

**Resume**

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**PERSONAL**

Born August 16, 1924; RFD #1, Alden, Michigan, USA

**EDUCATION**

Michigan State University, 1942-43  
Yale University, B.A., 1948  
University of Chicago, M.A., 1950; Ph.D., 1952

**EMPLOYMENT**

- (1) Tennessee Valley Authority, Economist, Division of Regional Studies, 1951-1953; Office of the General Manager, 1951-1954.
- (2) Purdue University, Department of Agricultural Economics, Assistant Professor, 1955-57; Associate Professor, 1957-60; Professor 1960-63.
- (3) University of California (Berkeley), Associate Agricultural Economist. Giannini Foundation of Agricultural Economics, 1958-59, (on leave from Purdue).
- (4) Council of Economic Advisors, Executive Office of the President, Staff Economist, November 1961-January 1963, (on leave from Purdue).
- (5) Rockefeller Foundation (at the International Rice Research Institute, Philippines), Agricultural Economist, May 1963-August 1965.

- (6) Agricultural Development Council, Inc.--Trustee, 1967-1973; President, May 1973-December 1977.
- (7) University of Minnesota--Professor and Head, Department of Agricultural Economics, September 1965-July 1970; Professor and Director of Economic Development Center, July 1970-May 1973; Professor: (a) Department of Agricultural and Applied Economics; (b) Department of Economics, 1978-1986; Regents Professor, 1986-1999; Regents Professor Emeritus, 2000-present.

## **PROFESSIONAL**

- (1) American Agricultural Economics Association
  - (a) Committee on New Orientations in Agricultural Economics Research, 1959-63.
  - (b) Editorial Council, 1965-67.
  - (c) Vice-President, 1967-68.
  - (d) Committee on Professional Problems in International Research, 1967-69, (Chairman, 1968-69).
  - (e) President, 1971-72.
- (2) Awards and Honors
  - (a) American Agricultural Economics Association, Publication Award, 1956, 1957, 1962, 1966, 1967, 1971, 1979, 1985, 1986; 1997.
  - (b) Fellow, American Agricultural Economics Association, elected 1974.
  - (c) Fellow, American Academy of Arts and Sciences, elected 1976.
  - (d) Honorary Degree, Rutgers University: Doctor of Laws (LLD), 1978.
  - (e) U.S. Department of Agriculture, B.Y. Morrison Memorial Lectureship, 1983.
  - (f) Alexander von Humboldt Award, 1984 (for outstanding contribution to agriculture over previous five years).
  - (g) U.S. Department of Agriculture Distinguished Service Award, 1986.
  - (h) Fellow, American Association for the Advancement of Science, elected 1986.
  - (i) Regents Professorship, University of Minnesota, 1986.
  - (j) Honorary Degree, Christian Albrechts Universität - Kiel (Germany): Ehrendoktor der Agrarwissenschaften, 1986.
  - (k) National Award for Agricultural Excellence, National Agri-Marketing Association, 1989.
  - (l) Member, National Academy of Sciences, elected 1990.
  - (m) Honorary Degree, Purdue University, Doctor of Agriculture (*honoris causa*), 1991.
  - (n) "Award of Merit," Minnesota Chapter, Gamma Sigma Delta, 1994.
  - (o) "International Citizen Award," City of Minneapolis, 1995; "Good Neighbor Award," WCCO Radio, 1995.

- (p) Honorary Scientist, Agricultural Development Administration, Korea Ministry of Agriculture, 1999-2002.

(3) Professional and Public Service

International

- (a) Agricultural Development Council, Inc., Board of Trustees, 1967-73; President 1973-78.
- (b) Economics Institute, Policy and Advisory Board, 1968-1970.
- (c) International Association of Agricultural Economists, U.S. Council Member, 1969-72.
- (d) Consultative Group on International Agricultural Research, Technical Advisory Committee (TAC), 1973-77.
- (e) Asian Vegetable Research and Development Center, Board of Directors, 1975-77.
- (f) Asian Development Bank, Co-Chairman (with Kazushi Ohkawa), Consultative Committee on Updating the Asian Agricultural Survey, 1975-77.
- (g) International Service for National Agricultural Research (ISNAR) Board of Directors, 1979-86.
- (h) Director, UM-ISNAR Agricultural Research Policy Seminar, (Annual 1982, 1983, 1984, 1985, 1986).
- (i) Chairman, Search Committee for Selection of Director General, International Service for National Agricultural Research (1990-91).

National

- (a) Agency for International Development, Research Advisory Committee (RAC), 1967-75, 1983-86.
- (b) Asia Society-Southeast Asia Development Advisory Group (SEADAG): Chairman, Rural Development Seminar, 1968-69, Executive Committee, 1969-71.
- (c) Social Science Research Council (a) Committee on Agricultural Economics (1958-60); (b) Working Group on Land Use Change (1990- 91).
- (d) National Research Council: (a) Committee on Problems of Pest Control, 19775; (b) Board on Agriculture, 1983-87; (c) Committee on Sustainable Agriculture and the Environment in the Humid Tropics 1979-92; Board on Science and Technology for Development 1990-93; Board on Global Change Research; 1990-95; Committee on Human Dimensions of Global Change 1992-1996; Board on Sustainable Development, 1997-1999; Committee on Grand Challenges in Environmental Sciences, 1998-2000; Committee on Biotechnology, Food and Fiber Production, and the Environment, 2000-2002; Roundtable on Science and Technology for Sustainability, 2002-2004.
- (e) National Planning Association, Committee on Agriculture, 1981-91.
- (f) Sierra Club, Economics Committee, and Liaison with Population Committee (1983-94).

- (g) Consortium for International Earth Science Information Network (CIESIN), Users Working Group, Chairman (1993-94).
- (h) Federation of American Scientists, Board of Sponsors, 1995-2001.

### Minnesota

- (a) Governor's Council of Economic Advisors (Minnesota) 1971-73.
- (b) Chairman, Committee to Review State Funded Research, Governor's Office of Science and Technology, St. Paul, 1984.
- (c) Member, Subcommittee on Technology and Technology Transfer, Governor's Commission of the Economic Future of Minnesota, 1986.
- (d) Boundary Waters Foundation 1988-94.
- (e) University of Minnesota, Center for International Food and Agricultural Policy, Board of Advisory, 1988-92; 1999-present.
- (f) Minnesota Institute for Sustainable Agriculture, Board of Directors, 1992-1994.
- (g) McKnight Foundation Collaborative Crop Research Program Oversight Committee Member, 1993-98.

### (4) Member

- (a) American Academy of Arts and Sciences
- (b) American Agricultural Economics Association
- (c) American Economics Association
- (d) Council on Foreign Relations
- (e) Economic History Association
- (f) Indian Society of Agricultural Economists
- (g) International Association of Agricultural Economists
- (h) Pakistan Society of Development Economists
- (i) Philippine Economic Society
- (j) Society for the History of Technology
- (k) Huguenot Historical Society (New Paltz, NY)

### (5) Editorial Boards

- (a) American Journal of Agricultural Economics, 1965-67
- (b) The Pakistan Development Review, 1982-
- (c) Forum for Applied Research and Public Policy, 1986-1989
- (d) Journal of Asian Economics, 1991-1998
- (e) Minnesota Journal of Global Trade, 1995-2005
- (f) Australian Journal of Agricultural and Resource Economics, 1997-2001

### (6) Listings

- (a) Who's Who in America, 1972-1973, 37th edition (Chicago: Marquis, 1972). (Also in subsequent editions.)

- (b) American Men and Women in Science: The Social and Behavioral Sciences, 11th edition (New York: R. R. Bowker, 1968). (Also in subsequent editions.)
- (c) Who's Who in Economics: A Biographical Dictionary of Major Economists: 1700-1981, Eds. Mark Blaug and Paul Sturgis (Cambridge: The MIT Press, 1983, 1986).
- (d) Agricultural Economics and Rural Sociology: The Contemporary Core Literature, Ed. Wallace C. Olson with Margot A. Bellamy and Bernard F. Stanton (Ithaca: Cornell University Press, 1991), pp. 97-99, 334, 335.

## **PUBLICATIONS**

### (1) **Books: Author or Co-author**

The Economic Demand for Irrigated Acreage: New Methodology and Some Preliminary Projections, 1954-1980. Baltimore: The Johns Hopkins Press, (for Resources for the Future, Inc.), 1965.

Plant Science: An Introduction to World Crops, San Francisco: W. H. Freeman and Company, 1st edition, 1969; 2nd edition, 1974; 3rd edition, 1981 (with J. Janick, R. W. Schery and F. W. Woods).

Agricultural Development: An International Perspective, Baltimore: Johns Hopkins Press, first ed., 1971; second ed., 1985 (with Yujiro Hayami). (Arabic Translation, Cairo: Egyptian-English Press, 125 Avenue Mahamad Farid, 1986; Portuguese translation, Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA), Brasilia, 1988; Spanish translation, Mexico, D.F.: Fondo de Cultura Económica, 1989; Chinese translation, China Social Sciences Publishing House, Foreign Economics Famous Works Translation, 1999. (First edition received American Agricultural Economics Association Publication of Enduring Quality Award, 1985.)

Induced Innovation: Technology, Institutions and Development, Baltimore: The Johns Hopkins University Press, 1978 (with Hans P. Binswanger and others). (American Agricultural Economics Association Publication Award, 1979)

Agricultural Research Policy, Minneapolis: University of Minnesota Press, 1982. (Italian translation, Politica per la Riceria in Agricoltura, Venezia: Giunta Regionale del Veneto, 1985.) (Chinese Translation, Beijing: Agricultural Science and Technology Information Center, Beijing Academy of Agriculture and Forestry, Beijing, 1986.)

The Role of Demand and Supply in the Generation and Diffusion of Technical Change, Volume 21 in Fundamentals of Pure and Applied Economics, editors Jacques Lesourne and Hugo Sonnenschein, London: Harwood Academic Publishers, 1987 (with Colin G. Thirtle).

Agricultural Research Policy and Development (Rome: Food and Agriculture Organization of the United Nations, Research and Development Centre, 1987).

Lectures in Technical and Institutional Change in Agricultural Development (Islamabad: Pakistan Institute of Development Economics, 1987). (Lecture 1 reprinted in Sisay Asefa (ed), World Food and Agriculture: Some Problems and Issues (Kalamazoo, MI: W. E. Upjohn Institute, 1988, pp. 9-34.)

Aid and Development (Baltimore: Johns Hopkins University Press, 1989) (with Anne O. Krueger, Constantine Michalopoulos, and others).

United States Development Assistance Policy: The Domestic Politics of Foreign Economic Aid (Baltimore: The Johns Hopkins University Press, 1996).

Technology, Growth and Development: An Induced Innovation Interpretation (New York, NY: Oxford University Press, 2001).

Social Science Knowledge and Economic Development: An Institutional Design Perspective (Ann Arbor, MI: University of Michigan Press, 2003).

Is War Necessary for Economic Growth? Military Procurement and Technology Development. (New York, NY: Oxford University Press, 2006).

(2) **Books: Editor or Co-Editor**

Agricultural Policy in an Affluent Society, New York: W. W. Norton and Company, 1969) (co-editors, A. D. Waldo and J. P. Houck).

Plant Agriculture: Readings from Scientific American, San Francisco: W. H. Freeman and Company, 1970 (co-editors, J. Janick, R. W. Schery, and F. W. Woods).

Agricultural Revolution in Southeast Asia: Impact on Grain Production and Trade, New York: The Asia Society, 1970.

Resource Allocation and Productivity in National and International Agricultural Research, Minneapolis: University of Minnesota Press, 1977 (co-editors, Thomas M. Arndt and Dana G. Dalrymple).

Agricultural Growth in Japan, Taiwan, Korea and the Philippines, Honolulu: The University Press of Hawaii, 1979 (co-editors, Yujiro Hayami and Herman Southworth).  
Policy for Agricultural Research, Boulder, Colorado: Westview Press, 1987 (co-editor, Carl Pray).

Generation and Diffusion of Agricultural Innovations: The Role of Institutional Factors, London: Grower, 1988 (co-editor, Iftikar Ahmed).

Technology and Agricultural Policy (Washington, DC: National Academy Press, 1990) (with Charles M. Benbrook, Kenneth R. Farrell, Dale W. Jorgenson, Ralph Landau, and George Rossmiller).

Sustainable Agriculture and the Environment: Perspectives on Growth and Constraints, Boulder, Colorado: Westview Press, 1992.

Why Food Aid? Baltimore: The Johns Hopkins University Press, 1993.

Health and Sustainable Agricultural Development: Perspectives on Growth and Constraints (Boulder, Colorado: Westview Press, 1994).

Agriculture, Environment, and Health: Sustainable Development into the 21st Century (Minneapolis, MN: University of Minnesota Press, 1994).

Environmentally Significant Consumption (Washington, DC: National Academy Press, 1997) (with Paul C. Stern, Thomas Dietz, Robert Socolow and James L. Sweeney).

(3) **Journal Articles**

The Changing Industrial Molasses Market," Journal of Agricultural and Food Chemistry, July 22, 1953, pp. 602-608 (with T. N. Hubbuch).

"The Relationship Between the BAE Level-of-Living Index and the Average Incomes of Farm Operators," Journal of Farm Economics, Vol. 36, February, 1954, pp. 41-51.

"The Impact of Urban-Industrial Development on Agriculture in the Tennessee Valley and the Southeast," Journal of Farm Economics, Vol. 37, February, 1955, pp. 38-56. Reprinted in Karl A. Fox and D. Gale Johnson (eds.) Readings in the Economics of Agriculture (Homewood: Richard D. Irwin, 1969), pp. 339-358. (American Farm Economics Association Award, 1956.)

"Industrial Progress and Agricultural Stagnation in the New South," Social Forces, Vol. 34, December, 1955, pp. 114-118.

"The Contribution of Technological Progress to Farm Output: 1950-75," Review of Economics and Statistics, Vol. 38, February, 1956, pp. 61-69 (American Farm Economics Association Award, 1957).

"Agricultural and Non-Agricultural Growth in Output Per Unit of Input," Journal of Farm Economics, Vol. 39, December, 1957, pp. 1566-1576.

"Regional Patterns of Technological Change in American Agriculture," Journal of Farm Economics, Vol. 40, May, 1958, pp. 196-207 (with T. T. Stout).

"Technological Change and Resource Requirements in American Agriculture," Journal of Agricultural and Food Chemistry, September, 1958, pp. 652-656.

"Farm and Non-Farm Employment Opportunities for Low Income Farm Families," Phylon (The Atlanta University Review of Race and Culture), Fall Quarter, 1959, pp. 248-255.

"Usher and Schumpeter on Invention, Innovation and Technological Change," Quarterly Journal of Economics, Vol. 73, November, 1959, pp. 596-606. (See also P. R. Schweitzer "Comment," and V. W. Ruttan, "Reply," Quarterly Journal of Economics, Vol. 73, February 1961, pp. 152-156.

"Regional Differences in Factor Shares in American Agriculture," Journal of Farm Economics, Vol. 41, February 1960, pp. 52-68 (with T.T. Stout).

"Research on the Economics of Technological Change in American Agriculture," Journal of Farm Economics, Vol. 42, No. 4, November, 1960, pp. 735-754.

"Impact of Local Population Pressure on Farm Real Estate Values in California," Land Economics, Vol. 37, No. 2, May 1961, pp. 125-131.

"Resource Inputs and Output Growth: Comparisons between Agriculture and Forestry," Forest Science, Vol. 8, No. 1, March, 1962, pp. 68-82 (with J. C. Callahan).

"The Effectiveness of Location Incentives on Local Economic Development," Journal of Farm Economics, Vol. 44, No. 4, November, 1962, pp. 968-978 (with L. T. Wallace).

"Evaluation of Area Redevelopment Loans to Agricultural Firms," Journal of Farm Economics, Vol. 45, No. 5, December, 1963, pp. 1022-1026 (with E. M. Babb and L. T. Wallace).

"Equity and Productivity Objectives in Agrarian Reform Legislation: Perspectives on the New Philippine Land Reform Code," Indian Journal of Agricultural Economics, Vol. 19, Nos. 3 and 4, July-December, 1964, pp. 114-130. Reprinted as "Land Reform and National Economic Development" in G. R. Sicut, (ef). The Philippine Economy in the 1960's, Institute of Economic Development and Research, University of the Philippines, Quezon City, 1964, pp. 92-119.

"Productivity Models of Economic Growth," The Philippine Statistician, Vol. 13, No. 3, September, 1964, pp. 132-147. (Reprinted in Productivity, Indian National Productivity Council, New Delhi, Vol. 7, No. 4, Winter 1966-1967, pp. 530-539).



"Partial Budgeting of Costs and Returns Using Experimental Data from Herbicide and Fertilizer Experiments," The Philippine Agriculturist, Vol. 48, Nos. 6-7, November-December, 1964, pp. 249-268 (with J. C. Moomaw).

"On Schumpeter and Development," Philippine Economic Journal, Vol. 4, No. 1, (First Semester, 1965), pp. 57-63.

"Growth Stage Theories and Agricultural Development Policy," Australian Journal of Agricultural Economics, Vol. 9, No. 1, 1965, pp. 17-32. (Abstracted in Mercurio, Vol. 8, No. 10, Rome, October, 1965, pp. 59-64; The Economic Weekly, Bombay, August 7, 1965, pp. 1231-1234).

"Tenure and Productivity of Philippine Rice Producing Farms," The Philippines Economic Journal, Vol. 5, No. 1, First Semester 1966, pp. 42-63.

"Technological and Environmental Factors in the Growth of Rice Production in the Philippines and Thailand," Rural Economic Problems, Vol. 3, No. 1, May, 1966, pp. 63-107. (Japanese translation in Agricultural Development Bulletin 265, Agricultural Policy Research Committee, Tokyo). (with A. Soothipan and E. C. Venegas). For preliminary reports covering the same material see World Crops, March 1966, pp. 16-33; Economic Research Journal, December, 1964, pp. 159-179; September, 1965, pp. 116-133; December, 1965, pp. 181-201; Bangkok Bank Monthly Review, May, 1966, pp. 182-191.

"Price and Market Relationships for Rice and Corn in the Philippines," Journal of Farm Economics, Vol. 48, No. 3, August, 1966, pp. 685-703 (with A. E. Recto and Mahar Mangahas). Also in Philippine Economic Journal, Vol. 5, (First Semester 1966), pp. 1-27.

"Equity and Productivity Issues in Modern Agrarian Reform Legislation," Philippine Studies, Vol. 14, No. 1, January, 1966, pp. 52-64.

"Agricultural Policy in an Affluent Society," Journal of Farm Economics, Vol. 48, No. 5, December, 1966, pp. 1100-1120 (American Agricultural Economics Association Award, 1967).

"Issues in the Evolution of Production Economics," Journal of Farm Economics, Vol. 49, No. 5, December, 1967, pp. 1490-1498.

"Environmental, Technological and Institutional Factors in the Growth of Rice Production: Philippines, Thailand, and Taiwan," Food Research Institute Studies, Vol. 7, No. 3, 1967, pp. 307-341 (with S. C. Hsieh). Reprinted in M. L. Dantwala, Agricultural Development in Developing Countries: Comparative Experience, Indian Society of Agricultural Economics, Bombay, 1972, pp. 59-72.

"Production Economics for Agricultural Development," Indian Journal of Agricultural Economics, Vol. 23, No. 2, April-June, 1968, pp. 1-14.

"Agricultural Product and Factor Markets in Southeast Asia," Economic Development and Cultural Change, Vol. 17, No. 4, 1969, pp. 501-519. Reprinted in (a) K. R. Anchel, R. H. Brannan and Eldon D. Smith, Agricultural Cooperatives and Markets in Developing Countries, Praeger, 1969, pp. 79-106; and in (b) Boedino and Peter McCawley, Bunga Rampai Ekonomi Mikro (Jogjakarta: Gadjah Mada University Press, 1976), pp. 170-187.

"Factor Prices and Technical Change in Agricultural Development: The United States and Japan, 1880-1960," The Journal of Political Economy, Vol. 78, No. 5, September-October 1970, pp. 1115-1141 (with Yujiro Hayami) (American Agricultural Economics Association Award, 1971).

"Korean Rice, Taiwan Rice and Japanese Agricultural Stagnation: An Economic Consequence of Colonialism," The Quarterly Journal of Economics, Vol. 84, No. 4, November, 1970, pp. 562-589 (with Yujiro Hayami).

"Agricultural Productivity Differences Among Countries," The American Economic Review, Vol. 60, No. 5, December, 1970, pp. 895-911 (with Yujiro Hayami). Reprinted in M. L. Dantwala, Agricultural Development in Developing Countries: Comparative Experience, Indian Society for Agricultural Economics, Bombay, 1972, pp. 73-88. Abstract also in Journal of Northeastern Agricultural Economics Council, Vol. 1, No. 1, Summer 1972, pp. 1-18.

"Technology and the Environment," American Journal of Agricultural Economics, Vol. 53, No. 5, December, 1971, pp. 707-717. (Reprinted in Lloyd F. Seatz, Symposium on Ecology and Agricultural Production (Knoxville: University of Tennessee Institute of Agriculture, 1977).

"Technology Transfer and Agricultural Development," Technology and Culture, Vol. 14, No. 2, April, 1973, pp. 1-52. Also in Shigeru Ishikawa (ed.), Agriculture and Economic Development--Structural Readjustment in Asian Perspective, Japan Economic Research Center, Tokyo, May, 1972, pp. 505-583 (with Yujiro Hayami).

"Strategies for Agricultural Development," Food Research Institute Studies, Vol. 11, No. 2, 1972, pp. 129-148 (with Yujiro Hayami). Reprinted in Carl K. Eicher and John M. Staatz, Agricultural Development in the Third World (Baltimore: The Johns Hopkins University Press, 1984), pp. 59-74.

"Technology Transfer and Agricultural Development," Technology and Culture 14 (April, 1973): pp. 119-151 (with Yujiro Hayami).

"Technical and Institutional Transfer in Agricultural Development," Research Policy, Vol. 4 (1975), pp. 350-378. Also published in J. D. Drilon (ed.), Institutionalizing Research Management in Asia, Los Banos: Southeast Asian Regional Center for Graduate Study and Research in Agriculture, 1974, pp. 74-92.

"Integrated Rural Development Programs: A Skeptical Perspective," International Development Review, Vol. 17, No. 4, December, 1975, pp. 9-16. (Reprinted in Productivity 19 (January-March, 1979): 481-495.

"Induced Innovation and Agricultural Development," Food Policy, Vol. 2, No. 3, August, 1977, pp. 196-216. Reprinted in Gordon K. Douglass, Agricultural Sustainability in a Changing World Order (Boulder, Colorado: Westview Press, 1984), pp. 107-134.

"Reviewing Agricultural Research Programs," Agricultural Administration, Vol. 5, No. 1, January, 1978, pp. 1-19. (Also in Revista Latino-Americana de Ciencias Agricolas, Vol. 13, No. 1, 1977, pp. 20-32.

"The Green Revolution: Seven Generalizations," International Development Review, Vol. 19, No. 4, December, 1977, pp. 16-23.

"Structural Retardation and the Modernization of French Agriculture," Journal of Economic History, Vol. 37, No. 3, September, 1978, pp. 714-728. Reprinted in Francois Crouzo (ed.) The Economic Development of France Since 1870 (Vol. I) (Aldershot, England: Edward Elgar, 1993) pp. 714.

"The International Agricultural Research Institute as a Source of Agricultural Development," Agricultural Administration, Vol. 5, No. 4, November, 1978, pp. 293-310.

"Induced Institutional Innovation," Agricultural Economics Research, Vol. 31, No. 3, July, 1979, pp. 32-35.

"Economic Benefits from Research: An Example from Agriculture," Science, Vol. 205, September 14, 1979, pp. 1101-1107 (with Robert E. Evenson and Paul E. Waggoner). Reprinted in Ciencia y Desarrollo (Mexico), Vol. 6, Septiembre-October 1980, pp. 127-144.

"Inflation and Productivity," American Journal of Agricultural Economics, Vol. 60, December, 1979, pp. 896-902. (Reprinted in Developing Agriculture 580 (November 1980), pp. 5-17 (in Japanese).

"Behavior and Productivity Implications of Institutional and Project Funding of Research," American Journal of Agricultural Economics, Vol. 62, No. 3, August 1980 (with Maury E. Bredahl and W. Keith Bryant), pp. 371-383; "Comment" (by William E. Becker, Jr.) AJAE, Vol. 64, No. 3, August, 1982, pp. 596-598; "Reply" (by Maury E. Bredahl, W. Keith Bryant and Vernon W. Ruttan) AJAE, Vol. 64, No. 3, August 1982, pp. 599-602.

"Bureaucratic Productivity: The Case of Agricultural Research," Public Choice, Vol. 35, No. 5, 1980, pp. 529-547; "Bureaucratic Productivity: The Case of Agricultural Research

Revisited," (by E. C. Pasour, Jr. and Marc A. Johnson) Public Choice, Vol. 39, No. 2 (1982), pp. 301-317; "A Rejoinder" (by Vernon W. Ruttan), Public Choice, Vol. 39, No. 2 (1982), pp. 319-329.

"Changing Role of Public and Private Sectors in Agricultural Research," Science, Vol. 216, April 2, 1982, pp. 23-29.

"Agricultural Scientists as Reluctant Revolutionaries," Interdisciplinary Science Review, Vol. 7, No. 3, September, 1982, pp. 170-177.

"Perspectives on Agrarian Reform and Rural Development," Quarterly Journal of International Agriculture, Vol. 21, No. 3, July-September, 1982, pp. 240-249.

"Moral Responsibility in Agricultural Research," Southern Journal of Agricultural Economics, Vol. 15 (July, 1983), pp. 73-80. Also in "Agricultural Research Policy Issues," HortScience, Vol. 18, No. 6, (December, 1983):809-818 (B. Y. Morrison Memorial Lecture); Charles V. Blatz (ed.), Ethics in Agriculture: An Anthology on Current Issues in World Context, (Moscow, Idaho: University of Idaho Press, 1991), pp. 272-284.

"Integrated Rural Development Programs: A Historical Perspective," World Development 12 (#4, 1984), pp. 393-401.

"A Guide to LDC Food Balance Projections," European Review of Agricultural Economics 10 (July, 1983), pp. 325-356 (with Glenn Fox). Reprinted in Ray A. Goldberg (ed.), Research in Domestic and International Agribusiness Management, Vol. 5 (Greenwich, CT: JAI Press, Inc., 1984), pp. 165-201.

"Toward a Theory of Induced Institutional Innovation," Journal of Development Studies, Vol. 20 (July, 1984): pp. 203-223 (with Yujiro Hayami).

"The Green Revolution: Inducement and Distribution," The Pakistan Development Review, Vol. 23 (Spring, 1984), pp. 37-63 (with Yujiro Hayami). Also in Charles V. Blatz (ed.) Ethics and Agriculture: An Anthology on Current Issues in World Context, (Moscow, Idaho: University of Idaho Press, 1991), pp. 637-650.

"Perspectives on Population and Development," Indian Journal of Agricultural Economics 39 (October, 1984), pp. 630-638.

"Social Science Knowledge and Institutional Change," American Journal of Agricultural Economics, Vol. 66 No. 5 (December, 1984), pp. 549-559, (American Agricultural Economics Association Fellows Lecture, 1984). Also in Jose Maria Garcia Alvarez - Cogue (ed.) Analisis Institucional de las Politicas Agrarias: Conflicts de Intereses y Political Agraria, (Madrid: Ministerio do Agricultura, Pesca y Alimontacion, 1991, pp. 195-171.

"The Intercountry Agricultural Production Function and Productivity Differences Among Countries," Journal of Development Economics 19 (1985), pp. 113-132 (with Toshihiko Kawagoe and Yujiro Hayami). See also Peter Moll, "Comment" and Kawagoe, Hayami, and Ruttan "Reply" in Journal of Development Economics 28 (1988):121-124, 125-126.

"Assistance to Expand Agricultural Production," World Development 14 (#1, 1986), pp. 39-63.

"A Reexamination of Professional and Popular Thought on Assistance for Economic Development: 1949-1952," The Journal of Developing Areas 20 (April, 1986), pp. 297-326 (with Joseph Kennedy).

"Assistance for Water Resource Development in Pakistan: Some Lessons from Experience," Pakistan Journal of Agricultural Social Sciences 1 (July-December, 1986), pp. 72-91 (with Greg Traxler).

"Some Concerns About Agricultural Research Policy in Developing Countries," Quarterly Journal of International Agriculture 25 (October-December, 1986), pp. 318-321.

"The Impact of External Economic Assistance to Korea," Journal of Rural Development 9 (December, 1986), pp. 219-256 (with Anne O. Krueger).

"Toward a Global Agricultural Research System: A Personal View," Research Policy 15 (December, 1986), pp. 307-327.

"Some Concerns About Agricultural Research Policy in the United States," Quarterly Journal of International Agriculture 26 (April/June, 1987), pp. 145-156.

"Balancing Basic and Applied Science: The Case of Agricultural Research," BioScience 37 (July/August, 1987), pp. 507-509 (with Glenn Fox and Robert E. Evanson.)

"Cultural Endowments and Economic Development: What Can We Learn from Anthropology?" Economic Development and Cultural Change 36 (April 1988); pp. S247-271).

"Sustainability is Not Enough," American Journal of Alternative Agriculture 3 (Spring/Summer, 1988), pp. 128-130; reprinted in Better Crops with Plant Food, Vol. 73 (Spring 1989), pp. 6-9; reprinted in Stanley P. Wilson, Kyleen A. Niyo and James L. Oblinger, Alternative Agriculture: Scientists Review (Ames: Council for Agricultural Science and Technology, July 1990), pp. 130-134.

"Research and Development of a Biological Innovation: Commercial Hybrid Wheat" Food Research Institute Studies 21 (#1, 1988): 45-68 (with Mary K. Knudson).

"Development Policy Under Eisenhower and Kennedy," The Journal of Developing Areas 23 (October, 1988), pp. 1-30 (with James M. Hagen).

"Why Foreign Economic Assistance?" Economic Development and Cultural Change 37 (January 1989), pp. 412-424 (edited version reprinted as "Assistance for Economic Development" in Warren J. Samuels (ed.) Fundamentals of the Economic Role of Government (New York: Greenwood Press, 1989), pp. 157-166.

"Induced Technical and Institutional Change in African Agriculture," Journal of International Development 1 (January 1989), pp. 1-45 (with Colin Thirtle).

"The Sources of the Basic Human Needs Mandate," The Journal of Developing Areas 23 (April 1989), pp. 331-362 (with Rolf H. Sartorius).

"Value of External Reviews of Research at the International Agricultural Research Centers," Agricultural Economics 3 (1989), pp. 365-380 (with Keith O. Fuglie).

"Institutional Innovation and Agricultural Development," World Development 17:9 (1989), pp. 1375-1387.

"Lost Directions: U.S. Foreign Assistance Policy Since New Directions," The Journal of Developing Areas 24 (January 1990), pp. 127-180 (with Mark McGuire).

"The Direction of Agricultural Development in Asia: Into the 21st Century," Journal of Asian Economics (Fall, 1990), pp. 189-204. Reprinted (with revisions) in "Constraints on Sustainable Growth in Agricultural Production: Into the 21st Century" Outlook on Agriculture 20 (#4, 1991), pp. 225-234.

"Efficiency and Equity in Institutional Development: A Perspective on Water Resources in the Arid West," Rivers 1 (#3, 1990), pp. 218-226 (with Marie Livingston).

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