Africa Tomorrow: Issues in Technology, Agriculture, and U.S. Foreign Aid

December 1984

NTIS order #PB85-238624

AFRICA TOMORROW:

ISSUES IN TECHNOLOGY, AGRICULTURE, AND U.S. FOREIGN AID

A TECHNICAL MEMORANDUM

DECOMBER 1984

of the sector discussion of the sector of the sector of the sector of

Recommended Citation:

Africa Tomorrow: Issues in Technology, Agriculture, and U.S. Foreign Aid—A Technical Memorandum (Washington, DC: U.S. Congress, Office of Technology Assessment, OTA-TM-F-31, December 1984).

Library of Congress Catalog Card Number 85-600503

For sale by the Superintendent of Documents U.S. Government Printing Office, Washington, D C 20402

Preface

The United States has a stake in the agricultural development of sub-Saharan Africa. Alleviating hunger and malnutrition, expanding stable markets for U.S. products, and maintaining the availability of critical and strategic materials provide humanitarian, economic, and political reasons for a continuing American interest in Africa. Most African countries are predominantly agricultural and their well-being and future development are tied closely to that sector. Therefore, agricultural assistance probably will continue to be a major area of U.S. involvement.

Food problems in Africa are substantial: in no other region of the world has per capita food production declined steadily for over two decades. The Congress expressed its concern for these problems in 1984 with a major supplemental appropriations bill and the creation of a Select Committee on Hunger. This technical memorandum on agricultural technology and U.S. foreign assistance in sub-Saharan Africa was requested by the Select Committee, with support from the Africa Subcommittee, House Foreign Affairs Committee. OTA was asked to investigate several topics relating to current and future African agriculture: technological needs, successful technology development and transfer, and the roles of public and private foreign assistance.

This paper is the result of 6 months' work, including: 1) a 2-day workshop with 14 invited experts on African agriculture, 2) a visit by an OTA contractor to the International Institute of Tropical Agriculture in Nigeria, and 3) additional OTA staff research. We do not pretend that this is a definitive work on specific types of agricultural technologies. Instead the paper outlines major issues constraining the development and transfer of sustainable technologies for low-resource food producers. Our findings reflect broad consensus on which potential congressional action can be based. The problems of food production in sub-Saharan Africa are acute. Opportunities for improving the situation abound, however, and many are available to Congress.

This paper was prepared by Scott McCormick, Ted MacDonald, Phyllis Windle, and Chris Elf ring, OTA wishes to thank the workshop participants and additional reviewers for their substantial contributions as well as the many others who generously provided information.

JOHN H. GIBBONS **Director**

John H. Sibbous

111

OTA Workshop Participants, Sept. 12=13, 1984

George Burrill Associates in Rural Development Burlington, VT

Charles Francis Rodale Research Center Emmaus. PA

Elon Gilbert
Center for Research on Economic
Development
University of Michigan
Ann Arbor, MI

Thomas Hayden CODEL New York, NY

James Henson International Program Development Office Washington State University Pullman, WA

Marilyn Hoskins Department of Sociology Virginia Polytechnic Institute Blacksburg, VA

Shelly Kessler Urban Resource Systems, Inc. San Francisco, CA

Carl Lindblad Volunteers in Technical Assistance Arlington, VA Sauveur Mahotiere Plant Science Department Fort Valley State College Fort Valley, GA

Gerald Matlock Department of Soils, Water, and Engineering University of Arizona Tucson, AZ

Robert McDowell Department of Animal Science Cornell University Ithaca, NY

Uzo Mokwunye International Fertilizer Development Center Muscle Shoals, AL

Anita Spring Department of Anthropology University of Florida Gainesville, FL

OTA Staff

Barbara Lausche Edward F. MacDonald Scott McCormick Walter Parham Phyllis N. Windle

OTA Staff on Africa Tomorrow: Technology and Agriculture

Roger Herdman, Assistant Director, OTA Health and Life Sciences Division

Wa ter E. Parham, Fo od and Renewable Resources Program Manager

Analytical Staff

Phyl is N. Windle, *Project Director*Scott McCormick, *Analyst*Edward F. MacDonald, *Research Analyst*

Barbara Lausche, *Senior Analyst* Chris Elfring, *Editor* George Scharffenberger, *Contractor*

Administrative Staff

Phyllis Balan¹and Patty Durana,⁴*Administrative Assistant*Nellie Hammond, *Secretary*Carolyn Swarm, *Secretary*