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

by

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Trade Policy Branch
International Economics Division

August 1983

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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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Acknowledgements

This guide has been prepared under Cooperative Agreement No. 58-3J22-0-00245 between the Department of Agricultural Economics at Michigan State University and the Economic Research Service of the U.S. Department of Agriculture. As such, it is the result of work performed by a team of people. Some of them have documented their contributions elsewhere (see Appendix E), but I would like to present a complete list here. Working team members under this Cooperative Agreement have included: at MSU--Michael Abkin, Forrest Gibson, Robert Gustafson, Hsin-Hui, Glenn Johnson, Manuel Lopez Blanco, Dennis Warner, and Paul Wolberg; at USDA/ERS--David Hopkins, Douglas Maxwell, William Quinby, Ralph Seeley, Abraham Subotnik, Shu-Hwa Tuan, and David Watt. Administrative team members have been: at MSU--Michael Abkin, Larry Connor, Glenn Johnson, and Christopher Wolf; at USDA/ERS--Kenneth Farrell, Charles Hanrahan, William Kost, John Lee, Douglas Maxwell, Larry Otto, J. B. Penn, Leroy Quance, Vernon Roningen, and Kelley White. Special recognition goes to Julia McKay for her secretarial support at MSU; and to Rose Mayhew, Theresa Wells and Verleece Brown for theirs at USDA/ERS, including the word processing and publication of this manuscript.

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.

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