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A Guide to USWRLD--the USDA-MSU Version of the IIASA World Food and Agriculture Model and Computer Program

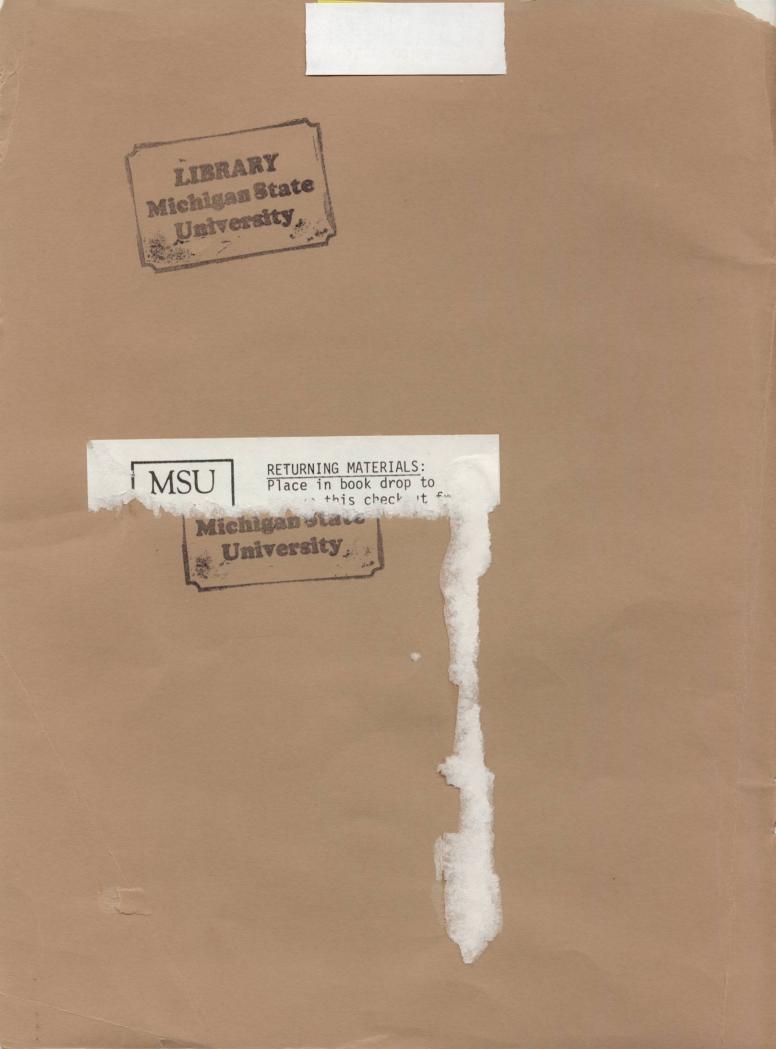
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by

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Trade Policy Branch International Economics Division

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Trade Policy Branch International Economics Division Economic Research Service Department of Agriculture Washington, D.C. 20250

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ABSTRACT The USWRLD system is the USDA-Michigan State University adaptation of the world food and agriculture model developed by the Food and Agriculture Program of the International Institute for Applied Systems Analysis. This guide provides analysts and computer programmers with (a) a functional description of the model's representation of the world food and agriculture system and, in particular, the U.S. component; and (b) a description of the structure and use of its FORTRAN program. This will enable both analysts and programmers to communicate with each other in (a) incorporating model improvements and extensions; (b) implementing policy scenarios and options; and (c) interpreting simulation results.

Keywords: agricultural trade, policy analysis model, global model, simulation, U.S. agricultural model, general equilibrium model.

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The above-referenced Cooperative Agreement called for the development of the detailed U.S. model, its integration with the IIASA/FAP global system, and the installation of that system at the USDA's Washington Computer Center. An intermediate U.S. model, developed separately from this Agreement as part of the IIASA/FAP basic linked system and financed by MSU and IIASA, is also operational at WCC. Since it is included in the system and, thus, in this guide, it is appropriate to acknowledge the contributors to that model here as well: Michael Abkin, Thomas Christensen, Daniel Kaufman, Tracy Miller, Donald Mitchell, and Christopher Wolf. Actually, this list includes only the direct contributors to the intermediate U.S. model and excludes the much larger set of people contributing to the MSU Agricultural model from which it was derived.

The USWRLD system documented here is the MSU-USDA version of the IIASA/FAP global system of national food and agriculture models. It is fitting and proper that the major developers of the basic linked system at IIASA's Food and Agriculture Program, including standard country models and the trade linkage algorithms, be recognized here as well (also see Appendix E for bibliographic references): Guenther Fischer, Klaus Frohberg, Michiel Keyzer, Kirit Parikh (Director, 1980-present), Ferenc Rabar (Director, 1976-1980), and Ulrike Sichra.

Finally, special acknowledgement must be made of George E. (Ed) Rossmiller, who initiated the MSU-IIASA connection and has followed the project through the years with his interest and sage advice, first at MSU and later at USDA/FAS.

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