrounding hill farm area, based on a 1951 survey and 1943 census.

---. "Labour and Development in the West Indies, Part 1." Social and Economic Studies 10, No. 3 (September 1961): 278-305. [MOA/JAM; UWI/ISER]

S, J, M

Looks at form of household and its expenditure patterns for Barbados and Jamaica. Includes a discussion of problems with household survey data. Discusses also effect of class on consumption and the social effects of trade unionism.

---. "Non-Economic Factors Influencing Rural Development Planning." Social and Economic Studies 17, No. 3 (September 1968) 243-251. [MOA/JAM; UWI/ISER]

Suggests questions, research directions, and the unknowns of a shift to medium size farms and resettlements.

---. "The Jamaican Family: Village and Estate," Social and Economic Studies 7, No. 1 (March 1958): 76-108. [MOA/JAM; UWI/ISER]

S, C

Traditional economic labor theory did not seem to apply to West Indian laborers, so this sociological study into attitudes was made. A sugar worker's work performance is affected by his 'location' in the family group. This article provides details of typical life cycles and household social structures in a highland village and a sugar estate. Workers with family have more 'wants' and will work harder to achieve them than will the unattached.

- . "The Relation of Certain Social Characteristics to Productivity and to Economic Development in Jamaica and Barbados." Unpublished Ph.D. dissertation, University of London, 1959. S,J
- . "Two Studies in Jamaican Productivity." Social and Economic Studies 1, No. 2 (June 1953): 1-83. [MOA/JAM; UWI/ISEP] S,SC,C
- Discusses concepts of productivity and looks at output per work and labor as a percentage of total cost in various industries. Also reports results of a survey of 600 households, of 760 sugar workers (1 in 10 sample) at Frome estate and 122 in Caymanes. Has detailed information on frame, survey, etc. and data on earnings by age, family size, ownership of land, education, etc.
- , and LAMONT, M. "Report on Income Distribution in Jamaica, 1963." (Unpublished). Kingston: Central Planning Unit, 1964. S,SC
- Based on 1963-64 household expenditure data.
- DENTON, Evelyn H. "The Economic Determinants of Fertility in Jamaica." Unpublished Ph.D. dissertation, Harvard University, 1975. S
- DORMAN, E.V. "Agricultural Programmes Undertaken by ALCAN Jamaica Limited and Reynolds Jamaica Mines." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM] S,Pr
- DUNCAN, Neville. "The Political Process" S,P

and Attitudes in a Jamaican Parish Council." Social and Economic Studies 19, No. 1 (March 1970): 89-113. [MOA/JAM; UWI/ISEF]

A discussion of local government in Manchester parish. Some useful material on working of the group, as well as public administration technical analysis.

- . "Small Farming in Jamaica: A Social Scientist's View." Work and Family Life: West Indian Perspectives, edited by L. COMITAS and D. LOWENTHAL. New York: Anchor Books, 1973. S

Article provides a general discussion. Suggests that small farmer in Jamaica is economically efficient given resources and risk and uncertainty. Proposes removal of credit risk (requiring of land as collateral) and secure land titles.

- . "The Development of Small-Scale Farming: Two Cases from the Commonwealth Caribbean." Caribbean Quarterly 18, No. 1, (1972): 59-71. [UWI/WIC] S,P

Compares Jamaican small-farming and market gardening in Trinidad. Suggests Jamaican farmer has rational (though non-optimal) response to perceived risk and non-availability of resources. The response is to minimize cash outlays. In Trinidad farmers have rapidly taken on new techniques. Suggests that difference in response not simply explained by relative efficacy of recommended practices, but that aggressive entrepreneurs of Trinidad learnt by experience that innovation is profitable. Experience of Jamaicans has not been as positive though some has occurred e.g. St. Elizabeth peanut farming. Community cultural practices have an effect, e.g. strongly progressive in Trinidad. Alternative strategies to innovation suggested: education on benefits, imposed use, creation of new farmers and/or farms and improved environment.

- DUNN, C.L. and PARTENHIMER, E.J.
"Viability of Dairy Settlement Farms in Jamaica." Journal of Northeast Agricultural Economics Council 3, No. 1 (May 1974): 35-47. [NAL: HD1773.M2N6]

S, SC, IC, C

A study in 1971 of 35 of 57 farmers settled on dairy farms as part of AID funded dairy settlement project. Few farmers had met repayment schedules; the objective of the study was to determine if this could be done, with a remaining 'sufficient income.' Regression estimates indicated that net income depended on number of cows, concentrate feed, and stocking rate. Estimates suggested repayment was possible, over opportunity cost wages, and that long run rate of return was 17-1/2 percent. Suggests that inefficiency of irrigation system, high consumption expenditures, sale on processed rather than fluid milk, and lower than optimal intensity of use of resources reduce potential income.

EBANKS, G. Edward. "Differential Internal Migration in Jamaica." Social and Economic Studies 17, No. 2 (June 1968): 197-214. [MOA/JAM; UWI/ISEP]

S

Indices of differential migration are calculated for immigrants with total population at point of destination as base. These are used to describe difference in pattern and intensity of migration by parish. Five variables considered are age, education, training, industry category and occupation. Results with respect to these variables are reported for data based on the 1960 census of population. Females are more numerous than males in the migrant stream, but males were more selective (that is, migrants had a higher proportion of specific traits than the base population.) Urban in migration was much greater than rural, but rural was more selective. Author suggests that these results reflect "push stimulus for migration".

EHRlich, A.S. "Ecological Perception and Economic Adaptation in Jamaica." Human Organization 33, No. 2 (Summer 1974): 155-61.

S,C

East Indians employed in sugar (formerly

indentured) produced rice (1954) in rented morass lands of Westmoreland. The crop cycle was complimented as rice sown in April and transplanted in June/July at end of cane crop, and harvested before sugar work started in November. In 1959 lands drained for sugar expansion. Indians no longer grow rice for food and have lower money incomes, and no way of utilizing their labor.

EYRE, Lawrence A. Geographic Aspects of Population Dynamics in Jamaica. Boca Raton: Florida Atlantic University Press, 1972. Pp. 172 + xiv. Bibliography.

S

Jamaica has experienced a high population growth rate. This study analyses the effect of population pressure on resource use within Jamaica. Shows the changes in population between 1943 and 1960 by ecological-economic zone and 1960 fertility ratios using aggregations of the 152 census unit. Changes in land occupancy and cropping type were developed for same period (1943 to 1960) from census data and aerial photos. Relation between population change and type of land occupancy are investigated using regression.

Four areas, from different ecologic-economic zones were chosen for detailed field study. Each area is described in detail and land use and population data provided. Income and cost data not collected systematically though description of a small sample of households in each area. The author's conclusions on the population change, resource use change situation is summarized at the end of each description. Although partly impressionistic these field studies provide a very valuable background for understanding small-farmer agriculture.

---. Geographic Aspects of Population Dynamics in Jamaica. Ph.D. dissertation, University of Maryland, 1969.

On basis of census divisions, a typology of ecologic-economic zones

the spatial patterns of population, population change and fertility are analyzed. Absorptive capacity and areal differentials in the repatterning of population over time are shown to be related to type and intensity of land occupance. Intensive field surveys are presented of four specific rural communities in which different options have been utilized. Study forms basis of book (Eyre 1972).

FONAROFF, L. Schuyler. "Settlement Typology and Infant Malnutrition in Jamaica." Tropical and Geographical Medicine 21, No. 2 (June 1969): 177-185.

S,N

Looks at mortality statistics of 6 months to 4 years (mortality statistics in Jamaica statistically reliable) in St. James and St. Elizabeth in relation to settlement type. Types related to morphology of service function show little correlation to PCM (protein calory malnutrition). Suggests that PCM relates to socio-economic characteristics of household rather than market-place (remoteness, under-education, social structure, migration and employment patterns). Mapping of PCM deaths shows correlation with specific population agglomerations. Social structure with highest PCM is suggested to be that with absent mother (with no supporting male). Hypothesis that areas close to employment sites will have high migration rates, absentee mothers and high PCM, and that areas with low employment opportunities will have high migration, absentee mothers and probability of high PCM incidence. May be a useful indicator of lowest income group.

FONER, Nancy. Status and Power in Rural Jamaica. A Study of Educational and Political Change. 1973. Pp. 172, Appendix, Index, Bibliography. [U.S. Embassy Library, Jamaica LC 206.J27F66]

S

Analysis based on a case study of a rural Jamaica community from 1968-69. Deals with role of education and political change in Coco Hill, St. Ann's Parish, a relatively prosperous

specialty crop area.

FOOD AND AGRICULTURE ORGANIZATION and UNITED NATIONS DEVELOPMENT PROJECT. Worker Participation in Agricultural Development. Report on a FAO/UNDP mission. July-September 1974, [mimeo]. Pp. 23. [Very limited circulation.] S

This report attempts to "tell it like it is," mincing no words about worker attitudes and goes on to suggest new forms of self-reliant, labor controlled land production organization. The relation of labor to the production environment is characterized as "passive endurance." This report is background to the planning of Project Land Lease II.

HARRIS, R.N. and STEEP, F.S. "Demographic-Resource Push in Rural Migration: A Jamaican Case Study." Social and Economic Studies 17, No. 4 (December 1968): 398-406. [MOA/JAM; UWI/ISEP] S

Uses survey data for UNDP survey of Pedro Plains to determine if migration is affected significantly by locality, farm size and family size. Results suggest no effect of location (within area) but large family sizes with large size exhibit high migration.

HENPY, Frances and WILSON, Pamela. "The Status of Women in Caribbean Societies: An Overview of Their Social, Economic and Sexual Poles." Social and Economic Studies 24, No. 2 (June 1975): 165-198. S, J

Not particularly applicable to women's role in agriculture.

HICKS, F. "Making a Living During the Dead Season in Sugar-Producing Regions of the Caribbean." Human Organization 31, No. 1 (Spring 1972): 73-81. S, J, C

Suggests 3 patterns of dead season subsistence: minifundia: small land-holdings of size inadequate for year-round income; landless proletariat: non-agricultural activities; and Cuban socialist pattern. Jamaica is considered belonging to first category.

HILL, V.G. and WILLIAMS, S.A. "The Relationship between the Bauxite Industry and the Agricultural Sector in Jamaica." S, J

Proceedings of the Ninth West Indies
Agricultural Economics Conference
Held at the Pegasus Hotel, New
Kingston, Jamaica, April 3-6, 1974
and at the Jamaica School of Agriculture,
Twickenham Park, April 3-6, 1974. St.
Augustine, Trinidad: Dept. of Agri-
cultural Economics, University of
West Indies, 1974. Kingston, 1974.
[UWI/ISER]

The development of mineral resources and the bauxite alumina industry in particular may involve competition with other industries like agriculture for land, labour and capital but, at the same time, it can provide market opportunities for agricultural products. The only real area of competition is wage rates, since the mineral industry pays a significantly higher rate than does agriculture. A bauxite laborer ranks higher in the social strata than an agricultural laborer and potential agricultural workers who fail to gain employment in the bauxite industry often go unemployed rather than opt for agriculture.

HOPPOWITZ, Michael. "A Typology of Rural Community Farms in the Caribbean." Anthropological Quarterly 33 (October 1960): 177-87.

S,J

Discussion is not on basis of detailed survey. Suggests that community integration is much less than in Central America. Small farms have greater community integration, sugar estates least.

HUSTED, Joan E. "Elderslie, A Rural Jamaican Village--A Sociological Description." (Mimeo) Pp. 38. Bibliography [Not dated].

S

This paper is a portion of the Cornell University Medical College, Community Medicine Division studies which were conducted in 1970-71 in Elderslie, St. Elizabeth Parish. Has useful, brief historical, politico-economic introduction for Jamaica and insightful comments on psycho-social motivations of rural poor. For example, "There are strong pressures on individuals to accept their traditional place in the community structure, and envy and ill will often arise in response to an individual's prosperity... isolation,

hostility, envy and lack of long-term cooperation are some of the social problems."

HUTCHINSON, M. "A Geographical Survey of the Idle Land on Small Farms in St. Mary." S
 Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM]

INNIS, Donald Q. "Human Ecology in Jamaica." S
 Unpublished Ph.D. dissertation, University of California, Berkeley, 1959.

---. "Peasant Farming: Banana Intercropping in Jamaica." Proceedings of Association of American Geographers, 5 (1973): 111-117. S,C

Details the intimate adaptation of peasant farmers to local physical conditions. Also demonstrates the logic of various associations of plants typically cultivated together.

---. "Peasant Farming: Banana Intercropping in Jamaica." Proceedings of Association of American Geographers, 5, (1973): 111-117. S,C

An analysis of banana production in Jamaica shows the sophistication with which local cultivators adapt plant combinations to local conditions. Inter-cropping is the most efficient way of production for peasant farmers.

---. "The Efficiency of Jamaican Peasant Land Use." The Canadian Geographer 5, No. 2 (Summer 1961): 19-23. S,LC

Study carried out in highland area of Manchester parish in 1951 on a sample of small farms (average size 7 acres). Maps land use, showing plants in each field to show plant mixing. Describes the patterns of intercropping and the method of cultivation of bananas. Suggests reasons for the greater technical efficiency of inter-cropping. Does not provide adequate analysis, but a useful introductory description of highland farming land use.

INSTITUTO INTERAMERICANO DE CIENCIAS S
 AGRICOLAS (IICA). Basic Agricultural Information on Jamaica. Document 1,

January 1977. (Internal Document of Work).

- . Basic Agricultural Information on Jamaica. Jan. 1977, 42 pp. + 25 tables. [RDS/AID/JAM] S

A compendium of available crop, program and sector characteristics available in 1977.

- and MINISTRY OF AGRICULTURE, JAMAICA. Hillside Farming Technology - Intensive Short Course, Vol. I and Vol. II. Kingston, March 1978, 470 pp. [RDS/AID/JAM] S,T,LC,C

Contain 28 articles on all aspects of small farms, including five on aspects of soils, two on farming systems, 13 on specific crops, 8 on agricultural technology and miscellaneous on sociology, marketing and management.

- INTERNATIONAL GROUP FOR AGRICULTURAL DEVELOPMENT IN LATIN AMERICA AND THE CARIBBEAN (GIDA/AL). Jamaica. Situacion Actual de su Agricultura. Washington, D.C., 1976. S

- JACQUES, Alfonso F. "Population Redistribution: An Aspect of Urbanization and Settlement Policy in Jamaica." Unpublished M.A. thesis, University of British Columbia, 1965. S,J

- JAMAICA. Jamaica Agricultural Society. Agriculture in the New Jamaican Economy. Kingston: Jamaica Agricultural Society, 1964, Pp29. [UWI/WIC: HD9014.J2J3] S,J

- . Ministry of Agriculture (probable author). Agriculture Sector Study, (for Ministerial meetings, July 1973). Approximately 80 pp. [RDS/AID/JAM] S,J,C,LC,E

Has sections on sugar, bananas, small farmers, food crops, livestock, fisheries, other crops, land use, credit, extension and administration.

- JAMAICA AGRICULTURAL SOCIETY. Current Problems of Jamaican Agriculture, Seminar No. 1. Kingston, 1967. Pp. 107. [MOA/JAM 63:33] S

- JOHNSON, E.F. "Resettlement of Small Farmers" S,LC

by Kaiser Bauxite Co., St. Ann." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM]

JOHNSON, I. and STEFACHAN, M. "Agricultural Development in Jamaica." Proceedings of the Ninth West Indies Agricultural Economics Conference, Pegasus Hotel, New Kingston, Jamaica April 3-6, 1974 and at the Jamaica School of Agriculture, Twickenham Park, April 7-10, 1974. St. Augustine, Trinidad: Dept. of Agricultural Economics, University of West Indies, 1974, pp. 3-22. [UWI/ISEP]

The paper analyzes the structure of Jamaican agriculture, examines the various sub-sectors, including land use, land tenure and land distribution, and assesses where possible the problems and needs of the sector. Jamaican agriculture is divided between two sub-sectors, plantation or export agriculture and the small farm sector.

Land settlement efforts are discussed in some detail. Authors recommend that emphasis should be placed on measures for achieving a more equitable pattern of land distribution and that there should be a more rational and intensive pattern of land use.

JOHNSON, S. "Small Farming in Pepper and the Impact on C.A.L.A." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM] S,Pr

KERTON, Robert R. "Labour Theory and Developing Countries: The Individual Supply of Effort in the Caribbean." Unpublished Ph.D. dissertation, Duke University, 1968. S,J

---. "The Unemployability Hypothesis and Effective Supply of Effort." Social and Economic Studies 20, No. 2 (June 1971): 134-150. [MOA/JAM; UWI/ISEP] S,J

An excellent article with well-developed argument (with evidence) analyzing the concept of labor unemployability. Unemployability is defined as either absolute (incapable of performing useful work) or price unemployability in which productivity is lower than

going wage rate. Suggests that this second type is significant due to lack of training, social habits which give a high rate of absenteeism and effects of the time (5 years) to get job. Author carried out survey of 73 unemployed males in Kingston to estimate supply of effort. Forty-nine percent had no objection to farm employment (at assumed going wage rate). Over 50 percent of those with objections found pay too low, especially as work is irregular. Author estimated MVP of labor from modified version of 1954 Edwards data at \$37 per year. The reservation price for unemployed urban males was \$3 per week. Alternative formulation is set up of labor surplus model with elastic demand for modern sector and elastic demand for sugar industry. Author contends that market supply curve has elastic section which is a social consensus on reservation price (see Maunder 1960). Suggests low productivity as most important problem, rather than overhigh supply prices.

KNIGHT, I. "Small Farming in Brown's Hall-- St. Catherine." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1974. [GD/UWI/JAM] S

KPUIJER, G.J. Sociological Report on the Christiana Area, Kingston, Ministry of Agriculture, Agricultural Information Service, Kingston, 1969. [MOA/JAM] S, SC

This has an original 1956 publication date. Reports results of survey work on various sociological items to supplement another economic survey. Covers also more general sociological description and recommendations. Areas include social systems, leadership, social strata, institutions, cultural change, traditional practices, major problems of farmers, education, communication of practices, social welfare.

Out of date, but republished by MOA as useful. It is a detailed description of village life, from the point of view of agricultural extension, and thus provides useful background.

LAWPENCE, D. "Study of Port Maria Land Authority." Unpublished undergraduate thesis. Dept. of Geography, University S

of West Indies, Mona, 1973. [GD/UWI/JAM]

- LION, Donor M. Assessment of Jamaica's Agricultural Sector. Kingston: USAID/JAM, June 1976. Pp. 139. [RDS/AID/JAM] S

Contains a summary analysis of 10 major problem areas in Jamaican agriculture and an evaluation of programs which are implemented or proposed to deal with them.

- LOWE-CHING, F. "The Economics and Economic Geography of Small Farming." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM] S

- LOWENTHAL, David. West Indian Societies. 1972. Pp. 385, Index, Bibliography (43 pp.). [U.S. Embassy Library/Jamaica] S, J

A review of analyses of the origins of social and racial attitudes in the Caribbean. A good overview, though should not be accepted uncritically, it has been criticized for over-generalization.

- LYTLE, F. "Geography and Economics of Small Farming in the Kellits Area." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

- . "Small Agriculture in Kellits Area." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

- MCCULLOCH, Cedric S. "Some Ideas on the Sociology of Small Farming in Jamaica." Proceedings of Fifth West Indian Agricultural Economics Conference, Roseau, Dominica, 1970. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1970. [MOA/JAM] S

A useful summary of previous work by author and others on social and economic characteristics of small-scale farming in Jamaica: poor quality land and fragmentation, low farm income, low level of education and dislike for agriculture, farming considered a way of life, high

degree of tenancy, frustration and adjustment, individualism and low levels of co-operation. Resistance to change is explained by need for funds for consumption before production, planning from above, and extension agents poorly trained in economics and sociology.

MARSHALL, Woodville K. "Notes on Peasant Development in the West Indies since 1838." Social and Economic Studies 17, No. 3 (September 1968): 252-263.

S, J

Looks at historical development to 1950. Data on Jamaica the most detailed.

---. "Peasant Movements and Agrarian Problems in the West Indies: Part I-- Aspects of Development of the Peasantry." Caribbean Quarterly 18, No. 7 (March 1972): 30-46. [UWI/WIC]

S

Gives historical review (to 1938) of origin of peasantry, some of welfare and political organizations and overt attempts at political action to change conditions. Concentrates on Jamaica. Useful background.

MAUNDEF, W.F. Employment in an Under-developed Area: A Sample Survey of Kingston, Jamaica. New Haven, Yale University Press, 1960.

S, J, SC

Quoted as suggesting a reserve price for labor supply, based on alternatives to working: mutual aid (families), common property resources (tree crops), theiving and begging.

MILIS, F.L. "Production Relationships among Small-Scale Farmers in St. Kitts." Social and Economic Studies 25, No. 2, (June 1976): 153-167. [MCA/JAM; UWI/ISFP]

S, J

A valuable article even though not on Jamaica. It is shown that production function analysis is appropriate in answering questions concerned with the optimal level of input combination and can help planning agencies to make the best decision in allocating scarce resources. Constant returns, to scale, appear to exist among smallholders over the range of inputs studied. If current

inputs are each increased by 1 percent while the others are held constant, land will contribute relatively little while labour and capital will add more to total output than their cost. At the micro-regional level, production can be increased by moving more land and labour into the cash-tenants region, and more labour and capital into the share-tenants region. A progressive land-reform programme that makes more fertile land available can increase overall production among small-holders, as well as increasing the productivity of land. Secondary industries based on animal produce could be developed if the present stock of animals could be increased. The small-scale agricultural production system is operating much more efficiently than is generally realized.

NOPTON, A.V. and CUMPER, G.E.E.

"'Peasant,' 'Plantation' and 'Urban Communities' in Rural Jamaica: A Test of the Validity of the Classification." Social and Economic Studies 15, No. 4 (December 1966): 338-352. [MOA/JAM] [UWI/ISFP]

Uses 1960 census data to test whether the anthropological, sociological labels above describe a significant part of agriculture in Jamaica. Looks at frequency of occurrence of combined characteristics (percent male labor force in agriculture, population 0-4 years as percent female population 15-44 years, population 15-59 years as proportion of those 10-14 years, owner occupied housing percent, males per female, percentage with more than 10 acres. These variables explain a significant part, but a large part of variation, but leave much unexplained.

OLIVER, I. "Portland Pidge--A Regional Study." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM]

PAPPY, Martin L. "Land Use in the Christiana Area of Jamaica." Unpublished M.Sc. thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM]

PATERSON, P.J. "Potential and Production Targets in Agro-Industry." Farmer 79, No. 1/2 (Jan/Feb 1974): 21-25. 1974.

PETERSON, Hans Patrick. "Effects of Resource Reallocation on Crop Income from Medium Size Farms in Jamaica." Unpublished M.S. Thesis, University of Florida, 1970, Pp. 77. Bibliography.

S

A linear programming model of medium-sized farms in four districts of Jamaica. Comparisons are made between rate of return to farming with non-farm wage opportunities. Major differences in profitability between areas due to soil and climatic factors were found. Excellent descriptions of farm types and ecological conditions given for each region. Low technology was identified as major productivity constraint.

PHILLIPS, I. "Some Observations on the Impact of C.A.L.A. on the Spaldings Christiana Area." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. r[GD/UWI/JAM]

S

PHILLIPS, James Joseph. "Pe Wi Land A Come: Choice and Change on a Jamaican Sugar Plantation." Ph.D. dissertation, Brown University, 1976.

S,C

Chapters discuss decision-making among workers in relation to: immigrating to and emigrating from the district, consumption work (strikes, alternative work), seizing unused land around plantation and membership in worker-run sugar producing co-op management for plantation.

POILLOCK, N.J. "Women and the Division of Labour: A Jamaican Example." American Anthropologist 74, No. 3 (1972): 689-692.

S,J,C

Women's contribution to subsistence farming is considered. In Jamaica farming is one of the few occupations, but there is also a shortage of young men in most villages. Reliance on the production support of women is part of the life cycle of the co-residential family, i.e. the young woman. A male member usually only returns to share economic responsibility when the couple reach middle age. This structural adjustment to the demographic imbalance is made

possible by the ecology and nature of subsistence farming.

- POWELL, Dorian L. "Female Labour Force Participation and Fertility: An Exploratory Study of Jamaican Women." Social and Economic Studies 25, No. 3 (Sep. 1976): 234-258. S, J

Uses 1970 census to look at relationship set out in title. Provides some more general data also--a high labour force participation rate (i.e. over 50 percent) for unmarried women even in rural areas. Number of children reduced participation rate.

- PICKETTS, N.E. "Soil Development on Paired Peefs in the Port Maria-Oracabessa Area, St. Mary." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM] S

- . "The Economic Geography of Small Farming in Frankfield." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM] S

- PITSON, C. "A Framework for Analysing the Contribution of the Agricultural Sector to Economic Development." Journal of Agricultural Economics 24, No. 1 (1973): 57-83. S, P

Develops a Fei/Ranis type model to look at role of agriculture in development, and then uses Jamaican sugar industry as a policy problem example, i.e. large unemployed unskilled labor, industry incompetent internationally and labor shortage. Suggests lack of land and push of less-than-subsistence average product, puts unemployed in urban sector, with an institutionally determined wage. Suggests social welfare instead of high wage rates.

- ROBERTS, G.W. "Demographic Aspects of Rural Development: the Jamaican Experience." Social and Economic Studies 17, No. 3 (September 1968): 276-282. [MOA/JAM; UWI/ISER] S

Looks at census data (1881-1960) for Jamaica to determine migration and sets up index

of education and occupation status for parishes in 1960 census. Considerable population growth occurred in small towns. Not an in depth analysis.

- . "Demographic Aspects of Rural Development: The Jamaican Experience." Social and Economic Studies 17, No. 3. (Ser. 1968): 276-282. [MOA/JAM; UWI/ISER]

S

Looks at effects of external and internal migration on growth of rural population for intercensal periods from 1881 to 1960. Looks also at parish level population changes (but not intra parish) from 1943 and 1960 and compares them to an index of education and occupational state (percent professional, clerical and supervisory personnel).

- POBOTHAM, D. "Class Structure and Community Structure in Jamaica." Unpublished M.A. Thesis, Dept. of Anthropology, University of Chicago, 1970.

S, J

- SAROOP, H. "A Geographical Appraisal of the Dairy Cattle Industry of Jamaica." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM]

S

- SINCLAIR, Dennis. "Jamaica Wicker Works: A Case Study of a Small Industry in the Development of Rural Jamaica." Unpublished Ph.D. dissertation, University of Michigan, 1975.

S

Reports results of an 18-month action project involving establishment of Jamaica Wicker Works in Chatsford, St. James. Author served as a participant observer, providing the capital and initiative to establish the business.

- SMITH, Michael G. "Community Organization in Rural Jamaica." Social and Economic Studies 5, No. 2 (June 1956): 295-312.

S, J

Discusses rural communities as sub-groups of a village. There are informal ties which are not very tight, but also are not the same as formal organizations.

- . Labour Supply in Rural Jamaica. S,SC
Kingston: Government Printer, 1956.

A report based on a 1955 large-scale survey and detailed analysis by anthropologist of labour situation in Jamaica. Frequently quoted.

- . "Patterns of Rural Labour." Work and Family Life: West Indian Perspectives. S
Edited by I. Comitas and D. Lowenthal.
New York: Anchor Books, 1973.

Describes labor force characteristics and demand and supply (as seen at farm level) of estates, middle sized properties and small farms, including labor-exchange practices.

- , and KPUIJER, G.J. A Sociological Manual for Extension Workers in the Caribbean. S, F
Mona, Jamaica: Extramural Department, University of West Indies, 1957, 255 pp. [MOA/JAM] [UWI/WIC: HN 245.553]

Over 100 pages of discussion of social attitudes and group behavior characteristics of rural Jamaica.

- SMITH, V.D. "Social and Economic Changes and Development in Clarendon as a Result of Alcoa Minerals of Jamaica Inc. Operation in the Parish." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM] S, Pr

- STEWART, S. "Agriculture--South Clarendon Plains." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM]

- STONE, Carl. "A Sociological Survey of Tenant Farmers on Project Land Lease." (Mimeo) S, SC
Jamaica, Ministry of Agriculture, Oct. 14, 1974, 39 pp. + appendix. [RDS/MID/JAM]

Report of a sociological survey of 420 farmers on land leased from the GOJ. Profiles social character and assesses goals and aspirations of co-operating farmers.

- . "Class, Community and Leadership on a Jamaican Sugar Plantation." Economic S, SC

Development and Social Change 24 (July 1976): 787-798.

This work is part of a larger field study of sugar-estate communities in Jamaican Clarendon sugar belt (financed by Inter-American Foundation). Interviews were in January 1974. Covers survey of Baldwin Cottage and a compound on Moneymusk Estates. Has breakdown on income (crop-time), and occupation. Explores hypotheses linking class solidarity with community solidarity. Results suggest that where there is community solidarity there is more confidence in local leadership. Also gives information on savings association, trade union, and co-op support and conflicts.

---. Sociopolitical Aspects of the Sugar Co-operatives. Mona, Jamaica: Dept. of Government, University of West Indies, 1976. [UWI/WIC]

S, SC

Provides results of questionnaire on attitudes and looks at weaknesses and strengths with respect to co-op activity.

TIDPICK, Gene M. "Wage Spillover and Unemployment in a Wage-Gap Economy; the Jamaican Case." Economic Development and Cultural Change 23, No. 2 (January 1975): 306-324.

S, J

A model is presented of a 'wage-gap' economy (i.e. an economy in which the wage in one sector is set higher than equilibrium for that level of skill) which is used to analyse employment and unemployment in Jamaica. The model is somewhat similar to that of Todaro. It provides a very significant contribution to the study of labor demand and supply. Concludes that Jamaica is able to have higher measured unemployment rate than poorer countries (e.g. Haiti) because there is both the incentive and means to support unemployment. Any reduction in the number of unemployed, or increase in hiring of the high wage sector raises the probability of obtaining a high wage job and induces supply withdrawal from the low-wage sector. Labor shortages in agriculture exist because expected lifetime earnings from high

wage job are higher and because occasional non-agricultural casual work gives workers means of support while they look for work in high wage sector. Essential reading.

---. "Wage Spillover and Unemployment in a Wage Gap Economy: The Jamaican Case." (Research Memorandum, No. 47). Williamstown: Center for Development Economics, Williams College, June 1972 (mimeo). S,J

---. "Wages and Unemployment in Jamaica." Unpublished Ph.D. dissertation, Harvard University, 1972. S,J

TINGLING, V. "The Impact of 'LPART' on the Small Peasant--A Socio/Spatial View on the South Eastern St. Elizabeth Area." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] S

UNITED NATIONS. Economic Commission for Latin America. Economic Survey of Latin America 1969. New York: 1969. S

Has a comparative analysis of income distribution in Latin America and the Caribbean, including Jamaica and other Commonwealth Caribbean countries. 1963-64 data are used for Jamaica analysis.

UNITED STATES. Agency for International Development. Jamaica Agricultural Sector Assessment. Rural Poor Profile, Constraint Analysis and AID Strategy. October 1976. Bibliography, Appendix, 60pp. [FDS/AID/JAM] S,J

A comprehensive review of Jamaican agricultural situation. Has two sections on marketing.

UNIVERSITY OF WEST INDIES. Department of Social and Preventive Medicine. Manual for Community Health Workers. Mona, Jamaica: University of the West Indies, [No date]. [UWI/WIC] S,E

Contains numerous insights into the sociology of rural Jamaica and how to succeed and what to avoid in organizing projects to promote change.

WATTS, K.F. "The Class Conflicts in Pural Jamaica," Unpublished M.A. Thesis, University of West Indies, 1974. 95 pp. bibliography. [UWI/WIC]

S

WEBSTER, Aimee. "Small Farmer's Role in Jamaica's Economy." New Commonwealth London, 31, No. 1 (January 1961): 65-66.

S

WILLIAMS, Allan Nathaniel. "Agricultural Re-Organization and the Economic Development of the Working Class in Jamaica." Unpublished Ph.D. dissertation, Cornell University, 1976.

S,P

Objective is to develop guidelines for state policy in reorganizing the agricultural sector within a socialist framework.

WRIGHT, U. "Agriculture in Rhymestbury-- Vernam Field." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM]

YOUNG, Ruth C. "The Structural Context of Caribbean Agriculture: A Comparative Study." Journal of Developing Areas, 10 No. 4 (July 1976): 426-444.

S,J

Study carried out on hypothesized characteristics of 'plantation agriculture.' A set of 15 characteristics are defined for all export crops of the Caribbean by country and a principle components analysis performed. Three components were rotated and these explain 60 percent of variance. These were termed progressive peasant agriculture (which is island specific), depending (which is crop specific), and large-scale speciality crop. Jamaica has some

export crops which are small farmer produced. Crops covered in analysis for Jamaica are cocoa, citrus, all-spice, ginger, coffee, bananas, and sugar. Correlation between these components and measures of economic and political position were carried out. Correlations with progressive peasant agriculture were significant

and related negatively to proportion
in agriculture and violent change
in government.

social costs; and setting out structural
factors facing the small-farm sector.
Suggests a general policy to remove
development obstacles. Admits that
process of transformation envisaged
will not be easy. Essential back-
ground reading.

AGRICULTURE:
SURVEYS, CENSUSES, STATISTICS

ALCAN JAMAICA LTD. Agricultural Division
Report. (Annual) Pp. 89. Tables
[RDS/AID/JAM] SC,LC

A yearly summary of agricultural production and research on bauxite lands managed by Alcan both restored and held for mining.

---. Survey of Agricultural Production
on Holdings Farmed by Alcan Tenants.
Jamaica, 1972. Pp. 22 [MOA/JAM 333.5] SC,LC

Land rented is that held for bauxite mining or restored land. Over 4,000 tenants rent 21,800 acres. Survey of 570, one group with concentrated extension and one without. Reports acreage, production, value by size group. Gross value per acre \$175.6/acre for those with extension, \$92.4 for those without.

BOLLAND, O.N. "Literacy in a Rural Area of Jamaica." Social and Economic Studies XX, (March 1971): 28-31. SC,E,S
[MOA/JAM; HWI/ISEP]

Surveyed 176 people (approximately 60 percent of population) of two hillside communities (Content Gap and St. Peters) in upper Yallah Valley. Reports socio-economic data on participants (size of household, rooms per person etc.). Forty percent owned 1 acre or less and 19 percent over 5 acres. Vegetables were main crop (home consumed), bananas (72%), and coffee (56%) and flowers. Little contact reported from Land Authority or Agricultural Society. Farmer wanted help for weather damage. Respondents were tested for literacy (ability to read a paper and write a letter). About 25 percent could not read or write and about 10 percent more could only perform poorly. Farmers did not perceive illiteracy as affecting their farming (it did not affect membership in Jamaica Agriculture Society), but considered it important for children to give them a non-agricultural career alternative. Assumes need for 5 years or more of schooling and estimates from survey

that more than 50 percent of functional illiterates are under 40.

CRUIKSHANK, F.K. and FOX, Helen C.
Dietary Survey of Jamaican Families (lower income) Rural and Urban. Kingston: Nutrition Committee of Jamaica Government, 1961.

SC, N

DAVISON, F.B. Labour Shortage and Productivity in the Jamaican Sugar Industry. Mona, Jamaica: Institute of Social and Economic Research, University of West Indies, 1966.
 [MOA/JAM; UWI/ISEP: HD9100-D]

SC, S, C

Provides a detailed discussion of labor organization, attitudes and gives data on productivity. A survey of workers attitudes and performance is central to this study. Covers number of days worked, number of hours per day, number of tons produced. An insightful section on 'social' factors affecting supply and productivity of labor is included. Provides recommendations.

---. An Economic Study of Small Farming in Jamaica. Kingston: Institute of Social and Economic Research, 1961.
 [FDS/AID/JAM; MOA/JAM]

SC, S

Reports 1954-55, study of a sample of small farmers across Jamaica. Has a detailed methodology chapter discussing non-statistical sample of 87 farmers used for intensive data collection using weekly records, etc. Has detailed data on resource use and returns: Includes life cycle earnings, community infrastructure, farm management, land tenure, capital investment, yields, prices, costs, efficiency of production, income and level of living indices. Provides data on behavior vis-a-vis change, for example, farmers' reaction to changes in product or scale; reactions to changes in intensity or method and entrepreneurial behavior.

Sample has statistical problems, although the detailed survey work should have reduced response error. The study is very old but is considered a classic study. It has ideas and information

worth exploring and may also provide a base line for comparison. Essential reading.

EDWARDS, D.T. "An Economic Study of Agriculture in the Yallahs Valley Area of Jamaica." Social and Economic Studies 3, No. 3/4 (December 1954): 316-341.

SC,S,LC,P

Yallah's valley was the first Land Authority set up to rehabilitate a mostly hill farm area. Data in article describes 1953 conditions based on survey taken of area. Gives data on income (farm and non-farm) and employment by farm size, data, type of land, etc. Suggests development of ruinate and high value crops.

FOOD AND AGRICULTURAL ORGANIZATION/UNITED NATIONS DEVELOPMENT PROJECT. Appraisal Report of Pedro Plains, St. Elizabeth. Appendix V--Agronomy. Appendix VI--Sociological Study (Pina and McCullough). Appendix VII Irrigation Proposal. AGI: SF/JAM 3 Technical Report 1/A VV, VII. Rome, 1971. [UNDP/FAO; FDS/AID/JAM]

SC,S,T

Agro-economic survey was of 199 farmers (i.e. stratified random sample of 31 percent of farms and of area). Also included crop cutting, but drought prevented use of data. Has area, yield, etc. by farm size group, use of fertilizer by high, low, average use. Describes soil, climate, irrigation, farmer services, farmer problems. Has recommendations for improving farm practices and estimated costs of production. VI: The sociological questionnaire was given to sub-sample survey (Pina and McCullough) 25 persons (random in geographical zones). Open-ended interview based on schedule covers age grouping, skills, attitudes, perception of irrigation, particular communal action, etc.

---. Economic Study of the Small Hillside Farmers in the Lucca Cabritta Watershed Complex. FO: SF/JAM 5 Technical Report 8, Rome, 1972. [UNDP/JAM; FDS/AID/JAM]

SC,S,T

Survey of 194 farmers (10 percent sample) carried out in 1968-69. Results indicated half owned practically no land and were part-time, that crop

seasons resulted in periods of insufficient labor and seasonal under-employment. Suggests new technique for yams, and suggests that new management schemes should be kept simple, as present schemes are simple.

- . Forestry Development and Watershed Management in the Upland Regions.
Jamaica: Project for the Rehabilitation and Development of the Pindas River and Two Neighboring Watersheds. (FO:DF/JAM/67/505 tech 13), Rome 1977. [RDS/AID/JAM; UNDP/JAM]

SC,S,T

A watershed survey as background to rehabilitation investment. Gives legal and historic aspects of watershed planning in Jamaica, reviews current plans and discusses impacts. Government financed bench terracing of hillslopes and afforestation are key projects. Numerous appendices provide information on reorganization of the Ministry of Agriculture, soil factors in relation to land capability, land use surveys, climate and hydrology, soil erosion, studies, and social and economic conditions. Appendices of survey data are described under later MOA entry.

- . Ground water survey in two areas of the interior, Jamaica.
Appraisal report of Martha Brae Valley, Trelawney. Appendices V, VI, VII. PEL: SF/JAM 3, Technical Report 2/AV, VI, VII. Rome, 1971. [UNDP/JAM; PDS/AID/JAM]

SC,S

Appendix V covers agro-economic aspects, VI a sociological survey and VII the irrigation project. For agro-economic purposes a survey of 217 farms in the area was made in 1967. Has area, yield, etc. by farm size group, use of fertilizer by high, low, average use. Describes soil, climate, irrigation, farmer services, farmer problems. Has recommendations for improving farm practices and estimated costs of production. In the Appendix VI, sociological survey was a subsample of 50 individuals, but given

detailed and open-ended questionnaire.

HODNETT, G.E. and NANTON, W.R.E.
 "Definitions of a Farm and a Farmer
 in Agricultural Statistics in the
 West Indies." Social and Economic
 Studies 8, No. 2 (March 1959): 190-
 1962. [MOA/JAM; UWI/ISER]

SC,S

A farm in Jamaica is all land
 occupied by one operator for
 agricultural purposes within one
 parish, irrespective of the terms
 of occupation and of the number
 of parcels of which it is composed.
 A farmer is the person financially
 responsible for the operation of
 the farm, who makes profits directly
 resulting from the farming operation.

JAMAICA. Department of Statistics.
Census of Agriculture 1968--69.
 Preliminary Report, Vol. 1.
 Kingston: Dept. of Statistics,
 Agricultural Census Unit, 1970.
 [RDS/AID/JAM: HD 1846 J32] [MOA/
 JAM]

SC,S,IC

Provides a discussion of organization
 and design of census. Note that a
 farm is defined as 1 square of cultiva-
 tion, 12 economic trees, one head of
 cattle, 2 head pigs, goats or sheep,
 one dozen poultry, six beehives.
 Landless farmers may graze animals on
 roadsides, etc. Provides preliminary
 results on number of farms by size
 groups and parishes, by type of manage-
 ment, and by type of holding.

---.---. Census of Agriculture 1968-69.
 Final Report, Vol. 1, Part A; Vol. 1,
 Part B. Kingston, Jan. 1973. [RDS/
 AID/JAM HD 1846 J32] [MOA/JAM]

SC,S,IC

Part A provides data by parish, Part
 B by land authority. Provides tables
 on number of farms by size group,
 acreage of farms by size group,
 utilization of land by farm size (pure
 stand, mixed stand, food forest, grass-
 land, fallow, rinate, etc.), extent
 of crops in pure stand (sugar, citrus,
 yams, bananas, potatoes, coconut, cocoa,
 coffee, other), livestock by farm size.

---. ---. Census of Agriculture 1968-69.
 Final Report, Vol. II, Part A; Vol. II,
 Part B. April 1973. [PDS/AID/JAM
 HD1846 J32] [MOA/JAM]

SC,S,LC

Part A is by parish and Part B by land authority. Tables are provided on farm management (single, joint owner, farm manager) number of parcels and acreage and by farm size. Use of fertilizer (number of farms and weight) and number of crops on which used (number of farms) by farm size; sources of communication (paper, Jamaica Agriculture Society publication, MOA publication, agricultural offices, almanac) by farm size, radio and TV (regular, seldom, never) number of farms by farm size; number of farmers on which crops were introduced (and acreage) by farm size, number of farms and acreage on which crops were abandoned, by farm size.

---. ---. Census of Agriculture 1968-69.
 Final Report, Vol III Part A, Vol III
 Part B, March 1974. [PDS/AID/JAM
 HD1846 J32] [MOA/JAM]

SC,S,LC

Part A gives data by parish, Part B by land authority. Tables for sex and age group of farmer by farm size; farmers' principal means of livelihood (farming, agricultural employment, non-agricultural employment) by farm size; farmers' purpose of farming (subsistence, sale, subsistence and sale) by farm size; farmers' major source of income (export crops, other crops, beef, pigs, poultry) by farm size.

---. ---. Census of Agriculture 1968-69.
 Final Report, Vol IV Part A, Vol IV
 Part B, March 1974. [PDS/AID/JAM
 HD1846 J32] [MOA/JAM]

SC,S,LC

Part A gives data by parish, Part B by land authority. Tables provided on farmers' number of years in farming by farm size, farmers residence on farm (always, sometimes, never) by farm size acreage in farms classified by basis of occupancy (owned, rented in, rented free, other) by farm size; citizenship and types of operators by

farm size (individuals, companies, government), number of farm equipment and implement (tractors, ploughs (tractor and non), trailers, trucks, etc., animal vehicle, mechanical pumps, hand pumps, mechanical reapers, loaders).

- . ---. Consumer price Indices: Rural and Urban. (Monthly or Biannually?) SC,M
[PDS/AID/JAM; MOA/JAM]

Note that methodology is set out in February 1975 issue. Gives price changes in groups and gives unit prices for the current year. More detail for Kingston than elsewhere. Base 1975, and based on 1971/72 household survey. Takes price changes each month.

- . ---. Continuous Social and Demographic Survey Unit. Continuous Social and Demographic Survey: The Sample Design. SC
Kingston, 1968. [NAL: HN 29.P54]

- . ---. Continuous Social and Demographic Unit. A Survey of Housing Conditions in Delacree Pen. Kingston, January 1969. SC,J

A survey of housing conditions in Trench Town, Kingston, September 1967. Part of a series of surveys taken in urban renewal areas.

- . ---. Demographic Statistics Annual. SC,J,S
Kingston. [PDS/AID/JAM]

Appears to be a yearly update series. Covers various age-sex measures by parish. All vital statistics, migration and family planning.

- . ---. Division of Censuses and Surveys. Commonwealth Caribbean Population Census 1970, Jamaica. Volume 5, Nos. 1-14. SC,J,S
Kingston, 1973. [PDS/AID/JAM; MOA/JAM]

Population by parish, by sex, by five year age group, by urban/rural areas and number of dwellings by enumeration unit. The special volumes include economic activity (vol. 4), internal migration (vol. 5), households (vol. 9) and miscellaneous (vol. 10).

---. ---. Expenditure Pattern of Working Class Households 1963-64. Kingston, 1966. SC, M, S

---. ---. External Trade (Quarterly, cumulative), Kingston. [254.8 J223E] SC, M

Totals for external trade by month; imports, exports and re-exports by generalized commodity breakdown; imports, exports and re-exports by value and country of origin/destination direction of trade by countries in currency and trading areas; detailed breakdown of imports, exports and re-exports by quantity and value of items by country of origin/destination.

---. ---. Household Expenditure Survey 1971-72, 1975, 1977 (On data tape, unedited as of December 1977). SC, S, M

A copy of the very detailed, 40 page questionnaire is in FDS/AID/JAM library. The Department of Statistics has the data tapes, though they were not in a useable form in March 1978. An editing tape was being tested at that time with plans to have the report ready by mid-1978. The survey has a highly detailed employment classification (the same as used for published labor statistics) and identification of rural/urban, parish and Kingston metropolitan area is included. The survey was applied twice within a two week period to the same households. The follow-up, Schedule B, is a repeat of the first five sections of Schedule A and deals with basic consumption and income questions.

The 1971-72 survey covered 3,800 households (planned sample 4,000); the 1975 survey 4,300 (5,500), and the December 1977 survey 1,700 planned.

---. ---. Household Expenditure Survey, 1958. Kingston, 1959. [MOA/JAM] SC, M

Sample survey (720 rural, 400 Kingston, 130 main towns). Covered two weeks family expenditures. Quantities published only for rural home consumption, otherwise values per week and percentage of

total expenditure on commodity.

- . ---. Household Expenditure Survey 1956. SC,M,S
Kingston (date unknown).

Provides data on rural expenditure.

- . ---. Household Expenditure Survey SC,M,S
1953-1954. Kingston, 1955. [MOA/JAM]

Survey carried out on 1,500 sample from Kingston alone. Has shillings per week per commodity and percentage of total expenditure on that commodity.

- . ---. Population Trends and Housing Needs. SC,J,S
Kingston, 1974. [MOA/JAM]

- . ---. Production Statistics. Annual. SC,J
(Published in April for previous year),
Kingston. [RDS/AID/JAM; MOA/JAM]

Data are based on surveys. Details of surveys in preface of 1976 issue. Production in agriculture (by crop) is from Information Division of MOA.

- . ---. Quarterly Abstract of Statistics. SC,J
Quarterly. Kingston. [PDS/AID/JAM;
MOA/JAM]

A synopsis of all data collected by the statistics department--climate, demography, migration, health, housing, labor, tourism, banking, prices, production, trade.

- . ---. Report on Citrus Production Survey 1955/56. SC,C
Kingston, 1957.

Four hundred farm sample, with returns by interviewers every 2 weeks. Detailed production data but no costs.

- . ---. Statistical Yearbook of Jamaica. SC,J
Annual. Kingston, March 1977. [PDS/AID/
JAM; MOA/JAM]

Has useful information on the organizational structure of the Government--various ministries, boards, authorities which relate to agriculture. Detailed summary of census of population, parish level data on nutrition status. Latest issue is for 1976 and has the following material: p. 347 table of registered outdoor poor by parish and p. 349 children on poor relief, and other measures of

level and type of relief. Pp. 367-371
data on rural housing schemes by parish
and project.

A 50 page summary of agriculture,
forestry and fishing census and
programs. Pp. 553-557 imports by
sector including food. Pp. 569-595
tables of price indices.

---. ---. Survey of Agriculture 1961-62. SC,C
Kingston, February 1966. [MOA/JAM]

Sample survey of 40,000 farms. Includes
all farms over 100 acres, a sample of
those under 100 acres, 2 visits by
enumerator. All data on survey
methodology listed in detail. Has
size distribution, population, crops
(acreage, sales, etc.), irrigation,
no cost data.

---. ---. Survey of Coffee Production SC,C
in Jamaica, 1953. Kingston, 1954.
Pp. 18.

---. ---. Survey of Costs, Output and SC,S
Investment: Large and Small Agriculture.
Provisional Report for 1964. Kingston,
1971. [MOA/JAM]

This survey covered only farms over 100
acres. 'Large' farms were above 500
acres (all interviewed), 'small' were
100 to 499 (20 percent sample). Part of an
economy-wide business establishment
survey. Survey carried out 1966 to
1968. Covers current expenditures,
purchases, sales by product, etc. and
capital assets. Tables presumably are
totals by parish.

---. ---. The Labour Force (Twice per SC,J,M
year), Kingston. [FDS/MID/JAM]
[MOA/JAM]

Survey of 1 percent of households taken each
6 months. Involves 2-stage sampling
outlined in detail in Appendix 11.
Identifies labor force (employed and
unemployed) by age, sex, training,
economic activity, education, though
not by area. Gives duration of unem-
ployment etc. Looks also at income
of workers. Income estimates for
agriculture may not be detailed enough

for accuracy, and employment data may be inappropriate. Note that sample was changed in April 1975.

- . Jamaica Development Bank. Self-Supporting Farmers' Development Programme, Socio-Economic Evaluation Report, March 1976, 52 pp. [plus tables and questionnaires]. [RDS/AID/JAM]

SC,IC

Survey of farmers in the SSFDP (farms of 5 to 25 acres) made in September-October 1975. Sample size about 600 (20 percent). Survey is designed to measure the impact of the farm loans on small farmers' assets and income. The SFDP program is explained (and placed in the context of overall rural development). The sample design and methodology is well described. The sample is stratified by four combinations of crop and livestock and results are areally disaggregated by Land Authority region. For each land authority, data on farm size distributions, use of inputs, annual livestock and crop output, crop expenses, operating capital, farm and livestock and crop output, crop expenses, operating capital, farm and non-farm income (and changes from previous period). are given. P. 28 comments on marketing problems. Note that there is a 1969 pre-program survey of SSFD farmers (MOA, 1969).

- . ---. Self-Supporting Farmers' Development Programme. Socio-Economic Evaluation Report, December, 1977. December 1977, 39 pp. +4 appendices. [RDS/AID/JAM]

SC,IC

A second evaluation of the SSFDP loan program. A 12 percent sample (422) of participating farms from a random stratified sample. Data may not be edited. Data is to evaluate loan program impact on farmer income. Also evaluates attitudes and socio-demographic information. Data do not deal with cost by commodity, but only for total farm (not clear how is obtained). Questionnaire included.

- . ---. Self-Supporting Farmers' Development Programme. Self-Supporting

SC,IC

Farmers' Development Programme: Socio-Economic Evaluation Report. Kingston, December 1977.

Study of 422 (a 12 percent stratified sample) from those with about 50 percent disbursement of loans. It includes an attitudinal section and quantitative information about farm activities. Survey does not cover cost by enterprise, just overall costs per farm and post programme. Questionnaire is attached to document.

---. Ministry of Agriculture. Data Bank and Evaluation Division. An Agro-Socio-Economic Sample Survey, Pindars River and Two-Meetings Areas, Kingston, 1977. 192 Tables, 4 Appendices. [PDS/AID/JAM]

SC,S

A comprehensive survey, commissioned by MOA and USAID as a part (two-volume descriptive analysis of area and program is also available) of feasibility study for an Integrated Rural Development Programme in the area. The introduction carefully specifies the sample design and technique. Six hundred fifty-seven of four thousand total farmers were surveyed in a random stratified sample. Data collected by 7 farm size categories includes: number of farmers by size of farm, age group, marital status, family size, education, dependent characteristics, experience in farming, crop, conservation adoption, market center, type of purchased input, livestock types, credit use, value of output, off-farm employment. Data is available on cards.

---. ---. Forecast of Production for Selected Agricultural Commodities, December 1977. Kingston, November 1977. [PDS/AID/JAM]

SC,S,M,C

Presents crop forecast for the following month based on extension agent reports. There is a table for each parish and an all-island summary is given for 50 major crops.

---. ---. Data Collection Statistics and Evaluation Department. Indices of Domestic Agricultural Production and Farm Gate Prices, 1970, 74. Kingston, 1975. [PDS/AID/JAM]

SC,S,M

Based on data collected monthly from extension agents and market intelligence officers. Weights used in overall indices are described. Has also annual farm gate prices by commodity for 1973-74.

----. ----. ----. Indices of Domestic Agricultural Production and Farm Gate Prices 1970-1976. Kingston, June 1977. [FDS/AID/JAM, 2 copies]

SC, S, M

The third in a series of agro-economic indicators published annually. Data collected monthly by extension agents and market intelligence officers. Estimated annual prices by commodity are given for 1976. Contains summary evaluation of trends. Data presented by quarter and by major crop for 1976 are not given by parish. In 1978 this survey will report farm input prices.

----. ----. Division of Economics and Statistics. Final Report on Sample Survey of Registered Cane Farmers Supplying Sugar Cane Factories in Jamaica. Kingston, 1963. [MOA/JAM]

SC

Gives number of farms by production, percentage of farm in cane, yield, by parish and farm size.

----. ----. ----. Sample Survey of Registered Cane Farmers Supplying Cane Factories in Jamaica: West Indian Sugar Company, Monymusk, Clarendon. Kingston, 1963. [MOA/JAM]

SC

Provides the results of 1962 survey: size distribution of farms, yield, percentage use of particular techniques (fertilizers, etc.) area in production, etc.

----. ----. ----. Survey of Cane Farmers Supplying Stevens Factory, Clarendon. Kingston, 1963. [MOA/JAM]

SC

Production, yield, techniques, area data by farm size but no costs.

----. ----. Production Unit. "Monthly Report, Estimate of National Crop Production." [loose tables in file folders].

SC, S

These estimates are the result of extension agent reports. A two month lag in availability. On December 16, October's report was the most recent. Reports are given by region (3), by crop, acreage (planted, growing). Also mixed with these are explanations for problems and failures to meet targets and reports of the Crop Lien program which was initiated as part of the Emergency Production Plan. This program helps remove credit reviews and other barriers to small farmers. Available from J. Robinson, Production Unit, MOA.

---. ---. Self-Supporting Loan Scheme: SC, LC
Survey of Farms in the Pilot Areas,
 Kingston, 1969. 60 pp. [MOA/JAM:
 63 (729.2)]

---. Ministry of Lands and Agriculture. SC
 Division of Economics and Statistics.
An Agro-Economic Survey of Farms in
the Bushy Park Area of St. Catherine
1959-60. Kingston, 1960. [MOA/JAM]

Seventy-eight farmers were interviewed who were members of the Bushy Park Small Farmers Irrigation Co-operative Society, Ltd. Average size of farm approximately 6 acres, and more than half were part-time. Farms essentially sugar-cane monoculture. Covers costs, returns, estimated income. Suggests in recommendations that sugar is acceptable for part-time, but dairy or vegetable needed for full-time.

---. ---. ---. "Final Report on an SC
 Agricultural Survey in Yallah's
 Valley Land Area." (mimeo) Kingston,
 January 1961. [MOA/JAM]

Interviewed all farmers five years after (or into) the project. Provides tables.

---. ---. ---. The Economic Organization SC, C
of Small Scale Farming: Banana, Coconut
and Cocoa, Highgate St. Margarets 1958-59.
 Kingston, Jamaica 1960. [MOA/JAM]

Twenty-seven farmers kept farm and consumption accounts: covers crops, returns, use of inputs, etc.

----. ----. ----. The Economic Organization of Small Scale Farming: Citrus, Ground Provisions and Livestock, Brokenhurst, Manchester, 1958. [MOA/JAM]

SC,C

Forty-three farmers selected by extension personnel, with above crops (ground provisions are food plots) in Brokenhurst area of South Manchester. These farmers were to keep records (extension checked). The first year 41 records were kept, in the second 20 Covers crops, returns, use of inputs, etc.

MAYPFS, J.M. Meat Consumption Statistics of the Commonwealth Caribbean. Department of Agricultural Economics and Management, University of West Indies, 1970.

SC,C

Develops consumption data by island 1950-68 by type of meat. Also has prices.

O'LOUGHLIN, C. "The Measurement and Significance of Agriculture Sector Statistics in National Accounting." Social and Economic Studies 6, No. 3 (September 1957): 363-379. [MOA/JAM; UWI/ISFP]

SC

Outlines sources of statistical data and methodology for certain estimates.

PANKINE, Iloyd B. Comparative Economics of Root Crop Production in Selected Countries of the Commonwealth Caribbean. St. Augustine, Trinidad: Department of Agricultural Economics, University of West Indies, 1970. [UWI/ISFP]

SC,C

Surveys were carried out in various Commonwealth Caribbean countries. In Jamaica, 241 farms were surveyed January to March 1970 in a variety of land authorities to estimate production costs of dasheen, and irish potatoes. Sampling procedures outlined. Size and scatter of root farms in survey did not allow large/small farm breakdown. Looks at labor use, productivity in relation to age and use of hired labor, and impact of family labor on net returns. Describes items of land preparation planting dates, fertilizer use, but doesn't estimate budgets on each, just cost averages. Does have task breakdown on labor (average). Gets

attitudes to price change (what would you do if price increased by 1 cent, 2 cents, etc.) and why more root crops not planted. Has questionnaire at back.

---. and Marlene HEE HOUNG A Preliminary View of Cassava (*Manihot esculenta*) Production in Jamaica. Occasional Series No. 6. St. Augustine, Trinidad: Department of Agricultural Economics and Farm Management, December, 1971
18 pp.

SC,C

Provides a summary of data on cassava in Jamaica and reports the results of a 19 farm survey on costs and returns in the St. Elizabeth and Manchester areas.

ROBOTHAM, Hugh. Jamaica Agricultural Society North Clarendon Rural Development Self-Help Project Survey. Herald Ltd., Kingston, 1969. 138 pp. Bibliography. [MOA/JAM]

SC,E

Gives farm project history and describes 'new' approach based on determination of group needs and rural development using JAS. All farms in project (2,167) are interviewed to get overall picture of region--provides results on education, literacy, residence, membership organizations, housing, water, electricity, communications, etc., husbandry, number of distribution of farms, fragmentation, land use (crop yields but no costs--sugar, trees) livestock, building, machinery, equipment, hired labor, fertilization, credit and attitudinal questions.

SCOTT, A. "Problems Which Beset Cane Farming," Farmer 79, 1974: 92-103. [MOA/JAM]

SC,S,C

Provides a report of a Cane Farmer Survey undertaken in August/November 1973, concerned mainly with the island-wide problems of cane farmers. The survey was carried out by a system of random sampling and farmers were categorized according to size of their farms. The problems revealed by the survey, essentially micro-economic in nature, were: (1) the general shortage of labour; (2) the complete disorganization of the harvesting operations; and (3) the inadequate water supply in the Clarendon plains area.

STONE, Carl. "A Sociological Survey of
Tenant Farmers on Project Land Lease."
(mimeo) Kingston, 1974. Pp. 39.
[MOA/JAM]

SC,S,LC

Provides the results of a socio-
logical survey of 420 tenant farmers
in 1974. Describes basis of survey
and notes previous occupation, farm
size (most 1/3 to 2 acres), income before
land lease (25 percent could not answer this
question), education level, age, and
obtains feedback on scheme: 35 percent com-
plained of shortage of cash to meet land
preparation expenditures not financed
by land lease and to hire labor; others
mentioned the lack of water; or inadequate
land. Survey looked at attitudes on
benefits of program, not objective
measures because half hadn't any cash
income, i.e. only 194 gave gross sales.
Benefits were seen through dignity etc.
(28 percent), cash income (over 20 percent),
increased food (16 percent). Hostility to coop-
erative farming was noted. Not very detailed
economic information, though social
information reasonably useful.

WILLIAMS, H.D. Report, major producers
survey, St. Catherine. Kingston:
Ministry of Agriculture, 1966. [MOA/JAM]

SC,S

"Major" covers 'significant' producers
of the product.

WILLIAMS, P.I. "A Note on the Specification
and Estimation of a Bias in the Measure-
ment of the Size and Growth of Real GDP
in Jamaica." Social and Economic Studies
22, No. 3 (September 1973): 384-394.

SC

Earlier article pointed out negative bias
of price deflator of capital goods used
by Dept. of Statistics because there is no
index of construction labor costs. This paper
estimates effect of this bias on GDP giving
a mean estimate of ± 5 percent. However
the null hypothesis could not be rejected.
Growth of GDP had a mean bias of .4 percent
and range from -2.8 to 8.8 percent.

---. "Gross, Fixed Capital Formation in
Jamaica 1948-66 - A Constant Price

SC

Series." Social and Economic Studies
20, No. 4 (December 1971): 369-377.

Author indicates three sources of bias in available current data and corrects for one. Then estimates a corrected price deflator for the series.

AGRICULTURE:
EXTENSION, EDUCATION, ORGANIZATIONS

ALLEYNE, Egbert Patrick. "Training and Management Policy for Agricultural Research Scientists in the Governmental System: A Study in Two Caribbean States- Trinidad and Tobago, and Jamaica." Unpublished Ph.D. dissertation, Cornell University, 1975.

E,T,D

Study sought to determine existing problems relating to management policy of agricultural research. Data were generated by interviews with scientists and administrators and questionnaires to extension agents. Data relate to organization, recruitment, support, in-service development, internal management procedures including rewards, project teamwork, monitoring of performance, etc. No discernible policy was found on recruitment and training to ensure that anticipated needs were met. Almost all graduate training was received outside the region and evidence suggests orientation was inadequate. Procedures were not evident for guidance and direction of research and rewards (if present) did not relate to research performance. Extension agents knew little of on-going research work.

ARAÚJO, Jose E. The Communal Enterprise. Instituto Interamericano de Ciencias Agrícolas (IICA), Kingston, March 1978, 43 pp., bibliog. [RDS/AID/JAM]

E,LC

This report is the first chapter of a larger work by Dr. Araujo. The main theme is the advantages of collective action as a part of the process of agrarian reform and land redistribution. Includes a how-to-do-it section analyzing the stages of organization and physical creation of a communal group.

---. The Theory Behind the Community Enterprise, Seminar in Jamaica. Instituto Interamericano de Ciencias Agrícolas (IICA), Kingston, March 1978, 13 pp. [RDS/AID/JAM]

E,J,LC

Report is the outline of a seminar held Feb. 1978. Dr. Araujo is the Director General of IICA and the report is the second in a series on this topic. This short document summarizes IICA experience in regard to what works and what does not in community development and case study experience in Latin America is cited.

CARIBBEAN AFFAIRS. Agricultural Research in Jamaica. Proceedings of a seminar held at University of West Indies, June 19, 1965. Kingston: Extra-Mural Dept. of University of West Indies 1965. [MOA/JAM]

F, T

Summarizes speeches of various experts on what should be done and summarizes critical discussion.

CHASE, R. Darwin. A Report on the Co-Operative Movement in Jamaica. Organization of Co-Operatives of America 1971. [MOA/JAM]

E, P

In 1970 there were: 132 Credit Unions, 4 Co-ops for input distribution, 22 for banana boxing, 20 of coffee producers, 10 of cocoa producers and 13 of fishing. Has detailed recommendation on each phase of operation. However, does not provide a real evaluation, but only a description of co-operative action.

EVANS, P.C.C. "School and Society in Rural Jamaica: A Survey of Rural Elementary Schools in Jamaica, with Particular Reference to the Lives Children Lead in Their Communities and the Occupations They Follow When They Leave School." Unpublished Ph.D. dissertation, University of London, Institute of Education, 1965.

E

FVEDDEPJOHN, Herbert C. "Recommendations Relating to the Organization and Operation of a Dairy Co-Operative in Jamaica. Report on a survey made in Jamaica." March 1966. Pp. 15. (Mimeo). [PDS/AID/JAM]

E, C

FONEE, Nancy. "Competition, Conflict and Education in Rural Jamaica." Human Organization 31, No. 4 (Winter 1972): 395-402.

E

Describes attitudes to secondary education in a rural community. Since competitive access to education became available it is considered the major means to upward mobility. Results of sample survey of 40 household heads show education is regarded as key means to success. There are inter-personal conflicts between those whose children attain secondary school and those who do not. Does not refer to role of education to agriculture. Includes a use breakdown of community into 5 groups wage laborers, small independent farmers (3 to 10 acres), big farmers, white collar workers, and large estate owners (10-50 acres). Characteristics provided for each group indicates role of off-farm employment and hiring in of labor.

FOOD AND AGRICULTURE ORGANIZATION. Report of the FAO/DANIDA Expert Consultations on Extension Training in the Caribbean and Latin America. Rome, 1973, v+55pp.

E,J

Consultations were to take a new and critical look at extension training needs from the farm-level point of view and to examine the links between the various kinds of extension people and the farmers, and among the farmers themselves. Consideration was also given to seeking means of involving peasants more directly in the extension endeavour through representative peasant organizations. The emphasis throughout was on the development of extension training that is relevant to farm needs.

---. Rural Extension in Latin America and the Caribbean. Report of the Technical Conference on Agricultural Extension and Rural Youth, Chiclayo, Peru, 29 November - 12 December 1970. Rome, 1971. 150 pp.

E,J

The agenda for this Conference was prepared on the basis of the most relevant current aspects of agricultural extension in Latin America and the Caribbean. It was divided into three sections permitting delegates to analyze separately background and up-to-date appraisal of extension work in the region; an outline for integrated

extension work.

GOMES, P.I. "Agricultural Extension - Recent Trends in Agricultural Education for Rural Development." Journal of the Agricultural Society of Trinidad and Tobago 75, No. 4 (1975): 372-380. E,J

GOODING, E.G. "How Well Does the University of the West Indies Faculty of Agriculture Serve the Caribbean's Farming Community?" Caribbean Farming 3, No. 4 (1972): 23-24. E,J

HAYE, Winston. "A Model for Leadership Development Component of Vocational Agriculture Programs in Jamaica." Unpublished Ph.D. dissertation, Iowa State University, 1976. E

Carried out a survey of a stratified sample of schools with vocational agriculture, and interviewed administration and teachers for qualification, and estimated attitudes. Half of teachers possessed level of education required by MOE to teach vocational agriculture. Three-fourths of teachers had less than 5 years experience (indicating a high turnover). Author develops a suggested 3-year vocational education program for leadership development using a Future Farmers of America model.

HENDERSON, Thomas H. "Factors Associated with Job Performance of Agricultural Extension Workers in Jamaica, West Indies." Unpublished Ph.D. dissertation, University of Wisconsin, 1969. E

Purpose of study was to determine factors associated with effective job performance among extension workers. A sample of 99 officers (some educational, others service and regulatory and Land Authority) was interviewed using 2 schedules. These covered pre-service background, in-service background, subjects evaluation of adequacy of training and experience and personality variables. Ratings of performance by farmers, peers and supervisors was also made.

---. "The Role of Agricultural Extension in Maximizing Regional Self-Sufficiency in Food Supplies" Proceedings of the Tenth West Indies Agricultural Economics Conference Georgetown, Guyana; 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. Pp. 122-130. F,J

---. "The University of the West Indies and Agricultural Extension Work in the Caribbean." Agricultural Progress 48, (1973): 102-109. E,J

HOYTE, Clyde. History of the Jamaica Agricultural Society, 1895-1960. Pp. 54. [RDS/AID/JAM] E

HUIZER, G. Rural Extension and Peasant Motivation in Latin America and the Caribbean. Food and Agricultural Organization, Agricultural Education and Training Service, Human Resources and Institutions Division. Occasional Paper No. 2, 1973. Pp. 25. E,J

This paper examines some of the central structural and institutional relationships which have a close impact on the development of effective extension work. Of particular concern is the involvement and participation of the peasant in extension and ways and means by which peasant organizations can become a more effective instrument in the extension process.

HUNTLEY, Milburn J. The Phymesfield Dairy Development Cooperative Ltd. Agricultural Cooperative Development International, Washington, D.C., December 1969, Pp. 30 + appendix. [RDS/AID/JAM] E,C

A consultant report on the progress of USAID funded dairy cooperative. Defines the program, provides an economic evaluation, discussion of problems and recommendation. Generally favorable and recommends more technical assistance.

JAMAICA. Ministry of Education. Five Year Plan for Education. Kingston, Jamaica, December 1977. E

Contains plans for rural education changes and expansion.

JAMAICA AGRICULTURE SOCIETY. "The Annual Report, April-March." Farmer (July or somewhat earlier month). [MOA/JAM]

---. The Farmer (Bi-monthly or quarterly). [MOA/JAM]

Gives short reports of research results extension advice etc.

MUNN, K. "The Role of Farmers and Their Organizations." Farmer 79, No. 1/2 (Jan/Feb 1974): 12-13, 15. [MOA/JAM]

PROSSEP, R.C. "Jamaica: Residential Camps and Other Programs for Out-of-School Youth." In Education for Rural Development. AHMED, M. and COOMBS, P.H. (eds.), New York: Praeger Press, 1975.

REVIEW TEAM ON RURAL SERVICES. Agricultural Sector Study. Agricultural Education. Pp. 18 (no date, no author). [RDS/AID/JAM]

Contains a description and analysis of the seven agricultural training programs (e.g. 4-H, Agricultural Society) and recommendation of the review team. The date seems to be circa 1974.

SMITH, M.G. "Education and Occupational Choice in Jamaica." Social and Economic Studies 9, No. 3 (1960). [MOA/JAM; UWI/ISEP]

Reports on occupational preference (3 types) preferred by school age children and young adults in 8 areas of rural Jamaica. Found very low percent of either group wished for own-account farming or rural labor. Adults over 25 have more realistic preferences. Author suggests aspirations are to escape rural situation. Schools reinforce urban image. Problems are likely when system reinforces aspirations and does not allow them to be realized.

STEEB, Edgar S. Agricultural Extension Education In Jamaica. Jamaica: Agricultural Planning Unit, Ministry of Agriculture and Land, 1968. [MOA/JAM 308:63(729.2)]

lists out number of extension agents per agency, including MOA marketing boards, Christiana and Yallahs Valley Authorities as at 1968.

MOA	47
Livestock	27
Land Authority	
Yallahs V.	16
Christ.	32
Watershed Protection	5
Cane Farmers Assoc.	2
Banana Growers Assoc.	26
Citrus Bd.	9
Coffee Bd.	5
Coconut Bd.	5
	<u>173</u>

which was an average of 918 holdings and 9,000 acres per extension officer. (For MOA there were 3,000 farms per extension officer.)

WILLIAMS, D.L. and HAYE, W. "The FFA Future Farmers of America--A Model for FFJ Future Farmers of Jamaica." Agricultural Education 49, No. 8 (Feb 1977): 180-181. E

WOOD, Aston S. Agricultural Education in Jamaica, a Review and a Proposal for Development. Instituto Interamericano de Ciencias Agrícolas (IICA), Kingston, October 1977, 105 pp. + vi appendices + bibliog. [SDS/AID/JAM] E

Includes detail for establishment facilities and curriculum for agricultural education at all levels.

YOUNGJOHNS, B.J. "Primary Co-operatives in Jamaica." Year Book of Agricultural Co-Operation 1975. Oxford, U.K.: Basil Blackwell, 1975. Pp. 163-175. E, M, P

There are 246 primary co-operatives in Jamaica with an aggregate membership of about 160,000. There are also 125 credit unions. Apart from bananas, coffee and cocoa the most important co-operative marketing organizations are concerned with potatoes and fishing.

AGRICULTURE: LAND, CREDIT

AGRICULTURAL SECTOR STUDY. Sector Brief: Land Use and Development. (No author, no date, no sponsoring agency) (prob. Jamaica, MOA) (Xerox), Pp. 14. [FDS/AID/JAM] LC,S

A brief survey of land use, physical base, tenure, demography, agricultural policy, institutions and sector performance. Date seems to be 1974. Provides table of land use capability in acres by class for each parish. Also discusses tenure and related laws and boards.

BARKER, G.H. "Soil Survey in Jamaica." Journal of the Scientific Research Council of Jamaica I, (1970). [MOA/JAM] LC,T

BARNER, Theodore P. Agricultural Credit in Jamaica: Evaluation and Recommendations on Accounting and Record Keeping. US/AID 1964. [MOA/AM 332.71(729.2)] LC,S

Does give information on credit board law and People's Co-Op Boards, but otherwise is specifically accounting.

BAXTER, A.F. "The Diffusion of Innovations: Soil Conservation Techniques in the Yallahs Valley, Jamaica." Unpublished M.Sc. thesis. University of West Indies, Mona, Jamaica, 1973. Pp. 194. [UWI/JAM] LC,T

BAYNES, Ronald A. "The Ideal Environment for Effective Agricultural Credit in the Caribbean." Proceedings of Twelfth West Indies Agricultural Economics Conference St. Johns, Antigua, 1977. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1978, pp. 175-180. LC,J

Comments by adviser to private bank on reasons for the declining productivity of agriculture, despite available agricultural credit. Suggests that official policies do not actively encourage agricultural expansion.

BECKFORD, George. "Land Reform for the
Proceedings of the Seventh West Indian
Agricultural Economics Conference,
Grand Anse, Grenada, April 9-15, 1972,
St. Augustine, Trinidad: University of
West Indies, 1973. [PDS/AID/JAM]

IC,J

This article reviews some of the theoretical issues in land reform, some third country experience, presents an analysis of effects of land reform on agricultural development and looks at land reform in the broader context. Gives 1961 estimates of output per unit land and output per person for large and small farms. In Jamaica small farms had twice the output per acre of large. Uses this to calculate likely effects of land reform. Suggests all land should be leased, that farms be 5-25 acres, and that there be provision of modern inputs.

BOURNE, Compton. "Dynamic Utility-
Maximizing Models of the Demand for
Money in Caribbean Economics (with
an Application to Jamaica." Social
and Economic Studies 23, No. 3
(Sep 1974): 418-445. [MOA/JAM]

IC,J

Provides a summary of characteristics of economy likely to affect monetary behaviour and then develops a model of the household demand for money and business firms demand for money and fits them using Jamaican data. Estimates interest rate, price inflation and income elasticities of money demand. Results suggest relatively unimportant roles for internal rates and price inflation and important role for incomes, but are very tentative.

BUCKMIRE, G.E. "Land Use and Agricultural
Development in the Commonwealth Caribbean."
Proceedings of Seventh West Indies Agri-
cultural Economics Conference, Grand Anse,
Grenada, April 9-15, 1972. St. Augustine,
Trinidad: Dept. of Agricultural Economics,
University of West Indies 1972. Pp. 40-
47. [MOA/JAM]

LC,J

Sets out a land use policy including no sales to non-national. Systematic plan for zoning, government control of prices. Suggests flat, good agriculture land is going into other uses.

CALLENDER, Charles Victor. "The Development of the Capital Market Institutions of Jamaica." Supplement to Social and Economic Studies 14, No. 3 (September 1965), pp. 174. [MOA/JAM; UWI/ISER] LC,J

Includes a description of Agriculture Loan Society Board (Peoples Co-operative Banks) to 1960 and their financing. Also describes the Agricultural Development Corporation at that time.

CAMPBELL, I.G.; CPUICKSHANK, A.H.; YANKEY, J.B. Agricultural Credit in General Rural Development and the Credit Strategy for Small Farmers in the Less Developed Countries of the English-Speaking Caribbean. Fridgetown, Barbados: Caribbean Development Bank, 1976. Pp 32. LC,J

After discussing some general institutional features of Credit Agencies serving small farmers in the less developed countries of the English-speaking Caribbean, this paper examines the role of the Caribbean Development Bank in rural development credit. Attention is given to the volume of credit absorbed and available, the ratio of disbursement to commitment, and the sub-sectors which are affected most. Finally, after identifying the constraints to the further expansion of small farmer credit, recommendations are made for using agricultural credit in a package aimed at improving rural community life.

CHRISTIANA AREA LAND AUTHORITY. Annual Report, 1955. Kingston, 1955. [MOA/JAM] LC

Has number and size of holdings, form of tenure, land use, credit use and credit worthiness, and farm population tenants and sugar cane producers. Object was to collect data for organization of co-op credit group. Thirty-eight percent of farmers had debt.

CLARKE, Edith. "Land Tenure and the Family in 4 Selected Communities in Jamaica." Social and Economic Studies 1, No. 4 (August 1953): 81-117. [MOA/JAM; UWI/ISER] LC

Data based on field work in fertile farming area, short-term lease area, and very isolated village. Two categories - 'family land' and 'bought land.' 'Family land is inherited and is split among family members. 'Bought' land is bought by owner and can be sold or willed to one person. For the next generation it is family land.

- CPEIGHTON, A. "Element of Climate in North Eastern Jamaica and Kingston Area." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1972. [GD/UWI/JAM] LC
- DAVIS, N. "Ground Water Resources in Jamaica. Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM] LC
- EHRHARDT, P.A. "Some Aspects of the Relation between Water and Agricultural Production in Jamaica." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1969. [GD/UWI/JAM] LC
- . "Some Aspects of the Relation between Water and Agriculture--Production in Jamaica." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1969. [GD/UWI/JAM] LC
- EYRE, I.A. "Environment and Education." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM] LC
- FLOYD, Barry. "Agricultural Innovation in Jamaica: The Yallahs Valley Land Authority." Economic Geography 46, No. 1 (January 1970): 63-77. [UWI/ISER] LC, Pr

Describes background and activities of the Yallahs Valley rural rehabilitation system, using an authority of type like TUP, carried out in hill-farming area. Provides an evaluation of the scheme. Essentially limited success (with vegetables, cattle, economic practices) operating and criticisms of returns and costs, and an administration which tried to work on everything - 'Haste makes waste.' Other problems were lack of

personnel, faulty plans, insufficient thought into marketing. Costs for 17 years \$360 (1970) per person per year.

- . Agricultural Innovation in Jamaica: The Yallahs Valley Land Authority. Occasional Publication 4, Department of Geography, University of West Indies, (no date) 1961? [MOA/JAM]

IC, Pr

Discusses some problems of this project, should be supplemented by article by same author in Economic Geography, 1970.

- FOOD AND AGRICULTURE ORGANIZATION.
Agricultural Credit in the Caribbean Area. Rome, 1976. Pp. 58. [MOA/JAM: 332.71 (729)]

LC, J

- FOOD AND AGRICULTURE ORGANIZATION/U.N. DEVELOPMENT PROJECT. Agrarian Reform and General Agricultural Development, Jamaica: Project Findings and Recommendations. AG: DP/JAM/74/003 Terminal Report, Rome, 1975 (restricted). [UNDP/JAM] [EDS/AID/JAM]

LC, S, P

Report of three man team which spent several months in Jamaica. Provides a current situation of Jamaican agriculture (22 pp.), analysis of farmer situation based on census and has a series of detailed recommendations.

- . Development and Management of Water Resources, Jamaica: Bull Savanna. AGI: DP/JAM/70/512/Tech Rep 5, Rome 1974. [UNDP/JAM]

LC, I, P, Pr

Provides information on land and water use (a semi-arid area), present irrigation and future estimated demand for irrigation. Also provides detailed water quality and hydrology information.

- . Development and Management of Water Resources, Jamaica: Dry Harbour Mts., North Coast Basin. AGI: DP/JAM/70/512/Tech. Rep. 3, Rome 1974. [UNDP/JAM]

LC, I, P, Pr

Land use, water demand, and government development plans for tourist water and irrigated agriculture.

- . Development and Management of Water Resources, Jamaica: Rio Cobre Basin. AGL: DP/JAM/70/512, Tech. 2, Rome 1974. 60 pp. + Plates. [RDS/AID/JAM]

LC, T, P, Pr

Summarizes material in annexes, i.e. technical data on the basin, its water resources, water quality, land and water use, irrigation, plus development and investment plans.

- . Development and Management of Water Resources, Jamaica: Rio Cobre Basin, Annex I Geology: Annex II Water Resource Appraisal. AGL: DP/JAM/70/512/i,ii, Rome, 1974. [UNDP/JAM] [RDS/AID/JAM]

LC, T

Annex II has detailed water availability data.

- . Development and Management of Water Resources, Jamaica: Rio Cobre Basin Annex III Water Quality, Annex IV Land and Water Use, Annex V Irrigation. AGL: DP/JAM/70/512/iii,iv,v, Rome, 1974. [UNDP/JAM] [RDS/AID/JAM]

LC, T, C, P, Pr

Has detailed information on land use by farm size. Also has section on rice production agronomy and costs, and analysis of irrigation projects.

- . Development and Management of Water Resources, Jamaica, Rio Minho-Milk River Basin. Tech. Report No. 1, AGL: DP/JAM/70/512, Rome, 1974. [UNDP/FAO]

LC, P, Pr

Overall summary of annexes, including suggestions for development of Clarendon plains.

- . Development and Management of Water Resources, Jamaica: Rio Minho-Milk River Basin, Annex I Geology. AGL: DP/JAM/70/512, Tech. Rep. 1/1, Rome, 1974. [UNDP/JAM]

LC, T

- . Development and Management of Water Resources, Jamaica: Rio Minho-Milk River Basin, Annex V, Economic Studies (Tables), Annex VI Economic Studies (Text). AGL: DP/JAM/70/512 Tech. Rep. I/V, VI. [UNDP/JAM] [RDS/AID/JAM]

LC, S, T, P

Covers present land use and alternative

for intensive use of Clarendon plains. Discusses dairying, and uses ad hoc collected cost and returns data for analysing this and crop activities. Calculates benefits and costs of improved irrigation.

- . Development and Management of Water Resources, Jamaica: Negril Basin.
AGL: DP/JAM/70/512 Tech. Report 4,
Rome 1974. [UNDP/JAM]

LC,T,P,Pr

Has land and water use, cropping land class, water demand estimates, irrigation data, plus a great deal of detailed technical material.

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Pedro Plains, St. Elizabeth Area. AGL: SF/JAM3/Tech Rep 1, Rome, 1971.

Overall summary of technical material on resources, agronomy, soil, land use, benefits and costs of irrigation. More details in appendices.

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Pedro Plains, St. Elizabeth Area. Appendix I/1A Geology; Appendix II Drilling.
AGL: SF/JAM 3/Tech Rep 1/1A/1,11,
Rome, 1971.

LC,T

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Pedro Plains, St. Elizabeth Area. Appendix III Hydrology; Appendix IV Water Quality.
AGL: SF/JAM 3/Tech Rep 1/III, IV,
Rome, 1971.

LC,T

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Martha Brae Valley "relawndy." AGL: SF/JAM 3, Tech. Rep. 2, Rome, 1971.

LC,T,E,Pr

Overall summary of technical material on resources, agronomy, soil, land use, benefits and costs of irrigation. More details in appendices.

- . Ground Water Surveys in Two Areas of

LC,T,P

the Interior, Jamaica: Summary of Findings of Hydrology Recommendations on Moneague Area. AGL: SF/JAM 3/Tech. Rep. 4, Rome, 1972.

Area has solution channels Cost and technical difficulties in plugging sinkholes and capturing run off are much too great for use to be practical. Area has limited potential for irrigated crops and with a sparse population, little need for domestic water.

---. Irrigation Development, Jamaica: Project Findings and Recommendations. AG: DP/JAM/73/011 Terminal Report, Rome 1976. [UNDP/JAM] [EDS/AID/JAM]

LC,T,P,Pr

Gives status of UNDP related irrigation projects and recommendations for further work in Clarendon and Pedro Plains.

---. Jamaica, Watershed Management. FO: DP/JAM/67/505, Rome, 1975. (Interim Report 1973).

LC,T,P,Pr

A discussion of soil erosion and soil loss problem and recommendations.

---. Water Resources Survey of Montego River Basin. AGL: SF/JAM 3, Technical Report 4.

LC,J

Water resources for Montego Bay analyzed. Little agricultural demand suggested.

FOUND, William C. "A Multivariate Analysis of Farm Output in Selected Land-Reform Areas of Jamaica." Canadian Geographer 12, (1968). [UWI/JAM]

LC,SC,S

Land settlement projects have been criticized with respect to size of settlement properties, types of persons selected, location of homes with respect to land, and types of land use encouraged.

Study analyses data from a 20 percent sample of 6 land settlements in south-central Jamaica. Useful data on land, gross income, physical characteristics of settlements, etc. are tabularly summarized. Major part of article reports a regression analysis of gross

income in each project as a function of size of farm, land use diversity, distance of home from farm, age, number of dependents, non-farm income, and acreage of land outside the settlement. This regression was used to analyse criticisms of the system. F2s were not very high and standard errors are not reported. Factors most consistently related to output (gross income) were acreage of farm and distance to holding. Some variables showed unusual signs. Given the empirical nature of the function, this does not seem surprising.

- . "Land Use Patterns and Problems in Selected Land Settlements in S-Central Jamaica: A Study in Multiple Regression Analysis." Unpublished Ph.D. dissertation, University of Florida, 1966, pp. 394.

IC

Dissertation is a study of patterns and problems of land use in six land settlement program areas. Twenty percent of farmers in areas were interviewed. Regression of gross income as a dependent variable was carried out. Analysis indicated effects of farm size, crop diversification, non-farm income and distance of house from holding as affecting land use practices. For analysis see also Found (1968).

- GAYLE, B.C.H. "The Financing of Sugar by Commercial Banks in Jamaica." (Mimeo) Mona: Dept. of Economics, University of West Indies, 1968.

LC, C

- GEORGE, Vincent. "The Underutilization of Agricultural Land in Jamaica." Unpublished Ph.D. dissertation. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM]

LC

- GRANT, V.B. "Jamaican Land Law." Unpublished M.A. thesis, University of London, 1948.

LC

- HARRIS, Brian J.D. "Some Aspects of the Fate of Erosion of Limestone in Jamaica." Unpublished M.Sc. thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM]

LC

HILLS, T.L.; ITON, S.; and LUNDGREN, J.
 "Farm Fragmentation in the Commonwealth Caribbean: Some Preliminary Observations and Analyses." Proceedings of the 7th Agricultural Economics Conference, Grand Anse, Grenada, April 9-15, 1972.
 University of West Indies, St. Augustine, Trinidad. Pp. 88-102.

LC,S

HOLLAND, Daniel M. "A Study of Land Taxation in Jamaica." In Land and Building Taxes: Their Effect on Economic Development, Arthur P. BECKER (ed.), Madison: University of Wisconsin Press, 1969. Pp. 239-286. [NAL: HJ 4165.L34]

LC,F

Jamaican property tax since 1962 has been unimproved site value, rather than improved value. Article describes process and notes all land holdings worth under 100 were not valued. Three taxes are levied: property, parish and service rates. All parcels (not total holdings) of less than 1,000 unimproved value were exempt, the rate was then progressive.

IGPOZUPIKE, Matthias U. "An Empirical Contribution to the Issue of Farm Size in Land Parcellization." Journal of Geography 75, No. 5 (May 1976): 266-274.

LC,S

Compares parcellization by farm size in Christiana and Fort Antonio Areas of Jamaica with East Central Nigeria. In Jamaica interviewed the 30 farmers on whether they had sufficient land. Fifty percent of small scale farmers (less than 25 acres) indicated need for more land. Small farms had a smaller number of fragments per farms than did large farmers.

---. "Fragmentation in Tropical Agriculture: Concept, Process, Result. A Jamaican Study." Unpublished Ph.D. dissertation, University of Florida, 1971.

IC

Analysis based on case studies in area. Field evidence tended to back condemnation of fragmentation

on grounds of land use inefficiency though substantiation is less firm than literature review suggests. For analysis carried out see also IGBOZUFIKE (1976).

IMPERIAL COLLEGE OF TROPICAL AGRICULTURE. Regional Research Centre. Soil and Land Use Survey, Jamaica. Vol 1-13, 1959. App. 21 pp. [MOA/JAM]

LC

This series of studies covers soils, climate, relief, drainage, land use within each parish. There are also estimates of soil capability recommended by soil type. One of very few data sources at parish level. This series is an excellent descriptive source despite its age. It also still defines important agricultural problems.

INTER-AMERICAN DEVELOPMENT BANK. Jamaica: Project Report on Self-Supporting Farmers' Development Program Stage IV 23 August 1977. (Restricted) [PO/AID/JAM]

LC, Pr

Has update on this project and evaluation of earlier part of project.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. Latin America Project Department and Caribbean Regional Office. Appraisal of the Second Agricultural Credit Project of Jamaica. Report 350aJM, May 7, 1974. (Restricted) [RDS/AID/JAM]

IC, E, F

Appraisal of a continuing program for investment in dairy, beef, citrus and coconut on about 200 farms (not necessarily small). Discusses performance under first loans (though not in detail).

Has two short but useful descriptive sections on agricultural credit and useful background descriptions of dairy and beef cattle, citrus and other fruit tree crops.

JAMAICA. Ministry of Agriculture. Dept. of Engineering.

LC, T

a) "Agricultural Sector Study Jamaica Irrigation Authorities" (mimeo)

b) "Present Situation, unpublished" (mimeo) [RDS/AID/JAM]

Material provided by Mr. Pusey on the

role of the Irrigation Authorities in running and operating irrigation. The 'Present Situation' material applies to the Pio Cobre scheme.

- . ----. Planning Unit. An Evaluation of Project Land-Lease and Project Food Farms from Their Inception to Jan. 31, 1974. Kingston, 1974. [MOA/JAM: 333.51] LC,P

- . ----. Project Land Lease, Status Summary (monthly). Kingston. [MOA/JAM] LC,SC

Gives data on land investment, land leased, number of tenants under each type of programme, land occupied, acres planted and tons of crops harvested (reaped) and value, by parish and within parish. Individual crop information on all land together: planted in month, in ground this month, to delivery period, crop reaped this month and to date.

- . Ministry of Agriculture and Lands. Division of Economics and Statistics. Land Reform in Jamaica with Emphasis on Land Settlement. October 1962. Pp. 77. [UWI/ISFP] LC

This is an evaluation of past programs as well as a base for future policy. Part A, a discussion of the Land Reform program; Part B, Land Reform-- agricultural productivity and output; effects on employment, wages and living conditions; Part D, financing reform and effects on the governmental budget; Part E, Land Reform and community development.

- JAMAICA. Yallahs Valley Land Authority. Annual Report. [MOA/JAM] LC,P

Provides acreage estimates by crop, credit use, etc.

- . ----. Report on a Sample Survey of Farms in the Yallahs Improvement Area (with Special Reference to the Problems of Agricultural Credit). Kingston, (date unknown). LC,SC

Quoted (McMorris) as showing that in

mid '50s of 3,000 farms, 1,400 depended on shop credit. About 15 percent obtained credit from Peoples Co-op 5 percent produce dealers 25 percent commercial banks, relatives, etc. Thirty-three percent did not borrow. Percentages greater than 100 as more than 1 source was used.

---. ---. Yallahs Valley Land Authority LC
1951-1966 15th Anniversary Brochure.
 [MOA/JAM]

Describes project, programs and results. Not an unbiased evaluation, but indicates highest estimate of achievement.

JAMAICA DEVELOPMENT BANK. "Self-Supporting Farmers' Development Programme." Farmer LC
 80, No. 7 (1975): 282-289.

The Self-Supporting Farmers' Development Programme was initiated in 1969 as a project of the (then) Ministry of Rural Land Development, aimed at raising the level of small-scale farming in Jamaica, by making available to farmers in the 5 to 25 acre group supervised credit for medium-long term agricultural development. The objectives of the Programme are: (1) to improve the economic and social standard of the beneficiary farm family by lifting the net farm income to at least \$900 annually, and (2) to provide food for the nation by proper development of land resources. The financing and administration of the scheme are described and details are presented of its operation in tabular form.

JOHNSON, H. "Patterns of Water Surplus and Deficit in Jamaica." Unpublished Undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1976. [GD/UWI/JAM] LC

JOHNSON, Irving E. "Alternatives in Agricultural Land Tenure. Jamaica, West Indies." Unpublished Ph.D. dissertation, Cornell University, 1961. Pp. 454. LC

---. Land Lease, Vol. 1 (of 3 volumes LC
 projected). Jamaica: Instituto

Interamericano de Ciencias Agrícolas,
Document 6 (no date--in process?).

- et al. "A Review of Land Settlement in Jamaica." Proceedings of the 7th West Indian Agricultural Economics Conference, Grand Anse, Grenada, April 9-15, 1972. St. Augustine, Trinidad: Dept. of Agricultural Economics, University of West Indies, 1972. Pp. 110-132. [MOA/JAM]

LC,P

Defines land settlement as system whereby Government subdivides land which it either owns or subsequently purchases for settlement of farmers on a freehold or leasehold basis. Discusses settlements 1949-63, of freehold and leasehold kind. Needed rehabilitation and land lease of 5 years was not liked. Two experiments in co-op farming--Lucky Hill and Grove are described and problems discussed. In period 1963-72 few farms were settled, though had a dairy scheme with successes and shortcomings. A year training was required of all participants and infrastructure and size were based on a target incomes. Discusses private tenant schemes (e.g. Alcan) with 1969-70 data. Some analysis, though coverage patchy.

- ; STEFACHAN, Marie; JOHNSON, Joseph. Land Settlement in Jamaica. Instituto Interamericano de Ciencias Agrícolas (IICA), Kingston, December 1977, 37 pp. bibliog. [RDS/AID/JAM]

LC

Contains a brief history and analysis of early land schemes. Major emphasis is on the land-lease scheme, its policy, goals and performance as well as statistics on its size, scope and importance.

- KEIL, F.F. "Land Use Planning in the Caribbean Area." Soil Conservation Society of America Proceedings 26, (1971): 26-30. [NAL: 56.9 SC33P]

LC,J

- MCMAHON, C. "Climatic Change in Jamaica over the Past Century with Specific Reference to Precipitation Patterns." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona. 1969. [GD/UWI/JAM]

LC

McMOREIS, C.S. Small-Farm Financing in Jamaica. Kingston, Jamaica, Institute of Social and Economic Research, 1957. [MOA/JAM]

LC, SC

Reports results of survey of approximately 3,000 farms, with a follow-up on 80 farms in much more detail (8 visits). Obviously out of date, but of some use to measure historical change (e.g. in sources of credit, loans and assets, etc.).

---. "Small-Farm Financing in Jamaica." Supplement of Social and Economic Studies, 6 No. 3, XIV. Pp. 128. [MOA/JAM; UWI/ISEP]

LC, SC

Same as individually published report. Data from 1954 survey done in conjunction with D. Edwards for 84 small farms, and with 8 visits over the year. Results suggest small farmers fund mostly with savings and use little credit, though 'aware of it.' Most require land titles and over half did not have adequately registered titles. Also provides information on official funds by source (1954) and compares operations of credit agency.

ORGANIZATION OF AMERICAN STATES. (Cover page missing but an employment-generation suggestion paper.) [PC/AID/JAM]

IC, J

Has section on agriculture. Suggests bringing idle land into production to provide employment. Has table (1973) by land class of unutilized land and in units of over 100 acres (Land Development and Utilization Committee). Makes some tentative suggestions for youth settlement on these lands. Appendix A on Jamaica Land Development and Utilization program, description as of January 1973.

---. Program of Social Development and Department of Educational Affairs. Rural Settlement and Youth Training in Jamaica: A Pilot Project, Oasis 1976. Pp. 98, including appendices. [RDS/AID/JAM]

IC, Pr, E

This is a project proposal for a scheme to settle 250 families and an underutilized 2,100 acre estate purchased by GOJ. The evaluation includes useful summaries of extension, rural education and credit institution. Appendices include crop production costs, soil maps/evaluation, price and marketing season data for major commodities.

PARBY, M.L. "Land Use in the Christiana Area, Jamaica." Unpublished Geography Thesis, University of West Indies, Mona, 1968. Pp. 185, bibliography. [UWI/WIC/JAM] IC

PRYCE, J. "Human Activities and Drought in Jamaica--1945-75." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM] LC

ROBOTHAM, Don. "Agrarian Relations in Jamaica." In Essays on Power and Change in Jamaica, Carl STONE and H. Aggrey BROWN (eds.). Kingston: Jamaica Publishing House, 1977. Pp. 207. 15 Essays. [U.S. Embassy Lib/JAM] LC

Provides historical overview of land distribution. Describes land distribution by farm size 1943 and 1968-69 (including a breakdown by color) and suggests redistribution of all land over 25 acres to those under 5 acres--average then 7 acres. Marxist viewpoint.

STONE, Carl. "Tenant Farming under State Capitalism." In Essays on Power and Change in Jamaica, Carl STONE and H. Aggrey BROWN (eds.). Kingston: Jamaica Publishing House, 1977. Pp. 207. 15 Essays. [CSU Hc 157.J2 F8] [U.S. Embassy Lib/JAM] LC, SC

Discusses Project Land Lease-- reviewing first distribution to mid 1975. Then reports benefits, complaints, and characteristics of 420 farmers on 25 farms in July-August 1974 (see also Stone 1974). Gives percent breakdown on previous occupation, land ownership (51 percent no land), size of previous land (less than 2 acres 55 percent).

estimated income (1/4 percent less than \$10 per week), family size, education (40 percent up to 4th grade), 48 percent membership JAS, 1/3 less than 40 years and 61 percent less than 50 years. Sixteen percent females and 84 percent males.

Looks at growth of crops--% of farmers grow, e.g. yams 68 percent, potatoes 50 percent, peas and beans 42 percent. Complain of shortage in cash, 67 percent hire. Reasons given--working other plots, low average of adult families, little exchange labor, poor land with long prgs. Distribution of acres--45 percent are 1 to 2 acres, 2-3 24 percent. Don't want to sell to AVIC (to cover debts) as prices lower. Incomes not really measurable as some with no income, but 51 percent perceive as better off. Dissatisfaction higher with higher education, 78 percent prefer lease to buying land with money of land lease credit.

SWAHY, K.F. "Appleton Sugar Estate--
A Geographical Appraisal." Unpublished
undergraduate thesis. Dept. of Geography,
University of West Indies, Mona, 1968.
[GD/UWI/JAM] LC,C

TAYLOR, S.A.C. "An Account of the
Development of Water Resources of
the Clarendon Plains." Social and
Economic Studies 4, No. 3 (August
1955). [MOA/JAM; UWI/ISEP] LC,T

Describes the area and its history
and development of wells for irri-
gation from 1929. Simple overview.

UNKNOWN AUTHOR. "Project Land Lease
Annual Report 1976/77." (Letter,
mimeo, loose tables) Ten pages of
text, 18 tables. [MOA/JAM Production
Unit] LC,S,SC

This is a summary of the project and
an evaluation of recent activities.
Tables include: A status summary as
of March 1977, status of lease holders
by sex, a summary by Land Authority of
amount of land take from private,
bauxite commonwealth and state land
owners. Also volume of loans by
parish.

---. Project Land Lease. Status Summary as of (sic) October 20, 1977. (Tables, project summary, parish, crop summary). [MOA/JAM Production Unit]

IC,S,C

The status summary table shows acreage leased, number of tenants placed, acreage planted, crops reaped (tons, \$), and estimates for those planted and not yet reaped. Each of these values is given for October, accumulated since April 1977 and accumulation to date from the beginning of the program.

A series of tables for each parish gives (by project area) the gross and arable area leased, the number of tenants placed, acreage rented and of the area rented the area planted and crops reaped by acreage and tons. The last table presents a crop summary. Crops are reported individually (corn, yams, etc.) and by groups (pulses, vegetables, tubers, permanent crops). For each crop and group for October 20, 1977 crop month the acreage of crops planted that month, currently growing, crops reaped this month, to date and estimated future are given.

WANF, Fulton. Jamaica Agricultural Credit Board, Evaluation and Recommendations on Organization and Operations. Washington, D.C.: US/AID, May 1964. Pp. 45 and 17 appendices. [SOS/AID/JAM]

IC

Includes description of the Agricultural Credit Board and the People's co-operative Banks. Also provides evaluation and recommendations of these agencies. Many shortcomings of agricultural credit are noted.

YANKEY, J.P. "Financial Intermediaries as a Mechanism to Facilitate the Integration of Production and Marketing in the Agricultural Sectors of Small Island States." Proceedings of the Twelfth West Indies Conference, St. Johns, Antigua, 1978. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1977, pp. 162-174.

LC,J

Discusses institutional arrangements for credit which integrate production and marketing. Includes reference to Jamaica institutions.

AGRICULTURE: MARKETS, MARKETING

ADAMS, Nassau A. "An Analysis of Food Consumption and Food Import Trends in Jamaica, 1950-1963." Social and Economic Studies 17, No. 1 (March 1968): 1-22. [MOA/JAM; UWI/ISEP]

M, J, F

Uses 1950-1963 data from National Accounts, plus weighted price elasticities to estimate overall income and price elasticities (.45 for food and .67 for food drink and tobacco). Food prices rose faster than non-food and the substitution coefficient was .35. Derives import demand and estimates that the function has a higher income elasticity and price elasticity greater than 1. Derives income and price elasticities for major groups (bread and cereals, meat, fish, dairy, oils and fats, fruits and vegetables, root crops). Data again from National Accounts and price indexes from 1958 Household Survey weights. Compares results with Harris' cross-sectional estimates. Finds some differences with root crops and fruits and vegetables. Also estimates import demand elasticities by food groups and forecasts higher imports in future. (Note that for period covered food imports remained at 20 percent of total imports.)

---. "Import Structure and Economic Growth in Jamaica, 1954-1967." Social and Economic Studies 20, No. 3 (Sep. 1971): 235-266. [MOA/JAM; UWI/ISEP]

M, J

Looks at import structure changes over the period designated. In order to measure imports at constant prices, develops price and quantum series by commodity group. Uses this information with income elasticities of importation. Results suggest imports underwent limited changes.

ALI, D.A. "The Scope for the Utilisation of Industrial and Agricultural By-Products. Proceedings of the Ninth West Indies Agricultural Economics Conference Held at the Pegasus Hotel, New Kingston, Jamaica, April 3-6, 1974, and at the Jamaica School of Agriculture, Twickenham

M, F

Park, April 7-10, 1974. St. Augustine, Trinidad, Department of Agricultural Economics and Farm Management, University of the West Indies. Pp. 71-80. [UWI/ISEP]

Examples of by-product utilization are found in the sugar industry, e.g. rum. More recent examples of industrial spin-offs are the production of particle-board from bagasse, the production of wheat middlings for animal feeds from wheat milling operations, the manufacture of citrus meal from citrus juice operations and the production of spent brewer's grain from the brewery industry as an input into animal feed formulations. In general, however, there is a lack of examples of successful commercial spin-offs. The potential for by-product utilization is examined, first in the traditional agricultural sector and then in the new sectors. It is concluded that there is scope to develop and expand the ways in which raw materials and their by-products are utilized in the Caribbean but that an urgent problem to be tackled is the need for much more indigenous research and development.

ANDEPSON, A.M. "The Marketing Situation for Fish and Fish Products in the Caribbean." Cajanus 3, No. 1 (Feb. 1970): 17-31. [NAL PA784.AIC3] [MOA/JAM]

M, J

---. "The Marketing Situation for Fish and Fish Products in the Caribbean." Cajanus 3, No. 1 (1970): 17-31. [MOA/JAM]

M, J, C

Gives per capita consumption estimate for 1967, and discusses supply, demand and possible marketing changes.

BENNETT, B.H. "Report to the AMC and the RDC/AID, Kingston, Jamaica. September 1977, 11 pp.

M

Contains useful specific and technical recommendations concerning needs for controlled temperature storage at AMC to reduce crop loss and deterioration.

BOLTON, William E. Untitled report on agricultural export opportunities from Jamaica to the U.S. (Typed, letter form, bound looseleaf) Alexander and

M

Baldwin Agribusiness Corporation,
Jan. 12, 1978. 9 pp. + 4 exhibits.
[PDS/AID/JAM]

A report on the feasibility of organizing production and marketing of Jamaican agricultural produce in the U.S. Contains an evaluation of existing marketing channels. Reports favorably on export potential.

BUCKMIRE, George. "Rationalization as an Instrument for the Development of Caribbean Agriculture." Proceedings of the 8th West Indian Agricultural Economics Conference, Held at St. Augustine, Trinidad 1-7 April, 1973. St. Augustine, Trinidad: Dept. of Agricultural Economics, 1973. M,J

---. "The Future Possibilities of Caribbean Export Crops in the Metropolitan Markets." Proceedings of the 6th West Indian Agricultural Economics Conference, Held at Georgetown, Guyana 28 March-2 April, 1971. St. Augustine, Trinidad: Dept. of Agricultural Economics, 1971. M,J

BUPTON, C.L. "The Emergence and Growth of the Bowden Whare, St. Thomas." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1968. [GD/UWI/JAM] M

CALLAM, M. "Functional Study of a Small Town--Brown's Town." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] M

CLARKE, E.C. "The Role of a Central Procurement Agency in Stabilizing the Price of Food with Special Reference to Jamaica Nutrition Holdings." Proceedings of the Tenth West Indies Agricultural Economics Conference Georgetown, Guyana, 1975. St. Augustine; Trinidad: University of West Indies, Department of Agricultural Economics, 1975. pp. 180-185. M,P

Describes the activities of Jamaica Nutrition Holdings and its attempts to stabilize prices.

CLARKE, S. St. A. The Competitive Position of Jamaica's Agricultural Exports. Kingston: M

Institute of Social and Economic Studies, 1962. [MOA/JAM]

COLLINS, E.C. and CLOSE, E.C. "Caribbean Islands Offer Farm Export Opportunities." Foreign Agriculture 13, No. 42 (Oct. 20, 1975): 8-9, 16. M

CRIPPS, M.H. "Spice Oleoresins: The Process, the Market and the Future." In Proceedings of the Conference on Spices, 10-14th April, 1972. London: Foreign and Commonwealth Office, 1973. M,T,C

CUMPER, G.F. "An Experimental Comparison of Some Alternative Methods of Computing Demand Elasticities." Social and Economic Studies 15, No. 2 (June 1966): 92-102. [MOA/JAM; UWI/ISEP] M

Gives alternative estimates of income elasticities using 1958 Household survey and different (and clearly described) estimation methods.

DIXON, J. "Structure Functional Importance and Field of Influence of Black River and Santa Cruz--St. Elizabeth." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] M

DUPANT-GONZALEZ, Victoria. "Pole and Status of Rural Jamaican Women: Higglering and Mothering." Unpublished Ph.D. dissertation, University of California, Berkeley, 1976. M

Examines the participation of women in social organization in a Jamaican rural area, including a description of recruitment into higglering. Status of higglering is high in local community, low in national.

EINER, W.G. The Marketing of Domestic Food Crops of Jamaica. Food and Agriculture Organization, 1961. [FDS/AID/JAM] M

EUROPEAN ECONOMIC COMMUNITY. Bulletin of the European Communities 8, No. 1 (1975): pp. 6-10. M

The Lome Convention concluded on 28 February 1975 between the European

Community and 46 African, Caribbean and Pacific (ACP) countries focuses on four main areas (1) trade co-operation; (2) stabilization of export earnings (including sugar); (3) industrial co-operation; and (4) financial and technical co-operation. In respect of agricultural products exported by the ACP which come under CAP, the Community offers similar advantages with most products enjoying free access and the rest covered by a preferential scheme. A major feature of the trade co-operation agreement is that the EEC relinquishes a reciprocal requirement in trade concessions, though the ACP states must guarantee the EEC treatment as good as the most favoured nation in their trading and must not discriminate between member states.

FAPQUHAPSON, Neville. The Production and Marketing of Yams From Allsides and the Christiana Area of Jamaica, Instituto Internacional de Ciencias Agrícolas, Kingston, 1978, 96 pp. M,C

An intensive study of all aspects of producing and marketing a major crop from a specialty production area. Provides figures and insight relevant to marketing problems in general.

FOOD AND AGRICULTURE ORGANIZATION. Jamaica, Food Crops Development and Marketing Feasibility Survey. ESP: SF/JAM 6 Terminal Report, Rome, September 1970. 50 pp. + 3 appendices, bibliography. [RDS/AID/JAM] M

Contains brief discussions of each commodity group, the sector demands for agricultural commodities, nutrition and the internal marketing system. Further description of market potential in North Atlantic markets and the functioning of the food processing industry is provided.

FOOD AND AGRICULTURE ORGANIZATION/INTER-AMERICAN DEVELOPMENT BANK COOPERATIVE PROGRAMME. Jamaica Agricultural Marketing. Report 4/76 Jamaica-2, June 1976, Washington, D.C. (Circulation restricted), 62 pp., bibliog. appendices A-G. [RDS/AID/JAM] M

The most important current source on

Jamaican marketing. Presents a comprehensive plan for consolidating and reorganizing the A.M.C., changing its role to complement the efforts of the traditional sector. This paper was done partially as background to the IDB investments in 33 Cornwall parish markets.

FOOD AND AGRICULTURE ORGANIZATION/U.N.
DEVELOPMENT PROJECT. Food Crop
Development and Marketing Survey,
Jamaica: Agronomic Consideration.
Technical Report 1, ESS: SF/JAM6,
Rome, 1971. [UNDP/JAM]

M, T, C

Looks at soil and climatic limitations for crops, and then evaluates crops: sugar, cocoa, coconut, pimento, ginger, maize, sorghum, rice, roots, pulses, fruits, vegetables, tobacco pasture and livestock. Information provided on cultural practices, fertilization, yield, site needs, research, etc. Very good introduction to agronomic feasibility and research needs.

---. Food Crops Development and
Marketing Feasibility Study,
Jamaica: Jamaica's Food Pro-
cessing Industry, A Series of
Economic Analyses. ESS: SF/JAM6
Tech. Report 2. [UNDP/JAM]

M

Covers domestic raw produce uses in local canning by product and structure of industry. Also looks at markets and potential for citrus, cocoa and coffee, as well as oil-seeds, cereals, meat and dairy. Includes discussion of refrigerated storage.

GIRLING, Robert K. "Education, Technology and Development/Underdevelopment: A Case Study of Agro-Industry in Jamaica." Unpublished Ph.D. dissertation, Stanford University, 1974.

M, E

Focus of empirical sections is on survey of 26 firms in the Jamaican food processing industry. Each was questioned in regard to policy affecting choice of technology as well as general nature of

their operations. Results are analysed in terms of production, employment, research training, technological choice and contribution to national development. Locally-owned firms showed different results than multi-national firms. For example they were more likely to be involved in research and development of indigenous resources, to reinvest their earnings and to obtain a larger proportion of their raw materials from local sources.

- . "Technology and Dependent Development in Jamaica: A Case Study." Social and Economic Studies 26, No. 2 (June 1977): 169-189.

M, P

Looks at employment performance (using census and labor force statistics) of the food processing industry, local research work, earnings re-invested and capacity utilization by ownership. Concludes that trend is towards more mechanization, critiques present policies and presents a radical alternative.

- GRUHN, I.V. "The Lome Convention: Inching towards Interdependence." International Organization 30, No. 2 (1976): 241-262.

M, J

The trade agreement between EEC and forty odd African, Caribbean and Pacific States in 1975 is discussed. Innovative techniques such as STABEX, sugar indexing and rural development are analyzed.

- GUERPERO, Pablo, et al. Pilot Study on National Accounting Parameters: Their Estimation and Use in Chile, Costa Rica and Jamaica. Vol. 2. Country and Project Case Studies. Project Methodology Unit, Country Studies Division, Economic and Social Development Department, Inter-American Development Bank, Draft 6. Oct. 1977, Washington, D.C. [PDS/AID/JAM]

M, J

Derives a series of measures for efficiency accounting ratios and social accounting prices for inputs, exports and domestic production.

"Jamaica Meat Processing Plant," pp. 249-284. Analysis of a proposed up-to-date slaughter house for Kingston area. Analysed at efficiency prices, market prices and social prices.

HAMILTON, J. Marketing Survey Report. Jamaica, Ministry of Finance and Planning, Town Planning Department, Kingston, 1970. (Mimeo) [RDS/AID/JAM]

M

HAPPIS, Donald J. "Econometric Analysis of Household Consumption in Jamaica." Social and Economic Studies 13, No. 4 (Dec. 1964): 471-487. [MOA/JAM; UWI/ISER]

M,S

Estimates income elasticities of demand for major food groups from 1958 Household Survey for urban, rural, and main town groups.

HAWTHORNE, P. "The Hierarchy of Small Towns in Westmoreland." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1974. [GD/UWI/JAM]

M

HUBBARD, Raymond. "A Note of Factors Influencing the Present Distribution of the Jamaican Road Network." Caribbean Studies 12, No. 4 (January 1973): 36-55.

M,P

Uses 1960 Population census, data and road mileage for multiple regression in which road mileage is determined by population distribution and areal extent of reporting units. Found that only areal extent was significant. Looks at forecast and actual values of road mileage (plus and minus) and suggests more actual roads than predicted reflects geographical distribution of sugar and fruits. Less than predicted depends on adverse terrain. Uses a basic gravity model to predict future road improvements. Priority determined was Kingston to Spanish town and extensions Old Harbour, May Pen, instead.

---, and FERMON, John. "Landslides on Jamaican Roads. An Appraisal of Causes." Geographical Survey 1, No. 3 (July 1972): 16-30.

M,P

Authors suggest slides are result of poor road route selection, poor road

construction, and slope gradient cuts. Slides costly to farmers who cannot transport perishable crops to market.

JAMAICA. Banana Board. Annual Report. Kingston. M.C.

Gives export amounts, and a few items on finance, changes in price etc.

---. Jamaica Nutrition Holdings. Grain Bulletin. Kingston. [MOA/JAM]

Has mostly world data but also a page or so of information on Jamaica on inventories, etc., collected from manufacturers, especially on wheat and feed grains.

---. Preparation of Parish Markets Project, Vol 1 M, Pr
FAO/IDB cooperative programme, Final Report
No. 4/77 Jamaica 4, Washington, D.C., (1977)
69 pp. and annex.

Contains a review of agricultural marketing policy and description of the distribution system. The major content deals with the program to design new parish markets and a consideration of the functioning of the system of markets. The project will replace 16 parish markets and construct one completely new market. A major change includes providing the AMC space in the parish markets for wholesaling activities and developing facilities for small processing equipment. Includes list of 14 public agencies involved in agricultural marketing and estimates of food waste in marketing. This is one of the best and most up to date sources available.

---. Ministry of Agriculture. Survey of Higglers. (Unpublished) M
[PDS/AID/JAM]

Survey done for Inter-American Development Bank by Dr. Mitchell, sociologist with MOA. Tabular analysis available with considerable detail on where higglers originate, their socio-economic characteristics, products traded by market, functions of the market. No information on how produce is

moved from farm to market.

- . Ministry of Industry and Tourism. Development of the Food Processing Industry in Jamaica. A Preliminary Appraisal. (Mimeo) May 1972. 38 pp. and appendix. [PDS/AID/JAM] M

Details the situation and problems of food processing, e.g. unreliable supply, inadequate capital. Deals with industry sectors by commodity group. Appendix has a list of all food processors and crops handled by each.

- JENNER, G.K. Comments and Recommendations Concerning Wholesale Terminal Market Buildings in the Agricultural Marketing Corporation of the Ministry of Agriculture and Lands. Sept. 1965. 30 pp. [AID/LA/WASH JM 380.141 J54] M

Includes much technical information and recommendations but also has general insight into technical marketing problems.

- JOHNSON, I.E. "Some Aspects of the Food Processing Industry in Jamaica" Proceedings of the Sixth West Indian Agricultural Economics Conference, Georgetown, Guyana, 1971. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1971. M

- . and COLEY, P.G. Marketing of Agricultural Commodities Produced for Domestic Consumption in Jamaica. Division of Economics and Statistics, Ministry of Agriculture and Lands, Kingston, March 1966. M

- . "Marketing of Agricultural Commodities Produced for Domestic Consumption in Jamaica." Proceedings of the First West Indian Agricultural Economics Conference, University of the West Indies, St. Augustine, Trinidad, March 28-April 2, 1966. St. Augustine, Trinidad, Dept. of Agricultural Economics, 1966. pp. 274-300. M

Most domestic food plus a substantial proportion of export commodities are produced by small farmers on low quality soils in hill slope lands. Estimates are the 70 to 75 percent of all food produced internally. Major weaknesses

of the higgler system are identified:

1. The small quantities increase costs of marketing,
2. in times of surplus large quantities are unmarketed,
3. poor transport methods result in spoilage and damage,
4. traveling costs for groups of higgler are higher than for bulk handling.
5. Higgler do not package.

Provides a consideration of establishment, functions and problems of the A.M.C.

JOHNSON, Paul E.; SCHOENHEFER, William H.; and WILBUR, Donald A. Jr. Seminar in Food Storage and Handling Practices, Kingston, Jamaica, June 19-21, 1973. (Mimeo) 15 pp. and 2 appendices. [RDS/AID/JAM] M

Major concern is storage and handling of U.S. grain exports after arrival in Jamaica to avoid contamination losses. Contains an inspection checklist (exhibit C-2) which would be useful for any storage facility and procedure that might be part of a domestic food marketing program.

JONES, A. The Market for Mango Products with Particular Preference to the United Kingdom. London: Tropical Products Institute, No. G74, 1973. 51 pp. and v. M

The mango is available in more processed forms than any other minor tropical fruit. Products derived from it include mango slices in brine, canned mangoes in syrup, mango juice, pulp, nectar, flour, jam, dried slices and an assortment of various mango based pickles, chutneys and sauces. India is by far the world's most important producer and exporter of mango products, followed by Jamaica and South Africa. Neither total world production nor trade figures are available for any of the products considered in this report due to the dearth of related national statistics.

KETZIN, Margaret Fisher. "The Business of Higglering in Jamaica." Social and Economic Studies IX, (September 1960): 297-331. [MOA/JAM; UWI/ISER] M

"Most country higgler take their loads to markets at some distance from their homes because they could be undersold in the local market by country people selling their own crops." This article offers a classification system of types of traders and describes how the system functions.

---. "The Jamaican Country Higgle." M
Social and Economic Studies 8, No. 4
 (Dec. 1959): 421-440. [MOA/JAM;
 UWI/ISRP]

Micro-level case study--one week in the life of a farm family, including higgling. The higgler-farmwife bought from farms on two days, each requiring a full day's walk over rough trails carry the accumulated load. Most in this district use a mule to collect produce and carry it to a motorable road where a truck picks them up. Normal market days are Thursday, Friday, and Saturday. Price information is carried daily by returning higgler and truckers back to rural areas. In the market, thievery is a major problem.

KUTISH, Francis A. "Assessment of Agricultural Marketing in Jamaica with Special Reference to Small Farmers in Portland Parish." 1978 83 pp. (Unpublished internal report of the USDA/ASAID Agricultural Sector Assessment Team.) M

Provides an insightful discussion of market structure and list of marketing constraints. Favors a declining role for AMC and predicts dominance of 'superhiggler'.

LOCHEP, Uli. The Marketing of Agricultural Produce in Jamaica. Instituto Interamericano de Ciencias Agrícolas (IICA), Kingston, Jamaica, 1977, 78 pp. M
 [EDS/AID/JAM]

An excellent overview of marketing and insightful field work by sociologist Locher in the Kingston markets. Details the functioning and problems of the city distribution part of the marketing system. Major recommendation is to support the higgler marketer and to co-ordinate government services (transport, credit, physical market

facilities) to improve traditional system.

LUMSDEN, F. "The Agricultural Marketing Corporation: Its Location and Distribution Networks." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1970. [UWI/WIC]

M

LUNDGFEN, J.C. "Agricultural Marketing and Distribution Arrangements with Respect to the Resort Hotel in the Caribbean." Proceedings of the Sixth West Indian Agricultural Economics Conference, Georgetown, Guyana, 1971. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1971. pp. 158-175.

M

Looks at the supply sources of a sample of hotels on North Coast of Jamaica. Data in article relate to one hotel.

MCDONALD, Vincent. "Innovation: The Basis for a Program of Rationalization of Caribbean Agriculture (with Special Reference to the Livestock Sector)." Proceedings of the 8th West Indian Agricultural Economics Conference, Held at St. Augustine, Trinidad 1-7 April, 1973. St. Augustine, Trinidad: Dept. of Agricultural Economics, 1973.

M, C, J

MCFARLANE, J. "Linear Development in a Rural Area--Savanna-la-mar to Petersfield Westmoreland." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

M

MCINTOSH, Curtis E. "Food Marketing in the Commonwealth Caribbean." PAG Bulletin 4, No. 4 (Dec 1975): pp. 22-25.

M, J

---. "Marketing Constraints to Agricultural Rationalisation in the Caribbean." Cajanus 8, No. 4 (1975): 237-244. [AOA/JFM]

M, J

This paper attempts to (a) identify constraints originating in the marketing of agricultural products, which militate against the achievements of a rationalized agricultural sector in the Caribbean Area, and (b) offer some suggestions for removing these constraints.

----. and LIM CHOY, M. The Performance of Selected Marketing Agencies in the Caribbean. St. Augustine, Trinidad: Occasional Series No. 11 Department of Agricultural Economics and Farm Management. University of West Indies, 1975.

M,J

An evaluation of marketing agencies in Barbados, Jamaica, St. Vincent, and Trinidad and Tobago. Compares economic environment and provides a short evaluation of procurement policies, distribution practices, and performance criteria. Concludes that performance is poor generally. Useful for comparative purposes.

MAGNUS, V. "Spatial Patterns of Food Purchasing by North Coast Hotels." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM]

M

MAYERS, J.M. "The Marketing and Demand for Meat in the Commonwealth Caribbean." In Proceedings of the 7th West Indian Agricultural Economics Conference, Georgetown, Guyana, March 28-April 2, 1971. St. Augustine, Trinidad: University of West Indies, Dept. of Agricultural Economics, 1971. [MOA/JAM]

M,J,C

This paper examines the consumption of meats, discusses current marketing structures and suggests a likely demand pattern over the next decade. Gives comparative estimates of per capita consumption of meats by type for 1956 and 1957 by country. Suggests with rising income 60 lbs per head will be demand by 1980 with beef expected the major item, followed by pork, and meat preparations. Demand is expected to be more elastic in the long-run than the short-run. Goat meat is not analysed.

MINTZ, Sidney W. Caribbean Transformation. Chicago: Aldine Press, 1974. 355 pp. xii, bibliography. [UWI/WIC]

M,J

Includes a chapter on the historic development of marketing in Jamaica. Discusses basis of role of women in

marketing. Has very little post 1900 material.

- . "The Jamaican Internal Marketing Pattern." Social and Economic Studies, No. 1 (March 1955): 95-103. [MOA/JAM; UWI/ISEP] M

Generally attributes Jamaica marketing pattern to African origins, noting the prevalence of women as marketing agents in both areas. Barter is reported rare, all transactions use money. An important characteristic of the higgler system is that the trader always accompanies his goods. A characteristic feature is the handling of a variety of goods to spread risk and dealing in small quantities.

- . "The Role of the Middleman in the Internal Distribution System of a Caribbean Peasant Economy." Human Organization XV, No. 2 (Summer 1956): 18-23. M

- MORROW, Felicia. U.S. Produce Market. (Mimeo) April 1978, USDA Working Document 60 pp. [FDS/AID/JAM] M

This report reviews the U.S. as market potential for Jamaican exports of fresh produce. Also problems of market information, transportation and brokerage are discussed. Finally specific commodity situations are reviewed: garlic, tomato cucumbers, melons, okra, broccoli and peanuts.

- NOBLE, M. "Food Canning in Kingston." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1974. [GD/UWI/JAM] M

- NOPTON, A. and SYMANSKI, P. "The Internal Marketing Systems of Jamaica." Geographical Review 65, No. 4 (1975): 461-475. M

Agricultural marketing and marketing reform in Jamaica is discussed, drawing on general comparisons with other parts of the region. Traditional, periodic markets are first described and integration of the entire system is suggested. The work of the Agricultural Marketing Corporation (AMC) is examined.

NORVELL, Douglass G. and THOMPSON, Marian Kay. "Higglering in Jamaica, and the Mystique of Pure Competition." Social and Economic Studies.

M

A not too convincing attempt to show that Katzin was incorrect in assuming that many sellers in the Jamaica traditional market fulfilled classic requirements for perfect competition.

ORGANIZATION OF AMERICAN STATES. Inter-American Institute of Agricultural Sciences. Hemishperic Agricultural Marketing Program. 1974. 15 pp.

M, J

IICA headquarters are in San Jose, Costa Rica. Since 1972 there has been a permanent program on Agricultural Marketing--with services relating to training, research and program service.

PETERKIN, O. "Spatial Organisation and Operation of the Small Town Market and Supply Area--Falmouth." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

M

BRITCHARD, Norris T.; HUTH, W.P.; and HAVAS, Nick. Prospects for U.S. Agricultural Exports to Jamaica. Washington, U.S. Govt. Print. Off., 29, 1.p., 1969.

M

PANKINE, Lloyd E. Extra and Intra-Caribbean Trade in Root Crops. Occasional Series No. 9. St. Augustine, Trinidad: Department of Agricultural Economics and Farm Management, University of West Indies, 1973.

M, C, J

Examines market institutions and marketing processes in 4 countries, including Jamaica. The crops studied in Jamaica are yams, sweet potatoes, dasheen, and Irish potatoes. For root crops as a whole, the export trend in the region was slightly downward, especially for intra-Caribbean trade.

----. Some Features of the Market for Root Crops Produced in the Commonwealth Caribbean. Proceedings of the 10th Annual Meeting of the Caribbean Food Crops Society, 1972:103-112.

M, C, J

FOGERS, Claudia. "Illegal Entrepreneurship and Social Networks in Rural

M

Jamaica." Unpublished Ph.D. dissertation, Columbia University, 1976.

Provides a case study of one village and one town in Jamaica. Covers use of cannabis and case studies of two major dealers in the study sites.

SAMMY, G.M. "The Scope for the Development of Food Processing." Proceedings of the Ninth West Indies Agricultural Economics Conference, Held at the Pegasus Hotel, New Kingston, Jamaica, April 3-6, 1974 and at the Jamaica School of Agriculture, Twickenham Park, April 7-10, 1974. St. Augustine, Trinidad, Department of Agricultural Economics and Farm Management, University of the West Indies, 1974. Pp. 61-70. [UWI/ISER] M

Suggests the lack of processing technology is due to the colonial past as producers of raw materials and consumers of processed goods. Indicates scope for food processing development, the main objective being a high degree of self-sufficiency in food production, linked with social improvement for the lower income section of society.

SAPFATY, David. "Feasibility of a Caribbean Export Program for Fresh Market Vegetables: Aspects of Demand and Supply Potential." USD/IDS/LA/SAIG Working Document, March 1978. Approx. 80 pp., tables, appendices, bibliog. [PDS/AID/JAM] M

Includes an analysis for 6 crops of the supply and demand situation in Jamaica and the U.S. Considerations of seasonality, transport costs, regional competition and regulatory constraints are considered.

SAWYER, W. "A Study of the Constant Spring Market." Unpublished undergraduate thesis, Dept. of Geography, University of West Indies, Mona, Jamaica, 1968. M

SHILLINGFORD, J.D. and H.W. BLADES "Prospective Demand for Food in the Commonwealth Caribbean," Proceedings of the Tenth West Indian Agricultural Economics Conference, Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975, pp. 40-53. M, J

Develops estimates of demand for each country from population projections, income projections, and income elasticities. Includes base level per capita consumption and nutrition estimates.

SINCLAIR, M. "The Cocoa Industry and Chocolate Manufacturing in Highgate." M.C.
Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

SMIKIE, C. and TAYLOR, H. Higgler Survey, Agricultural Planning Unit, Ministry of Agriculture May 1977, Kingston, 105 pp. and 47 appendices. M

An analysis of a large field survey of higgler in all parts of the Island. Includes a careful description of the marketing system and a great deal of data on many aspects of higgerling. Does not consider higgler transport problems or information systems. Includes an analysis of the economics of the higgler operation. This survey provides an extremely valuable body of data. Some of the analysis and conclusions drawn from it are questionable and should not be used by readers unable to make their own inferences from the data provided. Many serious errors of interpretation are evident.

SMITH, D.E. and GAPVIS, C.A. Ministry of Marketing and Commerce. Agricultural Marketing Corporation: Organization and Management Functions. Management Services Division, Ministry of the Public Service. May 1976. 113 pp. appendices A-P. [PDS/AID/JAM] M

This is a critical evaluation of the A.M.C. with detailed recommendation for changes in plant, operation and personnel. It also clearly spells out the structure, functions and objectives of each part of the organization.

---; WALWYN, E.; and TRACEY, J. M
Ministry of Industry and Commerce. Agricultural Marketing Corporation: Basic Shops and Mobiles Department Review of Organization, Systems and Procedures. (Confidential) Management Services Division, Ministry of Public Service, November 1977. 100 pp., appendices A-P. [PDS/AID JAM]

Detail of organizational structure, facilities, operational costs and problems. Gives recommendations.

SUTHEPLAND, C. "Spatial Structure of Brown's Town, St. Ann." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1974. [GD/UWI/JAM]

M

SYMANSKI, Richard. "God, Food, and Periodic Market Systems." Proceedings, Association of American Geographers, Vol. 5, 1973. Pp. 262-266.

M

Jamaica, in contrast to Colombia, has almost no Sunday markets and few mid-week market days. Most periodic markets occur on Friday and/or Saturday. In larger, continuous markets, Friday and Saturday experience much greater volumes of trade.

TAYLOR, Leroy. "A Study of Consumer's Expenditures in Jamaica, 1832 to the Present Day." Unpublished Ph.D. dissertation, University of London, 1963.

M

---. Consumer's Expenditures in Jamaica. Kingston: Institute of Social and Economic Research, 1964. [MOB/JAM]

M, J

THOMAS, F.D. (Editor). "The Role of Marketing in Caribbean Agricultural Development." Proceedings of the Sixth West Indian Agricultural Economics Conference Held at Georgetown, Guyana, March 28-April 2, 1971. St. Augustine, Trinidad: University of the West Indies, Department of Agricultural Economics and Farm Management, 1971. Pp. 220 + x.

M, B

Several papers on Guyana were followed by contributions on individual islands, and on such aspects of marketing as: the marketing and demand for meat in the Caribbean; the Jamaica dairy industry; transport; tourism and hotels; export crops; food processing. The workshop reports, linked with the main theme of the Conference, discussed: (1) agricultural co-operative marketing arrangements; (2) (a) the role of Marketing Boards; (b) extra-regional

marketing arrangements; (3) priorities for marketing research.

- THOMPSON, A.K. "Marketing and Handling Practices in the Tropics. 5. West Indies: Handling of Some Tropical Crops." In Postharvest Physiology, Handling and Utility of Tropical and Subtropical Fruits and Vegetables, E. B. Pantastico, ed., 1975. Pp. 542-545. M
- TUTTLE, Winn; and SEEBORG, Edward F. "The Caribbean: A Promising Market for U.S. Wheat Exports." Foreign Agriculture 9, No. 4 (Jan. 25, 1971): 6-7. M
- UNITED STATES. Dept. of Agriculture. Economic Research Service. Prospects for U.S. Agricultural Exports to Jamaica. USDA Foreign Agr. Econ. Rep. 56, (Dec. 1969): 30pp. M
- . ----. Foreign Agricultural Service. "Demand for U.S. Wheat Expanding in Caribbean Area." Foreign Agriculture, U.S. Foreign Agric. Serv. 13, No. 50 (Dec. 15, 1975): 16 pp. M
- . ----. ----. "U.S. Food Products Find Wide Acceptance in Three Caribbean Markets." Foreign Agriculture 11, No. 9 (Feb. 26, 1973): 9-10, 16. M
- WANDS, S.P. "The American Spice Market, 1972." In Proceedings of the Conference on Spices, 10-14th April, 1972. London: Foreign and Commonwealth Office, 1973. M, C
- WHITELOCKE, M.B. "The Agricultural Marketing Corporation in Jamaica-- A Geographical Appraisal." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1970. [GD/UWI/JAM] M
- WILSON, W.L. "The Marketing Costs of Fresh Fruits, Vegetables and Tubers"; The Productivity Centre, Jamaica Industrial Development Corporation, Kingston. June, 1971. 20pp. and 4 appendices. [PDS/AID/JAM] M

Based on an islandwide sample survey of marketing outlets to investigate marketing mar-

gins and cost services. Major finding demonstrates the better farm prices and lower marketing costs of small group of 'superhigglers' over AMC and small higglers. An excellent course.

WOOD, A., et al. Marketing, Agricultural Sector Study, 1973--Report of the Services to Agriculture. Mimeo, 1973. 41 pp. [RDS/AID/JAM]

M

The origins of this report are obscure. It was conducted by a six-man team, but who they represent and to whom they were reporting is not specified. This is the most complete compilation available of the organization, role and functions of the various commodity boards. Additionally, there is a good discussion of the problems of the parish council markets; their history, organization and function. An insightful discussion of the Higglers System is provided and an identification of 11 specific problems. An evaluation of the AMC is provided, including specific problem areas reported in a survey of users.

AGRICULTURE:
TECHNOLOGY, TECHNIQUES, RESEARCH

- AHMAD, N.; DAVIS, C.E.; and JONES, P.L. T
"Ammonium Fixation and Its Effect
on Mineralogical Properties of
West Indian Soil Clays." Tropical
Agriculture (St. Augustine) 49,
No. 4 (Oct 1972): 347-353.
- ALCAR JAMAICA LTD. Agricultural Division T,LC
Report for 1973. P.O. Box 52, Mandeville,
Jamaica, 1974, 1975.
- This report on Alcar Jamaica's farming
operations, which cover approx. 16,000
acres, includes a section on milk
production from the 2 dairies (pp. 23-
40) - lactation performance data of
the 225 cows are tabulated by breed
(including Jamaica Hope, Holstein-
Friesian and crossbreds) for 1972 and
1973, and a cost analysis is given.
- ARMY, F.M. "Caribbean Sugar Factory T,C
Size and Survival." Annals of
the Association of American
Geographers 66, No. 1 (Mar 1976):
76-88.
- BARKEP, G.; WAHAB, A.; and BELL, L.S.
Agricultural Research in Jamaica.
Instituto Interamericano de Ciencias
Agrícolas (IICA), Kingston, November
1977, 48 pp. + 10 appendices.
- A comprehensive survey of MOA agri-
cultural research policy, programs
and facilities.
- BEEN, B.O.; THOMPSON, A.K.; and PERKINS, C. T,C
Effects of Curing on Storage of Yams.
Proceedings of the Twelfth Annual Meeting of
the Caribbean Food Crops Society, 1974:
Pp. 38-42 [MOA/JAM].
- BENNETT, F.D. "Biological Control of T,J,C
Insect Pests of Horticultural Crops."
In C. W. D. BRAITHWAITE, P. H. PHELPS
and F. D. BENNETT (Editors), Crop
Protection in the Caribbean. Curepe,
Trinidad: Commonwealth Institute of
Biological Control, 1974. Pp. 213-
227.

In this paper the history and aims of biological control of insect pests of crops are reviewed, with many examples of successful and unsuccessful introductions of natural enemies of a pest species. Sections are included on the changing concepts of insect control; early examples of biological control in the Commonwealth Caribbean; outstanding examples of biological control of pests of horticultural crops in the West Indies; difficult problems; and the economics of biological control.

---. "Some Recent Successes in the Field of Biological Control in the West Indies. Insect Pests, Weeds." Revista Peruana de Entomologia 14, No. 2 (Dec 1971): 369-373. T

BREAG, G.R.; COWARD, L.D.G.; et al. "Artificial Drying of Jamaican Pimento." In Proceedings of the Conference on Spices 10-14 April, 1972. London, Foreign and Commonwealth Office, 1973. T,C

BROWN, A.L. Plant Pests of Importance to the Caribbean: Section I. Major Insects and Diseases Present in the Region. Section II. Dangerous Insects and Diseases Not Reported or of Limited Distribution in the Region. Fort of Spain, Trinidad and Tobago: FIC, Office for the Caribbean Region, 1972. iv + 52, i + 29 pp. T

The first section of this work contains a list, by crop, of major insects and diseases present in the Caribbean region. In the second section, injurious insects and diseases that do not occur or are of limited distribution in the region are listed, also by crop.

CAMPBELL, Lewis G. "Mechanising Tropical Foot Crop Production." Span 17, No. 3 (1974): 118-120. T,C

The development of mechanized systems of production for edible tropical starchy root crops such as yams, sweet potatoes, eddoe, tania, and cassava are discussed with particular reference to land preparation, planting, weed and pest control, secondary tillage, foliage

support, soil fertility and harvesting.

- . "Production Methods in West Indian Agriculture." Caribbean Quarterly 8, No. 2 (1962): 94-104.

T, S

An example of an article written on assumption that mechanization will reduce agricultural costs for export crops. Author states that the dangers of unemployment are non-existent, which seems unlikely.

- CARIBBEAN AGRICULTURAL RESEARCH AND DEVELOPMENT INSTITUTE Research Report 1974/75 and 1975/76.

T, B

Reviews research work on food legumes and cereals, root crops, vegetables, soils animal production etc.

- . Research Report 1976/77

T, B

- CARIBBEAN ECONOMIC COMMUNITY MISSION.
Agricultural Research in the Caribbean Community Region: A Report with Special Reference to the Role of the Regional Research Centre. (PRC) 1973(?) Unpublished, mimeo. (Restricted) [PDS/AID/JAM]

- CARIBBEAN PLANT PROTECTION COMMISSION.
Plant Pests of Importance to the Caribbean. Port of Spain, Trinidad: FAO, 1972. 29 pp.

The major insects and diseases of the plantation and vegetable crops grown in the region are listed according to crop and distribution.

- CHINLOY, T. and HOGG, E.M. "Potation of Pangola Grass and Sugarcane on a Jamaican Sugar Estate." International Society of Sugar Cane Technology, Proceedings of 12th Congress, (1969) pp. 636-42.

T, C

- CORNFOOTH, I.S. "A Review of Work on Nitrogen in West Indian Soils." Tropical Agriculture (Guilford) 51, No. 2 (April 1974): 145-153.

- CREEK, M.J. A Study of the Effects of Some Husbandry Practices on the Productivity of Beef Cattle, and

of Land Grazed by Beef Cattle in Jamaica. London, 1967. 213 pp. illus.

- . "Intensification of Pasture Production with Beef Breeding Herds Maintained upon Improved Pasture (*Digitaria Decumbens*) in Jamaica." In Proceedings of 11th International Grassland Congress, 1970. Pp. 800-803.

CPILL, P.; PHELPS, R.L.; et al. "Host Resistance and Disease Control in Tomato." In Proceedings of a Symposium on the Protection of Horticultural Crops in the Caribbean Held at the University of the West Indies, St. Augustine, Trinidad, 8-11 April, 1974.

A review of tomato production in the Caribbean which includes discussion of disease problems. Tables indicate the wide variety of diseases encountered.

DAVIS, Carlton G. "Agricultural Research and Agricultural Development in Small Plantation Economies: The Case of the West Indies." Social and Economic Studies 24, No. 1 (March 1975): pp. 117-152. [RDS/AID/JAM] [RDS/AID/JAM]

Contains useful comments on benefits and costs (private and social) of research for various types of research. Summarizes various agricultural research issues in Jamaica and reviews some response functions. Shows low levels of response to fertilizer for traditional and unadapted new varieties. Also response varies widely by soil type and from year to year.

DE GUZMAN, Jr., M.P. and ALLO, A.U. Pasture Production under Coconut Palms. Report from the Food and Fertilizer Technology Center, Taipei, October 1975. Bibliography. 85 pp. [RDS/AID/JAM]

Contains a discussion of ecological conditions, suitable species, land preparation, fertilization, pasture management and the economics of the system.

DEACON, H.F.E. "Experiences in the

Use and Development of Plantation Scale Fully Mechanized Harvesting in the Caribbean." International Society of Sugar Cane Technology, Proceedings of 13th Congress (1969): 1495-1512.

DEVENDRA, C. "Caribbean: Coconut Oil Meal for Pigs." Journal of Agricultural Society of Trinidad and Tobago 71, No. 4 (Dec 1971): 485-489.

T,J

---. "The Mineral Content of Caribbean Feedingstuffs." Tropical Agriculture (Guilford) 54, No. 1 (Jan 1977): 29-38.

T,C

EDGAR, A.J. "Citrus Fruit-Piercing Moths of the Genus *Gonodonta* Hubner (Lepidoptera, Noctuidae) in Jamaica." Master's Thesis, University of the West Indies, 1964.

T,C

EDWARDS, D.T. "An Economic View of Agricultural Research in Jamaica." Social and Economic Studies 10, No. 3 (September 1961): 306-339.

T,C

Provides a history of agricultural research in Jamaica and an evaluation of the adequacy of the effort. Some gaps in the research are noted, e.g. ackee, fertilizer response. Edwards suggests that the commodity boards should undertake most of the research required, the Agriculture Ministry lacking the funds and manpower. Jamaica in 1961 was spending more for agricultural research in relation to its output than was the U.S. or Britain, but spending should perhaps have been even greater. No actual economic analysis is presented.

FERGUSON, Theodore V. "The Development Potential for Root Crops in the Caribbean Region". Proceedings of the Tenth West Indies Agricultural Economics Conference Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. Pp. 63-81.

T,C,J

Provides an agronomic analysis of potential improvements and suggests that though increases in yield by breeding have little short-term potential, there are improvements in management and limited mechanization which would improve yields and labor productivity. A number of Jamaican examples are used.

----. Agronomic Techniques in Yam (Dioscorea spp.) Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: Pp. 5-15.

T,C,J

FERGUSON, T.U. "The Status and Future of Yams in the Caribbean." In Proceedings of International Symposium on Tropical Foot and Tuber Crops, 1970. 1973. Pp. 28-30.

T,C

---. "The Status and Future of Yams in the Caribbean." In Tropical Foot and Tuber Crops Tomorrow, Vol. 2. Honolulu, Hawaii: University of Hawaii, 1971. Pp. 28-30.

T,J,C

The level of agronomic technology practised in the growing of yams in the Caribbean region is discussed. Low yields of under 12 t/ha are normally obtained. With the exception of Barbados, yams are generally grown by small farmers in mixed stands. Staking is sometimes necessary but it can be expensive. It is suggested that future research should be geared towards the production of non-staking cultivars and to investigate the economics of fertilizer application and disease control. The development of processing methods is necessary.

FOOD AND AGRICULTURE ORGANIZATION. Report of the FAO Seminar on Dairy Education and Dairy Development for Latin American Countries, Held in Santiago and Valdivia, Chile, 24 June-1 July 1973. Rome, 1973. iii + 133 pp.

T,P

This report lists recommendations to FAO and governments adopted at the seminar, concerning dairy development, training, organizational and managerial aspects, and nutritional aspects. It also includes summaries, working papers, and the ensuing discussions. Country statements submitted by delegates, giving information on dairy production, consumption, marketing, training, etc. include one by Jamaica.

FOOD AND AGRICULTURE ORGANIZATION/
INTERAMERICAN DEVELOPMENT BANK COOPERATIVE
PROGRAM. Jamaica Agricultural Research

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Vol. I, Project Preparation Synthesis Report. Final Report, No. 4/76, Jamaica 1 (Circulation Restricted). Washington, December 1976, 86 pp. [RDS/AID/JAM]

Vols. 2-7 of this series are annexes to the Vol. 1. This report is a plan for the rationalization of agricultural research in Jamaica. Various institutions and physical facilities are to be consolidated and any research related to small farmer needs is to be emphasized.

- . Forestry Development and Watershed Management in the Upland Regions, Jamaica: Hillside Agriculture in Demonstration Watershed in Jamaica. Tech. Report 11, Rome 1974. [UNDP/JAM] T,LC,S

Describes work on the Smithfield demonstration area (110 acres in Kenilworth, Hanover) 1970-1973 on soil conservation and crop experiments to determine production responses for hill crops. Estimates returns and costs for plots also.

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Pedro Plains, St. Elizabeth Area. Appendix I/1A Geology; Appendix II Drilling. AGL: SF/JAM 3/Tech Rep 1/1A/1,11, Rome, 1971. T,LC

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Martha Brae Valley Trelawney. Appendix II Exploratory Drilling. AGL: SF/JAM 3/T, II. T,LC

- . Ground Water Surveys in Two Areas of the Interior, Jamaica: Appraisal Report of the Martha Brae Valley, Trelawney. Appendix III Hydrology; Appendix IV Water Quality. AGL: SF/JAM 3/iii,iv. T,LC

- . Research on Coconut Lethal Yellowing Disease, Jamaica: Project Findings and Recommendations. AG: DP/JAM/72/005, Rome, 1975. [RDS/AID/JAM] [UNDP/JAM] T,C

Recommends further search for disease vector.

FORD, St. C.M. and D. WALMSEY A Guide to Fertilizer Use on Vegetable Crops in the Commonwealth Caribbean, Technical Bulletin 2. Caribbean Agricultural Research and Development Institute, July 1977. 27 pp. T,E

An extension guide to fertilizers and recommendations for use.

GOHL, B.I. "Citrus by-Products for Animal Feed." World Animal Review 6, (1973): 24-27. T,C

The cost of drying can be estimated at about \$40 per ton of dried citrus pulp as produced for local use as feed. Trinidad has a yearly production of 4,000 tons and Jamaica has two plants which produce a total of 4,500 tons a year.

GROENIGEN, J.C. van. "Mechanical Harvesting in Jamaica." International Sugar Journal 75, No. 889 (Jan 1973): 6-10. T,C

GPUBB, P.J. and TANNER, E.V.J. "The Montane Forests and Soils of Jamaica, a Reassessment." Journal of the Arnold Arboretum 57, No. 3 (July 1976): 313-368. T

GUPTA, A. "Stream Characteristics in Eastern Jamaica. An Environment of Seasonal Flow and Large Floods." American Journal of Science 275, No. 7 (Summer 1975): 825-847. T
Maps, Ref.

HAMMERTON, J.L. "Problems of Herbicide Assessment in Peanuts in Jamaica." Weed Research 16, No. 1 (1976): 27-35. T

Delays on weeding and unweeded plots reduced yields, but a number of herbicides were not effective substitutes for weeding.

---. Problems of Herbicide Use in Peasant Farming. (Paper presented at the Annual Meeting of the Weed Science Society of America, Las Vegas, 1974). Corvallis, USA; International Plant Protection Centre, 1974. 10 pp. T

A review in which the author examines the present agricultural practice in the West Indies and the benefits that might result

from the use of herbicides. The entire system of production would have to be improved for herbicide use to be economic. Additional education and extension services and provision of credit would help solve some of the problems. Dribble bars and granular formulations could simplify application and reduce overall costs. A single herbicide, suitable for all the crops grown in the area, which would control the major weeds during critical periods of growth, would be the ideal.

- . "Weed Control in Peanuts in Jamaica." T,C
Abstracts 1974 Meeting of the Science Society of America. 1974. Pp. 111.

In Jamaica, peanuts are mainly grown by small farmers for local sale as confectionery. Cultural practices are often poor, weed control is frequently neglected and yields tend to be low. The main weed problems are annual and perennial grasses, annual brush, Euphorbia spp. and vines. Good control of weeds during the first 40 days of growth is necessary for good yields.

- . "Weed Control Work in Progress at the University of West Indies, Part 2." T
PANS 18, No. 2 (1972): 172-182.

Gives results of herbicide trials (including those on brown bauxite soil in Jamaica).

- . "Weed Control Work in Progress at the University of West Indies, Part 4." T
PANS 20, No. 4 (1974): 429-436.

Reports results of trials using specific herbicides.

- HAQUE, I. and WALMSLEY, D. "Sulphur Investigations in Some West Indian Soils." T,C
Tropical Agriculture (Guilford) 51, No. 2 (April 1974): 253-263.

- HARRIES, H.C. "The Performance of F1 Hybrid Coconuts in Jamaica." T,C
Journal of Plant Crops 2, No. 2 (Dec 1974): 15-20.

- . "The Malayan Dwarf Supersedes the Jamaica Tall Coconut. I. Reputation" T,C

and Performance." Cleagineux 25, No. 10 (Oct 1970): 527-531.

---, and POMNEY, D.H. "Maypan: An F1 Hybrid Coconut Variety for Commercial Production in Jamaica." World Crops 26, No. 3 (May/June 1974): 110-111. T,C

HAWKINS, J.C. Report on the Mechanization of Agriculture in the West Indies. National Institute of Agricultural Engineering, Silsoe, Bedfordshire, England, 1960. T

Obviously historical but suggests small hill farmers in Jamaica cannot use small machinery (hand type) because of heavy clay soils. Has detailed discussion of alternatives which may still raise relevant questions.

HENDERSON, T.H. "Research in Agricultural Extension." Caribbean Quarterly 11, No. 3/4, 197 . T,E

HENRY, Carol, and SUGGS, Edna "Pathological Problems Associated with Vegetable Growing at Orange River Agricultural Station." Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 96-101. [MOA/JAM] T,C

HICKLING, G.E. "Control of Nematodes in Stored Yams in Jamaica." Abstracts of International Symposium of Nematology (11th). European Society of Nematologists, Reading, UK, 3-8 September, 1972. T,M,C

---. "Nematode Pests of Yams in Jamaica." Proceedings of the 12th Annual Meeting of the Caribbean Food Crops Society, Jamaica, 30th June to 5th July, 1974. Jamaica: Ministry of Agriculture, 1974. Pp. 63-67. T,C

Nematodes were found associated with necrotic lesions on yam tubers. Report discusses species which cause degeneration of stored yams, and those in roots and soil which seem to contribute to loss of vigor.

HUBBARD, E.A. and WALMSLEY, D. "Studies of Phosphate Fixation and Release on the Bauxite Soils of Jamaica. I. The T

Fate of Added Phosphate." Tropical Agriculture 51, No. 3 (1974): 361-369.

Describes experiments. Discusses the results on clay soils with bauxite. Results suggest that phosphate on St. Ann's clay loam rapidly becomes unavailable. Recommends fertilizer be applied close to roots and given in split dressings.

---. "Studies of Phosphate Fixation and Release on the Bauxite Soils of Jamaica. II. Release of Phosphate." Tropical Agriculture (Guilford) 51, No. 3 (July 1974): 370-374. T

HUIE, Errol A.C. "Studies on the Efficiency of Surface Irrigation of Sugar Cane in Jamaica." Unpublished M.Sc. Thesis, University of West Indies, Department of Crop Science, 1974. T,C

Gives results of three year survey on four soil types on volumes of water reaching the field and run off. Estimates irrigation efficiency.

HUTTON, D.G. "Pineapple Nematodes in Jamaica and Relationship between Their Population and Rainfall in Two Areas." Nematropica 5, No. 2 (1975): 23-24. T,C

Nematode populations in pineapple roots and soils fluctuated regularly where rainfall was seasonal, and occurred in up to 90% of areas sampled. When rainfall was well distributed throughout the year, nematode populations decreased as the number of rainy days per month increased, but with a time lag in both cases.

ISPAEL. Ministry of Agriculture. Center for International Agricultural Cooperation. Agricultural Research Programmes in Joint Rural Development Projects, Annual Report 1970-1971. Jerusalem, 1972. 305 pp. T,C

The report includes work in tropical areas on tomatoes, capsicums, cucurbits, and eggplants. Two papers in the appendix deal with vegetable production in tropical countries and in Central America and the Caribbean.

JACKSON, Percival and PAYNE, Horace Fed T,C
 Pea (Phaseolus Vulgaris L.) Variety Trials
 in Jamaica
Proceedings of the Tenth Annual Meeting of
of the Caribbean Food Crops Society, 1972:
 44-45. [MOA/JAM].

JAMAICA. Banana Board Research and Develop- T,C
 ment Department. Annual Report. Kingston,
 Jamaica. [MOA/JAM]

Reports results of all research done:
 fertilizer trials, disease work, variety
 trials, post-harvest losses, etc. Has
 an introduction to each section (plant
 nutrition, field management) directed to
 farmer, and includes review articles on
 mixed-cropping, use of fertilizer, etc.
 Useful source for banana technology.

---. Coconut Industry Board Research Depart- T,C
 ment. 1st to 16th Report. (Annual)
 Kingston, Jamaica.

Annual reports since 1961 on research.
 Directors report provides review, and
 then detailed results are provided on
 variety, resistance to lethal yellowing,
 spacing, inter-cropping fertilizer
 experiment, etc. Includes listing of
 all recent publications. Useful
 source for research and technology
 in coconuts.

---. Ministry of Agriculture. Annual Report, T,E
for Year Ended 31st March, 1975. Kingston:
 Ministry of Agriculture, Agricultural Infor-
 mation Service, 1976. [MOA/JAM]

Report on work of MOA in extension,
 control, research.

---. ---. Dairy Cattle Research Branch. T,C
 "The Development of the Jamaica Hope
 Breed of Dairy Cattle. Bodles, Old
 Harbour, Jamaica." Animal Husbandry
Bulletin, Ministry of Agriculture,
 Jamaica, 1972, No. 2, 77 pp.

This bulletin is composed of 10 papers
 that summarize collectively cattle
 breeding projects at Hope farm near
 Kingston in Jamaica, resulting in the
 development of the Jamaica Hope breed
 in 1958 from Jersey/Sahiwal crosses.

Productive performance and future development of this new breed are discussed. Numerous tables and photographs included.

- . ----. Investigations 1975. Bulletin No. 65 (New Series), 1977. 216 pp. [RDS/AID/JAM]

A review of agricultural research programs and findings by commodity and by research organization.

- . ----. Investigations 1970-74. Bulletin 64, Ministry of Agriculture and Fisheries, 1976. 388 pp. [MOA/JAM]

T, E, C

Gives a detailed description of research carried out over the period, by crop, livestock, etc.

- . ----. Investigations 1964-1970. Bulletin 63, Ministry of Agriculture and Fisheries, 1973. 558 pp. [MOA/JAM]

T, E, C

Gives a detailed description of research carried out over the period, in sections by crop, livestock, etc.

- . Sugar Industry Research Institute. Annual Report. Kingston. [MOA/JAM]

T, C

Provides results of trials, fertilizer, variety, etc. Useful source of sugar technology.

- . Sugar Manufacturers Association. Research Department. Annual Report. [MOA/JAM]

T, C

This activity recently shifted to Sugar Industry Research Institute, but is source on research done prior to 1973.

- KAAN, F.; LATERPOT, H.; et al. "A Study of 100 Tomato Varieties in Relation with Climatic Adaptation and Resistance to 7 Prevalent Diseases in the West Indies." In Proceedings of the 12th Annual Meeting of the Caribbean Food Crops Society, Jamaica, 30th June to 5th July, 1974.

T, C

The characteristics and suitabilities for cultivation in the Caribbean of 100 varieties of tomato are indicated in tables together with their reactions to pathogens including Meloidogyne sp.

Comment is made on the breaking of resistance to Meloidogyne at high temperatures.

MARTIN, E.P.H. Corn Improvement Program, Ministry of Agriculture and Lands, Jamaica. Proceedings of the Fourth Annual Meeting of the Caribbean Food Crops Society, 1966: 58-62. T,C

MCCOY, P.E. "Comparative Epidemiology of the Lethal Yellowing, Kaincope, and Cadang-Cadang Diseases of Coconut Palm." Plant Disease Reporter 60, No. 6 (1976): 498-502. T,C

Calculations were made of the apparent rate of spread of lethal yellowing disease (LY) of coconuts under various conditions in Florida and in Jamaica, compared with that of Kaincope in West Africa and cadang-cadang in the Philippines.

MORGAN, G.W. "Crop Productivity as Affected by Depths of Topsoil Spread for Reclaiming Bauxite-Mined Lands in Jamaica." Tropical Agriculture 51, 2 (1974): 332-346.

In trials in 1969-72, maize, yellow yam and sweet potatoes were grown on topsoil spread to depths of 15, 30, 45 or 60 cm on reclaimed land, which was or was not subsoiled, and were given adequate rates of NPK or twice those rates. In 1969, '70 and '72, maize grain yields were not affected, but were reduced in 1971, by subsoiling. Increase in the fertilizer rate gave uneconomic increases in grain yield.

MAYLOP, A.G. Cacao Black-Pod Disease Control in Jamaica Proceedings of the Fifth Annual Meeting of the Caribbean Food Crops Society, 1967: 53-56. T,C

----. "Control of Papaya Bunchy Top Virus Disease in Jamaica: Proceedings of the Third Annual Meeting of the Caribbean Food Crops Society, 1965: 76-82. T,C

----. "Diseases of Beans and Their Control in Jamaica." Proceedings of the Fourth Annual Meeting of the Caribbean Food Crops Society, 1966: 134-137. T,C

----. Diseases of Plants in Jamaica. Kingston, T
Jamaica. Ministry of Agriculture, 1974. 129pp.

This publication is intended to serve as a quick guide to the identification and control of plant diseases and is intended for use by agricultural extension staff, farmers, students and others. After a general introduction on plant diseases, there are sections on control methods and on diseases of plantation crops, vegetables, grain legumes, root crops, cereal and forage crops, miscellaneous crops and ornamentals.

---. "Diseases of Root Crops in Jamaica." T
Proceedings of the 12th Annual Meeting of the Caribbean Food Crops Society, Jamaica, 30th June to 5th July, 1974. Jamaica: Ministry of Agriculture, 1974. Pp. 33-37.

Nematode infestation constitutes a severe threat to the profitable production of yams in Jamaica. Potato tubers are sometimes affected and species have been isolated from the roots of cocos and dasheens.

----. "Sphaeropsis Knot Disease of Citrus in Jamaica" T,C
Proceedings of the First Annual Meeting of the Caribbean Food Crops Society, 1963: 41-42.

PANTON, C.A. and MENENDEZ, T. "Possibilities and Implications of Mutation Breeding in Jamaica. In
Induced Mutations and Plant Improvement, 1972. Pp. 61-66.

PAYNE, Horace W. "Fertilizer Response of Groundnuts (*Arachis Hypogaea*) on Two Soils of Jamaica." T,C
Tropical Agriculture 51, No. 2 (1974): 347-354.

In trials at 3 sites in 1971, groundnuts were given various rates and combinations of NPK. Yields of unshelled nuts at Cocoa Walk were increased by up to 1.09 ton per hectare with increase in rate of NPK compared with the untreated control.

---. "The Role of Mini-Research Stations in Increasing Farm Productivity in the Caribbean." T,E
Caribbean Quarterly 18, No. 1 (March 1972): 24-28.

Outlines the concept of the mini-research station as carried out by Regional Field Experiment Programme of University of West Indies in Jamaica. Two to three acres of farmers' land are used for several simultaneous investigations. These are representative of major soil type in ecological region. Farmer provides labor for fencing, weeding, harvesting. Space large enough for statistically designed experiment; not just demonstration plots. Experiments usually involve fertility and variety assessment-- population densities and plant protection. Study includes a comparative/return cost for red per under improved and traditional method.

PAYNE, Hugh W. Fertilizer Research on Food Crops and Vegetables in Jamaica. Proceedings of the Fourth Annual Meeting of the Caribbean Food Crops Society, 1966: 109-119. [MOA/JAM] T

----. Peanut (Arachis hypogaea) Cultivation in Jamaica with Special Reference to Dry Farming Techniques and Response to Fertilizers. Proceedings of the Tenth Annual Meeting of the Caribbean Food Crops Society, 1972: 117-120 [MOA/JAM]

----. The Status of Fertilizer Trials with Corn in Jamaica Proceedings of the Seventh Annual Meeting of the Caribbean Food Crops Society, 1969: 313-333 [MOA/JAM] T,C

PIEPRE, R.E. Bean Disease In Jamaica Proceedings of the Sixth Annual Meeting of the Caribbean Food Crops Society, 1968: 42-44 [MOA/JAM] T,C

----. Fungi Associated with Deterioration of Ackee (Blighia sapida L.) in Jamaica. Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 114-119 [MOA/JAM] T,C

----. Yield Potential and Disease Resistance of Dry Bean (Phaseolus vulgaris) Varieties in Jamaica. Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 165-169 [MOA/JAM] T,C

RICHARDS, J.A. "Productivity of Tropical T,J,C

Pastures in the Caribbean." In Proceedings of the 11th International Grassland Congress, 1970.

ROACHE, K.I.; WELLINGTON, K.E.; and MAHADEVAN, P. "The Extent of Selection for Milk Yield among Cows of the Jamaica Hope Breed." Journal of Agricultural Science (London) 74, No. 3 (June 1970): 469-471.

SANCHEZ, P.A. (Editor). A Review of Soils Research in Tropical Latin America. Raleigh, North Carolina: Soil Science Department, North Carolina State University, 1972. 263 pp.

T, J

This publication represents a compilation of available literature on soils research in the American tropics, i.e. all countries of Latin America and the Caribbean, excluding Argentina, Chile, and Uruguay. About 1,000 abstracts of work published since 1960 were collected from Biological Abstracts and additional material was obtained from Tropical Abstracts, the Latin American Bibliography of Agriculture and the authors' personal files. Only representative or crucial references are cited in the body of the reviews, and all reviewed materials are cited in the bibliography. Emphasis was placed on the main food and feed crops grown on small and medium-sized farms in Tropical America.

SCHAEFER, Herbert R. "Technological Adaptations to Solar and Aeolian Energy Utilization: Two Case Studies in Rural Jamaica." Unpublished Ph.D. dissertation, University of Florida, 1969.

SHAW, F.D. "The Malayan Dwarf Supersedes the Jamaica Tall Coconut. 4. Making the Change." Oleagineux 26, No. 3 (March 1971): 155-158.

SHENG, T.C. "Bench-Terracing." Journal of the Scientific Research Council of Jamaica 3, No. 2 (1972): 113-127.

Article deals with the design, manual and mechanical construction, maintenance costs and benefits and other aspects of

bench-terraces, in particular reverse bench-terraces, which are most suited for upland or tree crops in high rainfall regions. Prerequisites for success are overall planning, individual treatment, demonstration plots, incentives and inducements during the period of terracing.

SHILLINGFORD, John. "Financial Potential and Welfare Implications of Sugarcane Harvest Mechanization on Jamaican Plantation." Unpublished Ph.D. dissertation, Cornell University, 1974.

T,C,S

Objectives were (i) to review sugar industry with reference to need and potential for mechanization (ii) to assess feasibility of combine-harvest mechanization at farm level (iii) to estimate welfare effects of mechanization and (iv) to determine policy implications.

Real wages in sugar remained constant or decreased between 1960 and 1971, and this plus wage gap effect explain labor shortage. This shortage has extended harvest with increased costs. Returns to investment in harvesters were estimated to range from negative to 95 percent, with net increase in foreign exchange. Estimated reduction in employment was 11-15 percent. Suggests compensation principle to attain equity and socially desirable resource allocation.

SMITH, F.W. "The Malayan Dwarf Supercedes the Jamaica Tall Coconut. 2. Changes in Farming Practice." Oleagineux 25, No. 11 (Nov. 1970): 593-598.

T,C

SNOW, J. Wendell; HOFMAN, H.C.; and BAUMHOVER, A.H. Jamaica--Report of the Screwworm Pre-Evaluation Committee, July 7-31, 1976. 32 pp. + maps, tables, appendix. [RDS/AID/JAM]

T

Screwworm is a major livestock pest in Jamaica and the feasibility and economics of its eradication are discussed.

SPENCE, J.P. "Status and Future Prospects for Edible Aroids in the West Indian Region." Tropical Foot and Tuber Crops

T,C

Tomorrow. Vol. 2. Honolulu, Hawaii:
University of Hawaii, 1971. Pp. 45-46.

The few reports of research on tania and cocoyam in the West Indies and Latin America are reviewed and the proposed research lines of study (growth regulators, plant density and canopy, and plant anatomy and growth) to be followed in the West Indies are discussed.

- SUAH, Joseph R.P. Control of Irish Potato Pests Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 76-78. T,C
- THOMAS, O.A. and McLAFEN, I.E. "Some Studies on the Digestibility of Panogla Grass (*Digitaria Decumbens* Stent.) in Jamaica. Tropical Agriculture (St. Augustine) 48, No. 3 (July 1977): 225-235. T,C
- THOMPSON, A.K.; BEEN, B.O.; and PERKINS, C.D. "Prolongation of the Storage Life of Breadfruits" Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 120-126. T,M
- TRINIDAD. University of the West Indies. Faculty of Agriculture. Report (Annual). T,E
- Annual report on research carried out in agriculture at University of the West Indies, in Jamaica and elsewhere.
- TURNER, M. Control of Rust and *Cercospora* Leafspot of Peanuts in Jamaica Proceedings of the Tenth Annual Meeting of the Caribbean Food Crops Society, 1972: 5-7 [MOB/JAM] T,C
- WAIKEI, I.A. "A Study of the Growth and Yield of the Valery, Lacatana and Robusta Cultivars of Banana in Jamaica." Tropical Agriculture (St. Augustine) 47, No. 3 (July 1970): 233-242. T,C
- WEIR, C.C. "Phosphate Fixation in Jamaican Latosolic Soils." Tropical Agriculture 54, No. 1 (1977): 87-93. T

Small but significant releases of native bound P were obtained by the application of high rates of ammonium sulphate, whereas similar rates of urea and calcium nitrate had no effect on

phosphate uptake. Application of calcium silicate had a beneficial effect on the uptake of phosphate by the plants. Some of the implications of using slightly soluble phosphatic fertilizers (in preference to the current highly soluble P fertilizers) on high phosphate-fixing latosolic soils are discussed.

---. "Phosphate Studies on the Jamaican Bauxite Soils." Tropical Agriculture (St. Augustine) 49, No. 1 (Jan. 1972): 89-96.

T

WELLINGTON, K.E. and MAHADEVAN, P. "Development of the Jamaica Hope Breed of Dairy Cattle." World Animal Review 15 (1975): 27-32.

T,C

WHERVIN, L.W. van. "Some Fruitflies (Tephritidae) in Jamaica." PANS 20, No. 1 (1974): 11-19.

T

A review, including details of the host-preferences of *Anastrepha* spp. and notes on the stage or stages at which host-fruits are attacked, differences in susceptibility of several mango and control measures.

YATES, R.B. "Field Experiments on the Chemical Ripening of Sugar-Cane in Jamaica and Belize in 1970." Tropical Agriculture (St. Augustine) 49, No. 3 (July 1972): 235-244.

T,C

ZEMJANIS, Faimunds. Report on Cattle Fertility Survey and Related Activities, Jamaica. Sept. 1965. Pp. 22 + 6 appendices. [RDS/AID/JAM]

T,C

AID consultant report.

AGRICULTURE: POLICY AND PLANNING

BINKENDIJK, A.L. and HUNTER, L.J. P.S.
"Implications for Rural Development from a Long-Range Planning Model: An Illustration for Jamaica." Proceedings of the Ninth West Indies Agricultural Economics Conference Held at the Pegasus Hotel, New Kingston, Jamaica, April 3-6, 1974 and at the Jamaica School of Agriculture, Twickenham Park April 7-10, 1974. St. Augustine, Trinidad: Dept. of Agricultural Economics, University of West Indies, 1974. [UWI/ISER]

The paper discusses the implications of long-term projections on planning for rural sector development in the context of a long-range planning model using Jamaica as a case study. It is primarily concerned with variables of population size, age distribution, migration patterns, labour force size and quality, food consumption and social service requirements, investment requirements and land densities. The application of the planning model to the rural sector in Jamaica leads to the conclusion that rapid sector population growth can seriously affect development of the rural sector through its impact on food requirements, government agricultural and social service expenditure requirements, densities, employment possibilities and worsening rural-urban income differences.

BROWN, Adlith. P.J.
"Planning as a Political Activity: Some Aspects of the Jamaican Experience." Social and Economic Studies 24, No. 1 (March 1975): 1-14. [MOA/JAM]

Includes short description of Jamaican experience with planning. Suggests it has not been effective. View of authors is that plan should mobilize and that indicative planning is not Agricultural Economics. effective for this.

BROWN, Headley. P.J,M
"Import Substitution and West Indian Agriculture." In Proceedings of the 11th West Indian Agricultural Economics Conference

Held at Cavehill, Barbados 23-29
March 1969. St. Augustine, Trinidad:
 University of West Indies, Dept. of
 Agricultural Economics.

CAMPBALL, L.G. "Strategy for Maximizing Self- P, J
 sufficiency in Food in the Region" Proceedings
of the Tenth West Indies Agricultural Economics
Conference, Georgetown, Guyana, 1975. St.
 Augustine, Trinidad: University of West Indies,
 Department of Agricultural Economics and Farm
 Management, 1975. Pp. 54-65.

CHIN, Hubert. National Water Resources P, LC
Plan, Jamaica. Water Resources Division,
 Ministry of Mining and Natural Resources.
 Kingston, Jan. 25, 1977. 12 pp. + 2
 annexes, bibliog. [FDS/AID/JAM]

A terms of reference statement for a
 study to develop a national water plan.
 The study is to report on the potential
 for multi-purpose uses of water for
 fisheries, irrigation, flood control,
 pollution control, power generation and
 to develop management policies to opti-
 mize water use and disposal to maintain
 environmental quality.

COMMONWEALTH SECRETARIAT. Towards a New P, J
International Economic Order. Report by
a Commonwealth Experts Group. London,
 U.K., 1975. Pp. 54.

An Interim Report of a group of Experts
 appointed by Commonwealth Heads of
 Government at their Meeting in Kingston,
 Jamaica, in May 1975 and considered by
 Commonwealth Ministers meeting in
 Georgetown, Guyana, August 28. The
 group indicates a short run program of
 development measures. In agriculture,
 recommends donor countries help with
 fertilizer needs and support their
 production. Also suggests fishing
 needs expansion.

DAILY GLEANER. "Production Target Surpassed." P
 December 14, 1977. Vol. CXLIII, No. 295,
 P. 1, 21.

A report by the Prime Minister to
 Parliament on the first nine months of
 the Emergency Production Plan. Targets
 in domestic food production surpassed,

unemployment still estimated at 23 percent. A Ministry Paper prepared by the Emergency Production Plan Implementation Control [EPIC] was also presented. The trade balance under the Plan has improved from a deficit of -\$201 million to -\$16 million. Inflation for the year is estimated at 13 percent. Import licenses for January-September, reduced from \$875.54 million in 1976 to \$790.97 million in 1977. Food imports fell from \$161.5 million to \$106.4 million. Exports up: beverages 116 percent; tobacco 117 percent; minerals, fluids, lubricants and related materials 141 percent; plastic materials 208 percent; production of non-metallic minerals up 150 percent; iron and steel 129 percent; non-ferrous materials 138 percent; non-elect. machinery 165 percent; furniture 146 percent. Exports of textiles, clothing and essential oils registered a small decrease. Domestic food crops up over target for year. Red peas 51 percent, cassava 31 percent, sweet potato 49 percent, dasheen 32 percent. At the 9 month point these crops had achieved the following proportion of the yearly target: corn 74 percent; onions 89 percent; yams 83 percent; cocoa 75 percent; rice 49 percent.

AMC purchases were up 69 percent over last year-- January-September. In the land lease programme the plan target was 12,000 farmers on 25,000 acres of arable land. So far, some 5,484 farmers have been placed on 10,200 acres.

The first co-operative Pioneer Farm was established near Wentworth in St. Mary in October. Four more are to be established this year. These Pioneer Farms are part of the program of the Accelerated Land Reform Unit. These Pioneer Farms are to be the nuclei for the development of Community Enterprise Organizations which are intended to accomplish a radical transformation of rural life.

Construction is less than 50 percent of the planned level. This has aggravated unemployment. A major obstacle has been import restrictions on construction material.

Bauxite and alumina exports are expected to fall short by 1.5 million tons from the planned 12,548 million tons projected for 1972 Government receipts would exceed

those for 1976, however.

New employment generation is to be the first priority of the upcoming new Five Year Plan.

- DUE, Jean M. and GEHRING, Donald C. P,C
 "Jamaica's Strategy for Import Substitution of Vegetables in the 1960's." Illinois Agricultural Economics 17, No. 1 (January 1973): 20-26.

This article summarizes the major types of vegetables currently imported, the percentage of consumption imported, government strategy to increase vegetable production and the response to that strategy. The authors conclude that most of the vegetables imported at present are being produced currently in Jamaica and their production could be accelerated.

- DUMONT, Rene. Planning Agricultural Development, Report to the Government of Jamaica. Expanded Program of Technical Assistance, Food and Agricultural Organization, No. 1717, Rome 1963. Pp. 87. [RDS/AID/JAM] P,S

Now dated but thorough study. Good description and recommendations for livestock and conservation programs.

- FLETCHER, C. and ALLY, A. "The JAS and the Anti-Inflation Package." Farmer 80, No. 8/9, (1975): 312-379. [MOA/JAM] P,S

This special issue of The Farmer is devoted to the subject of inflation. It includes two addresses to the Jamaican Agricultural Society by its president on inflation and the Government's Action Proposals, and in a dozen projects in which he thought the society should engage to increase production and so off-set inflation. The issue also contains the main substance of a seminar held on the subject of inflation. This includes an overview of inflation in Jamaica by A. Ally and excerpts from the discussion which followed, in which some of the most prominent personalities in finance, industry, agriculture, trade and commerce, and other sectors of the national economy, took part.

- FLOYD, Barry, "Planning for Rural Development" P

in Jamaica." Caribbean Quarterly 18, No. 1 (March 1972): 1-13. [UWI/WIC]

Suggests agricultural planning should include spatial analysis.

FOOD AND AGRICULTURE ORGANIZATION/ U.N. DEVELOPMENT PROJECT. Development and Management of Water Resources, Jamaica: A Proposed Water Resources Act for Jamaica, Working Document II. Rome, 1972. [UNDP/JAM]

P, LC

---. Development and Management of Water Resources, Jamaica: Water Legislation in Jamaica, Working Document I. Rome, 1972. [UNDP/JAM]

P, IC

A description and discussion of present legislation and authorities.

GOODWIN, P. "Jamaica's Crop of Good Ideas." New Scientist 64, No. 940 (1975): 636-638.

P

Discusses problems of food shortage for domestic consumption. Reports on drive towards self-sufficiency in food production and suggests the immediate results seem encouraging. Mentions the land reform program.

GOWDIE, A.L. and ROMNEY, D.H. "Replanting Coconuts in Jamaica through the Lethal Yellowing Insurance Regulations." Agricultural Administration 3, No. 2 (1976): 125-131.

P, C

Planting of resistant 'Malayan Dwarfs' in Jamaica, to replace 'Jamaica Tall' coconuts killed by lethal yellowing disease, is being aided through the Lethal Yellowing Insurance Regulations. Funding is by a tax on production, and aid to any farmer (free seedlings and cash grants) is proportional to his previous sales on coconuts for copra. From 1966 to 1974, 1.7 million seedlings were issued out of 2.2 million offered to farmers. A sample survey of 100,000 seedlings planted on 61 farms in 1967-1969 showed 67 percent alive in 1973. Although the replanting of coconuts through these Regulations has been accompanied by many errors, as the data show, nevertheless considerable success has been achieved. Inflation to some extent limited the enthusiasm of farmers since the cash

benefits became inadequate to cover the costs of planting and maintenance. The present cash benefit of \$1.40 per plant is the result of an increase in August 1974 from the \$1.00 per plant effective as from 1966. Increases in the price of coconuts have tended to fail to keep up with rising costs or with the profits to be made in non-agricultural enterprises.

HUGGINS, H.D. "Employment, Economic Development and Incentive Financing in Jamaica." Social and Economic Studies 1, No. 1 (February 1953): 1-59.
[MOA/JAM; OWI/ISEP]

P

Describes agriculture at that time (or in terms of 1943 census) in detail. Policies "assume agriculture is given first claim on development effort." Increased production is to be added by modern techniques associated with use of fewer workers. Trend should be toward medium size farms (10-49 acres) with workers being absorbed into industry. Useful historical comparison.

INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS. Agricultural Policy Papers (Vol. 1); Five-Year Plan (Vol. II). Jamaica: Instituto Interamericano de Ciencias Agrícolas, Document 7 (No date, in process?). [RDS/AID/JAM]

P

JAMAICA. Ministry of Agriculture (probably) Agricultural Development Strategy. No date on this xerox but seems about 1974. Pp. 44. [PDS/AID/JAM]

P

A forerunner of the National Development Plan. Useful for background of agricultural sector problems and government program formulation.

---. ---. Agricultural Information Service. Annual Report, Year Ended 31 March 1975. May 1976. Pp. 97. [ROS/AID/JAM]

P, E, T

Best single source of information on agricultural projects, goals, basic summary data, scope of ministry functions. An important source for any agricultural program information.

---. ---. Agricultural Planning in Jamaica.

P

Kingston, 1972. Pp. 32 + Appendices.
[MOA/JAM]

Discusses history of development planning (including colonial history) and a description (not evaluation) of projects 1950's, 1960's, and general review of planning critiques.

---. ---. Agricultural Planning Unit.
"Agricultural Subsidies." 1955-1972.
(Unpublished) 1973(?). Pp. 17 + tables.
[MOA/JAM]

P, M

Report lists subsidies, amounts used, administrative expenditures, etc. and a critique and recommendations. This is historical, but provides a useful though not detailed analysis and discussion of problems for present and future programs.

---. ---. Farm Subsidies. June 1975
(printed, looseleaf folder) Pp. 8.
[RDS/AID/JAM]

P, M

This folder contains a series of brochures which show the level and type of various types of subsidy programs, mostly crop specific.

---. ---. Planning and Policy Review Division and Ministry of Finance, The National Planning Agency. Five Year Development Plan 1978-83: Agricultural Sector Plan, Vol. I, Vol II (Draft). [RDS/AID/JAM]

P, S, C, M, LC

First volume has short summary chapters on resources available to the sector, recent programme of the sector and its major problems. Present and future actions proposed for land reform, soil conservation, irrigation and drainage projects are then outlined. Project goals for each of the domestic food crops are given, though not justified in great detail. The cattle expansion programme is outlined, as are programmes for small stock poultry and fisheries. Programs and projections for export industries - coconut, coffee, cocoa, sugar and bananas are given. In Vol. II spices, fruit trees, forestry, citrus, tobacco industries of program are covered. Credit, domestic food markets, certified seed production and agricultural co-operations and research have separate chapters. Alternative institutional systems for

credit are given. A quite detailed discussion of marketing is provided and a detailed programme for co-op development and detailed suggestions for agricultural research.

---. ---. Outline of the Proposed 5 Years Development Plan (Agricultural Sector) for Consultative Meeting of the Minister of Agriculture and Farm Leaders at Jamaica Pegasus Hotel, Kingston, on 14th April, 1978. Kingston, 1978.

P, M

Policy goals - 1. Produce as much food and raw materials as is feasible.
 2. Reduce imports. 3. Use all agricultural lands to fullest potential.
 4. Increase rural incomes. 5. Improve rural amenities. 6. Improve employment opportunities. Programs to achieve these goals include: 1. Fair prices.
 2. Acceleration of land reform.
 3. Expanded irrigation. 4. A major soil conservation program. 5. Better research and extension. 6. Major changes in food marketing. 7. Reorganization of crop export activities. Agricultural credit is to be consolidated under the control of J.D.B. All agricultural research is to be consolidated into the new Agricultural Research Service (A.R.S.).

---. ---. Project Land-Lease. Kingston, 1974. Loose leaf material for farmer. [RDS/AID/JAM]

P, IC

Indicates statistics kept and extension etc. involved in programme.

---. ---. Special Task Force. "Green Paper on Agricultural Development Policy." (Revised) March 1974. [RDS/AID/JAM]

P

---. ---. Special Task Force. Green Paper on Agricultural Development Strategy. Kingston, Jamaica, November 1973. Pp. 44. [MOA/JAM] [RDS/AID/JAM]

P, S

The important policy paper of the present (1977) Jamaican Government. Produced by a commission including W. Arthur Lewis. Sets as objectives full use of agricultural lands, improved rural living, income redistribution, produce as much food as economically

and technically feasible, attract private sector investment. The strategy: more equitable land distribution, improved farmer training, improved extension, re-organization research, introduce new technologies and expansion of existing production of non-traditional exports, e.g. avocados, mangoes, efficient credit system, reorganization of Ministry of Agriculture.

Has sections on resources in agriculture, recent performance (1963-72), agricultural sector study: its findings and recommendations, and Government's proposal for action.

- . ---. "Subsidies and Interest-Free Loans Available to the Farmer." Farmer 80, No. 7 (1975): 271-281.

P, LC

Discusses subsidies and interest-free loans available.

- . Ministry of Lands and Agriculture. Farmers Production Programme 1963-68. Kingston, May 1963. [MOA/JAM]

P

- . ---. The Agriculture Development Programme 1960-1962. Ministry Paper 42. 7 November 1960. [MOA/JAM]

P

Gives planned data, budget, etc.

- . Nutrition Advisory Council. A Food and Nutrition Policy for Jamaica with Programmes for Incorporation into the National Development Plan: 1975/76-1977/78. Pp. 45. Prepared June 1974, revised January 1975. [RDS/AID/JAM]

P, N

Discusses the current status of nutrition and food supply. A major section deals with the factors which determine food consumption patterns and nutritional status. The final section deals with proposed policies to improve the conditions described. Excellent source.

- . Office of the Prime Minister. The Emergency Production Plan - 1977-78. April 22, 1977. Paper No. 13. Pp. 127 + Appendices. April 22, 1977.

P

New temporary economic policies established

to deal with the current acute foreign exchange crisis. The plan calls for increased food output to substitute for imports. Existing programs are to be accelerated and new measures instituted.

- . The Ministry of National Mobilisation and Human Resource Development. Production Plan Implementation Control (E.P. I.C.) Council. Emergency Production Plan, Progress Report Number 2. Presented to the House of Representatives, Tuesday, December 13, 1977. Pp. 140 (Typewritten, no author) Ministry Paper No. 48. [Report borrowed from radio station. Probably available through Prime Minister's Office]

P

This entry is closely related to the adjacent report from the Daily Gleaner article on the Prime Minister's speech, which was excerpted from this document. Only different entries noted here. Results of the plan--consumption rates fell from 91 percent of GDP to 81 percent compared to a comparable period. Non-traditional exports have been stimulated--plastic materials, up 208 percent; non-electrical machines, up 165 percent; furniture, up 146 percent. Unemployment remains high--220,000 persons, 23 percent of labor force. Tables relating to activity of several projects are provided--Crop Lien Program, Project Land-Lease and Unusedauxite Lands.

- JAMAICA AGRICULTURAL SOCIETY. Background to the Formulation of a National Plan for Agriculture and Rural Reconstruction in Jamaica. Kingston, 1972. Pp. 126. [UWI/WJC: HD 1846.J3]

P, S

- . "Development plan for Agriculture." Farmer, 78 No. 11 (1973): 349-395. [MOA/JAM]

P

A comprehensive development plan for Jamaican agriculture, based on the findings and recommendations of the Agricultural Sector Study, was tabled as a Green Paper in the House of Representatives in November, 1973. Reports statement to the House by the Minister of Agriculture which outlined an 18-point action plan arising from the study, and invited comment by the end of the year. Both the Minister's message and the plan are reproduced.

- . "Farmers' Conference on Food Crop Production." Kingston: Jamaica Agricultural Society, 1976 (Pamphlets, mimeo). [MOA/JAM] P, S

Background papers and speeches of a national plan for agricultural and rural reconstruction.

- JOHNSON, I.E. "A National Agricultural Plan for Jamaica." Farmer, 78 No. 2/3, (1973): 64-70, 74. [MOA/JAM] P

- ; BONNICK, G.; et al. An Action Programme for Agriculture. Report on Seminar Held at Golden Head Beach Hotel, Oracabessa, 7 to 9 December, 1973. Kingston: 1974 79, No. 1/2: 5-52. P

The Seminar was opened by Mr. Anthony Capleton. The first paper, by I. E. Johnson discussed Policy and goals for Jamaican agriculture, and this was followed by G. Bonnick on the Need for the National Plan. In the next section K. Munn presented the role of farmers and their organizations and co-ordination in agriculture. P. J. Patterson spoke on Potential and production targets in

agro-industry, and G. M. Sammy on Food processing and agriculture. The Seminar concluded with reports from the Workshops on Extension, Livestock, Agricultural credit. Traditional and non-traditional export crops, marketing, research, and the role of co-operatives.

- JONES, Edwin. "The Role of Statutory Boards in the Political Process in Jamaica." Social and Economic Studies 19, No. 1 (March 1970): 114-134. [MOA/JAM] P, M

Discuss political processes in formulation and administrative efficacy of such Boards (these including marketing boards, etc.).

- . Agricultural Planning in Jamaica. Instituto Interamericano de Ciencias Agricolas (IICA), Kingston, June 1977. 48 pp. [RDS/AID/JAM] P

A review of existing policy and planning divisions of MOA.

LESLIE, K.A. and I.B. PANKINE, "Food Supplies in P,M,J
the Commonwealth Caribbean: the Case of Ja-
maica". Proceedings of the Tenth West Indies
Agricultural Economics Conference, Georgetown,
Guyana, 1975. St. Augustine, Trinidad: Univer-
sity of West Indies, Department of Agricul-
tural Economics and Farm Management, 1975.
Pp. 23-37.

Article reviews information of relative con-
tribution of domestic and foreign sources of
food supply, and describes and evaluates
recent programs to increase production. Sug-
gests that policies were not developed for the
whole sector and that small farmers did not
participate adequately.

MARSHALL, O.P. "West Indian Land Law: P,J
Conspectus and Reform." Social and
Economic Studies 20, No. 1 (March 1971):
1-14. [MOA/JAM]

Describes the legal situation of land
laws of each of the Commonwealth Caribbean
islands including Jamaica. Discusses and
explains difference between legality and
custom in matters of alienability (family
land is a custom), succession (legitimate
versus all offspring). Also suggests
reforms of law, e.g. reducing cost of
conveyancing. Useful for understanding
land title situation and farm fragmentation.

MILLS, G.E. and ROBERTSON, Paul D. P,J
"The Attitudes and Behaviour of the Senior
Civil Service in Jamaica." Social and
Economic Studies 23, No. 2 (June 1974):
311-343. [MOA/JAM]

Uses results of attitudinal survey to
suggest that civil servants consider
themselves implementers and do not
wish to be involved in providing
policy suggestions. This role is
considered a remnant of Colonial
administration in which decision-
making was done elsewhere.

MORRISON, C.J. A Development Plan for P
Portland. Kingston: Ministry of
Agriculture, July 1972. Appendix.
Pp. 75. [RDS/AID/JAM]

Portland at the extreme East end of
Jamaica is co-extensive with the Port
Antonia Area Land Authority (now defunct).

A comprehensive plan and study of the area.

MUNN, K.A. "Agricultural Development Policy." Farmer 79, No. 4/5 (1974): 139-153. [P0016-04734] P

Minister for Agriculture states the Jamaican government's broad objectives for agriculture, and detailed action proposals to put these policies into effect are set out.

---. "Coordination in Agriculture." Farmer 79, No. 1/2 (Jan/Feb 1974): 16-19. P

---. "Munn on Agriculture in the House. The text of a speech made in the (Jamaican) House of Representatives on Thursday 20 June (1974) by Honourable Keble Munn, M.P., Minister of Agriculture." Farmer 79, No. 7/8 (1974): 221-269. P

A review is made of some of the more important events in the agricultural sector of Jamaica during the year ending June 1974, including the Agricultural Sector Study, the re-organization of the Land Authorities within the Ministry of Agriculture, additional expenditure on Farm Machinery Pools, the Conservation Project, the "Miracle Fruit" project, the export crop situation, the coffee industry, Idle Land Orders, Food Farm operations, Project Land Lease, questions of credit, fertilizer and fertilizer subsidy, the Agricultural Marketing Corporation, and the cocoa, citrus, tobacco, sugar, pimento, banana, and dairy industries.

NUNES, F.E. "The Declining Status of the Jamaican Civil Service." Social and Economic Studies 23, No. 2 (June 1974): 344-356. [MOA/JAM] P, J

Provides results of survey showing decline in status of Civil Service. Suggests reasons are emergence of ministerial decision-makers to replace Colonial (white) Civil Service decision-makers. Civil Service chief advisors, but advice is only heard, seldom followed.

POORAN, S. and HUTCHINSON, M. Montego Bay-Lucea-Falmouth Regional Study. Kingston: Town Planning Division, Ministry of Mining and Natural Resources. July 1974. Pp. 136 + 35 maps, tables.

P,J

Presents a comprehensive view of each economic, social, physical factor as they apply in this region. Discusses problems and plan solutions (includes agriculture).

PAJANSEE, J. Politico-Administrative Aspects of Agricultural Development: A Caribbean Perspective. India: Indian Institute of Public Administration, 1973.

P,J

Quoted as relating agricultural policy failures to administrative-bureaucratic inadequacies.

SPAULI, Hebe. "Jamaica Plans an Agricultural Policy." New Commonwealth XL, No. 10 (October 1962): 521-524.

P

STONE, Carl. "Political Aspects of Postwar Agricultural Policies in Jamaica (1945-1970)." Social and Economic Studies 23, No. 2 (June 1974): 145-175. [MOA/JAM]

P,S

Paper develops thesis that primary obstacles to agricultural development in period were political, and represented the competition between and interplay of class interests. Suggests that the 'incrementalist' policies stressing credit, subsidies, marketing services to small farmers occurred because of lack of leadership and radical demands by small farmers. Leadership in agriculture was from farmers of 50-100 acres or 5 to 50, who accepted possibilities of mobility in system. Large landowners had sufficient influence to prevent radical land ownership changes in a situation in which governments gave a low priority to agriculture. Suggests that more radical changes are likely in 70's. An important and controversial analysis, with useful description and documentation.

UNKNOWN AUTHOR. "Agricultural Planning in

P

Jamaica." Unpublished mimeo. 1968?
[RDS/AID/JAM]

Gives a history to 1967 of plans, schemes and planning. Otherwise some general comments on planning.

---. "Agriculture in Jamaica." West Indian Review 10, No. 6 (1974): 16-18, 20. P

Reports on a seminar of the Jamaican Agricultural Society held at Oracabessa, December 1973, which commented on the agricultural development strategy set out in the Jamaica Government's Green Paper. Reviews the measures to be undertaken by the Government.

---. "Farmers' Income Tax: Breeding Stock Investment Allowances." Farmer 77, (12): 395-397. December 1972. P

---. "Farmers' Income Tax: Capital and Investment Allowances." Farmer 77, (12): 369-372, 374-376, 378, 381-383. December 1972. [MOA/JAM] P

---. "Farmers' Income Tax: Herd Basis Treatment of Farm Animals." Farmer 77, (12): 384-385, 387-390, 392-393, 397. December 1972. [MOA/JAM] P

WALKER, Carol. "The Why's and Wherefores of Food Shortages." Cajanus 10, No. 5 (1977): 256-259. P,M

Statement by an information officer of Agency for Public Information. Asserts higglers and consumers are hoarding, and that higglers are buying at controlled price and reselling.

ZENNY, F. Memorandum on Five Year Agricultural Sector Plan, (Internal Document, Ministry of Agriculture) March 1978, 115 pp. P,M

This document is an analysis and critique of the 1978-1982 Five Year Development Plan. Carefully done, detailed and specific. It provides an alternate view concerning nearly every aspect of agricultural policy, structure, plans and potential. Must reading as a companion to the 5-Year Plan. Points out clearly problems with the Plan's expanded role in AMC in marketing.

PROJECTS

- FARGUHARSON, A. "North Clarendon and Other JAS Projects." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM] Pr
- FOOD AND AGRICULTURE ORGANIZATION/U.N. DEVELOPMENT PROJECT. Forestry Development and Watershed Management in the Upland Regions, Jamaica: Project Findings and Recommendations, Phase III, Term Report. Rome 1977. Pr, T, C
- Reports results of sawmill wood utilization for low cost housing, and results of forest plantation project over a number of years.
- GREEN, P. "Agriculture Project Land Lease--Betford, Mandeville." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM] Pr, S
- GPONTMIJ CO. Black River Morasses Reclamation Project. Kingston, Ministry of Agriculture and Lands, September 1964. [MOA/JAM] Pr, LC
- This is a project proposal, with description of region and its water, land and drainage problems. Makes estimates of benefits and costs of project. Benefits based on cost/returns data on agriculture (no source cited).
- INTER-AMERICAN DEVELOPMENT BANK. Jamaica: Project Report on Self-Supporting Farmers' Development Program Stage IV (restricted) 23 August 1977. [PC/AID/JAM] Pr
- Has update on this project and evaluation of earlier part of project etc. Survey material on this project is listed under SC.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. Jamaica: List of Projects for External Financing 1978/9-1980/81. Washington, D.C.: IBRD, May 2, 1978 [RESTRICTED][RDS/AID/JAM] Pr

----. Jamaica: Third Highway Project. June 24, 1974. Document B74-152 for Executive Directors Meeting. Incorporated into this special document is Report No. 441a-Jm, Jamaica: Appraisal of a Third Highway Project Pp. 40. Includes maps, tables (Restricted). [RDS/AID/JAM] Pr,J

JAMAICA. Jamaica: Third Highway Project. "Action Required as a Result of Ministerial Decisions on Sector Study Briefs." (no date, no author, no indication of originating agency) Pp. 9. [RDS/AID/JAM] Pr,J

This document seems to date from 1975 and to have originated with the GOJ. It was probably a portion of a larger agricultural document. It is a complete listing of existing and proposed investment projects by all and any agency dealing with rural and agricultural development.

JAMAICA/INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. First Rural Development Project. Vol. I (Draft), Kingston, August 1975. Pp. 41 + 21 annexes of 250 pp. [RDS/AID/JAM] Pr,S,LC

Gives overview of Jamaican rural sector, a description of the project area (Trelawny, St. James, Hanover, Westmoreland, and St. Elizabeth), and a discussion of the project and its organization reform, improve services to agriculture and establish an Agricultural Credit Bank.

---. Ministry of Agriculture. Division of Economics and Statistics An Evaluation of the Soundness of Farm Planning under the Farm Development Scheme in the Treadway Development Area, Kingston, 1961. Pp. 42. [MOA/JAM] Pr,S,P

---. Ministry of Health. A Rural Health Program in Jamaica. University of the West Indies; Cornell University Medical College, 1971. [FDS/AID/JAM]

Pr,S,N

A description of the Elderslie, St. Elizabeth Parish pilot rural health project.

---. Ministry of Works and Communications. Public Works Department. Rural Feeder Roads Project. Final Report June 1976. Prepared by: Tippetts-Abbett-McCarthy-Stratton Engineer and Architects, New York, N.Y. Pp. 75, 4 appendices. [FDS/AID/JAM]

Pr

Much of this report is oriented to administrative and engineering detail. The size and scheduling of the projects is reported and mapped. A four-page discussion of social and economic benefits (appendix missing from copy evaluated. A note was inserted that the contractors would submit later). Also an appendix on cost/benefit ratios of each sub-project.

---. Office of the Prime Minister. National Planning Agency. Technical Assistance Bulletin. No. II, June 1976. [PC/AID/JAM]

Pr,J

Gives the statistics (as of September 1976) of projects in Jamaica by donor, ministry co-operating, project title and objectives, duration, experts, training, and remarks on status.

KRUIJER, G.J. and NUIS, A. Report on an Evaluation of the Farm Development Scheme, First Plan 1955-60. Kingston: Government Printer of Jamaica, 1960. [MOA/JAM] [UWI/JAM]

Pr,LC

Farmers applying for assistance had a land capability drawn up and a personal extension officer. A lot of money not used. Covers costs and benefits.

MOCPE, Ernest M. "Technical Assistance to Developing Countries: The Jamaican Experience." Paper for XIII session of the Committee on Improvement of National Statistics, Nov. 18-21, 1977.

Pr,SC,"

RICHARDS, G.M. "Evaluation of Operation Grow in Hounslow." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM] Pr

U.N. DEVELOPMENT PROJECT. Report on Development Assistance to Jamaica, 1976. UN Development Project, June 1977. (Also a report for 1975) [PO/AID/JAM] Pr,J

Gives Bank of Jamaica report on economy (short); has a statement on each donor's policy; then Project/activity by source of assistance, \$ commit for 76, duration, nature of assistance and location.

UNITED STATES. Agency for International Development. Capital Assistance Paper Proposal and Recommendations for the Review of the Development Loan Committee. University of West Indies, Integrated Regional Development Caribbean Regional. (Restricted) [PO/AID/JAM] Pr,S

Has list of research relating to rural poor in agricultural extension and agricultural economy. Describes agriculture and agricultural economics programme and relation to region.

---. ---. Integrated Rural Development Jamaica, Proposed Project for Pindars River and Two Meetings Watersheds. August 16, 1977. Pp. 60 and annexes. [PDS/AID/JAM] Pr,S

This AID project loan to the Government of Jamaica is designed to support programs which will help improve the standard of living for hillside farmers. This project integrates with an earlier program to create terraces and other conservation techniques in this same region. Report involves analysis of agricultural sector in the area.

---. ---. Jamaica - Integrated Rural Development Project. Project Paper (unclassified), proposal and recommendations for the Review of the Development Loan Committee. Sept. 14, Pr,S

1977. Pp. 68 and annexes A-V.
[PDS/AID/JAM]

Contains 5 pages of background section, 30 pages of program description, a program analysis and an evaluation-implementation plan. Among the annexes is an economic evaluation of small farms, a description of agricultural credit and farm organizations, a 7-page agricultural marketing discussion, a crop analysis, sociological analysis.

---. ---. Jamaica - Rural Feeder Roads Loan. Pr
Proposal and Recommendations, Capital Assistance Paper. AID-DLC/P. 978 (unclassified), June 1971. Pp. 52 + 7 appendices. [PDS/AID/JAM]

Includes a description of the program, need for roads and a project analysis.

WORLD BANK. Population Projects Department. Pr, J
Appraisal of a Second Population Project, Jamaica. Report No. 1040b-Jm, May 26, 1976. (Restricted Circulation) Pp. 25 + 24 annexes. [PC/AID/JAM]

An evaluation and description of population and nutrition programs in Jamaica. Includes data on location of facilities, costs of operation.

AGRICULTURE: COMMODITIES

ABBOTT, George C. "Stabilization Policies in the West Indies Sugar Industry." Caribbean Quarterly 9, No. 1/2 (1963): 53-56. [UWI/ISER]

C, M

Describes Commonwealth sugar agreement and effect on pricing and production.

---. "The West Indian Sugar Industry with Some Long-Term Projections of Supply." Social and Economic Studies 13, No. 1 (March 1964): 1-37. [MOA/JAM; UWI/ISEP]

C, J, M

Describes acreage changes, yields, factory efficiency of each island. Projects output from past trends and from likely acreage, yield, efficiency changes and gets 'technically feasible' production. Does not include detailed cost and has optimistic attitude to export market and comparative costs.

ALEXANDEF, J. "The Rope Industry in May Pen." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM]

C

ALGEO, John W. and BROWN, Dean. Survey of the Cattle Industry of Jamaica. Kingston: Sugar Manufacturing Associations, 1968. 17 pp. [MOA/JAM: 636.2]

C

ALL ISLAND JAMAICA CANE FARMERS' ASSOCIATION. Annual Report. Kingston, Jamaica. [MOA/JAM]

C, M

Gives cane deliveries per factory, basis for final payments (estates versus farmers), factory time accounts and efficiency. Gives a graph of cost of production but no tables or data sources.

APTHUR, Henry B.; HOUER, James P.; and BECKFORD, George L. Tropical Agribusiness Structures and Adjustments--Bananas. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968, XI. 210 pp. [NAL: HD 9259.B2A7] [MOA/JAM]

C, M

A descriptive analysis of factors that affect performance of international

banana industry. Has sections describing Jamaican industry. Some of comparative data useful, but no real cost data provided.

ASSOCIATION OF CARIBBEAN UNIVERSITIES AND RESEARCH INSTITUTES. Proceedings of the Seminar/Workshop on Horticultural Development in the Caribbean, Maturin, Venezuela, March 12-15, 1972. St. Augustine, Trinidad: University of the West Indies, Dept. of Crop Science, 1972. ix + 273 pp.

C, Pr

Objectives of this seminar were:

(1) to determine the current status, aspirations and problems associated with horticultural development in the region; (2) to explore the measures required to solve the problems, review the work in progress and define what additional efforts are needed; and (3) to suggest the best means for pooling facilities and co-ordinating efforts for the benefit of the entire Caribbean region. Background papers were given in all areas covered by the region. Problem areas papers covered technical and economic problems. These included storage and transport of fruit and vegetables in the West Indies (A.K. Thomson); aspects of fruit marketing in Venezuela (M. Millan Farinas); agricultural extension problems of horticultural development in the Caribbean (T.H. Henderson).

CHAMBERS, D.D. "A Geographical Appraisal of Poultry Farming in Jamaica." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1970. [GD/UWI/JAM]

C

COLQUHOUN, H.E. "Cocoa in Jamaica--A Geographical Review." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1971. [GD/UWI/JAM]

C

COMITAS, Lambros. "Fishermen and Co-operation in Rural Jamaica." Unpublished Ph.D. dissertation, Columbia University, 1962.

C, D

CROPPEP, J. and ATSU, S.Y. The Economics of Milk Production in Jamaica. Dept.

C, S

of Agricultural Economics, University of West Indies, St. Augustine, October 1969. Appendix, tables, 38 pp. [FDS/AID/JAM]

Discusses factors which affect the profitability of dairying in Jamaica and then compares various alternative systems. An island-wide survey of dairy farms showed that the higher rain and mountain areas have a production advantage over irrigated areas. New settlement farms were found to be successful. Overall success was related to management practice and less to farm size or capitalization.

CUMPER, G.F. "Labour Demand and Supply in the Jamaican Sugar Industry, 1830-1950." Social and Economic Studies 2, No. 4 (March 1954): 37-103. [MOA/JAM; UWI/ISEP] C,S

Detailed historical discussion of sugar industry.

DAVENPORT, N.C. "A Comparative Study of Two Jamaican Fishing Communities." Unpublished Ph.D. dissertation, Yale University, 1956. C,S

DAVID, J.M. "The Sugar and Banana Industries of Jamaica." Unpublished M.A. thesis, University of London, 1956. C,M

DEVENDRA, C. "Goat Production in the Caribbean." British Goat Society Year Book (1972): 46-49. C

---. "Management of Goats in Jamaica." Caribbean Farming 2, No. 4 (Oct/Dec 1970): 30-31. [MOA/JAM] C,T

Material for extension purposes. Suggests methods to prevent problems of overgrazing.

DREHER, Melanie. "Working Men and Ganja: Communalities and Variations in Rural Jamaican Communities." Unpublished Ph.D. dissertation, Columbia University, 1977. C,S,M

Examines and compares behaviour and values associated with cannabis in three rural communities in Jamaica. Use occurs as part of socioeconomic

structure of communities, is mostly carried out by males, and can occur in work-settings. Cultivation distribution and consumption are described.

DUNKLEY, Dorothy. "Dairy Industry in Jamaica." C
 Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

DUNN, C.L. "An Interim Economic Appraisal of the New Medium-Sized Dairy Farm Project in Jamaica." In Fifth Annual West Indian Agricultural Economics Conference, Roseau, Dominica, April 1970. C, F
 St. Augustine, Trinidad: University of West Indies, Dept. of Agricultural Economics, 1970. [MOA/JAM]

Explains USAID funded project to train and set up medium-sized dairy farms.
 Provides appraisal of cost, returns and problems of first 17 farmers settled.

EATON, George. "Canada--Sugar and the Commonwealth Caribbean." Caribbean Quarterly 18, No. 1 (1972): 72-86. C, M
 [UKC/ISEP]

Looks at issue of Canada's being asked to take West Indies sugar at higher prices.

EDWARDS, D.T. and CPOPFEE, J. "An Economic View of the Development of New Production Systems." In Proceedings of the International Symposium on Tropical Root Crops, 2-8 April 1967. C, J, T
 St. Augustine, Trinidad: University of West Indies, 1967. [UWI/ISER]

Suggests that for root crops unnecessary practices should be eliminated, and excess inputs reduced, less costly methods used. Yields could be increased by changes in variety, planting in optimal seasons, disease and decreased damage in harvesting. Increased prices could be obtained for better varieties and higher quality, more lucrative outlets and better timing. Illustrates with examples from Texaco Food Crops demonstration farms in Trinidad (these are mechanized).

PVANS, P. "Fishing in Old Harbour." C

Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1974. [GD/UWI/JAM]

FOOD AND AGRICULTURE ORGANIZATION.

C,S

International Scheme for the Co-ordination of Dairy Development: Final Report, Jamaica. FAO, Rome, June 1976. 33 pp. [PDS/AID/JAM]

The body of the report gives recommendations for production, health, marketing, research, institutions, and provides prospects for demand and price policy. A 10-page appendix gives a detailed account of the present situation of the industry covering numbers, disease, feed, techniques, milk market, prices economics of production and marketing. In 1974--80 percent milk imported. About 4,000 farms have cows but bulk of commercial milk from 200 farms with an average 35 cows.

FOOD AND AGRICULTURE ORGANIZATION/INTER-AMERICAN DEVELOPMENT BANK COOPERATIVE PROGRAMME. Jamaica, Identification of Fishery Development Project, Vol. I (Main Report), Vol. II (Annexes).

C,Pr

Report No. 5/77 Jamaica 3, April 1977. (Circulation Restricted) (Vol. I) 95 pp., (Vol. II) 148 pp. [PDS/AID/JAM; UNDP/JAM]

Comprehensive study of all aspects of present and potential fisheries development. Emphasis is on marine fisheries. Discussion of marketing included.

FOOD AND AGRICULTURE ORGANIZATION/U.N. DEVELOPMENT PROJECT. Caribbean Fish Development Project. Fisheries Development, Jamaica. Rome, 1971 [UNDP/JAM]

C,Pr

---. Caribbean Fish Development Project: Caribbean Fish Industry 1960-70. Tech. Report F. Rome, 1972. [UNDP/JAM]

C

FRANKS, H.D. "Mechanized Harvesting of Sugarcane. A Technical, Economic and Social Appraisal." (Diploma thesis, University of West Indies, unpublished), May 1968. 52 pp. + bibliography and seven appendices. [UWI/ISES: B HD9100-F (pamphlet)]

C,T

Reviews experiences with mechanized harvesting in other world regions. Discusses technical problems of field and mill management. Includes social and economic problems based on a survey of workers. Various alternatives are detailed as to costs and efficiency.

FRASEF, H. Aubrey. "The Law and Cannabis in the West Indies." Social and Economic Studies 23, No. 3 (September 1974): 361-385. [MOA/JAM; UWI/ISER] C, P

Most of article discusses specific laws and cases by country but includes a section on cannabis in Jamaica which states that it is considered a profitable agricultural crop allowing two crops per year, especially for small farmers. Jamaica also has traditional and endemic use of the plant.

GAPPEL, Douglas "The Experience of Major Constraints on the Commercial Production of Soybeans in Jamaica" Proceedings of the Tenth West Indies Agricultural Economics Conference, Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. pp. 241-248. C, P

Gives an overview of production, costs, research, imports etc. of soybeans in Jamaica.

GIRWAP, S.N. "The Role and Future of Sugar in the Commonwealth Caribbean in the Light of Britain's Entry into the EEC." Proceedings of Eighth West Indian Agricultural Economics Conference, Port-of-Spain, Trinidad, April 1-7, 1973. St. Augustine, Trinidad: University of West Indies, 1973. C, J, M

Analysis is made of the world sugar situation affecting the Caribbean producers. Sugar markets are analyzed: (a) negotiated price quota, (b) U.S. quota. The UK and EEC systems are discussed and compared. The Assurances offered to the Caribbean producers are examined (Brussels formula, to Lancaster House declaration, Protocol 22), and anxieties arising out of Britain's entry into EEC discussed. Examination of the alternatives open to the Caribbean sugar.

industry indicates that at present the Commonwealth Caribbean countries are so heavily committed to sugar production, in terms of both men and materials, that any disruption of market outlets can cause severe economic and social dislocation.

GRIFFITHS, M. "Lethal Yellowing Disease in Coconut-Spatial Patterns and Pepercussions on the Local Consumption Market." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975. [GD/UWI/JAM]

HAGELBEPG, G.B. The Caribbean Sugar Industries: Constraints and Opportunities. Occasional Papers No. 3. New Haven, Connecticut: Antilles Research Program, Yale University, 1974. 173 pp.

C,J,M

This study discusses the changing character of the plantation, the possibilities of further intensification of land use with sugar versus other food crops in the Commonwealth Caribbean. Potential for technological change in processing is also covered. Sugar statistics are reviewed, and trends in costs of production, factor use and productivity analyzed. Commonwealth Caribbean does not now have lower costs than competitors.

HAMMERTON, J.L. "The Future of Soybean in the Caribbean." Cajanus 4, No. 5-6 (1973): 303-308. [MOA/JAM]

Experimental results in Jamaica satisfactory (1.5 ton/acre) but farm production costs/yields not available.

-, and PIERRE, R.E. "Cajanus Cajan, the Pidgeon or Gungo Pea." Cajanus 4, No. 2 (1971): 81-88. [MOA/JAM]

C,T,N

Reports results of varietal research, and gives recommended practices for Jamaica.

HART, Ansell. "The Banana in Jamaica: Export Trade." Social and Economic Studies 3, No. 2 (September 1954): 212-229. [MOA/JAM; UWI/ISFR]

C,M

Gives historical background of trade and exports, 1910-1953.

INNIS, D.O. "Peasant Farming: Banana Intercropping in Jamaica." Proceedings of the Association of American Geographers, 5, (1973): 111-117. C,S

An analysis of banana production in Jamaica shows the sophistication with which local cultivators adapt plant combinations to local conditions. Inter-cropping is the most efficient way of production for peasant farmers.

JAMAICA. Cocoa Industry Board. Annual Report. Kingston. [MOA/JAM] C,M,T

Covers data on production, prices, operation of fermentation units, rehabilitation program, and details of research.

---. Coffee Industry Board. Annual Report. [MOA/JAM] C,M

Provides data on production prices, expansion efforts, etc.

---. Forest Department. Annual Report Kingston. [MOA/JAM] C

---. Sugar Industry Authority. Jamaica Sugar Digest. (Quarterly) [MOA/JAM] C

Provides crop production reports by estate. This is an estates publication.

JAMAICA, Government of. Report of the Commission of Enquiry on the Sugar Industry of Jamaica. Kingston, January 1960. 93 pp. [MOA/JAM: 664.1(729.2)] C,M

Covers production marketing quotas and constraints, the sugar law, organization, labor (conditions, productivity, etc.), unions, etc. Has financial results for 1954-58. The report describes industry at that point in time, and includes a great deal of data (of historical value). There is some evaluation, mostly on wage stability.

---. Report of the Sugar Industry Enquiry Commission (1966). Kingston, October 1967. 229 pp. [MOA/JAM]

As for previous report, has a lot of information on structure of industry, breakdown by size, costs, problems, at that point in time. General tenor is worry over 'high cost' Jamaican production and the factors affecting it.

- JOHNSON, John. "The Cereal Industry of Jamaica; Scope and Programmes". Proceedings of the Tenth West Indies Agricultural Economics Conference, Georgetown Guyana, 1975. St. Augustine, Trinidad: Department of Agricultural Economics and Farm Management, 1975. Pp. 46-54. C,P

Lists production data for corn, rice and sorghum and outlines briefly the programs for their development.

- JUHL, F. "Fishery Resources of the Caribbean and Their Potential." In Microbial Safety of Fishery Products, CHICHESTER, C.O., comp., (1973): 25-40. [NAL PA602.F5C5] C

- KPAUSZ, J.P. Competition among the Root and Cereal Staples in Tropical Agricultural Development. Cornell Agricultural Economics Staff Paper. Department of Agricultural Economics, Cornell University, 1974. No. 74-12. 21 pp. C,S,N

The potentials for increasing food production of the staple tropical cereals (rice, maize, sorghum, millet) are compared with those of the tropical root crops (cassave, sweet potato, yam, coc-yam, Irish potato), with special reference to those areas where the two staple food groups are in competition. Central West Africa (Ghana and Nigeria) and the Caribbean (Trinidad and Jamaica) were chosen as areas of investigation. The root crops tend to have slightly higher calorie yields per unit area per unit of time, and a higher untapped improved breeding potential. With few exceptions, the root crops also have lower production costs, but the importance of this is largely related to farmers' returns which vary with the region under study. With increased income, root crops become less preferred, although the increase in

urbanization perpetuates considerable demand for the generally low cost root crops. Cereals are superior as regards storage and transport, although attempts at reducing the bulkiness of root crops and increasing their storageability by processing and drying increase their competition with cereals. Alleged differences in protein content are greatly reduced if protein composition is viewed in terms of calories instead of weight.

KUNDU, A. "Rice in the British Caribbean Islands and British Guiana, 1950-1975." Social and Economic Studies 13, No. 2 (June 1964): 243-281. [MOA/JAM] C,J,M

Provides a short description of rice industry in each territory, including the 4,000 acres in 1960 in Jamaica. British Guiana at that time had monopoly on exports to other islands. Rough demand and supply projections are made.

LAWSON, Stanley. "Jamaica's Sugar Industry: An Inquiry into the Social and Economic Repercussions of a Declining Industry." Unpublished M.Sc. Thesis. New York University, 1971. Xerox. [UWI/WIC: HD 9114.J3L3] C,S

LESLIE, Kenneth A. "The Significance of Foot Crops in the Tropics." In Proceedings of the International Symposium on Tropical Root Crops, April 2-8, 1967. Vol. 2. St. Augustine, Trinidad: University of the West Indies, 1967. [UWI/ISER] C,J

Looks at area, role in GNP, etc., for countries including those in Commonwealth Caribbean.

MCCALMON, J.C.E. "Prospects for Intra-regional Trade in Fish and Fish Products" Proceedings of the Tenth West Indies Agricultural Economics Conference Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. Pp. 112-123. C,M,J

MCDONALD, V. "Innovation: The Basis for a Programme of Rationalization of Caribbean Agriculture (with special reference to the C,J,I

Livestock Sector)" Proceedings of the Eighth West Indies Agricultural Economics Conference, Port-of-Spain, Trinidad, 1973. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1973. Pp. 95-106.

MCDOWELL, L.P.; CONRAD, J.E.; et al. Latin American Tables of Feed Composition. Gainesville, Fla.: University of Florida, 1974. xxvii + 509 pp. + G-16 pp.

C,T

This publication is a combined effort by 28 countries in Central and South America and the Caribbean, the Universities of Florida and Utah and the United States Agency for International Development. The tables give all analytical and calculated values. Seeds are presented alphabetically by their scientific names. There does not seem to be any indication of the local names of the crops included. Instruction on how to use the tables occupy 6 pages.

McFARLANE, Dennis. "The Future of the Banana Industry in the West Indies: An Assessment of Supply Prospects for 1965 and 1975." Social and Economic Studies 13, No. 1 (March 1964): 38-93. [MOA/JAM; UWI/ISEP]

C,J,M

Has sections on resource allocation and distribution; disposal and prices; institutional framework; technical problems and practices; the internal and international markets. Available data by country (including Jamaica) is described. Supply projections to 1965 and 1975 are made.

---. "The Foundations for Future Production and Export of West Indian Citrus." Social and Economic Studies 13, No. 1 (March 1964): 118-156. [MOA/JAM; UWI/ISEP]

C,J,M

Has sections on resource allocation and distribution, capital availability and economic structure, institutional framework: disposal and prices and the international market, using available data to 1964 for each country including Jamaica.

- McLEOD, I. "Banana Industry in Upper Clarendon." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1977. [GD/UWI/JAM] C
- MAHADEVAN, P.; WELLINGTON, K.E.; and ROACHE, K.L. "An Evaluation of Jamaica Hope Bulls." Journal of Agricultural Science (London) 74, No. 3 (June 1970): 473-476. C,T
- MAYERS, J.M. "Some Aspects of the Rationalization and Livestock Development in the Commonwealth Caribbean" Proceedings of the Eighth West Indies Agricultural Economics Conference, Port-of-Spain, Trinidad, 1973. Pp. 71-77. C,J,M
- MITCHELL, H.W. "A Study Tour of Coffee Producing Countries. Part V-Guatemala. Part VI-Jamaica." Kenya Coffee 39, No. 460 (1974): 194-201. C
- Information is presented on the climate and soils, cultural methods and coffee processing and quality in these countries, with additional notes on crop diversification and studies on coffee by-products in Guatemala.
- MURPHY, T. "A Way Out of the Sugar Doldrums?" West Indies Chronicle 87, No. 1497 (1972): 407-410. C,J
- The problems confronting Caribbean sugar cane farmers are explored. Suggests modern technology needs to be utilized, experimental stations and extension services, better distribution and processing methods should be utilized. Recommends reduced labour per unit of production.
- NESTEL, B.L. "A Study, Based Partly on Business Analysis, of Some Factors Influencing Animal Production on a Group of Beef Farms in Jamaica." Unpublished Ph.D. dissertation, University of London, 1964. C
- NORTH LONDON HASLEMEPE GROUP. Bananas: A Study of the Crisis in the Jamaican Banana Industry. London, UK, Third World Publications, 1971. Pp. 7. C,M

The bulk of world trade in bananas is controlled by the Standard Fruit and Steamship Company and the United Fruit

Company of America, of which the Fyffes group is a UK subsidiary. The Fyffes group markets 77 percent of Jamaica's bananas, the rest being shipped by the locally-aimed Jamaica Producers' Company. The particular weakness of the banana producers' position is due to the fact that the marketing of bananas is necessarily a highly integrated operation. It is suggested that the producing countries should nationalize their banana production and corporately set up the machinery to market their crop on the international market.

ORGANIZATION OF AMERICAN STATES. Sugar By-Product Utilization in Jamaica. Vol. I: Pulp and Paper, and Animal Feeds; Vol. II: Alcohol 1977 and 1978 [RDS/AID/JAM]

C,M

Provides an assessment of the techno-economic potential for utilization of sugar by-products to produce useable products. A detailed and specific analysis of projected benefits and costs of each alternative is set out.

OSUJI, Paschal. "The Utilization of Agricultural Products for the Livestock Industry in the Caribbean" Proceedings of the Tenth West Indies Agricultural Economics Conference Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. Pp. 197-217.

C,T,J

PARK, W.L.; and PARK, F.L. Potential Returns from Goat and Sheep Enterprises. St. Croix, U.S. Virgin Islands: Virgin Islands Agricultural Experiment Station, Report No. 7, 1974. 13 pp.

C,J

This report describes four simulated bench mark farms for the production of goat meat and mutton on a small scale. Capital requirements, including land and animals, would range from \$331 to \$386 per adult animal, depending upon circumstances. Land can be leased for \$20 per acre per year. The average return for family labour for a 2¹ acre goat or sheep operation is estimated at \$2.01 and \$1.55 per hour, respectively.

The hourly rate of return to labour on a 5 acre operation is slightly less. At prevailing lease rates for land, family-oriented goat and sheep operations can be profitable as supplemental family enterprises and provide employment of older children and homemakers.

PERSAUD, B. "Market Prospects for Commonwealth Caribbean Sugar in the EEC" Proceedings of the Eighth West Indies Agricultural Economics Conference, Port-of-Spain, Trinidad, 1973. St. Augustines, Trinidad, Department of Agricultural Economics, 1973.

C, M, J

----. "Problems of the Commonwealth Caribbean Sugar Industry." West Indies Chronicles, 9-11 (Jan 1970): 9-11.

C, J

Comment on problems of sugar industry and need to reduce costs by either subsidized wages or mechanization.

PHILLIPS, W.J. "Some Interpretations of Banana Statistics Relating to the EEC Markets and the Commonwealth Caribbean Industry." In Proceedings of Eighth West Indian Agricultural Economics Conference. Port-of-Spain, Trinidad, April 1-7, 1973. St. Augustine, Trinidad: University of the West Indies, 1973. [WI/ISEP]

C

The study has some comments on, and interpretation of, the available data in relation to Commonwealth Caribbean bananas. Tables cover such aspects as: production conditions and structure and productive capacity; costs and cost competitiveness and possible repercussions on the Commonwealth Caribbean industry of factors such as market shares and market structure within the EEC, given an assumed relatively more open situation than that which prevailed in the UK.

RANKINE, Lloyd B. "Some Economic Aspects of Root-Crop Production in Jamaica." Proceedings of the Twelfth Annual Meeting of the Caribbean Food Crops Society, 1974: 1-4.

C

FEES, Ann. "Some Economic Aspects of Root Crop Production." In Proceedings of the International Symposium on Tropical Root Crops, April 2-8, 1967. Vol. 2. St. Augustine, Trinidad: University of

C, J

West Indies, 1967. [UWI/ISER]

Provides some comparative production costs in the Caribbean.

RODRIGUEZ, D.W. Bananas: An Outline of the Economic History of Production and Trade with Special Reference to Jamaica. Kingston: Dept. of Agriculture, Jamaica. Commodity Bulletin No. 1, 1955. 69 pp. [MOA/JAM]

C,T

Historical account of bananas-- production, marketing, exports to 1954.

---. Coffee: A Short Economic History with Special Reference to Jamaica. Kingston, Ministry of Agriculture and Lands, 1960, Commodity Bulletin 2. 77 pp. [MOA/JAM]

C,M

Covers history of coffee production in Jamaica, some discussion of factors affecting the industry, a summary of results of 1953 coffee farm survey, prices, and exports to 1959.

---. Pimento: A Short Economic History. Kingston: Ministry of Agriculture and Fisheries, 1969, Commodity Bulletin 3. 52 pp. [MOA/JAM]

C,M

Describes plant and its method of production, pests, etc. acreage and number of farms, marketing, production, prices and exports (estimates from 1691).

---. Ginger. A Short Economic History. Jamaica: Commodity Bulletin, Ministry of Agriculture and Fisheries, 1971. No. 4. 36 pp. [MOA/JAM]

C

Ginger is the oldest crop in continuous production in Jamaica and is also an export crop of some importance. In the group of spices produced locally it ranks second to pimento, and provides an important source of income for the small farmers who are engaged in its production. Much of the crop is grown in areas of the Christiana Area Land Authority which have suitable soil and climatic conditions.

SEHGAL, S.M. "Maize in Jamaica: Present Status and Future Possibilities." In

C,

Proceedings of the Caribbean Food Crops Society 37, (1969): 357-360.

Average yields of maize in Jamaica are about 12-15 bu/ac; a few progressive small farmers produce about 30 bu/ac and large growers produce about 60-65 bu/ac. Recommended cultural practices for maize production in Jamaica are outlined.

SHILLINGFORD, John Davison. "Financial Potential and Welfare Implications of Sugar Cane Harvest Mechanization on Jamaican Plantations." Unpublished Ph.D. dissertation, Cornell, 1974. 263 pp. Bibliography. [UWI/WIC: HD 9114.J355]

C, T, S

SIMMS, Errol A. "An Economic Analysis of Factors Affecting Root Crop Production unpublished M.Sc. thesis, University of West Indies, Department of Agricultural Economics and Farm Management, 1975.

C

Analyses factors affecting root crops between 1959 and 1972, using two periods - 1959-1969 and 1970 to 1972. Using supply response models estimates elasticity of output with respect to price (lagged) ranged between 1.83 for yams to 3.942 for dasheen.

STONE, Carl. "Sociopolitical Aspects of the Sugar Co-operatives." In Essays on Power and Change in Jamaica, H. AGGPEY-BROWN and Carl STONE (eds.), Kingston: Jamaica Publishing House, 1977.

C, SC, E, S

Report on survey of 40 members of ten co-op sugar farms, with questionnaire given March-April 1976. Attempted to get information on awareness, and participation; on support of new worker/management roles, and on values related to democratic management; interest in profits, efficiency, etc. Results varied between farms, though a majority wanted short-run gains (i.e. were not in favor of re-investment, etc.) and wanted to keep union as well as co-op membership.

SWEET, Robert D. Commercial Vegetable Project-Jamaica. (Mimeo) Jan. 1966. 14 pp. [AID Reference Center JM 635 US8]

C, T, M

AID consultant report. Object was to evaluate feasibility of establishing pilot vegetable growing and testing station on good alluvial soil.

THOMAS, Clive Y. "Coffee Production in Jamaica." Social and Economic Studies 13, No. 1 (March 1964): 188-217. [MOA/JAM; UWI/ISER]

C,M

Provides a history of production in Jamaica, a description of current production practices and trends in plantings. Provides information by parish on coffee acreage from 1953 survey. Estimates productivity and yields at farm in processing.

---. "Projections of Cocoa Output in Grenada, Trinidad and Jamaica, 1960-75." Social and Economic Studies 13, No. 1 (March 1964): 94-117. [MOA/JAM; UWI/ISER]

C,J,M

Includes fairly short description of Jamaican production, marketing, etc.

THOMAS, O.A. "Some Problems of Pasture Management in the Development of the Livestock Industry in Jamaica". Proceedings of the Tenth West Indies Agricultural Economics Conference, Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics, 1975. Pp. 164-179.

C,T

A good overview of technical and economic factors in the cattle industry.

TITUS, W. "The Tobacco Industry in Jamaica." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1973. [GD/UWI/JAM]

VICKIPPY, Deborah; VICKERY, James; and KETTERING, Merlyn. Intensive Vegetable Gardening for Profit and Self-Sufficiency. U.S. Peace Corps Program and Training Journal, Reprint Series No. 25, March 1978, Washington, 159 pp. [RDS/AID/JAM]

C,T

Written by Jamaica volunteers and specific to Peace Corps experience in Jamaica. Basically a how-to-do-it on community self-help in vegetable gardening. Contains

much layman simplified agricultural technology.

VILLAS SALAS, A.B. "El inventario forestal nacional de Jamaica: metodologias y resultados." Mexico y sus bosques 14, No. 2 (Mar/Abril 1975): 11-17. C,T

WALKER, A. "Agro-Industry in Development-- Case of the Pig Industry." Unpublished undergraduate thesis. Dept. of Geography, University of West Indies, Mona, 1975.

WELLINGTON, K.E.; MHADEVAN, P.; and ROACHE, K.L. "Production Characteristics of the Jamaica Hope Breed of Dairy Cattle." Journal of Agricultural Science 74, No. 3 (June 1970): 463-468. C,T

WILLIAMS, Randolph L. "Jamaican Coffee Supply, 1953-1968. An Exploratory Study." Social and Economic Studies 21, No. 1 (March 1972): 90-103. C,M
Bibliography. [MOA/JAM; UWI/ISER]

Provides summarized description of industry, but major portion develops supply model and estimates using time series data. Coffee output in one year is considered a function of potential to produce in the year (flow of capital services or number of bearing coffee trees) and the intensity of production (measured in labor time applied). This results in a formulation of supply as a function of coffee price (lagged), wage rates, and prices of substitutes and complements. Estimates gave significant positive response to own price lagged and cocoa price lagged, and a negative effect of banana prices. Wages were significant with expected negative sign.

---. The Coffee Industry of Jamaica. Institute of Social and Economic Research, University of West Indies, 1975. [FDS/AID/JAM] [MOA/JAM] C,M

Research carried out in 1970-72 for dissertation at Columbia. Covers development and structure of production and marketing since World War II. (Note that there is no recent

full survey on coffee). Estimates a supply function for Jamaican coffee with elasticity of .82 on quantity supplied and crossprice elasticity for cacao of .28. Discusses processing of coffee, looks at question of economics of scale and evaluates performance of the Coffee Board and the industry.

---. "The Growth, Structure and Performance of the Coffee Industry in Jamaica." Unpublished Ph.D. dissertation, Columbia University, 1973.

C, M

Study includes all growers registered with Coffee Industry Board, and all processing plants administered by Board. Excludes growers of Blue Mountain coffee who account for a negligible proportion of output, and manufacturers of instant coffee. Analysis in study reported in Williams (1972) and (1975). Conclusions are: a) coffee growers are consistent profit maximizers, b) quality responds positively to price differentials, c) long run average cost estimates for processing suggest rational resource allocation and economics of scale, d) investment in plant etc. by Board consistent with long-run average cost minimization, d) policy has contributed to national savings, to extent that constrained income and foreign exchange objectives.

WINTERS, Harold F. and MISKIMEN, George W. Vegetable Gardening in the Caribbean Area. Agricultural Research Service, U.S. Dept. of Agriculture, Agriculture Handbook No. 323, August 1967. Pp. 114. Bibliography. [PDS/AID/JAM]

C, T

A how-to-do-it from terracing and crop variety to insect pest control.

WORLD BANK. Sugar Rehabilitation Project, Jamaica, Staff Appraisal Report. Report No. 1732a-Jm, Jan 1978, 78 pp. + 2 annexes. [PDS/AID/JAM]

C

Contains an overview of the agriculture sector performance, policy and program. The sugar industry is reported in detail - physical, historical, political, technical and social aspects.

AGRICULTURE: NUTRITION

ALDERMAN, M. and D'SOUZA, A. "Improvement of Young Child Nutrition in Hanover Parish." Cajanus 8, No. 3 (1975): 203-204. N

Reports expansion of Elderslie nutrition programme to all children in parish. Local health aids identify malnourished and help family improve utilization of available foods. Malnutrition reported to have dropped 60 percent.

ASHCROFT, M.T. et al. "Heights and Weights of Adults in Rural and Urban Areas of Jamaica." British Journal of Preventive Social Medicine 20, (1966): 22-26. N

---. "Heights and Weights of Infants and Children in a Rural Community of Jamaica." Journal of Tropical Pediatrics 11, No. 3 (1965): 56-68. N

Heights and weights of about 1,000 children up to 9 years old were measured. Growth curves for males and females compared. Overt signs of disease or malnutrition were rare.

ASHWORTH, Ann. "An Investigation of Very Low Caloric Intakes Reported in Jamaica." British Journal of Nutrition 22, No. 3 (1965): 341-55. N

Detailed analysis of very small sample (10) giving heights, weight, caloric intakes, nitrogen balances, changes in body weight, metabolic rates and energy costs of different activities. Evaluation concludes that Jamaicans can live and work on about 70 percent of FAO caloric standard.

--- and PICOU, D. Nutritional Status in Jamaica. University of West Indies, Tropical Metabolism Research Centre, Plenary Paper E, May 1974. N

--- and WATEFLOW, J.C. Nutrition in Jamaica 1969-70. Extra-Mural Dept., University of the West Indies, Tropical Metabolism Research Unit, 1974. Pp. 103. N,P

This booklet consists of a report on nutritional status and the food supply situation in Jamaica in 1969, which was prepared for the Science Research Council by an expert committee. Deals with nutritional status, food supplies and the pattern of food consumption, existing schemes for nutritional improvement, present food policy, research and development, and prevention of infantile malnutrition. Under nutritional status, recent findings are reported on vital statistics, dietary surveys and anthropometric, biochemical and clinical measurements. These are derived mainly from surveys of children. Malnutrition is implicated as a cause of death in about 30 percent of infant hospital admissions. Infant mortality rates have fallen markedly over the last twenty years in the island. The general picture is of malnutrition as an important problems in children aged less than 3 years. The Jamaican diet is a varied one and the main problems are fluctuations in local production caused by erratic weather, and increases in the cost of important staple foods. The main schemes for nutrition improvement in 1969 consisted of the distribution of free or subsidized milk powder for infants; these were run both by government and voluntary agencies, and encountered problems of efficient distribution to those most in need.

--; GRANT, D.; et al. "Value for Money (Energy and Protein) of Basic Foods in Jamaica, Barbados and Guyana." Cajanus 7, No. 1 (1974): 42-47.

N, J

Gives prices in Jamaica for December 1973 for a list of foodstuffs, and grams of protein and calories per 10 cents Jamaican currency. Prices in Barbados were similar to those in Guyana. Those in Guyana were lower.

BANTJE, Han F. 1974 Household Circumstances and Infant Malnutrition in Western Hanover, Jamaica. Kingston: Caribbean Food and Nutrition Institute (mimeo) 1974.

N

BOYD, Phillip. "The Health Programme of the CAFICOM Secretariat." Cajanus

N, J, P

8, No. 6 (1975): 370-379.

Includes general reference to nutrition.

CAMPBELL, J.A. "Food Legislation in Six Caribbean Countries." Cajanus 8, No. 2 (1975): 115-127.

N, P

Jamaica's legislation is included and resources used for enforcement.

---. "Recommended Dietary Allowances for Caribbean Countries." Cajanus 7, No. 1 (1974): 18-20.

N, J

Author presents FAC/WHO allowances as appropriate for Caribbean.

CARIBBEAN FOOD AND NUTRITION INSTITUTE.

N

Cajanus. Published bi-monthly in Kingston in conjunction with the Regional Office of the WHO and PAHO.

Contains several articles, news notes and book reviews relating to food, agriculture and nutrition. A yearly index is also published.

---. Pan American Health Organization. Food and Agriculture Organization of the United Nations. Food Composition Tables for Use in the English-Speaking Caribbean. Kingston, Jamaica, 1974. Pp. 115.

N

---. "Strategy and Plan of Action to Combat Gastro-enteritis and Malnutrition in Children under Two Years of Age." Cajanus 7, No. 5 (1974): 166-199.

N, J

Reports the resolutions of the 5th annual Health Minister conference. Includes short section on agricultural measures.

COOK, R. "Nutrition and Mortality under 5 Years in the English-Speaking Caribbean Area." Journal of Tropical Pediatrics 15, (1969): 109.

N, J

Compares mortality rates with 1966 per capita income--a quite high negative correlation. Suggests for Jamaica (where 10 percent sample of deaths, 6 months to 3 years, made in 1965) malnutrition a factor in deaths 65 percent of deaths.

Suggest 50 percent of those deaths between 1 and 23 months affected by malnutrition.

- . "The Cost of Malnutrition in Jamaica. Ecology of Food and Nutrition 1, No. 1 (Nov 1971): 61-66. [TX341.E3] N

DESAI, Patricia. "Socioeconomic and Cultural Influences on Child Growth in Rural Jamaica." Journal of Biosocial Science 2, (1970): 133-143. N

- et al. "A Five-Year Study of Infant Growth in Rural Jamaica." West Indian Medical Journal 18, No. 4 (1969): 210-221. N

Child in clinics and those that did not attend were surveyed (229 in sample) and weights and heights measured. Extra clinic cure was not significant.

- ; MIALL, W.; et al. "The Social Background of Malnutrition in Jamaica." Cajanus 2, No. 4 (1969): 303-316. N,S

Anthropometric measurements made on cohort of infants in a rural area from birth to 2 years. Growth, compared to developed countries, is retarded from 3-18 months. Comparisons were made of backgrounds in highest and lowest 10 percent. A series of factors associated with poverty were more likely to be associated with poor weight gain. This included lack of fathers' support.

- ENIOE, Cortez F., Jr. "De Ship Da Hab de Bush." Nutrition Today 10, No. 3 (1975): [PA784.N8] N

Discusses breadfruit--very similar nutritionally to the potato. Two provide 1/2 calories, 1/5 K, 1/2 riboflavin, 3/4 niacin and adequate P and vitamin C.

- EYRE, I. Alan. "How Long Can Jamaica Feed Itself?" Cajanus 3, No. 2 (1970): 77-86. N

Jamaica exports low cost energy and imports protein, but at that time had a surplus resulting in (net) exports. Suggests rural land utilization can aim to minimize energy-cost inputs; maximize

energy-value return on energy-cost inputs or maximize energy-value product per unit area. Suggests crops under each alternative.

FONAROFF, Arlene. Percepciones culturales y trastornos nutricionales: Estudio de casos de Jamaica." Boletin de la Oficina Sanitaria Panamericana 53, No. 2 (Febrero 1976): 135-150.

N

Case-study surveys perceptions of protein-caloric malnutrition (PCM) by women who use medical services, women who do not and indigenous and trained health workers. Women who do not use medical services frequently misdiagnose and do not associate the condition with nutritional deficiency. Suggests education which augments indigenous practices.

FOOD AND AGRICULTURE ORGANIZATION/U.N. DEVELOPMENT PROJECT. Report on Food Science Activities within the Caribbean Food and Nutrition Institute, Oct. 1972-Sep. 1973. Pome, 1973. [PDS/AID/JAM]

N, J

FOSTER, Isabel. "Comparative Prices of Foods in Four Caribbean Countries." Cajanus 6, No. 1 (1973): 37-39.

N, J, M

Reports prices on a series of food stuffs Nov. 1972 to January 1973 for Jamaica, Trinidad/Tobago, Barbados and Guyana.

FOX, Helen C. "Determination of Protein Value of Foods and Their Relation to the Jamaican Economy." Unpublished M.A. thesis, University of London, 1960.

N

---. Food Consumption in Jamaica. Jamaica: Ministry of Agriculture and Lands, Economics and Statistics Division, 1962.

N

Quoted as providing dietary evidence that malnutrition in pre-school age Jamaica is primarily caloric deficiency. Protein intake increases with age. For 6m to 6 yrs 63 percent caloric requirements; 1-3 yrs. 68 percent protein, and 3-6 80 percent

protein requirement.

---; CAMPBELL, Versada; and MORRIS, Joy.
Information Bulletin of Science
Research Council, Jamaica 8, 33.

N

Report based on 1964 island-wide survey. Quoted as suggesting rural diet more nearly adequate in calories but quality of urban diet superior as a higher proportion of animal protein.

GRANTHAM-MCGREGOR, S.M.; DESAI, P.; and BACK, E.H. "A Longitudinal Study of Infant Growth in Kingston, Jamaica." Human Biology 44, No. 3 (1972): 549-561.

N

From a sample of 300 consecutive live births in Kingston, Jamaica, in March 1967, 271 infants were studied. The birthweights of the children were generally low, even when parity was taken into account. The infants grew exceptionally fast during the first 3 months of life, but this was not associated with a high incidence of breast feeding, as 67 percent were partly or wholly artificially fed at 6 weeks of age. The growth rate of these Kingston infants was faster than that of a group of rural Jamaican infants, and the difference in weight between the rural and the urban Jamaican children was significant at 12 months of age.

GUERI, Miguel. "Nutritional Status of Young Children in the English Speaking Caribbean." Cajanus 10, 5 (1977): 267-281.

Gives data by country on weight for age, birth weights and percentage of children admitted to hospital with gastroenteritis and malnutrition. Cites sources, and coverage for each study. Jamaica data are 1972 for weight for age, and an incomplete 1968-69 sample for percent with gastroenteritis and are cited in this bibliography.

GURNEY, J.M. "Available Data on the State of Food and Nutrition of the Peoples of the Commonwealth Caribbean." Cajanus 8, No. 3 (1975): 150-166.

N, J

presents comparative data for countries (including Jamaica) on mortality, nutritional status (weight for age and anaemia); and food intake. One set food intake data are from food balance sheet, the other from 1971-72 household consumption survey data. Most important sources of energy and protein listed for low income groups, and percentage of budget spent on each food group for rural and urban families for 6 income groups. Includes bibliography.

- . "Available Data on the State of Food and Nutrition the Peoples of the Commonwealth Caribbean", Proceedings of the Tenth West Indies Agricultural Economics Conference, Georgetown, Guyana, 1975. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1975. Pp. 66-75 [NAL]. N,J

Provides comparative data on mortality, nutritional status and food intake for individual commonwealth Caribbean countries; For Jamaica and one or more other countries. Percentage contribution of each food group to energy and protein is estimated, and the percentage of the food dollar spent on each food group by income group.

- . "Nutrition Facts on Staples." Cajanus 6, No. 4 (1973): 213-216. N,J

Points out that cereals are more concentrated sources of energy and protein than starchy fruits, tubers or roots. If wheat is partially replaced, aim must be to produce equal or lower cost composite flour.

- . "Nutritional Consideration Concerning the Staple Foods of the English-Speaking Caribbean." Ecology of Food and Nutrition 4, No. 3 (1975): 171-175. N

Staple foods are wheat, rice, maize, starchy fruits, roots and tubers and to some extent sugar. Energy and protein values of each are given. Cereals contain more energy and protein than tubers. Gives balance sheet estimates of percent of energy and protein from each staple. In Jamaica 95 percent of dietary energy from cereals comes from imports. Uses

current yield estimates to determine energy and protein yield from local production. Consumer price of energy and protein by food source indicate imported cereals still have good value for money.

--- and COOK, Robert. "The Price of Groceries in the Caribbean 1972-73." Cajanus 6, No. 1 (1973): 40-44. N

Develops (not on sample) 'market basket' of foods (seems higher income) and compares prices for Dec. 1972 for Caribbean countries, U.S., etc.

---; FOX, Helen; and NEILL, J. "1972 A Rapid Survey to Assess the Nutrition of Jamaican Infants and Young Children in 1970." Transactions of the Royal Society of Tropical Medicine and Hygiene Vol. 66, No. 4, Pp. 653-662.

A sample of 490 under 4 years were examined in 3 urban and 7 rural localities. Rural selected so 3 where food consumption on 1964 data was poor and 3 not so poor. Period of weight failure: 9-24 months with 25 percent average overall below standard weight. No difference between 1963-64 and 1970 data detected. Geographical breakdown showed no obvious difference in weights of 'good' and 'poor' rural areas, but urban closer to standard than rural (urban 10-20 percent rural 20-30 percent except case). Lowest malnutrition in Barbary Hill (9 percent) on remote rural area with longer breast feeding and a higher consumption of home produced beans and peanuts (i.e. village has few cash crops).

HEYWOOD, Peter. "Malnutrition Lowers Cane Cutters' Productivity." Cajanus 6, No. 3 (1973): 181-184. N,S,C

Reports in progress study in Jamaica with Caribbean Food and Nutrition Institute and Cornell on weights, anaemia, food intake and energy expenditures.

JAMAICA. Ministry of Health and Environmental Control. Catholic

Relief Services. Community Nutrition Studies. Kingston, Jamaica, [no date (circa 1973)], Pp. 175. [PDS/AID/JAM]

Contains regional case studies of nutritional status, socio-economic characteristics, attitudes and cultural factors in child nutrition.

JELIFFE, D.B. et al. "A Clinical Nutrition Survey in a Rural Jamaican Village." Journal of Tropical Medicine and Hygiene 57, (Feb. 1954): 27-40.

N

JONES, W.C. "Starchy Roots in the Diets of Developing Countries." In Proceedings of the International Symposium on Tropical Foot Crops, 2-8 April, 1967, Vol. 2. St. Augustine, Trinidad: University of West Indies, 1967.

N, J, C

Suggests that with income rise, there will be a shift away from these crops.

LANDMAN-BOGUES, Jacqueline. "Pastafarian Food Habits." Cajanus 9, No. 4 (1976): 228-234.

N

MCKENZIE, H.I.; LOVELL, H.G. et al. "Child Mortality in Jamaica." Millbank Memorial Fund Quarterly 3, (1967): 303.

N, S

Quoted as suggesting spatial incidence and increased incidence of protein caloric malnutrition.

MARCHIONE, Thomas J. "Factors Associated with Malnutrition in the Children of Western Jamaica." In Nutritional Anthropology, edited by N. JEFOME, E.F. KANDEL, and G. PELTO. New York: Marcel Dekker (in press as of Winter 1977).

N

"Food and Nutrition in Self-Reliant National Development: The Impact on Child Nutrition of Jamaican Government Policy." Medical Anthropology 1, No. 1 (Winter 1977): 58-79. [PDS/AID/JAM]

N, F

Major finding is that enforced self-reliance related to increased price of imported food led to an increase in subsistence farming and an increase in nutritional status in rural areas.

MAY, J.M. and McLELLAN, D.L. The Ecology of Malnutrition in the Caribbean. The Bahamas, Cuba, Jamaica, Hispaniola (Haiti and the Dominican Republic), Puerto Rico, The Lesser Antilles, and Trinidad and Tobago. New York: Hafner Press, 1973. Pp. 490. N

Pre-emption of land for sugar at the expense of food crops, reliance on imported foods which cost more than the common people can afford, lack of education about food values, have all played a role in creating malnutrition. Moreover, European or American continental wars have often cut off supplies, reinforcing dependence upon local resources that were not adequately husbanded. The traditional diet of imported cod, local beans, rice and a rich variety of fruits could have provided adequately balanced intakes, however monotonous and dreary. An examination is made of the reasons why it did not and why (as in the rest of the developing world) the populations of the Caribbean islands have continuously suffered from malnutrition.

MORRISON, C.J. "Improving Nutrition in Jamaica." Cajanus 3, No. 3 (1970). N

General very brief overview of nutrition and suggested problems.

OMAWALE. "Kicking the Wheat Habit." Department of Biology, University of Guyana. Pan American Health 8, No. 3 (1976): 12-15. [F0019-04063] N

Discusses problem of wheat which is imported. A substitute must be found which may be grown in the Caribbean and be nutritionally and socially acceptable. With the co-operation of the Pan American Health Organization, food and nutrition policies concerning this are being developed, and promising crops are rice, cassava, sweet potato, yam, plantain or banana, dasheen and tania.

---. "Wheat Substitution in the CARICOM Region, the Case against an Imported Luxury." Cajanus 10, No. 2 (1977): 89-96. N

Looks at starch substitutes for wheat, especially cassava or cassava/wheat mix.

PARRY, J.H. "Salt Fish and Akee." Caribbean Quarterly (Kingston) Vol. VIII, No. 4 (December 1962): Pp. 30-36.

A historical sketch of the introduction of food crops into Jamaica.

REDDY, S.K. "Some Misconceptions about Nutrition which Are Common in the West Indies." Cajanus 4, No. 2 (1971): 94-102.

Useful discussion on such areas as importance of caloric intake to protein caloric malnutrition, encouragement of use of tropical dark green leafy vegetables, etc.

SAHMY, G.M. "The Time to Replace Wheat by an Indigenous Carbohydrate Is Now." Cajanus 8, No. 1 (1975): 5-11.

Discusses at superficial level possibilities for partial replacement of wheat by yam flour, fortified with soy or fish protein. More technical bibliography.

STANDARD, K.L. "Child Nutrition in Two West Indian Islands, Jamaica and Barbados." Unpublished Ph.D. dissertation, University of London, 1962.

--- et al. "A Longitudinal Study of Child Growth in a Rural Community in Jamaica." Journal of Biosocial Science 1, (1969): 153-76.

Sample of 229 children born 1962-63 around Lawrence Tavern was used. Observations on health, diet, and family circumstances recorded, and weight and height measurements taken over time. Growth impairment was common between 3-15 months and more common in boys than girls.

STOOPLER, M.; FRAYER, W.; and ALDERMAN, M.H. "Prevalence and Persistence of Lactose Malabsorption among Young Jamaican Children." American Journal of Clinical Nutrition 27, No. 7 (1974): 728-732.

BIBLIOGRAPHIES AND PROCEEDINGS

- ALLEYNE, Garth O'G (editor) Proceedings of the Twelfth West Indies Agricultural Economics Conference, held at St. John's, Antigua, 1977. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1978. Pp. 249. [NAL] B

The theme of the conference was 'Implementing Food Production and Marketing Programs in a Developing Tourist Economy', and sessions focused on a case-study working-document relating to an integrated production and marketing system for Antiguan agriculture. Other papers were also presented.

- ANDERSON, T. Agriculture in the Economy of the Caribbean. Madison: University of Wisconsin, Land Tenure Center, Training and Methods Series No. 24, 1974. [NAL: HD107.L32] B, J

A bibliography of materials dealing with the Caribbean Area in the Land Tenure Center library. Has section on Jamaica covering general, agriculture, economy, labor, politics and government and society as well as general Caribbean and British West Indies material. Entries are not annotated.

- BAA, Enid M. Theses on Caribbean Topics, 1778-1968. San Juan: Institute of Caribbean Studies, University of Puerto Rico, 1970. Pp. 146, v. [Z1501.C33] B

Includes MS/MA theses and non-U.S. theses.

- BIRIA, S.C. and McINTOSH, C.E. (Editors). Proceedings of the Ninth West Indies Agricultural Economics Conference Held at the Pegasus Hotel, New Kingston, Jamaica, April 3-6, 1974 and at the Jamaica School of Agriculture, Twickenham Park, April 7-10, 1974. St. Augustine Trinidad, Department of Agricultural Economics and Farm Management, University of the West Indies, 1974. Pp. 222. [UWI/ISEP] B

The main theme of the conference was

'the relationship between agriculture and other sectors with particular reference to the competition for resources in the Commonwealth Caribbean.' The document contains the papers presented during the plenary sessions, summaries of the discussion on papers and the reports of the three workshop sessions as well as a selected number of contributed papers which formed the basis of workshop sessions.

----. Proceedings of the Tenth West Indies Agricultural Economics Conference, Georgetown, Guyana. Vols. I & II. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1975. [NAL]. B

Main theme of conference was 'maximizing Regional self-sufficiency in food in the Commonwealth Caribbean'. Volume I of the Proceedings covers opening speeches and plenary session papers. Volume II covers four Technical Group session papers on developing the regions cereal; root crops, fruits, vegetables; fish and livestock; grain/legume and other protein sources.

BRATHWAITE, C.W.D.; PHELPS, R.H.; and BENNET, F. D. (Editors). Crop Protection in the Caribbean: Proceedings of a Symposium on the Protection of Horticultural Crops in the Caribbean. St. Augustine, Trinidad, University of the West Indies, Dept. of Crop Science, 1974. [NAL: SB599.S95 1974] B,T

COMMONWEALTH AGRICULTURAL BUREAU. List of Research Workers in the Agricultural Sciences in the Commonwealth and in the Republic of Ireland, 1975. UK: Farnham Royal, Slough, 1975. Pp. 758 + vii. P,T

It provides information on places where research is carried out, also individual research workers and their interests. There is a separate chapter on Jamaica.

COMMONWEALTH BUREAU OF AGRICULTURAL ECONOMICS. "The Caribbean Agricultural Situation and Prospects: West Indies, Central America." Annotated Bibliography Series D, Commonwealth Bureau of Agriculture Economics, No. 5 (1974): Pp. 19. [NAL: Z5074.E3C62] B,C

CONNELL, J. Labour Utilization: An Annotated Bibliography of Village Studies. Prepared for the International Labour Office within the framework of the World Employment Programme. Brighton, UK: Institute of Development Studies, University of Sussex, 1975. Pp. 305 + xv.

B, S

This bibliography complements a Village Studies Programme (VSP) report on village labour situations submitted to the International Labour Organization in 1973, and attempts to list and summarize all village surveys from the Third World that are oriented to labour utilization, include information on labour utilization, and/or have particular sorts of related information. These studies therefore have been primarily selected for their analysis and coverage of labour input data, and are all based on fieldwork carried out in villages. The studies are almost all of villages, which usually have (1) populations well under 5,000; (2) settled rather than migrant populations; (3) a nucleated form of settlement pattern; (4) a population belonging to a community in the sense that most of the social, economic and political transactions are conducted within the village and other villages; and (5) an agricultural emphasis, in that two-thirds or more of the families obtain most of their livelihood and income from agriculture. The bibliography aims to be as comprehensive as possible for studies carried out between 1950 and 1973. The studies included in this bibliography have been arranged alphabetically by author for each country and, in the case of the Indian material, for each State. The bibliographical information is followed by a general comment on the study and the village in question drawing attention to any notable or distinctive characteristics and, more specifically, the particular sorts of information that are available on labour utilization, and the major findings or results of this analysis.

CROPPER, John (Editor) Proceedings of the Eleventh West Indies Agricultural Economics

R

Conference, Roseau, Dominica, April 20-24 1976 St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1977. 141 p. [NAL].

Plenary papers and discussions related to a detailed assessment of rural development projects for the Grand Bay, Dominica area.

EDWARDS, D.T. (Editor). Diversification, Import Substitution and Regional Economic Integration in West Indian Agriculture. Proceedings of the Fourth West Indian Agricultural Economics Conference Held at the University of the West Indies, Cave Hill, Barbados, March 23-29, 1969. St. Augustine, Trinidad, University of the West Indies, Department of Agricultural Economics and Farm Management, 1969. Pp. 135 + x. B,S

The papers given are divided into the following headings: (1) diversification; (2) import substitution; (3) the Barbados agricultural sector; (4) the CAPIFTA agreement and the agricultural marketing protocol. Workshop reports on (a) sugar; (b) regional policy; (c) diversification strategy; and (d) rationalization of agriculture in the Commonwealth Caribbean are also included.

--- (editor). Proceedings of the Sixth West Indies Agricultural Economics Conference, Georgetown, Guyana, 1971. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Economics and Farm Management, 1971. B

The conference theme was the 'Role of Marketing in Caribbean Agricultural Development'. Workshop groups covered agricultural cooperative marketing arrangements, the role of Marketing, and priorities for research in agricultural marketing.

FISHEE, Herbert Harry and LOCATELLI, Eduardo (Editors). Bibliografía parcial de investigación sobre malezas y su control para América del Sur, América Central, El Caribe y México, 1942-1972. Corvallis, Oregon: International Plant Protection Center, 1974. Pp. 179. B,J
[NAL: SB613.C4F5]

HENDERSON, T. Abstracts of Graduate Students' Research in Agriculture, 1974-1976 Research Summaries No. 2. St. Augustine, Trinidad: University of West Indies, Department of Agricultural Extension, December 1977. B, T

Includes 2 or 3 theses specifically related to Jamaica.

---- (editor). Abstracts of Graduate Students Research in Agriculture 1971-1973, Research summaries Number 1, St. Augustine, Trinidad, December, 1973. B, T

----. and Mahabir, S. Fifty Years of Research in Tropical Agriculture, 1922-1972. A Bibliography. St. Augustine, Trinidad and Tobago: University of the West Indies, 1976. B
Pp. 184.

This bibliography contains a list, including a subject matter index of 2,573 papers published during the 50-year period 1922-1972 by the staff and students of the former Imperial College of Tropical Agriculture, and the present Faculty of Agriculture of the University of the West Indies in Trinidad.

INTER-AMERICAN CENTER OF DOCUMENTATION AND AGRICULTURAL INFORMATION. Indice agricola de America Latina y el Caribe 10, No. 1 (Jan/Mar. 1975): [NAL: Z5C75.L3B5] B

JAMAICA. Ministry of Agriculture. Proceedings of the 12th Annual Meeting of Caribbean Food Crops Society, Jamaica, 30th June to 5th July, 1974. Jamaica, Caribbean Food Crops Society, 1974. B
Pp. 171 + v.

MAHARAJ, D. and STPAUSS, J. (Editors). The Prospects for Developing Agriculture in the Small Caribbean Commonwealth Territories. The Role of the Small-Scale Farmer in the Caribbean Economy. Proceedings of the Fifth West Indian Agricultural Economics Conference Held at Roseau, Dominica, April 5-11, 1970. St. Augustine, Trinidad: University of the West Indies, Department of Agricultural Economics and Farm Management, 1970. Pp. 176 + ix. B, S

Several papers on Dominica, and single contributions on other West Indian islands related to the two main themes of the Conference. The Workshop reports considered: (1) sociological and extension aspects of small-scale farming development; (2) the problem of introducing new market crops in a small agricultural economy dominated by a major export cash crop; (3) land and labour in the development of Dominican agriculture; (4) small-scale farm planning and land settlement, and together with discussion of the presented papers, showed how far the two chosen themes tend to overlap.

MAPSHALL, T.G. (Editor). A Bibliography of the Commonwealth Caribbean Peasantry, 1838-1974. Occasional Bibliography Series No. 3, Institute of Social and Economic Research (Eastern Caribbean), University of the West Indies, Barbados, 1975. Pp. 47 + vi.

B,S

This bibliography has been compiled as part of a larger on-going project "A history of the Caribbean peasantry since 1838." The bibliography is divided into two sections: the first one comprising items dealing with the Commonwealth Caribbean in general and the second part containing lists of studies on individual territories. Each entry is comprised of author's name, title, place of publication, pagination, (for articles in periodicals) and date of publications where confirmed.

MURSE, O. (Editor). Proceedings of the Seventh West Indian Agricultural Economics Conference Held at Grand Anse, Grenada April 9th-15th, 1972. St. Augustine, Trinidad, University of West Indies, Department of Agricultural Economics and Farm Management, 1972. Pp. 175 + vii.

B,T

The Conference attempted to provide a bridge from international experience of land reform, one of the main topics, through Caribbean experience (by case studies of an old land reform, Mexico's to a new one, Cuba's), to the examination of the reform required in the Commonwealth Caribbean. Workshop

groups expanded this topic. The other main topic, the role of the Caribbean Development Bank in financing agricultural development, was discussed in a paper by Sir A. Lewis, and similarly expanded in working groups.

RANKINE, I.B. Selected References on Tropical Root Crops. Mona, Jamaica; University of the West Indies. Undated. Pp. 15.

B,C,T

References to papers and reports in English written by research workers based mainly in the West Indies on general aspects of tropical root crops, and on agronomy, physiology, nutrition, control of weeds, pests and diseases, and storage of sweet potato, yam, tania, cassava, cocoyam and Irish potato are listed.

SCHOFIELD, S. and LAMBERT, C.M. Village Nutrition Studies: An Annotated Bibliography. Brighton, UK: Institute of Development Studies, University of Sussex, 1975. Pp. 285 and xiii. [F0018-01815]

B,M

This bibliography is derived from the Institute of Development Studies Village Studies Programme. The studies are arranged regionally for Africa, the Middle East and North Africa, India, Asia, Oceania, Latin America and the Caribbean. Each section is introduced by a short evaluatory comment on the surveys available, their quality and limitations. Within each area the studies are arranged alphabetically by author/institution for each country. It provides a data bank for those who wish to examine the available evidence before instigating new measurement surveys or improvement programmes.

It shows the kind of data that have usually been collected, and indicates the uses, reliability and shortcomings of the survey methods usually adopted. Some of the studies help identify the nutritionally at risk families within the village, while others identify causal factors.

Other information can indicate how improvement or educational programmes can best be timed, to coincide with felt seasonal needs and to avoid the major seasonal demands on village labour supplies.

SMITH, Ann Thirkell; comp. The Caribbean, Jamaica, Agricultural Situation and Prospects. Oxford: Commonwealth Bureau of Agricultural Economics, 2, 1974. Pp. 8. [Z5074.E3C62 No. 2]

B,J

UNITED KINGDOM. Foreign and Commonwealth Office. Proceedings of the Conference on Spices, 10th-14th April, 1972. London: Foreign and Commonwealth Office, 1973. Pp. 261.

B,T,C,M

The papers read at this conference, held at the London School of Pharmacy from 10th 14th April, 1972, include a number of technical papers on aspects of various spices, including one on artificial drying of Jamaican pimento by G.R. Breag et al. There are also marketing papers for specific spices.

UNIVERSITY OF THE WEST INDIES. Faculty of Agriculture. M.Sc. and A.I. C.T.A. theses and D.T.A. and C.A.S. reports, 1969-65 (no date of publication). Pp. 8. [UWI/WIC: LE15.M7h]

B

---. Institute of Social and Economic Research (Eastern Caribbean). A Bibliography of the Caribbean. Occasional Bibliography Series, No. 1, Cave Hill, Barbados, Sept. 1974. Pp. 167. [USAID/B]

B,J

---. Proceedings of the 1st West Indian Agricultural Economics Conference, University of the West Indies, 1966. St. Augustine, Trinidad, Dept. of Agricultural Economics and Farm Management, University of West Indies, 1967?. Pp. 325. [NAL: UWI/ISEP]

---. The Impact of Britain's Entry into the European Economic Community on Caribbean Economies. The Scope and Progress of Nationalization in Caribbean Agriculture. Proceedings of the Eighth West Indies Agricultural Economics Conference, Held at Hilton Hotel, Trinidad, April 1-7.

B,J

1973. St. Augustine, Trinidad: Department of Agricultural Economics and Farm Management, University of the West Indies, 1973. Pp. 155 + viii. [UWI/ISER]

The conference papers are divided in the report into plenary papers, contributed papers and workshop reports, rather than being separated according to the two themes. Papers relevant to Jamaica, and of significant content are listed by author elsewhere. The workshop reports covered (i) the EEC, CARIFTA and rationalization, and (ii) rationalization of Caribbean agriculture--constraints and methodology.

WILKINSON, Audine. The Caribbean Sugar Industry: A Select Bibliography. Occasional Bibliog. Series No. 4, Cave Hill, Barbados: Institute of Social and Economic Research, University of the West Indies, May 1976. Pp. xv and 87. [USAID/B]