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AGRICULTURE, NATURAL RESOURCES AND CAPITAL GROWTH

A BIBLIOGRAPHY

by George A. Pavelis

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# AGRICULTURE, NATURAL RESOURCES AND CAPITAL GROWTH

## A BIBLIOGRAPHY

by George A. Pavelis\*

### Coverage and Organization

This extensive bibliography includes about 350 different formal publications or easily accessible other references. All are recommended for understanding the measurement, significance and contribution of natural resource capital accumulation to the growth and development of agriculture in the United States. There is no effort to include only the relatively recent or so-called up-to-date material. Doing so would erroneously leave out some of the most valuable literature bearing on capital growth in agriculture. Moreover, dates of publication of research and other information documents, such as Census reports, often belie their true substance, from an historical as well as other viewpoints.

Irrigation, drainage and conservation assets (IDC) are the main components of natural resource capital covered. But we also include some key references on flood protection, environmental controls, energy topics, and agricultural research. These subjects and associated policy issues also impinge on agricultural growth and development, either conjunctively or competitively with the IDC assets and the more ordinary forms of capital like land, buildings and farm equipment. For completeness natural resource capital must be studied in the context of agricultural growth and capital accumulation in general.

In many respects the most useful work bearing on natural resource capital accumulation in agriculture is the pathbreaking analysis of Tostlebe (1954) on the growth of physical capital (real estate, equipment, inventories) in agriculture from 1870-1950. There is also the Towne-Rasmussen review (1960) of gross farm product and investment in the nineteenth century. Significantly, both of these studies were completed in the U. S. Department of Agriculture, for the National Bureau of Economic Research. This private Bureau and later the Brookings Institution (Denison, 1974) have sponsored much of the basic economic research on growth and productivity in the United States. Their reports are included in the sections on growth and productivity for the economy as a whole and for the farm sector.

Concerning organization, the 350 separate items are classed into eleven specialized lists, but only the first seven groups are true subject-matter separations. They involve: capital and investment in general, economic growth and productivity (separated for the economy as a whole versus agriculture), general aspects of land use and resource development policy, mathematical/statistical

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\*Citations were standardized with the editorial assistance of Lila J. Walker, senior editor (retired). Economics, Statistics, and Cooperatives Services, USDA. The full bibliography was typed by Linda R. Stallard, Natural Resource Economics Division.



techniques and evaluation methodologies, and some representative survey studies of natural resource investment. The seventh list is for the literature useful in developing capital stocks of specialized irrigation equipment and on-farm irrigation water supply facilities, a hitherto neglected area of agricultural research.

This overall classification was not entirely clearcut of course, but worked very well. Doubts on the best placement of some items were resolved by repeating them in the competing categories. A few reports considered to have exceptional methodological or empirical value, such as Ward's 1976 monograph on capital measurement, may appear in several categories.

The last four lists are for governmental publications and reports, arranged according to the issuing Departments and their member agencies. Three executive Departments (Agriculture, Commerce and Interior) have produced nearly all the research, statistical and other Federal information bearing on capital accumulation in agriculture. Publications of universities, experiment stations and various State government units can be found under the appropriate subject areas. The 'general government' or last category contains Congressional as well as some useful international references.

#### Commentary on the USDA Literature

Some special remarks are in order concerning the Department of Agriculture material (100 items). The USDA section includes individually authored or agency authored official Department publications. But the list also includes pertinent items published outside of the Department--in various professional journals, cooperative USDA/State Experiment Station bulletins, and other media--if the authors were Department of Agriculture employees or were known to have conducted their work with Department support. Most of the USDA items appear again within the major subject-matter classes. Those which do not are not less useful; by and large they contain important statistical information not readily lendable to the particular breakdown employed.

The two-way treatment of USDA materials in effect makes this working paper two complete bibliographies on natural resource capital in agriculture. One covers the subject in general and the other the U. S. Department of Agriculture's particular contributions toward the understanding of such a broad and important subject.

The diversity and rather surprising balance of the 100 Department of Agriculture contributions to the literature on natural resource capital can be seen in the itemized summary below. The internal and external items each divide quite clearly into three pre-identified kinds of publications.

<u>Breakdown of 100 publications having USDA authors or support</u>	<u>Number and percent</u>
Numbered Departmental publications	22
Numbered Agency publications	20
Unnumbered--committee and miscellaneous items	<u>12</u>
 <u>Subtotal</u> , Internal USDA Publications	 <u>54</u>
Cooperative State or other research bulletins	21
Journal articles and conference papers	20
Books, chapters, dissertations, etc.	<u>5</u>
 <u>Subtotal</u> , External 'USDA' Publications	 <u>46</u>

This very simple tabulation verifies the importance of conducting literature searches and evaluating contributions by looking more carefully at the different dissemination modes, particularly cooperative publications, than at the originating institutions. In the case of natural resource economics, for example, U. S. Department of Agriculture contributions would be seriously distorted and grossly under-determined by concentrating on examining official USDA publications.



## Capital and Investment: General References

- Boulding, Kenneth E. 1948.  
Economic analysis (rev. ed.). Esp. pp. 262-270 on capital concepts.  
Harper and Brothers. 884pp.
- Carlin, Thomas A. and Charles R. Handy. 1974.  
Concepts of the agricultural economy and economic accounting. Amer. Jour.  
Agr. Econ. 56(5):964:975.
- Fisher, Irving. 1930.  
The theory of interest. (1954 republication of original edition). Esp.  
ch. 1 on income and capital and ch. 7 on investment opportunities. Kelley  
and Milliman, Inc. 566pp.
- Castle, Emery N. 1965.  
The market mechanism, externalities and land economics. Jour. Farm Econ.  
47(3):542-556.
- Dyer, David R. 1975.  
Livestock capital formation: a preliminary estimation. Proc. 48th Ann.  
Mtg., Western Agr. Econ. Assoc. pp.226-229.
- Hawkins, C. J. and D. W. Pearce. 1971.  
Capital investment appraisal. Macmillan, Studies in Economics Series.  
88pp.
- Heady, Earl O. 1952.  
Economics of agricultural production and resource use. Esp. ch. 2 on the  
production function and ch. 26 on fundamentals of conservation and land  
use. Prentiss-Hall. 852pp.
- Junankar, P. N. 1972.  
Investment: theories and evidence. Macmillan, Studies in Economics  
Series. 78pp.
- Keynes, J. M. 1935.  
The general theory of employment, income and money. Harcourt, Brace  
and Co. 403pp.
- McKenna, Joseph P. 1972.  
Aggregate economic analysis. Dryden Press. 269pp.
- Margolis, J. 1955.  
A comment on the pure theory of public expenditure. Rev. Econ. and  
Statis. 37:347-349.
- \_\_\_\_\_. 1957.  
Secondary benefits, external economies, and the justification of public  
investment. Rev. Econ. and Statis. 39:284-291.

Penson, John B., Jr. 1977.

Toward an aggregative measure of saving and capital finance for U.S. farm operator families. 1977. Amer. Jour. Agr. Econ. 59(1):49-60.

Penson, John B., Jr., and Dorwin L. Williams. 1976.

Financing farm businesses in the United States. U. S. Dept. Agr., Agr. Fin. Rev. 36:32-41.

Penson, John B., Jr. and others. 1977.

Measurement of capacity depreciation based on engineering data. Amer. Jour. Agr. Econ. 59(2):321-329.

Schluter, Gerald E. and Thomas A. Niles. 1975.

Farmers' capital expenditures, who benefits? Jour. Northeast Agr. Econ. Council. pp.225-235

Schultz, Theodore W. 1953.

The economic organization of agriculture. Esp. ch. 8 on the declining economic importance of land, ch. 18 on factor markets and economic development, and ch. 19 on organizing agriculture for economic stability. McGraw-Hill. 374pp.

Simunek, Richard W. 1976.

National farm capital accounts. Amer. Jour. Agr. Econ. 58(3):532-542.

Smith, Allen G. 1972.

Is there disinvestment in the farming sector? Amer. Jour. Agr. Econ. 54(2):275-278.

Stonier, Alfred W. and Douglas C. Hagwe. 1956.

Textbook of economic theory. Esp. chs. 19-21, 23. Longmans, Green and Co., Ltd. 513pp.

Timmons, John F. 1954.

Economic framework for watershed development. Jour. Farm Econ. 36(5):1170-1183.

Tostlebe, Alvin S. 1954.

The growth of physical capital in agriculture, 1870-1950. Natl. Bur. Econ. Res. Occas. Paper 44, New York. 92pp.

Ward, Michael. 1976.

The measurement of capital: the methodology of capital stock estimates in OECD countries. Organ. for Econ. Co-op. and Dvmt. Paris. 148pp.

#### Economic Growth and Productivity: U. S. Economy

Abramovitz, Moses. 1956.

Resources and output trends in the United States since 1870. Natl. Bur. Econ. Res., Occas. Pap. 52. New York.

- Ahramovitz, Moses. 1962.  
Economic growth in the United States. Amer. Econ. Rev. LII(4):762-782.
- Almond, Clopper, Jr. 1966.  
The American Economy to 1975: an Interindustry Forecast. Harper and Row. 160pp.
- Denison, Edward F. 1962.  
The sources of economic growth in the United States and the alternatives before us. Com. for Econ. Devlpmt., Supp. Pap. 13. 308pp.
- \_\_\_\_\_. 1971.  
Welfare measurement and the GNP. Surv. of Current Bus. 51(1):1-8.
- \_\_\_\_\_. 1974.  
Accounting for United States Economic Growth, 1929-69. The Brookings Institution. Wash., D.C. 355pp.
- Fabricant, Solomon. 1959.  
Basic facts on productivity change. Natl. Bur. Econ. Res., Occas. Paper 63, New York. 49pp.
- Kendrick, John W. 1956.  
Productivity trends: capital and labor. Natl. Bur. Econ. Res., Occas. Pap. 53. New York.
- Kendrick, J. W. and Ryuzo Sato. 1963.  
Factor prices, productivity and growth. Amer. Econ. Rev. LIII(5):974-1003.
- Schultz, Theodore W. 1977.  
The economic value of human time over time. In Lectures in Agricultural Economics. Bicentennial lectures sponsored by the Economic Research Service, U. S. Dept. of Agr. 165pp.
- Smith, Warren L. 1970.  
Macroeconomics. Esp. part IV on economic growth. Richard D. Irwin, Inc. 373pp.
- Solow, Robert W. 1956.  
A contribution to the theory of economic growth. Quart. Jour. Econ. Vol. LXX:65-94.
- Solow, Robert M. 1957.  
Technical change and the aggregate production function. Rev. of Econ. and Statis. 39(3):312-320.
- \_\_\_\_\_. 1962.  
Technical progress, capital formation and economic growth. Amer. Econ. Rev. Proc. 52:76-86.
- Weisbrod, B. 1962.  
Education and investment in human capital. Jour. Political Econ., Supp. pp.106-123.



Economic Growth and Productivity: U. S. Agriculture

Aull, George H. 1957.

Distinctive problems of agriculture in adjusting to economic growth and development. 85th Cong., 1st Sess., Joint Econ. Com. Print. Policy for Commercial Agriculture: its Relation to Economic Growth and Stability. pp.38-41.

Ayer, Harry W. and G. Edward Schuh. 1972.

Rates of return on agricultural research: the case of cotton research in Sao Paulo, Brazil. Amer. Jour. Agr. Econ. 54(4, pt. 1):557-569.

Bonnen, James T. 1957.

American agriculture in 1965. 85th Cong., 1st Sess. Joint Econ. Com. Print. Policy for Commercial Agriculture: its Relation to Economic Growth and Stability. pp.145-156.

Bredahl, Maury and Willis L. Peterson. 1976.

The productivity and allocation of research. Amer. Jour. Agr. Econ. 58(4, pt. 1):684-692.

Breimyer, Harold F. 1978.

Agriculture's three economies in a changing resource environment. Amer. Jour. Agr. Econ. 60(1):37-47.

Carter, Harold J. and James G. Youde. 1974.

Some impacts of the changing energy situation on U. S. agriculture. Amer. Jour. Agr. Econ. 56(5):878-887.

Christensen, Laurits R. 1975.

Concepts and measurement of agricultural productivity. Amer. Jour. Agr. Econ. 57(5):910-915.

Conrat, Maisie and Richard Conrat. 1977.

How U. S. farmers become specialists--in cash and debts. Smithsonian 7(12):48-54.

Evenson, Robert. 1967.

The contribution of research to agricultural production. Jour. Farm Econ. 49(5):1415ff.

\_\_\_\_\_. 1971.

Economic aspects of the organization of agricultural research. In Resource Allocation in Agricultural Research (ed. W. L. Fishel). Univ. of Minn. Press., Minneapolis. 39lpp.

Gavett, Earl E. 1973.

Agriculture and the energy crisis. Speech at Natl. Conf. on Agr. and the Energy Crisis, Univ. of Neb., Lincoln, Apr. 10-11, 1973. 20pp.

Gertel, Karl. 1976.

Anticipated effects of the Bureau of Reclamation program on agricultural production and prices. U. S. Dept. Agr., Econ. Res. Serv., Nat. Resource Econ. Div. Working Pap. 12. 23pp.

Griliches, Zvi. 1963.

The sources of measured productivity growth: United States agriculture, 1940-60. Jour. Political Econ. 71:331-346.

\_\_\_\_\_. 1964.

Research expenditures, education, and the aggregate agricultural production function. Amer. Econ. Rev. 54(6):961-974.

Heady E. O. and others. 1972.

Agricultural and water policies and the environment: an analysis of national alternatives in natural resource use, food supply capacity and environmental quality. CARD Rpt. 40T, Iowa State Univ., Ames. 295pp.

Heichel, Gary H. 1973.

Comparative efficiency of energy use in crop production. Conn. Agr. Expt. Sta. Bul. 739. 26pp.

\_\_\_\_\_. 1974.

Energy needs and food yields. Technology Review 76(8):9pp.

Heisig, Carl P. 1957.

Long-term adjustments in composition of farm production and in production inputs. 85th Cong., 1st Sess., Joint Econ. Com. Print. Policy for Commercial Agriculture: its relation to economic growth and stability. pp.157-167.

Howe, Eric C. and Charles R. Handy. 1975.

Inventory and critique of productivity estimates in the U. S. food and fiber sector. Amer. Jour. Agr. Econ. 57(5):916-921.

Johnson, D. Gale. 1963.

Efficiency and welfare implications of United States agricultural policy. Amer. Jour. Agr. Econ. 45(2):331-342.

Johnson, Glenn L. 1957.

Sources of expanded agricultural production. 85th Cong., 1st Sess., Joint Econ. Com. Print. Policy for Commercial Agriculture: its relation to economic growth and stability. pp.127-145.

Kendrick, John W. and Carl E. Jones. 1951.

Gross national farm product in constant dollars, 1910-50. Surv. of Current Bus. 32(9):13-19.

Khalidi, Nabil. 1975.

Education and allocation efficiency in U. S. agriculture. Amer. Journ. Agr. Econ. 57(4):650-657.



Loomis, R. A. and Glen T. Barton. 1961.

Productivity of agriculture, United States, 1870-1958. U. S. Dept. Agr. Tech. Bul. 1238.

Lu Yao-Chi. 1974.

A production function approach to measuring productivity growth.

Contributed paper, 1974 Ann. Mtng. of Amer. Agr. Econ. Assoc., College Station, Tex. Abstracted in Amer. Jour. Agr. Econ. 56(5):1206.

---

. 1975.

Measuring productivity change in U. S. agriculture. Southern Jour. Agr. Econ. 7(2):69-75.

---

. 1978.

Projections of agricultural productivity under alternative rates of increase in research and extension investment. Presented, 144th Ann. Mtng., Amer. Assoc. Adv. Sci., 12-17, Feb. 26pp. (summary in Abstracts of Papers, 144th Mtng., AAAS, Wash., D.C.)

Miles, Gary H. 1974.

The Federal role in increasing the productivity of the U. S. food system. Rpt. prepared for the Research Applications Directorate, National Science Foundation. NSF-RA-N-74-271. 165pp.

Nielson, James. 1978.

Issues and priorities in public funding of agricultural research and extension education. Presented, 144th Ann. Mtng. Amer. Assoc. Adv. Sci., Wash., D.C., 12-17 Feb. 14pp.

Otte, Robert C. 1971.

Energy demands versus rural resources. Unpublished manuscripts, Econ. Res. Serv., U. S. Dept. of Agr., Wash., D.C. 9pp. typescript.

Pavelis, George A. 1973.

Energy, natural resources, and research in agriculture: effects on economic growth and productivity for the United States. U. S. Dept. Agr., Econ. Res. Serv., Unnumb. Rpt. 41pp.

Peterson, Willis L. 1971.

The returns to investment in agricultural research in the United States. In Resource Allocation in Agricultural Research (ed. W. L. Fishel). Univ. of Minn. Press, Minneapolis. 391pp.

---

. 1976.

A note on the social returns to private research and development. Amer. Jour. Agr. Econ. 58(2):324-326.

---

. 1978.

Returns to investment in agricultural research. Presented, 144th Ann. Mtng., Amer. Assoc. Adv. Sci., 12-17, Feb. Staff paper P78-2, Dept. Agr. and App. Econ., Univ. of Minnesota. 15pp.

Pimentel, D. and others. 1973.

Food production and the energy crisis. Science 182(4111):443-449.

Rasmussen, Wayne D. 1976.

The past 200 years of American farming. U. S. Dept. Agr., Agr. Outlook AO-12:16, 18.

Rasmussen, Wayne D., G. L. Baker and J.S. Ward. 1976.

A short history of agricultural adjustment, 1933-75. U. S. Dept. Agr. Info. Bul. 391. 21pp.

Schultz, Theodore W. 1957.

The United States farm problem in relation to the growth and development of the United States economy. 85th Cong., 1st. Sess., Joint Econ. Com. Print. Policy for Commercial Agriculture: its Relation to Economic Growth and Stability. pp.1-14.

\_\_\_\_\_. 1971.

The allocation of resources to research. In Resource Allocation in Agricultural Research, (ed. W. T. Fishel) Univ. Minn. Press, Minneapolis. pp. 90ff.

Shumway, C. Richard. 1973.

Allocation of scarce resources to agricultural research. Amer. Jour. Agr. Econ. 55(4, pt. 1):557-566.

Sorenson, Bert. 1975.

A simple model of economic growth or decline under the influence of resource depletion. Niels Bohr Institute, Copenhagen, Denmark. 19pp typescript.

Spielmann, Heinz and Eldon E. Weeks. 1975.

Inventory and critique of estimates of U. S. agricultural capacity. Amer. Jour. Agr. Econ. 57(5):922-928.

Taylor, C. Robert. 1975.

A production function model for aggregate time-series data. Amer. Jour. Agr. Econ. 57(1):122-123.

Towne, Marvin W. and Wayne D. Rasmussen. 1960.

Farm gross product and gross investment in the nineteenth century. In Trends in the American Economy in the Nineteenth Century. Studies in Income and Wealth by the Conf. on Res. in Income and Wealth. Vol. 24. Natl. Bur. Econ. Res. pp.255-314.

Weeks, Eldon E. 1972.

The concept and measurement of farm income and general welfare in agriculture. Western Agr. Econ. Assoc. Proc. pp.259-266.

## Evaluation Methodologies and Mathematical/Statistical Techniques

- Bartlett, M. S. 1950.  
Tests of significance in factor analysis. Brit. Jour. Psych., Statis. Ser. 3, pt. II:77-85.
- Booth, E. J. R. 1966.  
Correlation and regression analysis. In Methods for Land Economics Research (eds. W. L. Gibson, R. J. Hildreth, and G. Wunderlich), Univ. of Nebr. Press, Lincoln. 242pp.
- Bridge, J. L. 1971.  
Applied Econometrics. North-Holland and American Elsevier Publishing Co. 422pp.
- Byerlee, Derek and A. N. Halter. 1974.  
A macro-economic model for agricultural sector analysis. Amer. Jour. Agr. Econ. 56(3):520-5323.
- Davis, Harold T. 1941.  
The Analysis of Economic Time Series. The Principia Press, Bloomington, Ind. Esp. ch. 1 on history of the problem and ch. 6 on analysis of trends. Principia Press. 398pp.
- De Janury, Alain. 1972.  
The class of generalized power production functions. Amer. Jour. Agr. Econ. 54(2):234-237.
- Doll, John P. 1974.  
On exact multicollinearity and the estimation of the Cobb-Douglas production function. Amer. Jour. Agr. Econ. (56(3):556-563.
- Farrar, Donald E. and Robert R. Glauber. 1967.  
Multicollinearity in regression analysis: the problem revisited. Rev. of Econ. and Statis. 49:92-107.
- Finney, D. J. 1972.  
An Introduction to Statistical Science in Agriculture. John Wiley and Sons. 290pp.
- Fisher, R. A. 1950.  
Statistical methods for research workers. Hafner Publishing Co. 354pp.
- Fox, Karl A. 1958.  
Econometric models of the United States. In his Econometric Analysis for Public Policy. Iowa State Univ. Press, Ames. 290pp.
- \_\_\_\_\_. 1968.  
Intermediate Economic Statistics. John Wiley and Sons, Inc. 568pp.
- French, Burton L. 1956.  
Functional relationships for irrigated corn response to nitrogen. Jour. Farm Econ. 38(3):736-747.



- Frevert, Richard K. and others. 1955.  
Soil and water conservation engineering. John Wiley and Sons. 477pp.
- Frisch, Ragnar, and Frederick V. Waugh. 1933.  
Partial time regression as compared with individual trends. *Econometrica* 1(4):387-401.
- Fuller, Wayne A. 1976.  
Introduction to Statistical Time Series. John Wiley and Sons. 470pp.
- Harper, Floyd S. 1946.  
Mathematics of Finance. Internatl. Textbook Co., Scranton, Pa. 327pp.
- Hogg, H. C. and others. 1976.  
Selected methods of financial analysis for agriculture investment. Hawaii Agr. Expt. Sta., Departmental Paper 34. 8pp.
- Hogg, Howard C. and Gary R. Vieth. 1977.  
Method for evaluating irrigation projects. Amer. Soc. Civ. Engr., Jour. Irrig. and Drainage Div., Proc. Pap. 12818 103(IRI):43-52.
- Hook, Irving. 1962.  
Estimation of production function parameters combining time series and cross-section data. *Econometrica* 30(1):34-53.
- Jolley, L. B. W. 1961.  
Summation of Series. Dover Publications, Inc. 251pp.
- Kelejian, Harry H. and Wallace E. Oates. 1974.  
Introduction to Econometrics: Principles and Applications. Harper and Row, New York, N.Y. 300pp.
- Kimball, D. K. and E. N. Castle. 1963.  
Secondary benefits and irrigation project planning. Oreg. Agr. Expt. St. Tech. Bul. 69. 35pp.
- Maass, Arthur. 1966.  
Benefit-cost analysis: its relevance to public investment decisions. *Quart. Jour. Econ.* LXXX(May):208-226.
- Maass, Arthur and Raymond L. Anderson. 1978.  
...And the Desert Shall Rejoice: Conflict, Growth and Justice in an Arid Environment. Massachusetts Institute of Technology Press, Cambridge. 488pp.
- Madden, J. Patrick. 1967.  
Economies of size in farming: theory, analytical procedures, and a review of selected studies. U. S. Dept. Agr. Econ. Rpt. 107. 83pp.
- Medici, Guiseppi. 1953.  
Principles of Appraisal (Books I and II). Esp. ch. 1 in book II on the appraisal of land improvements. Iowa State College Press, Ames. 255pp.

- Mendershausen, Horst. 1938.  
On the significance of Professor Douglas' production function.  
*Econometrica* 6(2):143-153.
- Moore, Charles V. 1961.  
A general analytical framework for estimating the production function for crops using irrigation water. *Jour. Farm Econ.* 43(4-1):876-888.
- \_\_\_\_\_. 1963.  
A method of selecting least-cost irrigation water distribution systems.  
*Jour. Farm Econ.* 45(5):1238-1242.
- Pavelis, George A. 1972.  
Planning natural resource development: an introductory guide. U. S. Dept. Agr., Handb. 431. 30pp.
- Prest, A. R. and R. Turvey. 1965.  
Cost-benefit analysis: a survey. *Econ. Jour.* 75(300)683-705.
- Quenouille, M. H. 1971.  
The analysis of economic time series. Griffin's Statis. Monog. 1. Hafner Publishing Co. 72pp.
- Rosine, John and Peter Helmberger. 1974.  
A neoclassical analysis of the U. S. farm sector, 1948-1970. *Amer. Jour. Agr. Econ.* 56(4):717-729.
- Schramm, Gunter. 1978.  
A benefit-cost model for the evaluation of soil conservation projects. Paper for the 17 Ann. Mtng., Western Regional Science Assoc., Sacramento, Calif. 12 February 1978. 13pp. typescript.
- Tintner, Gerhard. 1939.  
The analysis of economic time series. Pap. presented at a joint session of the Amer. Farm. Econ. Assoc. and Amer. Statis. Assoc., Philadelphia, Dec. 29, 1939. 8pp.
- \_\_\_\_\_. 1940.  
The analysis of economic time series. *Jour. Amer. Statis. Assoc.* 35(1):93ff.
- \_\_\_\_\_. 1944.  
An application of the variate difference method to multiple regression. *Econometrica* 12(2):97-101.
- \_\_\_\_\_. 1952.  
*Econometrics*. John Wiley and Sons. 370pp.
- Weitzell, E. C. 1947.  
Evaluating soil conservation. *Jour. Farm. Econ.* 29(2):475-493.



## Land Use and Resource Development Policy

Anderson, Raymond L. and Arthur Maass. 1971.

A simulation of irrigation systems: the effects of water supply and operating rules on production and income on irrigated farms. U. S. Dept. Agr. Tech. Bul. 1431. 57pp.

Anderson, Terry L. and Peter J. Hill. 1976.

The role of private property in the history of American agriculture, 1776-1976. Amer. Jour. Agr. Econ. 58(5):937-945.

Boxley, Robert F. and William D. Anderson. 1973.

An evaluation of subsidy forms for soil and water conservation. In the economics of federal subsidy programs (Pt. 7). U. S. Cong., 1st Sess., Joint Economic Committee Print. pp.953-976.

Bunce, Arthur C. 1942.

The Economics of Soil Conservation. Iowa State College Press, Ames. 227pp.

Burt, O. and R. Cummings. 1970.

Production and investment in natural resources industries. Amer. Econ. Rev. 60:576-590.

Castle, Emery N. 1964.

Activity analysis in water planning. Ch. 11 in Economics and Public Policy in Water Resource Development (eds. S. C. Smith and E. N. Castle). Iowa State Univ. Press, Ames. 463pp.

Chryst, Walter E. and W. B. Back. 1966.

Perspectives on content and methodology of land economics. In Methods for Land Economics Research (eds. R. J. Hildreth and G. Wunderlich). Univ. of Neb. Press, Lincoln. 242pp.

Ciracy-Wantrup, S. V. 1963.

Resource Conservation: Economics and Policies (2d. rev. ed.). Univ. of Calif. Press, Berkeley. 395pp.

---

. 1964.

Benefit-cost analysis and public resource development Ch. 2 in Economics and Public Policy in Water Resource Development (eds. S. C. Smith and E. N. Castle). Iowa State Univ. Press, Ames. 463pp.

Cotner, Melvin L. 1963.

Optimum timing of long-term resource improvements. Jour. Farm Econ. 45(4):732-748.

---

. 1969.

A policy for public investments in natural resources. Amer. Jour. Agr. Econ. 51(1):87-99.

- Cotner, Melvin L. 1976.  
Land use policy and agriculture: a national perspective. U. S. Dept.  
Agr., Econ. Res. Serv. Rpt. ERS-630. 8pp.
- Eckstein, Otto. 1957.  
Evaluation of federal expenditures for water resource projects. 85th  
Cong., 1st Sess., Joint Econ. Com. Print. Policy for Commercial  
Agriculture: its relation to economic growth and stability. pp.657-667.
- Gibson, James A. and John F. Timmons. 1976.  
Information needs and models for land use planning. Amer. Jour. Agr.  
Econ. 58(5):903-908.
- Hagan, R. M., H. R. Haise and T. W. Edminster (eds.). 1967.  
Irrigation of Agricultural Lands. Monograph No. 11 in Agronomy Series.  
Amer. Soc. Agron., Madison, Wisc. 1189pp.
- Haveman, R. H. and John V. Krutilla. 1968.  
Unemployment, Idle Capacity, and the Evaluation of Public Expenditures.  
Johns Hopkins Press, for Resources for the Future, Inc. 159pp.
- Held, R, Burnell and Marion Clawson. 1965.  
Soil Conservation in Perspective. Johns Hopkins Press, for Resources for  
the Future, Inc. 344pp.
- Huffman, Roy E. 1953.  
Irrigation Development and Pubic Water Policy. Ronald Press. 336pp.
- Kalter, Robert J. and others. 1969.  
Criteria for federal evaluation of resource investments. Water Resources  
and Marine Sciences Center, Cornell Univ., Ithaca, N.Y. 11pp.
- Kelso, M. M. 1964.  
Economic analysis in the allocation of the federal budget to resource  
development. Ch. 5 in Economics and Public Policy in Water Resource  
Development (eds. S. C. Smith and E. N. Castle). Iowa State Univ. Press,  
Ames. 463pp.
- Knetsch, Jack and others. 1969.  
Federal natural resources development: basic issues in benefit and cost  
measurement. Nat. Resources Policy Ctr., George Washington Univ., Wash.,  
D. C. 12pp.
- Luthin, James M. (ed.). 1957.  
Drainage of Agricultural Land. Monograph No. 7 in Agronomy Series. Amer.  
Soc. of Agronomy, Madison, Wisc. 620pp.
- Pavelis, George A. 1965.  
Irrigation policy and long-term growth functions. Agr. Econ. Res.  
17(2):50-60.

- Raup, Philip M. 1963.  
Contributed introduction to the public lands: studies in the history of the public domain (ed. Vernon Carstensen). Also see appendix on original land entries 1800-1834 in pp.481ff. Univ. of Wisc. Press, Madison. 522pp.
- Reynolds, John E., J. Martin Redfern and Robert N. Shulstad, eds. 1974.  
Readings in Natural Resource Economics. MSS Inform. Corp., New York. 199pp.
- Steele, Harry A. and George A. Pavelis. 1967.  
Economics of irrigation policy and planning. Ch. 11 in Irrigation of Agricultural Lands (eds. R. M. Hagan, H. R. Haise, and T. W. Edminster). Monograph No. 11 in Agronomy Series. Amer. Soc. Agron., Madison, Wisc. 1189pp.
- Wharton, Clifton R., Jr. 1967.  
The infrastructure for agricultural growth. Ch. 4 in Agricultural Development and Economic Growth (eds. Herman M. Southworth and Bruce F. Johnson). Cornell Univ. Press, Ithaca, N.Y. 608pp.
- Washington State University (publisher). 1976.  
Land use: issues and research needs for planning, policy and allocation. Cooperative Task Force Report. 96pp.
- White, Gilbert F. 1969.  
Strategies of American Water Management. Univ. of Michigan Press, Ann Arbor. 155pp.
- Wilcox, Walter W. 1938.  
Economic aspects of soil conservation. Jour. Pol. Economy XLVI(5):702-713.
- Wooten, H. H. and Margaret R. Purcell. 1949.  
Farm land development: present and future by clearing, drainage and irrigation. U. S. Dept. Agr. Circ. 825. 86pp.

#### Selected Survey Studies of Natural Resource Investments in Agriculture

- Ball, A. Gordon, E. O. Heady and R. V. Baumann. 1957.  
Economic evaluation of use of soil conservation and improvement practices in Western Iowa. U. S. Dept. Agr. Tech. Bul. 1162. 91pp.
- Callison, Charles H. (ed). 1967.  
America's Natural Resources. The Ronald Press, for the National Audubon Society. 220pp.
- Christensen, Thormod and Arthur J. Matson. 1969.  
Impact of irrigation development on income and trade: eastern and central South Dakota. So. Dak. Agr. Expt. Sta. Bul. 550. 51pp.
- Coddington, Dean C., H. L. Davis, and J. G. Milliken. 1972.  
The federal reclamation program: its impacts, issues and future considerations. Bickert, Browne, Coddington & Associates, Denver, Colo. 100pp.



- Cook, R. L. 1962.  
Soil Management for Conservation and Production. John Wiley and Sons. 527pp.
- Cotner, Melvin L. 1964.  
The impact of the agricultural conservation program in selected farm policy problem areas. Mich. State Univ., Dept. Agr. Econ. Mimeo. 943. 23pp.
- Dasmann, Raymond F. 1972.  
Environmental Conservation. John Wiley and Sons. 544pp.
- Davis, Elizabeth Gould and others. 1958.  
The economics of irrigation in the eastern United States: a list of annotated references. U. S. Dept. Agr. Library List 66. 68pp.
- Development and Resources Corporation. 1976.  
A perspective on flood protection of agricultural lands. IWR Contract Rpt. 76-3. 75pp.
- Donnan, William W. and Clyde E. Huston. 1967.  
Drainage related to irrigation management. Ch. 50 in Irrigation of Agricultural Lands (eds. Hagan, R. M., H. R. Haise and T. W. Edminster). Monograph No. 11 in Agronomy Series. Amer. Soc. Agron., Madison, Wisc. 1189pp.
- Eddleman, B. R. and James C. Cato. 1976.  
Variations in natural resource investments and income growth among areas of the southeast. Fla. Agr. Expt. Sta. Bul. 781. 57pp.
- Eidman, Vernon R. 1967.  
An annotated bibliography of publications related to Great Plains irrigation. Prepared for the Great Plains Technical Research Committee. Okla. Agr. Expt. Sta., Agr. Econ. Mimeo. No. 6712. 59pp.
- Ekholm, Arthur L. and others. 1976.  
Adjustments due to a declining groundwater supply. High Plains of Oklahoma and Texas. Okla. Agr. Expt. Sta. Tech. Bul. T-142. 90pp.
- Grubb, Herbert W. 1966.  
Importance of irrigation water to the economy of the Texas High Plains. Rpt. No. 11, Texas Water Development Board. Prepared by Texas Technological College. 25pp.+ appendices.
- Golze', Alfred R. 1961.  
Reclamation in the United States. McGraw-Hill. 486pp.
- Gulhati, N. D. and William Charles Smith. 1967.  
Irrigated agriculture: an historical review. Ch. 1 in Irrigation of Agricultural Lands (eds. Hagan, R. M., H. R. Haise and T. W. Edminster). Monograph No. 11 in Agronomy Series. Amer. Soc. Agron., Madison, Wisc. 1189pp.

- Harrison, Robert W. 1961.  
Alluvial empire (Vol. I): a study of State and local efforts toward land development in the Alluvial Valley of the Lower Mississippi River; including flood control, land drainage, land clearing and land farming. Pioneer Press, Little Rock, Ark. 344pp.
- Haystead, Ladd and Gilbert C. Fite. 1955.  
The Agricultural Regions of the United States. Univ. Okla. Press, Norman. 288pp.
- Heady, Earl O. and Carl W. Allen. 1951.  
Returns from and capital required for soil conservation farming systems. Iowa Agr. Expt. Sta. Res. Bul. 381. pp.315-361 in 1951 bul. volume.
- Holloway, Milton L. 1972.  
A production function analysis of water resource productivity in Pacific Northwest agriculture. Unpublished Ph.D. dissertation, Oregon State Univ. (Library), Corvallis. 205pp.
- Howe, Charles W. 1968.  
Water resources and regional economic growth in the United States, 1950-1960. Southern Econ. Jour. 34(4):477-489.
- Johnson, Rich. 1977.  
The Central Arizona project, 1918-1968. Univ. of Ariz. Press, Tucson. 242pp.
- Kohnke, Helmut and Anson R. Bertrand. 1959.  
Soil Conservation. McGraw-Hill, Series in Agricultural Sciences. 298pp.
- Lacewell, Ronald D. 1966.  
Optimum temporal allocation of exhaustible irrigation water supply: southern hardlands, Texas High Plains. Unpublished M. S. thesis, Texas Technological College (Library). 171pp.
- Lamphear, F. Charles and Theodore W. Roesler. 1974.  
Impact analysis of irrigated agriculture on Nebraska's economy, 1967-1970. Bur. Bus. Res., Univ. of Neb., Econ. and Bus. Rpt. 8. 87pp.
- Landsberg, Hans H., L. L. Fischman, and J. L. Fisher. 1963.  
Resources in America's future: patterns of requirements and availabilities, 1960-2000. Johns Hopkins Press, for Resources for the Future, Inc. 1017pp.
- McKusick, R. and J. Herbert Snyder. 1972.  
A regional approach to project evaluation. Am. Water Resources Assn., Water Resources Bul. 8(3):431-445.
- Micheel, Charles C. and Charles W. Nauheim. 1961.  
Economics of soil conservation, northeastern Kansas. Kans. Agr. Expt. Sta. Agr. Econ. Rpt. 101. 69pp.



- Osborn, James E., Milton Holloway and Neal Walker. 1970.  
Importance of irrigated agriculture to the Texas High Plains. Rpt. prepared for the Economic Research Service, U. S. Dept. Agr. by Texas Technological Univ., Lubbock, 66pp.
- Parks, W. Robert. 1952.  
Soil Conservation Districts in Action. Iowa State Univ. Press, Ames. 242pp.
- Pavelis, George A. 1978.  
Natural resource capital stocks: measurement and significance for United States agriculture. Presented, 144th Ann. Mtng. Amer. Assn. Adv. Science, 12-17 Feb. Unnumb. rpt., Economics, Statistics and Cooperatives Service, U. S. Dept. Agr., Wash., D.C. 27pp.
- Picton, Walter L. 1959.  
Water resource developments: capital investment values, 1900-1975. U. S. Dept. Commerce, Bus. and Defense Serv. Adm. Rpt. Government Printing Office, Wash., D.C. 12pp.
- Ruttan, Vernon. 1965.  
The Economic Demand for Irrigated Acreage. Johns Hopkins Press, for Resources for the Future, Inc. 139pp.
- Taylor, Gary C. 1967.  
Economic planning of water supply systems. Calif. Agr. Expt. Sta. Giannini Foundation Res. Rpt. 291. 91pp.
- Thames, John L. (ed.). 1977.  
Reclamation and use of disturbed land in the southwest. Univ. of Ariz. Press, Tucson. 362pp.
- Tostlebe, Alvin S. 1954.  
The growth of physical capital in agriculture, 1870-1950. Natl. Bu. Econ. Res., Occas. Paper 44, New York. 92pp.
- Tontz, Robert L. 1958.  
Future of irrigation in the humid area. Jour. Farm Econ. 49(3):636-652.
- Wollman, Nathaniel and Gilbert W. Bonem. 1971.  
The Outlook for Water: Quality, Quantity and National Growth. Johns Hopkins Press, for Resources for the Future, Inc. 286pp.
- Wooten, Hugh H. and Lewis A. Jones. 1955.  
The history of our drainage enterprises. In Water. U. S. Dept. Agr. 1955 Yearbook. pp.478-491.

#### Irrigation Equipment and Capital Stocks: Selected Survey and Research Reports

- Anderson, Dale O., N. R. Cook and D. D. Badger. 1965.  
Irrigated crops on bottomland soils of Western Oklahoma: costs and returns. Okal. Agr. Expt. Sta. Proc. Ser. P-521. 23pp.

- Anderson, Raymond L. and L. M. Hartman. 1965.  
Introduction of supplemental irrigation water: agricultural responses to an increased water supply in northeastern Colorado. Colo. Agr. Expt. Sta. Tech. Bul. 76. 33pp.
- Barr, W. L. and D. Woods Thomas. 1953.  
Irrigation on Pennsylvania farms. Pa. Agr. Expt. Sta. Bul. 562. 30pp.
- Becker, M. H. 1953.  
Sprinkler irrigation: costs and practices, Willamette Valley, Oregon. Ore. Agr. Expt. Sta. Bul. 532. 24pp.
- Bishop, A. Alvin, Marvin E. Jensen, and Warren A. Hall. 1967.  
Surface irrigation systems. Ch. 43 in Irrigation of Agricultural Lands (eds. R. M. Hagan, H. R. Haise and T. W. Edminster). Monograph No. 11 in Agronomy Series. Soc. Agron., Madison, Wisc. 1189pp.
- Booker, L. J. 1974.  
Surface irrigation. Food and Agr. Organ. of the United Nations, Dvmt. Pap. 95. Rome. 160pp.
- Brantwood Publications, Inc. (publisher). 1977.  
The 1977 irrigation survey (annual). Irrig. Jour. 27(6):19-26. For 1976 survey see Irrig. Jour. 26(6):23-30. Comparable State-by-State annual surveys in the Irrig. Jour. since 1971, in World Irrigation from 1968-70, and in Irrigation Engineering and Maintenance from 1955-67.
- Christensen, Jerauld E. 1942.  
Irrigation by sprinkling. Calif. Agr. Expt. Sta. Bul. 670. 124pp.
- Christiansen, Jerauld E., and John R. Davis. 1967.  
Sprinkler irrigation systems. Ch. 44 in Irrigation of Agricultural Lands (eds. Robert M. Hagan, Howard R. Haise, and Talcott W. Edminster). Amer. Soc. Agron., Madison, Wisc. 1109pp.
- Code, W. E. and A. J. Hamman. 1949.  
When to use sprinkler irrigation in Colorado. Colo. Agr. Expt. Sta. Bul. 405-A. 19pp.
- Cothorn, James, S. W. Howard, and L. Luft. 1969.  
Cost of owning and operating five different types of sprinkler systems. Mont. Agr. Ext. Serv. Bul. 1063. 37pp.
- Criddle, Wayne D. and others. 1956.  
Methods for evaluating irrigation systems. U. S. Dept. Agr. Handbook 82. 24pp.
- Criddle, Wayne D. and Cornelis Kalisvaart. 1967.  
Sub-irrigation systems. Ch. 45 in Irrigation of Agricultural Lands. (eds. Robert M. Hagan, Howard R. Haise, and Talcott W. Edminster). Amer. Soc. Agron., Madison, Wisc. 1109pp.

- Crosswhite, William M. 1968.  
Use of water for supplemental irrigation in Delaware. Del. Agr. Expt. Sta. Bul. 375. 24pp.
- Davis, E. H. 1948.  
Irrigate for more profits. Ga. Agr. Expt. Sta. Bul. 542. 42pp.
- Gertel, Karl and others. 1956.  
Adjusting to irrigation in the Loup River area in central Nebraska. Neb. Agr. Expt. Sta. Bul. 434. 70pp.
- Gray Alfred S. 1970.  
Defining solid set, permanent sprinkler systems effectively. World Irrig. 19(3):19.
- Gustafson, C. D. 1977.  
Drip irrigation, 1976. Survey in Irrig. Jour. 27(3):37. Also see Irrig. Jour. 26(3) for earlier survey data on drip irrigation.
- Hoglund, C. R. and others. 1956.  
The economics of irrigating in Michigan. Mich. Agr. Expt. Sta. Quart. Bul. 39(2):208-229.
- Hughes, William F. 1964.  
Labor requirements and costs for sprinkler irrigation, Texas High Plains. Tex. Agr. Expt. Sta. Bul. MP-750. 16pp.
- \_\_\_\_\_. 1971.  
Irrigation costs: center-pivot vs. portable sprinkler irrigation systems. Tex. Agr. Expt. Sta. Cir. 71-1. 26pp.
- Hughes, William F. and A. C. Magee. 1956.  
Changes in investment and irrigation water costs: Texas High Plains, 1950-54. Tex. Agr. Expt. Sta. Bul. 828. 8pp.
- \_\_\_\_\_. 1964.  
Economics of low-capacity irrigation wells. Tex. Agr. Expt. Sta. Bul. MP-710. 16pp.
- Jensen, Max C. and Roland C. Bevan. 1952.  
Costs of sprinkler irrigation on Idaho farms. Idaho Agr. Expt. Sta. Bul. 287. 15pp.
- Jones, Ted L. and Frank Miller. 1960.  
Nature and extent of irrigation in Missouri. Mo. Agr. Expt. Sta. Res. Bul. 735. 44pp.
- Lacewell, Ronald D. and William F. Hughes. 1971.  
A comparison of capital requirements and labor use for alternative sprinkler irrigation systems: Texas High Plains. Tex. Agr. Expt. Sta., Dept. Agr. Econ. and Rurl Sociol. Inform. Rpt. 71-3. 15pp.



- Langley, M. N. 1969.  
Trends to sprinkler irrigation. Sprinkler Irrig. Assoc., Proc. Ann. Tech. Conf. 10pp.
- Long, Roger B. and Philip M. Raup. 1965.  
Economics of supplemental irrigation in central Minnesota. Minn. Agr. Expt. Sta. Bul. 475. 32pp.
- Luft, Leroy D. 1969.  
Cost of owning and operating five different types of sprinkler systems. Mont. Agr. Ext. Serv. Bul. 1063. pp.25ff.
- Mallory, Rich. 1977.  
Center pivots in California: slow acceptance in largest agricultural state may be ending. Irrig. Jour. 27(1):46-49.
- McMartin, Wallace. 1968.  
Economic trends and future markets for sprinkler irrigation equipment. Sprinkler Irrig. Assoc., 1968 Ann. Tech. Conf. Proc. pp.89-108.
- McMartin, Wallace and Ronald O. Bergan. 1968.  
Irrigation practices and costs in North Dakota. No. Dak. Agr. Expt. Sta. Bul. 474. 48pp.
- Miller Stanley F., L. L. Boersma, and E. N. Castle. 1965.  
Irrigation water values in the Willamette Valley: a study of alternative valuation methods. Ore. Agr. Expt. Sta. Tech. Bul. 85. 34pp.
- Monson, O. W. 1952.  
Sprinkler irrigation in Montana. Mont. Agr. Expt. Sta. Bul. 483. 40pp.
- Moore, Charles V. 1964.  
Guides to selecting an economical surface irrigation distribution system. Calif. Agr. Expt. Serv. Pub. AXT-161. 13pp.
- Moore, C. V. and J. H. Snyder. 1965.  
Pump irrigation cost increases in the Salinas Valley. Calif. Agr. 19(8):14-15.
- Nelson, Aaron G. and Charles D. Busch. 1967.  
Cost of pumping irrigation water in central Arizona. Ariz. Agr. Expt. Sta. Tech. Bul. 182. 44pp.
- Otto, M. L. and W. H. Pine. 1956.  
Sprinkler irrigation: its costs and returns. Kans. Agr. Expt. Sta. Bul. 381.
- Pavelis, George A., H. P. Johnson and J. F. Timmons. 1957.  
Economic design and operation of sprinkler irrigation systems. Iowa Agr. Expt. Sta. Prelim. Rpt. 34pp.

- Pillsbury, Arthur F. and Ariosto Degan. 1968.  
Sprinkler irrigation. Food and Agr. Organ. of the United Nations, Dvmt. Pap. 88. Rome. 179pp.
- Quackenbush, J. H. and Shockley, D. G. 1955.  
The use of sprinklers for irrigation. In Water. U. S. Dept. Agr. Yearbook. pp.267-273.
- Redman, John C. and Stephen Q. Allen. 1956.  
Economic allocation of resources to supplemental irrigation. Ky. Agr. Expt. Sta. Bul. 649. 22pp.
- Reed, A. D. and others. 1976.  
Irrigation Costs. Calif. Agr. Ext. Serv. Leaflet 2875. 9pp.
- Reuss, L. A. and D. S. Harrison. 1969.  
Inputs and costs of selected sprinkler irrigation systems for citrus in central Florida. Fla. Agr. Expt. Sta. Econ. Mimeo. Rpt. EC 69-8. 53pp.
- Rohdy, D. D. and others. 1970.  
Pump irrigation on the Colorado High Plains. Colo. Agr. Expt. Sta. Bul. 543S. 41pp.
- Sheffield, Leslie F. 1977.  
The economics of irrigation: Nebraska corn crop reflects irrigation's dollar value. Irrigation Jour. 27(1):18-21, 33-34.
- Smith, Wesley G. and others. 1960.  
Irrigation in Delaware. Del. Agr. Expt. Sta. Bul. 335. 28pp.
- Splinter, William E. 1976.  
Center-pivot irrigation. Sci. Amer. 234(6):90-99.
- Sprinkler Irrigation Association (publisher). 1969.  
Sprinkler Irrigation Handbook. Wash., D.C. 444pp.
- Stippler, Henry H. 1956.  
Sprinkler irrigation in the Pacific Northwest. U. S. Dept. Agr. Inform. Bul. 166. 265pp.
- Swanson, Earl R. 1971.  
Economic analysis of water use in Illinois agriculture. Univ. of Ill., Water Resources Ctr. Res. Rpt. 38. 59pp.
- Thomas, D. Woods and G. R. Slater. 1958.  
Irrigation--costs and returns: southwestern Indiana, 1955. Ind. Agr. Expt. Sta. Res. Bul. 668. 16pp.
- Thorfinnson, T. S., N. P. Swanson, and A. W. Epp. 1960.  
Cost of distributing irrigation water by the sprinkler method. Neb. Agr. Expt. Sta. Bul. 455. 34pp.



U. S. Department of the Interior, Bureau of Reclamation. 1949.  
Sprinkler irrigation. 6lpp.

Webb Company (publisher). 1972.

Sprinkligation: the men and their machines. Irrig. Age 6(6):11-24.

U. S. Department of Agriculture: Internal or Staff-authored External  
Publications on Natural Resource Capital and Allied Topics

Anderson, Dale O., Neil R. Cook and D. D. Badger. 1965.

Irrigated crops on bottomland soils of Western Oklahoma: costs and returns.  
Okla. Agr. Expt. Sta. Proc. Ser. P-521. 23pp.

Anderson, Raymond L. 1963.

Irrigation enterprises in northeastern Colorado: organization, water  
supply, costs. U. S. Dept. Agr., Econ. Res. Serv. Rpt. ERS-117. 18pp.

Anderson, Raymond L. and L. M. Hartman. 1965.

Introduction of supplemental irrigation water: agricultural response to an  
increased water supply in Northeastern Colorado. Colo. Agr. Expt. Sta.  
Tech. Bul. 76. 33pp.

Anderson, Raymond L. and Arthur Maass. 1971.

A simulation of irrigation systems: the effect of water supply and  
operating rules on production and income on irrigated farms. U. S. Dept.  
Agr. Tech. Bul. 1431. 57pp.

Bailey Mary L. 1977.

Farm real estate taxes, 1976. U. S. Dept. Agr., Econ. Res. Serv., Nat.  
Econ. Anal. Div. RET-17. 23pp.

Ball, A. Gordon, E. O. Heady and R. B. Baumann. 1957.

Economic evaluation of use of soil conservation and improvement practices  
in Western Iowa. U. S. Dept. Agr. Tech. Bul. 1162. 91pp.

Bamesberger, John G. 1954.

Land leveling for irrigation. U. S. Dept. Agr. Leaflet 371. 8pp.

Boxley, Robert F. and William D. Anderson. 1973.

An evaluation of subsidy farms for soil and water conservation. In The  
Economics of Federal Subsidy Programs (Pt.7). U. S. Cong., 1st. Sess.,  
Joint Economic Committee Print. pp.953-976.

Burke, Frances A. and Donna Hazelwood. 1976.

Agricultural finance statistics. U. S. Dept. Agr., Econ. Res. Serv.,  
Natl. Econ. Anal. Div. AFS-3. 44pp.

Burns, James A. 1967.

Measuring the effect of irrigation on rate of technological change. U. S.  
Dept. Agr., Econ. Rpt. 125. 23pp.

- Carlin, Thomas A. and Charles R. Handy. 1974.  
Concepts of the agricultural economy and economic accounting. Amer. Jour. Agr. Econ. 56(5):964-975.
- Chryst, Walter E. and W. B. Back. 1966.  
Perspectives on content and methodology of land economics. In Methods for Land Economics Research (eds. R. J. Hildreth and G. Wunderlich), Univ. of Neb. Press, Lincoln. 242pp.
- Clifont, Ivery D. and William D. Crowley, Jr. 1973.  
Farm real estate historical series data, 1850-1970. U. S. Dept. Agr., Econ. Res. Serv. ERS-520. 50pp.
- Criddle, Wayne D. and others. 1956.  
Methods for evaluating irrigation systems. U. S. Dept. Agr. Handb. 82. 24pp.
- Cotner, Melvin L. 1963.  
Optimum timing of long-term resource improvements. Jour. Farm Econ. 45(4):732-748.
- \_\_\_\_\_. 1969.  
A policy for public investments in natural resources. Amer. Jour. Agr. Econ. 51(1):87-99.
- \_\_\_\_\_. 1976.  
Land use policy and agriculture: a national perspective. U. S. Dept. Agr., Econ. Res. Serv. Rpt. ERS-630. 8pp.
- Dale, Tom. 1950.  
For insurance against drought: soil and water conservation. U. S. Dept. Agr. Farmers' Bul. 2002. 22pp.
- Evans, Carson D. and others. 1975.  
Balance sheet of the farming sector, 1975. U. S. Dept. Agr. Inform. Bul. 389. 33pp.
- Frey, H. Thomas, O. K. Krause and C. Dickason. 1968.  
Major uses of land and water in the United States: summary for 1964. U. S. Dept. Agr. Econ. Rpt. 149. 74pp.
- Frey, H. Thomas and Robert C. Otte. 1975.  
Cropland for today and tomorrow. U. S. Dept. Agr. Econ. Rpt. 291. 17pp.
- Gavett, Earl E. 1973.  
Agriculture and the energy crisis. Speech at Natl. Conf. on Agr. and the Energy Crisis, Univ. of Neb., Lincoln, Apr. 10-11, 1973. 20pp.
- Gertel, Karl. 1976.  
Anticipated effects of the Bureau of Reclamation program on agricultural production and prices. U. S. Dept. Agr., Econ. Res. Serv., Nat. Res. Econ. Div. Working Pap. 12. 23pp.

- Gertel, Karl and others. 1956.  
Adjusting to irrigation in the Loup River area in central Nebraska.  
Nebr. Agr. Expt. Sta. Bul. 434. 70pp.
- Hale, R. F. 1962.  
Prices paid by farmers for commodities and services, specified months,  
United States, 1910-60. U. S. Dept. Agr. Sta. Bul. 319. 144pp.
- Hamilton, C. L. 1943.  
Terracing for soil and water conservation. U. S. Dept. Agr. Farmers'  
Bul. 1789. 60pp.
- Heisig, Carl P. 1957.  
Long-term adjustments in composition of farm production and in production  
inputs. 85th Cong., 1st Sess., Joint Econ. Com. Print. Policy for  
Commercial Agriculture: Its Relation to Economic Growth and Stability.  
pp.157-167.
- Hogg, H. C. and others. 1976.  
Selected methods of financial analysis for agriculture investment.  
Hawaii Agr. Expt. Sta., Departmental Paper 34. 8pp.
- Hogg, Howard C. and Gary R. Vieth. 1977.  
Method for evaluating irrigation projects. Amer. Soc. Civ. Eng., Jour.  
Irrig. and Drainage Div., Proc. Pap. 12818 103(IRI): 43-52.
- Hughes, William F. 1964.  
Labor requirements and costs for sprinkler irrigation, Texas High Plains.  
Tex. Agr. Expt. Sta. Bul. MP-750. 16pp.
- Hughes, William F. 1971.  
Irrigation costs: center-pivot vs. portable sprinkler irrigation systems.  
Tex. Agr. Expt. Sta. Cir. 71-1. 26pp.
- Hughes, William F. and A. C. Magee. 1956.  
Changes in investment and irrigation water costs: Texas High Plains,  
1950-54. Tex. Agr. Expt. Sta. Bul. 828. 8pp.
- \_\_\_\_\_. 1964.  
Economics of low-capacity irrigation wells. Tex. Agr. Expt. Sta. Bul.  
MP-710. 16pp.
- Holloway, Milton L. 1972.  
A production function analysis of water resource productivity in Pacific  
Northwest agriculture. Unpublished Ph.D. dissertation, Oregon State  
Univ. (Library), Corvallis. 205pp.
- Howe, Eric C. and Charles R. Handy. 1975.  
Inventory and critique of productivity estimates in the U. S. food and  
fiber sector. Amer. Jour. Agr. Econ. 57(5):916-921.



- Hutchins, Wells A. 1931.  
Irrigation districts: their organization, operation and financing.  
U.S. Dept. Agr. Tech. Bul. 254. 56pp.
- Hutchins, Wells A., H. E. Selby and S. W. Voelker. 1953.  
Irrigation enterprise organizations. U. S. Dept. Agr. Circ. 934. 107pp.
- Jones, Lewis A. 1952.  
Farm drainage. U. S. Dept. Agr. Farmers' Bul. 2046. 37pp.
- Kasal, James and W. B. Back. 1970.  
An economic evaluation of the Great Plains conservation program. U. S. Dept. Agr., Econ. Res. Serv. Rpt. ERS-440. 41pp.
- Maass, Arthur and Raymond L. Anderson. 1978.  
...And the Desert Shall Rejoice: Conflit, Growth and Justice in an Arid Environment. Massachusetts Institute of Technology Press, Cambridge. 488pp.
- Lacewell, Ronald D. and William F. Hughes. 1971.  
A comparison of capital requirements and labor use for alternative sprinkler irrigation systems: Texas High Plains. Tex. Agr. Expt. Sta., Dept. Agr. Econ. and Rural Sociol. Inform. Rpt. 71-3. 15pp.
- Lea, Dallas M. and C. Dudley Mattson. 1974.  
Evolution of the small watershed program: changes in Public Law 566 watershed protection and flood prevention program, 1954-72. U. S. Dept. Agr., Econ. Rpt. 262. 58pp.
- Loomis, R. A. and Glen T. Barton. 1961.  
Productivity of agriculture, United States, 1870-1958. U. S. Dept. Agr. Tech. Bul. 1238.
- Lu Yao-Chi. 1974.  
A production function approach to measuring productivity growth. Contributed paper, 1972 Ann. Mtng. of Amer. Agr. Econ. Assoc., College Station, Tex. Abstracted in Amer. Jour. Ag. Econ. 56(5):1206.
- \_\_\_\_\_. 1975  
Measuring productivity change in U. S. agriculture. Southern Jour. Agr. Econ. 7(2):69-75.
- \_\_\_\_\_. 1978.  
Projections of agricultural productivity under alternative rates of increase in research and extension investment. Presented, 144th Ann. Mtng., Amer. Assoc. Adv. Sci., 12-17 Feb. 26pp. (Summary in Abstracts of Papers, 144th Mtng., AAAS. Washington, D.C.
- Madden, J. Patrick. 1967.  
Economies of size in farming: theory, analytical procedures, and a review of selected studies. U. S. Dept. Agr. Econ. Rpt. 107. 83pp.



- McMartin, Wallace. 1968.  
Economic trends and future markets for sprinkler irrigation equipment.  
Sprinkler Irrig. Assoc., 1968 Ann. Tech. Conf. Proc. pp.89-108.
- McMartin, Wallace and Ronald O. Bergan. 1968.  
Irrigation practices and costs in North Dakota. No. Dak. Agr. Expt. Sta.  
Bul. 474. 48pp.
- Micheel, Charles C. and Charles W. Manheim. 1961.  
Economics of soil conservation, northeastern Kansas. Kans. Agr. Expt. Sta.  
Agr. Econ. Rpt. 101. 69pp.
- Miller, Stanley F., L. L. Boersma, and E. N. Castle. 1965.  
Irrigation water values in the Willamette Valley: a study of alternative  
valuation methods. Oreg. Agr. Expt. Sta. Tech. Bul. 85. 34pp.
- Moore, Charles V. 1961.  
A general analytical framework for estimating the production function  
for crops using irrigation water. Jour. Farm Econ. 43(4-1):876-888.
- \_\_\_\_\_. 1963.  
A method of selecting least-cost irrigation water distribution systems.  
Jour. Farm Econ. 45(5):1238-1242.
- \_\_\_\_\_. 1964.  
Guides to selecting an economical surface irrigation distribution system.  
Calif. Agr. Ext. Serv. Pub. AXT-161. 13pp.
- Moore, C. V. and J. H. Snyder. 1965.  
Pump irrigation: cost increases in the Salinas Valley. Calif. Agr.  
19(8):14-15.
- Myers, Mardy. 1969.  
Major statistical series of the U. S. Department of Agriculture--how they  
are constructed and used. Vol. 3, gross and net farm income. U. S. Dept.  
Agr. Handb. 365. 17pp.
- Nielson, James. 1978  
Issues and priorities in public funding of agricultural research and ex-  
tension education. Presented, 144th Ann. Mtng. Amer. Assoc. Adv. Sci.,  
Wash., D.C., 12-17 Feb. 14pp.
- Osborn, James E., Milton Holloway and Neal Walker. 1970.  
Importance of irrigated agriculture to the Texas High Plains. Rpt. pre-  
pared for the Economic Research Service, U. S. Dept. Agr. by Texas  
Technological University, Lubbock. 66pp.
- Otte, Robert C. 1971.  
Energy demands versus rural resources. Unpublished manuscript, Econ. Res.  
Serv., U. S. Dept. Agr., Wash., D.C. 9pp. typescript.

- Overboe, Orville F. 1968.  
Irrigation and agricultural water management in world agriculture. World Irrig. 18(5):11-13.
- Pavelis, George A. 1965.  
Irrigation policy and long-term growth functions. Agr. Econ. Res. 17(2):50-60.
- \_\_\_\_\_. 1969.  
Irrigation trends and growth functions for the United States. U. S. Dept. Agr., Econ. Res. Serv. Unnumb. Rpt. 50pp.
- \_\_\_\_\_. 1972  
Planning natural resource development: an introductory guide. U. S. Dept. Agr., Handb. 431. 30pp.
- \_\_\_\_\_. 1973.  
Energy, natural resources, and research in agriculture: effects on economic growth and productivity for the United States. U. S. Dept. Agr., Econ. Res. Serv. Unnumb. Rpt. 41pp.
- \_\_\_\_\_. 1978.  
Natural resource capital stocks: measurement and significance for United States agriculture. Presented, 144th Ann. Mtng. Amer. Assoc. Adv. Sci., 12-17 Feb. Unnumb. rpt., Economics, Statistics, and Cooperatives Service, U. S. Dept. Agr., Wash., D.C. 27pp.
- Rasmussen, Wayne D. 1976.  
The past 200 years of American farming. U. S. Dept. Agr., Agr. Outlook AO-12:16, 18.
- Rasmussen, Wayne D., Gladys L. Baker and James S. Ward. 1976.  
A short history of agricultural adjustment, 1933-75. U. S. Dept. Agr. Inform. Bul. 391. 21pp.
- Reuss, L. A. and D. S. Harrison. 1969.  
Inputs and costs of selected sprinkler irrigation systems for citrus in central Florida. Fla. Agr. Expt. Sta. Econ. Mimeo. Rpt. EC 69-8. 53pp.
- Rohdy, D. D. and others. 1970.  
Pump irrigation on the Colorado High Plains. Colo. Agr. Expt. Sta. Bul. 543S. 41pp.
- Rowe, Gene and Leslie W. Smith. 1976.  
The hired farm working force of 1975. U. S. Dept. Agr. Econ. Rpt. 355. 30pp.
- Simunek, Richard W. 1976.  
National farm capital accounts. Amer. Jour. Agr. Econ. 58(3):532-542.
- Smith, Allen G. 1972.  
Is there disinvestment in the farming sector? Amer. Jour. Agr. Econ. 54(2):275-278.

- Spielmann, Heinz and Eldon E. Weeks. 1975.  
Inventory and critique of estimates of U. S. agricultural capacity. Amer. Jour. Agr. Econ. 57(5):922-928.
- Steele, Harry A. and George A. Pavelis. 1967.  
Economics of irrigation policy and planning. Ch. 11 in Irrigation of Agricultural Lands (eds. R. M. Hagan, H. R. Haise and T. W. Edminster). Monograph No. 11 in Agronomy Series. Amer. Soc. Agron., Madison, Wisc. 1189pp.
- Stippler, Henry H. 1956.  
Sprinkler irrigation in the Pacific Northwest. U. S. Dept. Agr. Inform. Bul. 166. 265pp.
- Taylor, Gary C. 1967.  
Economic planning of water supply systems. Calif. Agr. Expt. Sta., Giannini Foundation Res. Rpt. 291. 91pp.
- Thorfinnson, T. S., N. P. Swanson and A. W. Epp. 1960.  
Cost of distributing irrigation water by the sprinkler method. Nebr. Agr. Expt. Sta. Bul. 455. 34pp.
- Tontz, Robert L. 1958.  
Future of irrigation in the humid area. Jour. Farm Econ. 40(3):636-652.
- Tostlebe, Alvin S. 1954.  
The growth of physical capital in agriculture, 1870-1950. Natl. Bur. Econ. Res. Occas. Paper 44, New York. 92pp.
- Tower, Harold E. 1953.  
Strip cropping for conservation and production. U. S. Dept. Agr. Farmers Bul. 1981. 46pp.
- Towne, Marvin W. and Wayne D. Rasmussen. 1960.  
Farm gross product and gross investment in the nineteenth century. In Trends in the American Economy in the Nineteenth Century. Studies in Income and Wealth by the Conf. on Res. in Income and Wealth. Vol. 24. Natl. Bur. Econ. Res. pp.255-314.
- U. S. Department of Agriculture. 1974.  
Out land and water resources: current and prospective supplies and uses. Misc. Pub. 1290. 54pp.
- Bureau of Agricultural Economics 1948.  
Irrigation agriculture in the West. U. S. Dept. Agr. Misc. Pub. 670. 39pp.
- Committee on Land Use. 1975.  
Perspectives on prime lands: background papers for seminar on retention of prime lands, July 16-17, 1975. 257pp.



Conservation Needs Inventory Committee. 1965.

Soil and water conservation needs: a national inventory. U. S. Dept. Agr. Misc. Pub. 971. 94pp.

Economic Research Service. 1974.

Our land and water resources: current and prospective supplies and uses. U. S. Dept. Agr. Misc. Pub. 1290. 54pp.

\_\_\_\_\_. 1974.

Statistics on cotton and related data, 1920-73. U. S. Dept. Agr. Stat. Bul. 535. 264pp.

\_\_\_\_\_. 1975.

Balance sheet of the farming sector, 1975 (annual). U. S. Dept Agr. Inform. Bul. 389.

\_\_\_\_\_. 1976.

Changes in farm production and efficiency: a special issue featuring historical series. U. S. Dept. Agr. Stat. Bul. 561. 68pp.

\_\_\_\_\_. 1976.

Farm income statistics (annual). U. S. Dept. Agr. Stat. Bul. 557.

\_\_\_\_\_. 1976.

Inventory of benefits, costs and other data for P.L. 566 watershed work plans (annual). Staff report compiled by Natural Resource Economics Division. ERS for the Soil Conservation Service.

Land and Water Policy Committee. 1962.

Land and water resources: a policy guide. 73pp.

Soil Conservation Service. 1977.

Potential cropland study. Stat. Bul. 578. 104pp.

Statistical Reporting Service. 1975.

Agricultural prices: annual summary, 1974. Pt.1-3(75). 167pp.

\_\_\_\_\_. 1977.

Agricultural Statistics. 613pp. (annual). Earlier issues prepared by USDA Yearbook Statistical Committee. For back historical data on irrigation drainage and conservation subjects see esp. issues for 1952, 1957, 1962, 1967, 1972, 1974 and 1975.

U. S. Department of Agriculture and Great Plains Agricultural Council. 1956.

Program for the Great Plains. U. S. Dept. Agr. Misc. Pub. 709. 11pp.

Weeks, Eldon E. 1972.

The concept and measurement of farm income and general welfare in agriculture. Western Agr. Econ. Assoc. Proc. pp.259-266.

Wooten, Hugh H. and Lewis A. Jones. 1955.

The history of our drainage enterprise. In Water. U. S. Dept. Agr. 1955 Yearb. pp.478-491.

Wooten, Hugh H. and Margaret R. Purcell. 1949.

Farm land development: present and future by clearing, drainage and irrigation. U. S. Dept. Agr. Circ. 825. 86pp.

Zeimetz, Kathryn A. and others. 1976.

Dynamics of land use in fast growth areas. U. S. Dept. Agr. Econ. Rpt. 325. 48pp.

U. S. Department of Commerce: Information and Research Reports

Loftus, Shirley F. 1972.

Stocks of business inventories in the United States, 1928-1971. Surv. of Current Bus. 52(12):29ff.

Musgrave, John C. 1974.

New estimates of fixed nonresidential business capital in the United States. Surv. of Current Bus. 54(3):23-27, 33.

\_\_\_\_\_. 1974.

New estimates of residential capital in the United States, 1925-73. Surv. of Current Bus. 54(10):32-38.

\_\_\_\_\_. 1976.

Fixed nonresidential business and residential capital in the United States, 1925-75. Surv. of Current Bus. 56(4):46-52. Note: Revised data for 1973, 1974, and 1975 are in the Aug. 1976 issue of the Survey, p.64.

Picton, Walter L. 1959.

Water resource developments: capital investment values, 1900-1975. U. S. Dept. Commerce, Bus. and Def. Serv. Adm. Rpt. Government Printing Office, Wash., D.C. 12pp.

Rottenberg, Irving and Gerald Donahoe. 1975.

Improved deflation of producers' durable equipment. Surv. of Current Bus. 55(7):20-23.

Bureau of the Census. 1910.

Thirteenth Census of the U. S. Irrigation, pp.827-876 in Ch. 11, Vol. V of the 13th Census Reports.

\_\_\_\_\_. 1942.

Sixteenth Census of the U. S., 1940. Drainage of agricultural lands: land in drainage enterprises, capital invested and drainage works. 683pp.

\_\_\_\_\_. 1942.

Sixteenth Census of the U. S., 1940. Irrigation of agricultural lands: irrigation enterprises, areas, irrigation works, investment, etc. 689pp.

\_\_\_\_\_. 1943.

Sixteenth Census of the U. S., 1940. Drainage of alluvial lands: a comparison of agriculture within and outside of drainage enterprises in the alluvial lands of the Lower Mississippi Valley. 97pp.

Bureau of the Census. 1952.

Census of Agriculture, 1950. Vol. III, Irrigation of agricultural lands: enterprises, irrigation works, farms and acreage irrigated, investment, etc. 1500pp. (approx.).

U. S. Department of Commerce, Bureau of the Census. 1952.

Census of Agriculture, 1950. Vol. IV, Drainage of agricultural lands. 307pp.

\_\_\_\_\_. 1961.

Census of Agriculture, 1959. Irrigation in humid areas. Pt. 2 of Vol. V, Special Reports. 148pp.

\_\_\_\_\_. 1961.

Census of Agriculture, 1959. Vol. IV, Drainage of agricultural lands. 364pp.

\_\_\_\_\_. 1967.

Census of Agriculture, 1959. Vol. III, Irrigation of agricultural lands. 400pp.

\_\_\_\_\_. 1968.

Census of Agriculture, 1964. Irrigation land improvement practices and use of agricultural chemicals. Ch. 9 in Vol. II, General Report. pp.909-955.

\_\_\_\_\_. 1973.

Census of Agriculture, 1969. Irrigation and drainage on farms. Ch. 9 of General Report (Vol. II). 105pp.

\_\_\_\_\_. 1973.

Census of Agriculture, 1969. Vol. IV, Irrigation. 305pp.

\_\_\_\_\_. 1973.

Census of Agriculture, 1969. Vol. VI, Drainage of agricultural lands. 87pp.

\_\_\_\_\_. 1975.

Historical statistics of the United States, colonial times to 1970. Bicentennial edition. In two parts. 1200pp.

Bureau of Economic Analysis. 1974.

Revised deflators for new construction, 1947-73. Surv. of Current Bus. 54(8):18-27.

\_\_\_\_\_. 1974.

Stocks of business inventories in constant dollars, end of quarter, 1947-74. Surv. of Current Bus. 54(8):50-51.

\_\_\_\_\_. 1976.

The national income and product accounts of the United States: revised estimates, 1929-74. Surv. of Current Bus. 56(1):1-46. (National income issues.)



Bureau of Economic Analysis. 1977.

The national income and product accounts of the United States, 1929-74: statistical tables. Supp. to Surv. of Current Bus. 359pp.

U. S. Department of Commerce, Office of Business Economics. 1971.

Fixed nonresidential business capital in the United States, 1925-70. National Technical Information Service, Document COM-71-01111. 502pp.

Young, Allan H., John C. Musgrave, and Claudia Harkins. 1971.

Residential capital in the United States, 1925-70. Surv. of Current Bus. 51(11):16ff.

U. S. Department of the Interior: Information Reports

Boettcher, Arnold J. 1966.

Ground-water development in the High Plains of Colorado. U. S. Dept. of the Interior, Geol. Surv. Water Suppl. Pap. 1819-I. 21pp.

Bureau of Reclamation. 1949.

Sprinkler irrigation. 61pp.

\_\_\_\_\_. 1954.

The growth and contribution of federal reclamation to an expanding national economy. U. S. House of Representatives, Com. on Interior and Insular Affairs Com. Print 27. 27pp.

\_\_\_\_\_. 1960.

Water resources activities in the United States: future needs for reclamation in the western States. 86th Cong., 2nd Sess., Senate Select Committee on National Water Resources, Comm. Print No. 14. 45pp.

\_\_\_\_\_. 1975.

Construction cost trends (Quarterly). Engineering and Research Center, Denver. 12pp.

\_\_\_\_\_. 1976.

Federal reclamation projects: water and and resource accomplishments (annual). Summary Rpt. 57pp.

\_\_\_\_\_. 1976.

Federal reclamation projects: water and land resource accomplishments (annual). Statis. App. I. 284pp.

Coddington, Dean C. and others. 1972.

The Federal reclamation program: its impacts, issues and future considerations. Bickert, Browne, Coddington and Associates, Inc. for the U. S. Department of the Interior, Bureau of Reclamation, Denver. 100pp.

Shaw, Samuel P. and C. Gordon Fredine. 1956.

Wetlands of the United States: their extent and their value to waterfowl and other wildlife. U. S. Dept. of the Interior, Fish and Wildlife Service Circ. 39. 67pp.

U. S. Government and International: General Reports and Studies

Booher, L. J. 1974.

Surface irrigation. Food and Agr. Organ. of the United Nations, Devlpmt. Pap. 95. Rome. 160pp.

Krause, Kenneth R. 1975. Foreign firms with investments in the U. S. food and fiber system. U. S. Dept. Agr. Econ. Rpt. 302. 104pp.

Lal, Deepak. 1972.

Wells and welfare: an exploratory cost-benefit study of the economics of small-scale irrigation in Maharashtra. Devlpmt. Centre of the Organ. for Co-op. and Devlpmt. 162pp.

National Academy of Sciences. 1961.

Principles of resource conservation policy, with some applications to soil and water resources. Rpt. of the Committee on Soil and Water Conservation of the Agricultural Board. Publication 885. Wash., D.C. 49pp.

\_\_\_\_\_. 1975.

Agricultural production efficiency: report to the Committee on Agricultural Production Efficiency, Board on Agriculture and Renewable Resources. 199pp.

Organization for Economic Cooperation and Development. 1971.

Rpt. by Directorate for Agriculture and Food, irrigation policies in southern European countries and in the United States. Paris. 60pp.

\_\_\_\_\_. 1971.

Rpt. by Directorate for Agriculture and Food, Irrigation policy in the United States. Paris. 78pp.

Overboe, Orville F. 1968.

Irrigation and agricultural water management in world agriculture. World Irrig. 18(5):11-13.

Pillsbury, Arthur F. and Ariosto Degan. 1968.

Sprinkler irrigation. Food and Agr. Organ. of the United Nations, Agr. Devlpmt. Pap. 88. Rome. 179pp.

Schlutz, Theodore W. 1977.

The economics of the increases in the value of human time over time. Presented at Fifth World Congress, Intern. Econ. Assn. Tokyo. 29 Aug.- 3 Sept., 1977. 43pp. typescript.

Tintner, Gerhard. 1974.

A production function for Austria emphasizing energy (1955-72). Institut fur Okonometrie, Technische Hochschule Wien. Vienna, Austria. 20pp. typescript.

U. S. Congress. 1976.

Costs of producing selected crops in the United States, 1974. Rpt. prepared for the Comm. on Agriculture and Forestry by Econ. Res. Serv., U. S. Dept. Agr. 140pp.

- U. S. Library of Congress,, Legislative Reference Service. 1959.  
Reclamation: accomplishments and contributions. 86th Cong., 1st Sess.,  
Comm. Print 1. 73pp.
- U. S. Water Resources Council. 1968.  
The Nation's water resources: the first national assessment of the Water  
Resources Council. Wash., D.C. 500pp.
- Ward, Michael. 1976.  
The measurement of capital: the methodology of capital stock estimates in  
OECD countries. Organ. for Econ. Coop. and Dvmt. Paris. 148pp.





