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and
The Economic Research Service
for analysis of

FACTORS ASSOCIATED WITH DIFFERENCES AND CHANGES IN
AGRICULTURAL PRODUCTION IN UNDERDEVELOPED COUNTRIES

By

Development and Trade Analysis Division
Economic Research Service
United States Department of Agriculture

July 1965

This fourth semi-annual report describes progress on the productivity project during the first six months of 1965 and plans for its continuation. The first, second and third semi-annual progress reports and the Participating Agency Agreement No. 12-17-0017-132 should be referred to for background information and accomplishments through 1964.

Activities in the first half of 1965 have been divided between the completion of Phase A of the project and the initiation, organization and coordination of Phase B country studies.

I. Phase A Progress:

Editing and rewriting initial manuscripts for the Phase A comparative analysis of differences and changes in agricultural output and productivity in 26 countries are completed and a draft report has been submitted for final review and publication.

Findings suggest the broad generalization that there are no inherent reasons why the less developed countries cannot meet their food and fiber needs within the next few decades and have enough food or food-producing resources to spare to contribute substantially to their general economic development. The conclusion is strongly reinforced by reference to the world's stock of scientific principles or methodological know-how applicable to the solution of the underdeveloped world's agricultural problems.

This is not a prediction of what the less developed countries will do in the decades ahead. Success will depend in large measure upon the exercise of the human will and the determination and judgment of the people themselves in the less developed countries. The problem of improving agriculture appears to be fundamentally that of improving institutions and institutional arrangements

and strategies so as to free the energies, lift the hopes, broaden the horizons, improve the incentives and in other ways expand the opportunities or scope of rural people to exercise and apply their energies and intelligence. More specific hypotheses regarding the means of accomplishing this task, suggested in the body of results of the Phase A analysis, will be investigated and tested in the Phase B studies.

Since it is expected that the full body of the Phase A comparative country study will be available soon in published form, no effort is made here to excerpt the major findings. However, in Appendix I are listed the major contributions aside from the final report, that have resulted from Phase A of the project.

With the exception of minor editorial matters related to publishing the comparative study, Phase A of the productivity project is now complete and all personnel and facilities are directed to carrying out Phase B.

II. Phase B Progress and Plans:

Phase B work is well underway in Greece and Mexico and is completed in Taiwan except for rewriting the final draft of the Taiwan report. Memorandums of Agreement have been negotiated for work in India, Nigeria, Brazil, Tunisia and Turkey and are now waiting to be signed by officials of cooperating government agencies and ministries. Personnel have been assigned to carry out these studies as follows: W. E. Hendrix to India, William P. Huth to Nigeria, and Louis Herrmann to Brazil. Recruitment is now in progress for a junior economist for India, and senior staff for Turkey and Tunisia. Plans were that Hendrix and Huth were to have left in June for India and Nigeria, but because the Memorandums of Understanding have not been signed, their departures are delayed until these

documents are signed. October has been set as the date Mr. Herrmann will begin work on the Brazil study.

Several discussions were held during the period of this report in connection with completing Memorandums of Understanding. In January, R. P. Christensen and W. E. Hendrix traveled to India to negotiate plans for the study in India. In connection with this trip they also visited Turkey and Pakistan for preliminary discussions. Hendrix also stopped in Rome to confer with FAO officials. Wade F. Gregory spent several weeks in June finalizing details for studies in Turkey and Tunisia. Clarence Moore and William P. Huth were in Nigeria in March to complete arrangements for the Nigerian study. Moore will also visit Colombia in July to develop final plans for the study there.

Dr. John Brewster spent January and February in Taiwan as a consultant to Dr. David H. Spaeth during the final phases of the Taiwan study. A technical conference to review the draft report was held in Taipei, June 7-11. Those in attendance were David Spaeth, USDA; Dr. Douglas D. Caton, AID/W; Mr. Clement L. Orrben, AID/W; Mr. Gerald H. Huffman, Commissioner, JCRR; Dr. Vernon Ruttan, International Rice Research Institute; Dr. A. M. Weisblatt, Agricultural Development Council; Dr. Chang Han-yu, National Taiwan University; Mr. Paul Kovenock, Fulbright Scholar, University of Washington; Dr. Hsieh, Sam-chung, JCRR; Mr. Lee Teng-hui, JCRR; Mr. Y. C. Tsui, JCRR and Mr. W. M. Ho, JCRR. Dr. Spaeth returned to Washington June 20 and will rewrite the report of Taiwan agricultural development incorporating the suggestions emanating from the conference.

Arrangements had been made for Dr. Brewster to work full time on the productivity project, but his untimely death deprived the project of his

exceptionally able services and his advice and counsel particularly in the area of institutional, social and political analysis, will be greatly missed.

Rex Daly spent most of February and March in Mexico as consultant on the Phase B study being conducted there by Reed Hertford. Hertford has initiated three special problem area studies dealing with foreign trade, agricultural policies and tropical agriculture in addition to a general aggregative analyses. Progress on all facets of the study in Mexico is encouraging.

Dr. Shaw submitted a second report of progress covering the period October 1964 through March 1965. Most of the basic data for Greece have been accumulated and an analytical framework developed for an analysis of sources of growth in agricultural production in Greece. The three-phase analyses includes (1) a study of output increase due to an increase in demand, an increase in supply, or an increase in both demand and supply, (2) a study of motivational factors affecting decision makers that led them to make changes, i.e., analysis of the role of the human factor in effecting change in economic performance, and (3) the development from findings in (1) and (2) of a general schema of the growth of the agricultural sector. Most of Dr. Shaw's time in the future will be devoted to the analysis of data already collected. As a consequence of his probing for suitable means of measuring aggregative variables in the study, Shaw has developed a paper entitled Measuring Components of Aggregate Production to be submitted to a professional journal for publication.

On his return from Turkey and Tunisia, Wade Gregory spent a day and half with Dr. Shaw reviewing his work. Progress is very satisfactory and all indications are that the final report on Greek agricultural development will be a very instructive document.

The necessity of developing definitions and measures of key variables to be computed consistently for each of the Phase B countries in order to link the country studies together at crucial points has been recognized. The Washington staff is now in the process of developing these linkage definitions and measures. Also, plans are being formulated to carry out a number of particular problem studies to fill in crucial areas where knowledge is lacking on the overall problem of increasing agricultural productivity.

APPENDIX I

1. S. A. Breth, Agricultural Output and Productivity in Nigeria, Unpublished manuscript, (used as reference and background for MIT Conference and other discussion seminars) June 1964.
2. R. P. Christensen, "Economic Progress of Agriculture in Less Developed Countries," Conference on Economic Development of Agriculture, Center for Agriculture and Economic Development, Iowa State University, November 9-12, 1964.
3. R. P. Christensen, The Relation of Agricultural Productivity to Economic Growth, a paper presented at the Economic Growth Center, Yale University, New Haven, Connecticut, May 22, 1964.
4. R. P. Christensen, R. D. Stevens and W. E. Hendrix, Aspects of United States Experience in Improving Agricultural Output and Productivity Relevant to Less Developed Countries, September 1963.
5. R. P. Christensen, R. D. Stevens and W. E. Hendrix, How the United States Improved its Agriculture, ERS Foreign-76, March 1964.
6. R. P. Christensen and H. T. Yee, "The Mechanics of Agricultural Productivity and Economic Growth," Agricultural Economics Research, Vol. XVI, No. 3, July 1964.
7. R. P. Christensen and H. T. Yee, "The Role of Agricultural Productivity in Economic Development," a paper presented at the 1964 Annual Meeting of the American Farm Economic Association, August 16-19, 1964, Journal of Farm Economics, Vol. 46, No. 5, December 1964.
8. W. F. Gregory, "Policies for Agricultural Development," a paper presented at the Conference on Agriculture in Economic Development, University of Illinois, Urbana, Illinois, April 13, 1964.
9. W. E. Hendrix, "Observations on Recent Experiences in Increasing Output in More Rapidly Developing Countries," Conference on Economic Development of Agriculture, Center for Agricultural and Economic Development, Iowa State University, November 9-12, 1964.
10. W. E. Hendrix and F. W. Parker, "Foundations for Agrarian Development," paper presented for the CENTO Rural Symposium, Tehran, Iran, September 25-27, 1963.
11. C. A. Moore and M. O. Settle, Agricultural Development in Greece, unpublished manuscript, (used as reference and background for MIT Conference and other discussion seminars) February 1964.

12. J. S. Oweis, Agricultural Development in the United Arab Republic, unpublished manuscript (used as reference and background for MIT Conference and other discussion seminars), May 1964.
13. F. W. Parker, D. D. Steward and P. Peperzak, "The Expanding World Fertilizer Market," a paper presented at the Twelfth Annual California Fertilizer Conference, Fresno, California; also published in Fertilizer News, New Delhi, India, March 1964. January 1964.
14. J. R. Turns, Agricultural Development in Argentina, unpublished manuscript (used as reference and background for MIT Conference and other discussion seminars) June 1964.
15. United Nations, United Nations Fertilizer Manual
 - Chapters 2.0, World Overview of Fertilizers
 - 3.0, Role of Fertilizers in Agricultural Production
 - 4.0, Criteria for Production vs. Importation
 - 17.0, Demand for Fertilizers