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Expert Systems, Decision Support Systems and Computer-Assisted Instruction for Water Resource Management (I)

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255 citations from AGRICOLA

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Water Quality Information Center

August 1993

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ESS, DSS and CAI for Water Resource Management

1 NAL Call No: QA76.76.E95A5
Adapting expert systems to multiple locations.
Dyer, R.M.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (1): p. 11-16. ill., maps; 1989. Includes references.

Language: English

Descriptors: Natural resources; Resource management; Weather patterns; Meteorological observations; Geographical distribution; Location theory; Prototypes; Computer software

2 NAL Call No: QA76.76.E95A5
Advanced information-extraction tools in remote sensing for earth science applications: AI and GIS.
Friedl, M.A.; Estes, J.E.; Star, J.L.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (2/3): p. 17-31. ill; 1988. Includes references.

Language: English

Descriptors: Natural resources; Resource management; Imagery; Remote sensing; Computer applications; Geography; Information systems

3 NAL Call No: S494.5.D3C68 1992
Advisory computer system for agricultural pesticide selection.
Thomson, W.J.; Clark, J.J.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 595-600; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Uk; Pesticides; Support systems; Computer

software

4 NAL Call No: QA76.76.E95A5
AI applications.

Moscow, Idaho : AI Applications, c1991-.
AI applications. v. : ill. ; 28 cm; 1991-9999. Title from cover.
Language: English; English

Descriptors: Natural resources; Expert systems (Computer science); Artificial intelligence

5 NAL Call No: TD427.N5M3
Analytical methods for optimization of nitrogen fertilization in agriculture.

Ostergaard, H.S.
New York : Elsevier Applied Science.
Management systems to reduce impact of nitrates / edited by J.C. Germon ; assisted by S. Dupain. p. 224-235. maps; 1989.
Includes references.
Language: English

Descriptors: Denmark; Nitrogen fertilizers; Fertilizer requirement determinatio; Analytical methods; Computers; Systems

6 NAL Call No: S494.5.D3I5 1988
Application of crop models for technology testing and transfer.
Lal, H.; Hoogenboom, G.; Jones, J.W.; Peart, R.M.
Gainesville : Florida Cooperative Extension Service, IFAS, Univ. of Florida, [1988?].
Proceedings of the 2nd International Conference on Computers in Agricultural Extension Programs Fedro S. Zazueta. p. 596-603; 1988. Meeting held February 10-11, 1988 at Lake Buenavista, Orlando, Florida. Includes references.

Language: English

Descriptors: Glycine max; Growth models; Expert systems

7 NAL Call No: TD420.A1P7
Application of expert systems technology in water quality modeling.

Barnwell, T.O. Jr; Brown, L.C.; Marek, W.
Oxford : Pergamon Press.
Water science and technology : a journal of the International Association on Water Pollution Research and Control v. 21 (8/9): p. 1045-1056; 1989. Paper presented at the "Fourteenth Biennial Conference of the International Association on Water

Pollution Research and Control," July 18-21, 1988, Brighton, United Kingdom. Includes references.
Language: English

Descriptors: China; Water pollution; Control; Water quality; Models; Expert systems; River water

8 NAL Call No: FICHE S-72
Application of the gossym/comax system to cotton crop management.

McKinion, J.M.; Baker, D.N.; Whisler, F.D.; Lambert, J.R.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 88-7532): 15 p.; 1988. Paper presented at the 1988 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.

Language: English

Descriptors: Gossypium; Crop management; Expert systems; Decision making; Simulation models

9 NAL Call No: S494.5.D3I57 1988
Applications in forestry and environmental protection.
Smaltschinski, T.
Frankfurt am Main : Deutsche Landwirtschafts-Gesellschaft (DLG).
Knowledge based systems in agriculture : prospects for application : Frankfurt a. M., Bad Soden, June 19-22, 1988 / editor: Deutsche Landwirtschafts-Gesellschaft, Frankfurt am Main. p. 127-133; 1988. Includes references.
Language: English

Descriptors: Expert systems; Forest management; Environmental protection

10 NAL Call No: SD143.S64
Applications of artificial intelligence in resource management.
Stock, M.
Bethesda, Md. : The Society.
Proceedings of the ... Society of American Foresters National Convention. p. 58-61; 1990. Paper presented at a meeting on "Forestry on the Frontier," Sept 24-27, 1989, Spokane, Washington. Includes references.
Language: English

Descriptors: Natural resources; Resource management; Decision making

11 NAL Call No: SB950.3.A8P535
An appraisal of opportunities to reduce herbicide use.
Combellack, J.H.
Victoria : R.G. Richardson.
Plant protection quarterly v. 7 (2): p. 66-69; 1992. Includes references.
Language: English

Descriptors: Herbicides; Weed control; Application rates; Farm inputs; Farm planning; Expert systems

12 NAL Call No: QA76.8.I2594A7 1987
AquaRef., Version 1..

Hapgood, William
National Agricultural Library (U.S.)
Beltsville, Md. : USDA, National Agricultural Library,.
1 computer disk ; 5 1/4 in + user's guide. Title from title screen. June 1987. Aquaculture Information Center's expert advisory system. 1st-CLASS ADVISOR by Programs in Motion Inc., copyright 1986 William Hapgood. AquaRef is a small-scale aquaculture advisory system which was created by the staff of the Aquaculture Information Center at the National Agrocultural Library.
Language: N/A

Descriptors: Aquaculture; Computer programs; Expert systems (Computer science)

13 NAL Call No: QH540.N3
AQUATOOL: a computer-assisted support system for water resources research management including conjunctive use.

Andreu, J.; Capilla, J.; Sanchis, E.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 333-355; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Spain; Water resources; Water management; Simulation models; Computer simulation; Planning; Decision making; Computer software; Water use

14 NAL Call No: FICHE S-72
Artificial intelligence and expert systems in agricultural research and education.

Barrett, J.R.; Morrison, J.B.; Huggins, L.F.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 85-5516): 10 p.; 1985. Paper presented at the 1985 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices.
Language: English

Descriptors: Agricultural research; Agricultural education

15 NAL Call No: S494.5.D3C68 1992
An artificial intelligence based farmstead assessment program for groundwater quality concerns.

Embleton, K.M.; Engel, B.A.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 750-755; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Groundwater; Water quality; Evaluation; Expert systems

16 NAL Call No: HD1.A3
An artificial intelligence based method for scheduling crop management actions.

Plant, R.E.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 31 (1): p. 127-155; 1989. Includes references.

Language: English

Descriptors: Gossypium; Crop management; Decision making; Scheduling; Integrated methods; Experts; Systems approach; Computer software

17 NAL Call No: S916.I2F6
Artificial intelligence in resource management.
Stock, M.
Moscow, Idaho : The Station.
Focus on renewable natural resources - University of Idaho, Forest, Wildlife and Range Experiment Station v. 13: p. 26-27. ill; 1988 May.
Language: English

Descriptors: Idaho; Forestry; Computer software; Resource management

18 NAL Call No: 292.9 AM34
Assessing ground water pollution potential from nitrogen fertilizer using a geographic information system.

Halliday, S.L.; Wolfe, M.L.
Bethesda, Md. : American Water Resources Association.
Water resources bulletin v. 27 (2): p. 237-245; 1991 Mar.
Includes references.
Language: English

Descriptors: Texas; Groundwater pollution; Nitrogen fertilizers; Pollutants; Susceptibility; Expert systems
Abstract: A geographic information system (GRASS 3.1) was used to correlate the availability of nitrogen fertilizer with the susceptibility of ground water to pollution in Texas to identify potential ground water quality problems. An agricultural pollution susceptibility map, produced by the Texas Water Commission using the DRASTIC methodology, was combined with information on cropped areas, recommended nitrogen fertilizer application rates, and aquifer outcrops. A Nitrogen Fertilizer Pollution Potential Index was generated, identifying 24 percent or Texas within the high pollution potential category. An analysis of the susceptibility of major aquifer outcrops to potential pollution from nitrogen fertilizer indicated that 34 percent of the outcrop areas fall in the high pollution potential range. It is proposed that correlating the availability of a pollutant with an assessment of the susceptibility of ground water to pollution yields a more accurate screening tool for identifying potential pollution problems than considering susceptibility alone.

19 NAL Call No: QA76.76.E95A5
Assessing pesticide risk to arthropod natural enemies using expert system technology.

Messing, R.H.; Croft, B.A.; Currans, K.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (2): p. 1-11. ill; 1989. Includes references.
Language: English

Descriptors: Integrated pest management; Computer software; Pesticide specificity; Predators of insect pests; Pesticide side effects; Plant pests

20 NAL Call No: 292.9 AM34
An Auto-CAD-based watershed information system for the hydrologic model HEC-1.

Cline, T.J.; Molinas, A.; Julien, P.Y.

Minneapolis, Minn. : American Water Resources Association.
Water resources bulletin v. 25 (3): p. 641-652. ill., maps;
1989 Jun. Includes references.
Language: English

Descriptors: Watersheds; Information systems; Hydrological models; Runoff water; Surface water; Microcomputers; Computer software; Water management

21 NAL Call No: 290.9 AM3PS (EE)
Automated calibration and use of stream-quality simulation model.

Wood, D.M.; Houck, M.H.; Bell, J.M.
New York, N.Y. : American Society of Civil Engineers, Environmental Engineering Division.
Journal of environmental engineering v. 116 (2): p. 236-249;
1990 Mar. Includes references.
Language: English

Descriptors: Rivers; Streams; Water quality; Simulation models; Expert systems

22 NAL Call No: SD1.S63
An automated system for timing insecticidal sprays for Nantucket pine tip moth control.

Pickering, J.; Ross, D.W.; Berisford, C.W.
Bethesda, Md. : Society of American Foresters.
Southern journal of applied forestry v. 13 (4): p. 184-187.
maps; 1989 Nov. Includes references.
Language: English

Descriptors: South eastern states of U.S.A.; Pinus taeda; Pinus echinata; Pinus Virginiana; Rhyacionia frustrana; Insect control; Insecticides; Sprays; Automatic control; Computers

23 NAL Call No: SB249.N6
CALEX/cotton: an expert system-based management aid for california cotton growers.

Plant, R.E.; Wilson, L.T.; Zelinski, L.; Goodell, P.B.; Kerby, T.A.
Memphis, Tenn. : National Cotton Council and The Cotton Foundation.
Proceedings -Beltwide Cotton Production Research Conferences.
p. 203-206. ill; 1987. Includes references.
Language: English

Descriptors: California; Modules; Models; Decision making; Microcomputers; Experts; Systems; Gossypium; Crop management; Insect pests; Management

24 NAL Call No: 100 C12CAG
CALEX/Cotton: an integrated expert system for cotton production and management.

Goodell, P.B.; Plant, R.E.; Kerby, T.A.; Strand, J.F.; Wilson, L.T.; Zelinski, L.; Young, J.A.; Corbett, A.; Horrocks, R.D.; Vargas, R.N.
Oakland, Calif. : Division of Agriculture and Natural Resources, University of California.
California agriculture v. 44 (5): p. 18-21; 1990 Sep.

Language: English

Descriptors: California; Cotton; Growers; Expert systems; Information; Simulation; Decision making; Crop management; Production; Prediction

25 NAL Call No: S671.3.A97 1991
A comparison of expert systems and simulation techniques for control of a fertilizer applicator.

He, B.; Peterson, C.L.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Automated agriculture for the 21st century : proceedings of the 1991 symposium, 16-17 December 1991, Chicago, Illinois. p. 373-384; 1991. (ASAE publication :). Includes references.
Language: English

Descriptors: Idaho; Placement; Expert systems; Computer simulation

26 NAL Call No: 80 AC82
Computer aided chemical analysis and fertilizer recommendation of composts and other substrates.

Gabriels, R.; Keirsbulck, W. van; Engels, H.
Wageningen : International Society for Horticultural Science.
Acta horticulturae (172): p. 245-249; 1985 Jun. Presented at the International Symposium on the use of Composts as Horticultural Substrates, Ghent/Melle, Belgium, August 27-31, 1984. Includes references.
Language: English

Descriptors: Belgium; Horticultural crops; Fertilizer requirement determinatio; Composts; Growing media; Computer analysis

27 NAL Call No: 58.9 IN7
Computer aided pesticide application (CAPA)--a spraying system for the future.

Landers, A.
Silsoe : Institution of Agricultural Engineers.

The Agricultural engineer v. 47 (3): p. 68-71; 1992. Special issue on electronics/livestock. Includes references.
Language: English

Descriptors: Pesticides; Application methods; Computers

28 NAL Call No: 290.9 AM32P
Computer aided regional mapping of pesticide runoff.
Khan, M.A.; Liang, T.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-2661): 22 p. maps; 1989. Paper presented at the "1989 International Winter Meeting sponsored by the American Society of Agricultural Engineers," December 12-15, New Orleans, Louisiana.

Language: English

Descriptors: Hawaii; Pesticide residues; Runoff; Water pollution; Erosion

29 NAL Call No: 55.8 B46
Computer applications in water resources planning.
Mathew, F.T.
New Delhi : Central Water Commission, Ministry of Agriculture and Irrigation.
Bhagirath : the irrigation and power quarterly v. 32 (2): p. 66-70. ill; 1985 Apr.
Language: English

Descriptors: India; Water resource management; Computer assisted instruction; Planning

30 NAL Call No: SB319.2.F6F56
Computer assisted fertigation dilution calculations.
Yeager, T.H.; Ingram, D.L.
s.l. : The Society.
Proceedings of the ... annual meeting of the Florida State Horticulture Society v. 97: p. 294-297. ill; 1985 Jun.
Language: English

Descriptors: Computer software; Fertirrigation; Irrigation water; Fertilizers; Concentration

31 NAL Call No: RA422.C65
A computer assisted, risk-based screening of a mixture of drinking water chemicals.

Smith, R.L.
Columbia, Mo. : The Conference.
Trace substances in environmental health : proceedings of the University of Missouri's annual conference on Trace Substances in Environmental Health v. 22: p. 215-232; 1988. Includes

references.
Language: English

Descriptors: Drinking water; Chemical composition; Computer assisted instruction

32 NAL Call No: SB951.S84
Computer assisted synthesis of homochiral agrochemicals.
Feenstra, R.W.; Ottenheijm, H.C.J.
Amsterdam :
Elsevier.
Stereoselectivity of pesticides : biological and chemical problems / edited by E.J. Ariens, J.J.S. van Rensen and W. Welling. v. 1 p. 519-527. ill; 1988. (Chemicals in agriculture ; 1). Includes references.

Language: English

Descriptors: Pesticides; Synthesis; Computer applications; Planning; Systems

33 NAL Call No: 464.8 SP2
Computer graphics, an aid in developing new pesticides.
Dearing, A.
Foston : J.G.R. Stevens.
Span : progress in agriculture v. 29 (3): p. 99-101. ill; 1986.
Language: English

Descriptors: Pesticides; Pesticide action; Physico-chemical properties; Computer graphics

34 NAL Call No: QH540.N3
Computer graphics for assessment of eutrophication Venice Lagoon: a case study.

Orlob, G.T.; Bale, A.E.; Malagoli, M.; Rajbhandari, H.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 471-474; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Veneto; Lagoons; Eutrophication; Water pollution; Computer graphics; Computer simulation; Simulation models; Hydrology

35 NAL Call No: 57.9 F41
Computer integrated manufacturing in the 1990s.

Evans, H.N.
London : The Society.
Proceedings - the Fertiliser Society (321): 30 p.; 1992.
Language: English

Descriptors: Fertilizer industry; Fertilizer technology; Manufacture; Computer techniques; Integrated systems

36 NAL Call No: TD420.A1P7
Computer modelling of algal waste treatment systems.
Martin, N.J.; Fallowfield, H.J.
Oxford : Pergamon Press.
Water science and technology : a journal of the International Association on Water Pollution Research and Control v. 21 (12): p. 1657-1660. ill; 1989. Paper presented at the "Fourteenth Biennial Conference of the International Association on Water Pollution Research and Control," July 18-21, 1988, Brighton, United Kingdom. Includes references.
Language: English

Descriptors: Waste water treatment; Systems; Biological treatment; Algae; Ponds; Prediction; Photosynthesis; Oxygen; Production; Seasonal variation; Climatic factors; Computers; Models

37 NAL Call No: 290.9 AM32P
Computer program for insecticide application to rice crop.
Suryanto, H.; Gupta, C.P.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (90-1059): 13 p.; 1990. Paper presented at the "1990 International Summer Meeting", June 24-27, 1990, Columbus, Ohio. Includes references.
Language: English

Descriptors: Oryza sativa; Insecticides; Sprayers; Expert systems

38 NAL Call No: 500 N484 v.482
Computer simulation of chemical and biomolecular systems.
Beveridge, David L.,_1938-; Jorgensen, William L.
New York Academy of Sciences
New York : New York Academy of Sciences,.
x, 307 p. : ill. ; 24 cm. (Annals of the New York Academy of Sciences, v. 482). Papers from a conference held by the New York Academy of Sciences, Oct. 2-4, 1985. Includes bibliographies and index.
Language: English

Descriptors: Molecular dynamics; Mathematical models; Congresses; Molecular structure; Mathematical models; Congresses; Molecular dynamics; Data processing; Congresses; Molecular structure; Data processing; Congresses

39 NAL Call No: QH540.N3
Computer-aided decision support in water resources planning and management.

Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 3-41; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Water resources; Water management; Planning; Decision making; Computer simulation; Simulation models; Computer techniques

40 NAL Call No: SB249.N6
Computer-aided management of insecticide resistance.
Tabashnik, B.E.
Memphis, Tenn. : National Cotton Council and The Cotton Foundation.
Proceedings - Beltwide Cotton Production Research Conferences. p. 215-218. ill; 1987. Includes references.
Language: English

Descriptors: Simulation models; Computers; Gossypium; Insecticide resistance; Pyrethroids; Plutella xylostella; Liriomyza; Heliothis virescens

41 NAL Call No: QH540.N3
Computer-aided management of the southeastern U.S. reservoir system.

Georgakakos, A.P.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 407-428; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Alabama; Georgia; South Carolina; Water resources; Water management; Water reservoirs; Computer software; Computer simulation; Simulation models; Decision making

42 NAL Call No: QH540.N3
Computer-aided support for water resources research and

planning.

Loucks, D.P.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 173-188; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Water management; Planning; Decision making; Computer software; Computer hardware; Computer graphics; Computer simulation; Simulation models

43 NAL Call No: QH540.N3
Computer-aided water reservoir management: a prototype two-level DSS.

Soncini-Sessa, R.; Nardini, A.; Gandolfi, C.; Kraszewski, A.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 527-574; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Water reservoirs; Water management; Water resources; Decision making; Computer simulation; Simulation models; Computer software; Lakes

44 NAL Call No: QH540.N3
Computer-aided water resources planning and operational management in a water company in the U.K.

Walker, S.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 305-330; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Northern england; Water resources; Water management; Planning; Decision making; Computer software;

Simulation models; Computer simulation; Hydrology

45 NAL Call No: 290.9 AM32P
Computer-assisted analysis of best management practices.
Lanier, A.L.; Westerman, P.W.; Smolen, M.D.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-2531): p. 151-166; 1989. Paper presented at the 1989 International Winter Meeting of the American Society of Agricultural Engineers, December 12-15, 1989, New Orleans, Louisiana.
Includes references.
Language: English

Descriptors: Water quality; Water management; Databases; Water pollution

46 NAL Call No: S539.5.A77
Computer-assisted irrigation scheduling: an educational tool.
Jones, A.J.; Bauder, J.W.
New York : Springer.
Applied agricultural research v. 2 (4): p. 260-271. maps; 1987. Includes references.

Language: English

Descriptors: Montana; Irrigation scheduling; Water management; Decision making; Computer assisted instruction; Computer software; Teaching materials

47 NAL Call No: QD1.A45
Computer-assisted molecular prediction of metabolism and environmental fate of agrochemicals.

Saleh, M.A.
Washington, D.C. : The Society.
ACS Symposium series -American Chemical Society (459): p. 148-159; 1991. In the series analytic: Pesticide Transformation Products: Fate and significance in the environment / edited by L. Somasundaram and J.R. Coats.
Includes references.

Language: English

Descriptors: Pesticide residues; Agricultural chemicals; Byproducts; Degradation; Environmental impact; Metabolites; Pollution; Toxic substances; Computer software; Prediction

48 NAL Call No: QD471.G755
Computer-assisted structure elucidation.

Gray, Neil A. B.
New York : Wiley,.
xi, 536 p. : ill. ; 24 cm. A Wiley-Interscience publication.

Includes index. Bibliography: p. 503-531.

Language: English

Descriptors: Chemical structure; Data processing

49 NAL Call No: 99.8 F768
Computer-based approach for teaching multiresource management.
Wood, D.B.; Fox, B.E.; Covington, W.W.
Bethesda, Md. : Society of American Foresters.
Journal of forestry v. 87 (111: p. 11-16. ill; 1989 Nov.
Includes references.
Language: English

Descriptors: Arizona; Resource management; Forestry; Educational programs; Computer simulation; Decision making

50 NAL Call No: SB950.C77
A computer-based decision aid for managing bean rust.
Meronuck, R.A.
St. Paul, Minn. : APS Press.
Crop loss assessment and pest management / edited by P.S. Teng. p. 242-250; 1987. Includes references.

Language: English

Descriptors: Minnesota; Computer applications; Models; Decision making; Phaseolus vulgaris; Uromyces appendiculatus; Fungicide application

51 NAL Call No: SB950.3.A8P535
A computer-based simulator for rational management of grapeview downy mildew (Plasmopara viticola).

Magarey, P.A.; Wachtel, M.F.; Weir, P.C.; Seem, R.C.
Victoria : R.G. Richardson.
Plant protection quarterly v. 6 (1): p. 29-33; 1991. Includes references.
Language: English

Descriptors: Vitis; Plasmopara viticola; Plant disease control; Decision making; Computer simulation; Simulation models; Disease models; Life cycle; Prediction; Epidemiology; Chemical control; Timing; Fungicides; Application date

52 NAL Call No: 79.9 C122
Computerized chemical injection systems.

Sacramento, Calif. : California Weed Conference Office.
Proceedings -California Weed Conference (39th): p. 18-19; 1987.
Language: English

Descriptors: Texas; Herbicide application; Application methods; Injection

53 NAL Call No: SB610.2.B74
A computerized decision support system for sugar beet herbicide selection.

Edwards-Jones, G.; Mumford, J.D.; Norton, G.A.; Turner, R.; Proctor, G.H.; May, M.J.
Surrey : BCPC Registered Office.
Brighton Crop Protection Conference-Weeds v. 2: p. 561-566; 1989. Paper presented at the Brighton Crop Protection Conference--Weeds, November 20-23, 1989, at Brighton, England. Includes references.
Language: English

Descriptors: Beta vulgaris var. saccharifera; Weed control; Herbicides; Computer techniques

54 NAL Call No: TD420.A1P7
A computerized degree of hazard assessment for evaluation of wastes: an innovative aid to management of residuals.

Plewa, M.J.; Minear, R.A.; Adesd-McInerney, D.; Thomas, D.L.; Miller, G.D.
Oxford : Pergamon Press.
Water science and technology : a journal of the International Association on Water Pollution Research and Control v. 21 (8/9): p. 821-831; 1989. Paper presented at the "Fourteenth Biennial Conference of the International Association on Water Pollution Research and Control," July 18-21, 1988, Brighton, United Kingdom. Includes references.

Language: English

Descriptors: Illinois; Wastes; Health hazards; Toxicity; Evaluation; Streams; Water pollution; Computer techniques; Databases

55 NAL Call No: SB1.H6
Computerized individual-nutrient fertilizer injector: the system.

Bauerle, W.; Short, T.; Mora, E.; Hoffman, S.; Nantais, T.
Alexandria, Va. : American Society for Horticultural Science.
HortScience v. 23 (5): p. 910. ill; 1988 Oct.
Language: English

Descriptors: Computer applications; Greenhouses; Fertilizer placement; Soil injection

56 NAL Call No: 72.8 W522
Computers and cotton production: GOSSYM/COMAX.

Supak, J.R.; Childers, R.E.
Memphis, Tenn. : Southwest Five-State Cotton Growers Association.
Summary proceedings - Western Cotton Production Conference. p. 71-75; 1990. Paper presented at the " Western Cotton Production Conference," August 6-7, 1990, Fresno, California. Includes references.

Language: English

Descriptors: Gossypium; Growth models; Crop management; Expert systems

57 NAL Call No: QH540.N3
Computers in consulting engineering.

Howard, C.D.D.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 267-282; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal.
Language: English

Descriptors: Water resources; Water management; Decision making; Computer simulation; Simulation models; Computer software; Computer hardware; Engineering; Consultants

58 NAL Call No: QH540.N3
A conceptural framework for an integrated operational information and decision-supported system for Thames Water Utilities.
Jamieson, D.G.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 283-293; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal.
Language: English

Descriptors: South east england; Water resources; Water management; Rivers; Decision making; Drinking water; Sewage effluent; Waste water treatment; Simulation models; Computer simulation; Computer software

59 NAL Call No: QA76.76.E95A5
Conferences: getting the message across with AI and graphics.
Ferris, I.G.; Frecker, T.C.; Doss, A.F.; Iwan, J.; Harper,

S.S.
Moscow, Idaho : AI Applications.
AI applications v. 6 (4): p. 51-62; 1992. Includes references.
Language: English

Descriptors: Pesticides; Expert systems

60 NAL Call No: FICHE S-72
Conservation planning using expert systems and geographic information systems.

Heatwole, C.D.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-5011): 15 p.; 1987. Paper presented at the 1987 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Experts; Systems; Geography; Information services; Land use planning; Erosion; Soil conservation

61 NAL Call No: 290.9 AM32P
Conservation tillage expert system for Southwestern Ontario: multiple experts and decision techniques.

Clarke, N.D.; Vyn, T.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-2015): p. 1-10; 1989. Paper presented at the "1989 International Summer Meeting" jointly sponsored by the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering, June 25-28, 1989, Quebec, Canada. Includes references.

Language: English

Descriptors: Ontario; Conservation tillage; Expert systems

62 NAL Call No: 1.98 AG84
Conserving the Great Plains for all.

Senft, D.
Washington, D.C. : The Service.
Agricultural research - U.S. Department of Agriculture, Agricultural Research Service v. 40 (8): p. 4-9; 1992 Aug.
Language: English

Descriptors: Southern plains states of U.S.A.; Northern

plains states of U.S.A.; Ecosystems; Ecological balance; Natural resources; Erosion; Water pollution; Resource conservation; Information systems; Decision making; Water conservation; Water management; Soil fertility; Soil conservation; Air pollution; Atmosphere; Agricultural chemicals

63 NAL Call No: SB249.N6
COTFLEX: an expert system to provide cropmix and farm policy advice to producers.

Helms, G.; Richardson, J.W.; Knight, T.O.; Rister, M.E.; Stone, N.D.
Memphis, Tenn. : National Cotton Council and The Cotton Foundation.
Proceedings - Beltwide Cotton Production Research Conferences. p. 197-201; 1987. Includes references.
Language: English

Descriptors: U.S.A.; Computers; Models; Experts; Systems; Economics; Decision making; Crop yield; Gossypium

64 NAL Call No: SB249.N6
COTFLEX: organizing, developing and implementing a cotton expert system for total crop management.

Frisbie, R.E.; Stone, N.D.; Richardson, J.W.; Sansone, C.
Memphis, Tenn. : National Cotton Council and The Cotton Foundation.
Proceedings - Beltwide Cotton Production Research Conferences. p. 193-194. ill; 1987. Includes references.
Language: English

Descriptors: U.S.A.; Computers; Modules; Gossypium; Crop production; Cultivation methods; Economics; Marketing; Pest control; Decision making

65 NAL Call No: S494.5.D3I5 1988
Counselor--an expert system application in the agrochemical industry.

Jones, M.J.
Gainesville : Florida Cooperative Extension Service, IFAS, Univ. of Florida, [1988?].
Proceedings of the 2nd International Conference on Computers in Agricultural Extension Programs Fedro S. Zazueta, A.B. (Del) Bottcher, eds. p. 209-214; 1988 Feb. Conference held February 10-11, 1988 at the Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, Orlando, Florida.
Language: English

Descriptors: Uk; Agricultural chemicals; Decision making; Support systems; Expert systems

66 NAL Call No: TD351.W35 1988
Critical water issues and computer applications proceedings of the 15th Annual Water Resources Conference.

Strech, Mike
American Society of Civil Engineers, Water Resources Planning and Management Division
Water Resources Conference 15th : 1988 : Norfolk, Va.
New York, N.Y. : American Society of Civil Engineers,.
xv, 394 p. : ill. ; 22 cm. Includes bibliographies and indexes.
Language: English

Descriptors: Water-supply; Management; Congresses; Water-supply; North America; Management; Congresses; Water-supply; Virginia; Management; Congresses; Expert systems (Computer science); Congresses

67 NAL Call No: SB950.3.A8P535
Crop disease management with fungicides: an overview of its origins, progress, current status and future development using modelling and climate data.

Kable, P.F.
Victoria : R.G. Richardson.
Plant protection quarterly v. 6 (1): p. 19-28; 1991. Includes references.
Language: English

Descriptors: Plant disease control; Management philosophies; Chemical control; Fungicides; Genetic control; Biological control; Integrated control; Decision making; Weather data; Disease models; Prediction; Computer simulation

68 NAL Call No: SB245.B42
Crop simulation for the analysis and management of cotton production systems: expert systems.

McKinion, J.M.
Memphis, Tenn. : National Cotton Council.
Proceedings of the ... Beltwide Cotton Production Conference. p. 13; 1989. Meeting held January 3-4, 1989, Nashville, Tennessee.
Language: English

Descriptors: Gossypium; Simulation models; Expert systems

69 NAL Call No: QH540.N3
Current trends in computer-aided water resources management at Delft Hydraulics.

Dijkman, J.; Klomp, R.
Berlin, W. Ger. : Springer-Verlag.

NATO ASI series : Series G : Ecological sciences v. 26: p. 201-249; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal.
Language: English

Descriptors: Netherlands; Indonesia; North sea; Water resources; Water management; Irrigation systems; Irrigation; Simulation models; Computer simulation; Computer software; Computer graphics

70 NAL Call No: HC79.E5N3
The Danube River basin: negotiating settlements to transboundary environmental issues.

Linnerooth, J.
Albuquerque, N.M. : University of New Mexico School of Law.
Natural resources journal v. 30 (3): p. 629-660; 1990.
Includes references.
Language: English

Descriptors: Europe; River water; Water quality; Water pollution; International cooperation; Water management; River regulation; Regional planning; Water use; Water power; Environmental impact; Economic development; Role perception; Computer simulation; Decision making

71 NAL Call No: FICHE S-72
Data acquisition system for aerial application aircraft mission analysis.

Kaczynski, T.; Whitney, R.W.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-1505): 10 p.; 1986. Paper presented at the 1986 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Aircraft; Pesticide application; Data collection; Systems; Computer software

72 NAL Call No: TD223.P39
A data management system to evaluate water quality impacts of nonpoint source pollution control.

Smolen, M.D.; Dressing, S.A.; Maas, R.P.; Spooner, J.;

Jamieson, C.A.; Newell, A.D.; Humenik, F.J.
Washington, D.C. : U.S. Environ Protection Agency, Office of Water Regul and Standards.
Perspectives on nonpoint source pollution : proceedings of a national conference, Kansas City, Missouri, May 19-22, 1985. p. 429-432. maps; 1985. Includes references.

Language: English

Descriptors: North Carolina; Water composition and quality; Quality controls; Water pollution; Pollution by agriculture; Control; Databases; Computer software

73 NAL Call No: TD420.A1P7
DBAPE--a database and model parameter analysis system for agricultural soils to support water quality management.

Imhoff, J.C.; Carsel, R.F.; Kittle, J.L. Jr; Hummel, P.R.
Oxford : Pergamon Press.
Water science and technology : a journal of the International Association on Water Pollution Research and Control v. 24 (6): p. 331-337; 1991. In the series analytic: Watermatex '91 / edited by T.O. Barnwell, P.J. Ossenbruggen and M.B. Beck. Proceedings of the "Second International Conference on Systems Analysis in Water Quality Management," June 3-6, 1991, Durham, New Hampshire. Includes references.
Language: English

Descriptors: Soil properties; Water quality; Management; Agricultural soils; Computer software; Subsurface runoff; Models; Databases

74 NAL Call No: SD388.W6
Deciding between and EA and an EIS may be a question of mitigation.

Daniels, S.E.; Kelly, C.M.
Bethesda, Md. : Society of American Foresters.
Western journal of applied forestry v. 5 (4): p. 111-116; 1990 Oct. Includes references.
Language: English

Descriptors: Environmental assessment; Legal systems; Usda; Expert systems

75 NAL Call No: 290.9 AM32P
Decision support model for fertilizer application to corn.
Hossain, N.; Gupta, C.P.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (90-1062): 23 p.; 1990. Paper presented at the "1990 International Summer Meeting", June 24-27, 1990, Columbus, Ohio. Includes references.
Language: English

Descriptors: Zea mays; Fertilizers; Computer techniques; Simulation models

76 NAL Call No: SB599.C8
Decision support system for economic analysis of grasshopper treatment operations in the African Sahel.

Coop, L.B.; Croft, B.A.; Murphy, C.F.; Miller, S.F.
Oxford : Butterworths-Heinemann Ltd.
Crop protection v. 10 (6): p. 485-495; 1991 Dec. Includes references.
Language: English

Descriptors: Oedaleus senegalensis; Insect control; Decision making; Cost benefit analysis; Chemical control; Computer software; Computer simulation; Simulation models; Prediction; Economic thresholds; Crop growth stage; Crop yield; Crop losses; Timing; Insecticides; Loss prevention; Millets

77 NAL Call No: S494.5.D3C68 1992
A decision support system for manure management.
Jacobsen, K.W.; Bubenzer, G.D.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 572-577; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Animal manures; Waste disposal; Decision making; Expert systems

78 NAL Call No: TD365.S97 1987
Decision support system for selecting eutrophication control strategies., 1st ed.

Grobler, D.C.; Rossouw, J.N.; Van eeden, P.; Oliveira, M.
Oxford : Pergamon Press.
Systems analysis in water quality management : proceedings of a symposium held in London, U.K., 30 June-2 July 1987 / editor, M.B. Beck. p. 219-230; 1987. (Advances in water pollution control). Includes references.

Language: English

Descriptors: South Africa; Water reservoirs; Drainage; Phosphorus; Eutrophication; Control; Decision making; Cost benefit analysis; Simulation models

79 NAL Call No: 292.9 AM34
Decision support system for selecting inputs to a basin scale model.

Arnold, J.G.; Sammons, N.B.
Minneapolis, Minn. : American Water Resources Association.
Water resources bulletin v. 24 (4): p. 749-759. ill., maps; 1988 Aug. Includes references.
Language: English

Descriptors: Water resource management; Drainage systems; River basins; Hydrology; Sediment water interface; Climatic factors; Simulation models; Hydrological models; Technology transfers; Computer software; Databases

80 NAL Call No: S494.5.D3C652
A decision support system for soil conservation planning.
Montas, H.; Madramootoo, C.A.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 7 (3): p. 187-202; 1992 Sep. Includes references.
Language: English

Descriptors: Quebec; Soil conservation; Watersheds; Land use planning; Decision making; Expert systems; Information systems; Erosion; Simulation models; Rain; Soil types

81 NAL Call No: FICHE S-72
A decision support system for technology transfer.
Gaultney, L.D.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-5536): 28 p.; 1987. Paper presented at the 1987 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Models; Erosion

82 NAL Call No: TD365.S97 1987
Decision support system for water management in regions with intense agriculture., 1st ed.

Walsum, P.E.V. van; Drent, J.
Oxford : Pergamon Press.
Systems analysis in water quality management : proceedings of a symposium held in London, U.K., 30 June-2 July 1987 / editor, M.B. Beck. p. 231-240. ill; 1987. (Advances in water pollution control). Includes references.
Language: English

Descriptors: Netherlands; Intensive livestock farming; Intensive production; Decision making; Water management; Water pollution; Simulation models

83 NAL Call No: 290.9 AM32P
Decision support system for water quality model selection.
Arnold, J.G.; Ascough, J.C.; Engel, B.A.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (90-7559): 7 p.; 1990. Paper presented at the "1990 International Winter Meeting sponsored by the American Society of Agricultural Engineers," December 18-21, 1990, Chicago, Illinois. Includes references.
Language: English

Descriptors: U.S.A.; Water quality; Expert systems; Models

84 NAL Call No: S494.5.D3C652
A decision support system to aid weed control in sugar beet.
Edwards-Jones, G.; Mumford, J.D.; Norton, G.A.; Turner, R.; Proctor, G.H.; May, M.J.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 7 (1): p. 35-46; 1992 Apr. Includes references.

Language: English

Descriptors: Uk; Sugarbeet; Weed control; Herbicides; Decision making; Expert systems; Flow charts; Computer software

85 NAL Call No: QH540.N3 v.26
Decision support systems water resources planning.
Loucks, Daniel P.; Costa, Joao R. da,
NATO Advanced Research Workshop on Computer-aided Support Systems for Water Resources Research and Management 1990 : Ericeira, Portugual.
Berlin ; New York : Springer Verlag,.
x vi, 574 p. : ill. (some col.), maps (some col.) ; 25 cm. (NATO ASI series. Series G, Ecological sciences ; vol. 26).
"Proceedings of the NATO Advanced Workshop on Computer-aided Support Systems for Water Resources Research and Management held at Ericeira (Portugal), 24-28 September, 1990"--T.p. verso. Includes bibliographical references.
Language: English

Descriptors: Water resources development; Water-supply

86 NAL Call No: S530.J6
Designing parabolic waterways.

Aide, M.T.

Madison, Wis. : American Society of Agronomy.
Journal of agronomic education v. 17 (2): p. 129-130; 1988.
Includes references.

Language: English

Descriptors: Missouri; Grass waterways; Structures; Design calculations; Teaching materials; Computer assisted instruction

87 NAL Call No: SB950.3.A8P535
Development of a day-degree model to predict generation events for lightbrown apple moth Epiphyas postvittana (Walker) (Lepidoptera: Torticidae) on grapeviens in Australia.

Madge, D.G.; Stirrat, S.C.
Victoria : R.G. Richardson.
Plant protection quarterly v. 6 (1): p. 39-42; 1991. Includes references.

Language: English

Descriptors: Vitis; Epiphyas postvittana; Prediction; Population dynamics; Heat sums; Computer simulation; Life cycle; Probabilistic models; Timing; Insecticides; Application date; Decision making; Insect control

88 NAL Call No: S494.5.D3C652
Development of a prototype expert system for identification and control of insect pests.

Pasqual, G.M.; Mansfield, J.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 2 (4): p. 263-276; 1988 Jun. Includes references.
Language: English

Descriptors: Western australia; Plant pests; Insect pests; Pest control; Prototypes; Identification; Decision making; Knowledge; Experts; Computer software; Pesticides

89 NAL Call No: 79.9 C122
Development of a robotic system for non-chemical weed control.
Slaughter, D.C.; Curley, R.; Chen, P.; Brooks, C.
Fremont, Calif. : California Weed Conference.
Proceedings - California Weed Conference (44th): p. 103-107; 1992. Paper presented at the meeting on "Many Benefits of Weed Control," January 20-22, 1992, Sacramento, California.
Includes references.

Language: English

Descriptors: California; Lycopersicon esculentum; Cultural weed control; Robots; Cultivars; Computers

90 NAL Call No: TD420.A1P7
Development of dialog system model for eutrophication control between discharging river basin and receiving water body--case study of Lake Sagami (Japan).

Suzuki, M.; Chihara, K.; Okada, M.; Kawashima, H.; Hoshino, S.
Oxford : Pergamon Press.
Water science and technology : a journal of the International Association on Water Pollution Research and Control v. 21 (12): p. 1821-1824; 1989. Paper presented at the "Fourteenth Biennial Conference of the International Association on Water Pollution Research and Control," July 18-21, 1988, Brighton, United Kingdom. Includes references.

Language: English

Descriptors: Japan; Lakes; Eutrophication; Water pollution; Control; Computer software; Expert systems; Microcomputers; Case studies; Simulation models

91 NAL Call No: 290.9 AM32P
The development of gossym callibration files for High Plains cotton varieties.

Osborne, D.J.; Parnell, C.B. Jr; Childers, R.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-1016): 24 p.; 1989. Paper presented at the 1989 International Summer Meeting, June 25-28, 1989, Quebec, PQ, Canada. Includes references.
Language: English

Descriptors: Texas; Gossypium; Crop production; Expert systems; Computer simulation

92 NAL Call No: FICHE S-72
Development of microcomputer based O2 measurement and control system.

Hassan, R.M.B.; Ghaly, A.E.; Mansour, M.H.; Al-Taweel, A.M.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-6503): 42 p. ill; 1987. Paper presented at the 1987 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.

Language: English

Descriptors: Computer applications; Microcomputers; Oxygen;

Measurement; Control; Systems; Aerobic treatment; Fermentation; Food products; Wastes; Pollution

93 NAL Call No: S494.5.D3C68 1992
Development of the Water Efficient Landscape Planner knowledge-base.

Adams, W.H.; Siekkinen, G.G.; Jones, D.D.; Holland, K.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 762-767; 1992. (ASAE publication ; 1-92). Includes references.
Language: English

Descriptors: Landscaping; Water requirements; Expert systems

94 NAL Call No: S671.A66
Development of tillage system selection software for corn/soybean production.

Meyer, C.R.; Parsons, S.D.; Griffith, D.R.; Mannering, J.V.; Steinhardt, G.C.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Applied engineering in agriculture v. 7 (3): p. 367-373; 1991 May. Includes references.
Language: English

Descriptors: Zea mays; Glycine max; Production; Tillage; Computer software; Expert systems
Abstract: Development of a regionally-specific expert system to estimate corn/soybean production on an individual-field and whole-farm basis is described. Rules and equations to project yield as a function of tillage system, crop rotation, latitude, soil series, and soybean row spacing and maturity group were derived from interviews with three experts. The resulting knowledge was encoded into computer logic written entirely in C-language. Although very small, the program retains the functionality of expert systems developed in shells. On-line explanations are available to explain why each input is requested. Help screens offer expanded explanation of each question. Conclusions are displayed as they are reached. Management suggestions are offered where appropriate, including recommending a conservation tillage system, flagging highly erodible fields, indicating erosion control measures, suggesting that a field be tilled as two separate fields, and warning against farming steep slopes in row crops. The program goes beyond the features offered by some shells, permitting the user to back up in the program, to execute UNIX or DOS commands from within the program, and to store a partial run in a disk file to be resumed later. The program has been released as Public Domain software, with over 300 copies

currently in use.

95 NAL Call No: TC823.P52
Diagnostic strategies of an expert system for simulating snowmelt runoff.

Engman, E.T.
New York, N.Y. : The Society.
Planning now for irrigation and drainage in the 21st century : proc of a conference : Lincoln, Nebraska, July 18-21, 1988 / sponsored by the Irrig and Drain Div of the American Soc of Civil Engineers ; edited by D.R. Hay. p. 242-249; 1988. Includes references.

Language: English

Descriptors: Meltwater; Runoff water; Computer software; Simulation models

96 NAL Call No: QA76.76.E95A5
DRYPLAN: a computer-based decision-support system for sustainable land-use planning.

Biggins, J.G.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 5 (3): p. 57-59; 1991. Includes references.

Language: English

Descriptors: Australia; Land use; Sustainability; Soil degradation; Erosion; Land management; Soil conservation; Planning; Expert systems; Computer software

97 NAL Call No: FICHE S-72
DSS: an expert system as an educational aid.
Engel, B.A.; Beasley, D.B.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-5044): 10 p.; 1987. Paper presented at the 1987 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Agricultural education; Teaching; Experts; Systems; Computer applications; Instruction

98 NAL Call No: 290.9 AM3PS (IR)
DSS: dam site selector expert system for education.

Engel, B.A.; Beasley, D.B.
New York, N.Y. : American Society of Civil Engineers.
Journal of irrigation and drainage engineering v. 117 (5): p. 774-782; 1991 Sep. Includes references.
Language: English

Descriptors: Dams; Water reservoirs; Site selection; Expert systems; Training

99 NAL Call No: SB387.R4F67 1990
Ecological modeling: an artificial intelligence framework for natural resource managers.

Ball, G.L.; Gimblett, R.H.
Bethesda, Md. : American Society of Photogrammetry and Remote Sensing.
Protecting natural resources with remote sensing : the Third Forest Service Remote Sensing Applications Conference held at the University of Arizona and the Doubletree Inn, Tucson, Arizona, April 9-13, 1990. p. 250-258; 1990. Includes references.
Language: English

Descriptors: Natural resources; Ecology; Computer simulation; Expert systems

100 NAL Call No: 99.9 SO82
ENID: an expert system for fertiliser prescription in the Cape Province of South Africa.

Payn, T.W.; Grey, D.C.; Donald, D.G.M.
Pretoria : South African Forestry Association.
South African forestry journal (151): p. 71-77. ill; 1989 Dec. Includes references.
Language: English

Descriptors: South Africa; Fertilizers; Forest soils; Computer software

101 NAL Call No: 290.9 AM32P
Evaluation of an expert system to diagnose sprayer.
Han, Y.J.; Christenbury, G.D.; Wolak, F.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (90-7558): 9 p.; 1990. Paper presented at the "1990 International Winter Meeting sponsored by the American Society of Agricultural Engineers," December 18-21, 1990, Chicago, Illinois. Includes references.
Language: English

Descriptors: Sprayers; Expert systems; Maintenance; Problem analysis

102 NAL Call No: S530.A4
An evaluation of farm management and agricultural marketing microcomputer-assisted instruction in training vocational agriculture instructors.

Trede, L.D.; Russell, D.H.; Miller, W.W.
Gainesville, Fla. : The Association.
The Journal of the American Association of Teacher Educators in Agriculture v. 26 (3): p. 12-18; 1985. Includes references.

Language: English

Descriptors: Farm management; Marketing; Computer assisted instruction; Vocational training; Microcomputers

103 NAL Call No: S494.5.D3I5 1988
Evaluation of the expert systems GOSSYM-COMAX under Texas conditions.

Childers, R.E.; Metzer, R.B.; Parnell, C.B.; Akins, D.C.
Gainesville : Florida Cooperative Extension Service, IFAS, Univ. of Florida, [1988?].
Proceedings of the 2nd International Conference on Computers in Agricultural Extension Programs Fedro S. Zazueta, A.B. (Del) Bottcher, eds. p. 267-272; 1988 Feb. Conference held February 10-11, 1988 at the Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, Orlando, Florida. Includes references.
Language: English

Descriptors: Texas; Gossypium hirsutum; Crop production; Expert systems

104 NAL Call No: QH540.N3
Evolution of a decision support system for reservoir operations: Manitoba Hydro case study.

Simonovic, S.P.; Grahovac, J.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 485-526; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Manitoba; Water reservoirs; Water management; Computer simulation; Simulation models; Computer graphics; Decision making; Expert systems; Hydroelectric schemes

105 NAL Call No: 423.9 EN8
Evolution of pesticide resistance in predator/prey systems.
Tabashnik, B.E.
College Park, Md. : The Society.
Bulletin of the Entomological Society of America v. 32 (3): p. 156-161; 1986. Includes references.
Language: English

Descriptors: Insect pests; Predators of insect pests; Insecticide resistance; Natural enemies; Evolution; Computer simulation; Simulation models; Population dynamics

106 NAL Call No: S494.5.D3I57 1988
Excursion 3: arable farming and horticulture--computer-aided fertilization planning.

Kurpjuweit, H.
Frankfurt am Main : Deutsche Landwirtschafts-Gesellschaft (DLG).
Knowledge based systems in agriculture : prospects for application : Frankfurt a. M., Bad Soden, June 19-22, 1988 / editor: Deutsche Landwirtschafts-Gesellschaft, Frankfurt am Main. p. 205-206; 1988.

Language: English

Descriptors: Arable farming; Horticulture; Fertilizer requirement determination; Computer techniques

107 NAL Call No: 290.9 AM32P
EXNUT, an expert system for peanut production.
Davidson, J.I. Jr; Butts, C.L.; Parker, S.; Jones, C.A.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (90-7557): 14 p.; 1990. Paper presented at the "1990 International Winter Meeting sponsored by the American Society of Agricultural Engineers," December 18-21, 1990, Chicago, Illinois. Includes references.
Language: English

Descriptors: Georgia; Arachis hypogaea; Crop production; Expert systems

108 NAL Call No: Q180.55.M4C65 1989
Experimentation in machine discovery.

Kulkarni, D.; Simon, H.A.
San Mateo, Calif. : Morgan Kaufmann Publishers.
Computational models of scientific discovery and theory formation / edited by Jeff Shrager and Pat Langley. p. 255-274; 1990. (The Morgan Kaufmann series in machine learning). Includes references.

Language: English

Descriptors: Expert systems; Computer analysis; Theory; Physical chemistry; Experiments; Biochemistry; Chemical reactions

109 NAL Call No: aZ733.N3A54
Expert advisory systems loaded on ALF.

Waters, S.T.; Schneider, K.
Beltsville, Md. : The Library.
Agricultural libraries information notes - National Agricultural Library (U.S.), Science and Education Administration, U.S. Department of Agriculture v. 15 (1): p. 2-3; 1989 Jan.
Language: English

Descriptors: Maryland; Experts; Computer software; Telecommunications; Agricultural education

110 NAL Call No: FICHE S-72
Expert potentiometric surface modification for groundwater contaminant management.

Ward, R.L.; Peralta, R.C.; Brasher, J.R.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-5023): 21 p.; 1987. Paper presented at the 1987 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Computer applications; Experts; Systems; Optimization; Programs; Groundwater pollution

111 NAL Call No: 290.9 AM32P
Expert selection of Midwest agricultural best management practices.

Engel, B.A.; Srinivasan, R.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (90-7023): 7 p.; 1990. Paper presented at the "1990 International Summer Meeting" sponsored by the American Society of Agricultural Engineers, June 24-27, Columbus, OH. Includes references.
Language: English

Descriptors: Erosion control; Soil management; Expert systems

112 NAL Call No: 290.9 AM32P

Expert system for aerial spray drift.

Saputro, S.; Smith, D.B.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (90-1018): 31 p.; 1990. Paper presented at the "1990 International Summer Meeting," June 24-27, 1990, Columbus, Ohio. Includes references.
Language: English

Descriptors: Drift; Herbicides; Aerial application; Aerial spraying; Expert systems

113 NAL Call No: 290.9 AM32T
Expert system for agricultural aerial spray drift.
Saputro, S.; Smith, D.B.; Shaw, D.R.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Transactions of the ASAE v. 34 (3): p. 764-772; 1991 May. Includes references.
Language: English

Descriptors: Aerial spraying; Crop damage; Drift; Expert systems; Herbicides; Pesticidal action; Simulation models
Abstract: An expert system for aerial spray drift and possible crop damage has been developed and tested. The user supplies 21 pieces of information regarding such things as the atomizer type, aircraft speed, meteorological conditions, type and amount of pesticide and the crop and its growth stage. The expert system calculates the expected drift deposit and the corresponding upper 95% confidence limit for a given downwind distance. The program also calculates the volumetric application rate and provides the user with a statement indicating whether or not a given application is likely to cause drift damage at the specified site. Nine of the 14 verification simulations yielded predicted drift deposits which were within +/- 3 fold of the reported drift deposits. The largest ratio between predicted/reported drift deposits was 3.79 and the smallest ratio was 0.215.

114 NAL Call No: FICHE S-72
An expert system for animal waste management.
Kalkar, S.; Goodrich, P.R.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-4540): 15 p.; 1986. Paper presented at the 1986 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Computer applications; Computer software;

Experts; Systems; Animal housing; Animal manures; Mechanical handling

115 NAL Call No: 290.9 AM32P
An expert system for barley management.

King, J.P.; Israeli, I.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-7041): 12 p.; 1989. Paper presented at the 1989 International Summer Meeting, June 25-28, 1989, Quebec, PQ, Canada. Includes references.
Language: English

Descriptors: Barley; Crop management; Ex
pert systems

116 NAL Call No: FICHE S-72
Expert system for crop parameterization for the WEPP model.
Deer-Ascough, L.A.; Weesies, G.A.; Ascough, J.C. II; Alberts, E.E.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (90-7016): 7 p.; 1990. Paper presented at the 1990 Summer Meeting of the ASAE held June 24-27, 1990, Columbus, OH. Includes references.
Language: English

Descriptors: Water erosion; Prediction; Simulation models; Cropping systems; Vegetables; Expert systems; Agronomic characteristics;

Languages

117 NAL Call No: QA76.76.E95A5
An expert system for environmental screening.
Everitt, R.R.; Sutherland, G.D.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (4): p. 55-56; 1988.

Language: English

Descriptors: Environmental assessment; Resource management; Computer software; Screening; Program evaluation; Prototypes; Project appraisal

118 NAL Call No: ArUGB705.A8A26
no.141An expert system for managing an activated sludge wastewater treatment plant.

Parker, Sandra C.; Parker, David G.
Arkansas Water Resources Research Center

Fayetteville, Ark. : Arkansas Water Resources Research Center, University of Arkansas,; HI.F 3/242-7:P 8/141.
ii, 24 leaves ; 28 cm. (Publication (Arkansas Water Resources Research Center) ; no. 141.). Research project technical completion report, project G-1549-05. Financed in part by the U.S. Dept. of the Interior. June, 1989. Includes bibliographical references.

Language: English

Descriptors: Water quality-management; Water treatment plants; Sewage disposal plants; Sewage

119 NAL Call No: QD1.A45
An expert system for the formulation of agricultural chemicals.
Hohne, B.A.; Houghton, R.D.
Washington, D.C. : The Society.
ACS Symposium series - American Chemical Society (306): p. 87-97. ill; 1986. Includes 3 references.
Language: English

Descriptors: Pesticides; Formulations; Computers; Specialization; Decision making

120 NAL Call No: QA76.76.E95A5
An expert system to aggregate biophysical attributes of a forested landscape within a geographic information system.
Coughlan, J.C.; Running, S.W.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (4): p. 35-43. ill; 1989. Includes references.
Language: English

Descriptors: Forests; Landscape; Ecosystems; Simulation; Models; Databases; Geography; Information services; Experts; Systems

121 NAL Call No: 290.9 AM32P
An expert system to aid in herbicide application decisions in Arkansas rice production.

VanDevender, K.W.; Costello, T.A.; Ferguson, J.A.; Smith, R.J. Jr; Huey, B.A.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-4044): 16 p.; 1989. Paper written for presentation at the 1989 International Summer Meeting American Society of Agricultural Engineering and the Canadian Society of Agricultural Engineering, June 25-28, 1989, Quebec Canada. Includes references.
Language: English

Descriptors: Arkansas; Oryza sativa; Crop production; Weed

control; Herbicides; Application date; Expert systems

122 NAL Call No: S494.5.D3C652
An expert system to elicit risks preferences: the futility of utility revisited.

Cochran, M.J.; Zimmel, P.; Goh, S.C.; Stone, N.D.; Toman, T.W.; Helms, G.L.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 4 (4): p. 361-375; 1990 Mar. Includes references.
Language: English

Descriptors: U.S.A.; Computer software; Risks; Assessment; Utility functions; Bias; Decision making; Gossypium hirsutum

123 NAL Call No: FICHE S-72
Expert system to evaluate suitability of creams--WT applications.

Heatwole, C.D.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-2572): 10 p.; 1987. Paper presented at the 1987 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Simulation models; Water resource management; Watersheds; Application

124 NAL Call No: 290.9 AM32T
Expert system-based coupling of SOYGRO and DRAINMOD.
Perry, C.D.; Thomas, D.L.; Smith, M.C.; McClendon, R.W.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Transactions of the ASAE v. 33 (3): p. 991-997. maps; 1990 May. Includes references.
Language: English

Descriptors: Georgia; Glycine max; Growth; Crop production; Drainage; Irrigation; Simulation models

125 NAL Call No: 281.8 C16
Expert systems and farm management.

Evans, M.; Mondor, R.; Flaten, D.
Ottawa : Canadian Agricultural Economics and Farm Management Society.

Canadian journal of agricultural economics; Revue Canadienne d'economie rurale v. 37 (4pt.1): p. 639-666; 1989 Dec. Includes references.
Language: English

Descriptors: Manitoba; Grain; Fertilizer application; Computer analysis; Experts; Information systems; Decision making; Systems analysis; Program development

126 NAL Call No: S494.5.D3I5 1990
Expert systems applications in water quality control.
Robillard, P.D.
Gainesville, FL : Florida Cooperative Extension Service, University of Florida.
Proceedings of the 3rd International Conference on Computers in Agricultural Extension Programs / Fedro S. Zazueta, editor. ; January 31-February 1, 1990, Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, FL. p. 349-354; 1990. Includes references.
Language: English

Descriptors: U.S.A.; Water quality; Quality controls; Expert systems

127 NAL Call No: GB611.A3
"Expert systems" as an appropriate computer technique to speed up agricultural desert development in Egypt.

Rafea, A.A.; El-Beltagy, A.S.
Chur, Switzerland : Harwood Academic Publishers.
Advances in desert and arid land technology and development v. 5: p. 47-58; 1991. In series analytic: Desert Development, Part 1: Desert Agriculture, Ecology and Biology / edited by A. Bishay and H. Dregne. Proceedings of the Second International Desert Development Conference, held Jan 25-31, 1987, Cairo, Egypt. Includes references.
Language: English

Descriptors: Egypt; Deserts; Agricultural development; Reclamation; Expert systems; Computer techniques

128 NAL Call No: FICHE S-72
Expert systems development stages: double cropping as an example.

Halterman, S.T.; Barrett, J.R.; Swearingin, M.L.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-4516): 15 p.; 1986. Paper presented at the 1986 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes

references.
Language: English

Descriptors: Experts; Systems; Decision making; Computer applications; Double cropping; Triticum; Winter wheat; Glycine max

129 NAL Call No: QD1.A45 no.431
Expert systems for environmental applications.
Hushon, Judith M.
American Chemical Society, Division of Chemical Information, American Chemical Society, Meeting_1989 :_Miami Beach, Fla.)
Washington, DC : American Chemical Society,.
viii, 232 p. : ill. ; 24 cm. (ACS symposium series, 431).
Developed from a symposium sponsored by the Division of Chemical Information at the 198th National Meeting of the American Chemical Society, Miami Beach, Florida September 10-15, 1989. Includes bibliographical references and indexes.
Language: English

Descriptors: Environmental monitoring; Data processing; Congresses; Expert systems (Computer science); Congresses; Microcomputers; Congresses

130 NAL Call No: T57.6.A1I5
no.RR-91-19Expert systems for environmental screening an application in the Lower Mekong Basin.

Fedra, K.; Winkelbauer, L.; Pantulu, Vedurumudi R.
International Institute for Applied Systems Analysis
Laxenburg, Austria : International Institute for Applied Systems Analysis,.
xi, 169 p. : ill. (some col.), maps ; 24 cm. November 1991.
RR-91-19. Includes bibliographical references (p. 161-169).

Language: English; English

Descriptors: Environmental monitoring; Environmental impact analysis

131 NAL Call No: QA76.76.E95A5
Expert systems for geographic information systems in resource management.

Robinson, V.B.; Frank, A.U.; Karimi, H.A.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 1 (1): p. 47-56. ill; 1987. Includes references.
Language: English

Descriptors: U.S.A.; Natural resources; Resource management; Geography; Information systems; Mapping; Computer software

132 NAL Call No: QA76.76.E95A5
Expert systems for natural resource models.
Ritchie, J.C.; Engman, E.T.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (2/3): p. 57-58; 1988. Includes references.
Language: English

Descriptors: Western states of U.S.A.; Natural resources; Rangelands; Land use; Plant production; Simulation models; Meltwater; Runoff; Water; Computer software

133 NAL Call No: TC823.P52
Expert systems water management: a demonstration.
Strzepek, K.M.; Berkowitz, L.; Eaton, L.
New York, N.Y. : The Society.
Planning now for irrigation and drainage in the 21st century : proc of a conference : Lincoln, Nebraska, July 18-21, 1988 / sponsored by the Irrig and Drain Div of the American Soc of Civil Engineers ; edited by D.R. Hay. p. 544-552; 1988. Includes references.
Language: English

Descriptors: Water management; Wells; Computer software; Demonstrations

134 NAL Call No: QA76.9.C65S95 1989
Farm application of the model-based-reasoning system GOSSYM/COMAX.

Landivar, J.A.; Wall, G.W.; Siefker, J.H.; Baker, D.N.; Whisler, F.D.; McKinion, J.M.
San Diego, CA : The Society.
Proceedings of the 1989 Summer Computer Simulation Conference : July 24-27, 1989, the Stouffer Austin Hotel, Austin, Texas / edited by Joe K. Clema ; conference sponsor, the Society for Computer Simulation. p. 688-694; 1989. Includes references.

Language: English

Descriptors: Gossypium hirsutum; Crop production; Plant physiology; Phenology; Equations; Computer simulation; Simulation models; Growth models
Abstract: The GOSSYM/COMAX system, a decision aid for cotton crop management, has been tested over the last five years on research and commercial farms across the cotton belt of the United States. GOSSYM simulates the major biotic and abiotic processes which influence growth, development and yield of cotton. Phenological and physiological rate equations derived from Soil-Plant-Atmosphere-Research (SPAR) experimental databases are crucial to the model development process. COMAX is an expert system environment that provides data management and a user friendly interface to GOSSYM. GOSSYM/COMAX is more properly called a model-based-reasoning system rather than an expert system. This is due primarily to COMAX's use of rules

to control its operation while the important knowledge about cotton resides in GOSSYM. The rules used by COMAX contain the expert knowledge of the model builders on how to use GOSSYM and how to interpret the model results. The belt-wide farm management test has provided useful information on designing an enhanced user interface and developing improved rules to optimize management inputs.

135 NAL Call No: 57.8 SO4
Fertilizer 'expert' available, personal computer wanted].
Maran, L.R.
St. Louis, Mo. : Solutions Magazine.
Solutions v. 34 (3): p. 54-56. ill; 1990 Mar.
Language: English

Descriptors: Soil fertility; Weed control; Computer software; Microcomputers; Decision making

136 NAL Call No: 275.29 F66C
Forestry information system. 6. Silvicultural practices.
Munson, K.; Watts, J.; Dippon, D.; Flinchum, M.
Gainesville, Fla. : The Service.
Circular - Florida Cooperative Extension Service (632): 20 p.; 1985. Includes references.
Language: English

Descriptors: Pinus; Silviculture; Computer software; Fertilizer application

137 NAL Call No: SB610.W39
Format of a weed control database.

Mueller-Warrant, G.W.
Champaign, Ill. : The Society.
Weed technology : a journal of the Weed Science Society of America v. 5 (1): p. 221-228; 1991 Jan. Includes references.
Language: English

Descriptors: Weed control; Chemical control; Herbicides; Databases; Computer software; Decision making; Microcomputers; Mathematical models; Equations; Application rates; Growth stages

138 NAL Call No: QA76.76.E95A5
Formation and use of intermediate inferences in advisory systems: a herbicide example.

Thomson, A.J.; Williamson, D.R.
Moscow, Idaho : AI Applications.
AI applications v. 6 (4): p. 29-37; 1992. Includes references.

Language: English

Descriptors: Forests; Herbicides; Selection; Expert systems

139 NAL Call No: HD1.A3
A framework for crop growth simulation model applications.
Thornton, P.K.; Dent, J.B.; Bacsi, Z.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 37 (4): p. 327-340; 1991. Includes references.
Language: English

Descriptors: Maize; Wheat; Soybeans; Peanuts; Technology transfer; Computer software; Growth models; Simulation models; Farm inputs; Weather data; Soil; Field size; Varieties; Fertilizers; Irrigation; Timing; Establishment

140 NAL Call No: SB249.N6
Generating historical weather files for GOSSYM/COMAX in Texas.
Akins, D.; Parnell, C.B. Jr
Memphis, Tenn. : National Cotton Council of America.
Proceedings - Beltwide Cotton Conferences (Book 1): p. 153-156; 1989. Meeting held on January 2-7, 1989, Nashville, Tennessee. Includes references.
Language: English

Descriptors: Texas; Gossypium hirsutum; Weather data; Growth models; Expert systems

141 NAL Call No: QH540.N3
The German water authorities needs for computer-aided support systems.

Muller, N.; Hahn, H.H.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 295-304; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: German federal republic; Water resources; Water management; Decision making; Computer simulation; Simulation models; Planning; Computer software; Legislation

142 NAL Call No: QH540.N3
Getting someone to use the systems: lessons from HEC.
Ford, D.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p.

251-266; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Water resources; Water management; Hydrology; Computer simulation; Simulation models; Public agencies; Computer software; Research institutes

143 NAL Call No: SB249.N6
GOSSYM/COMAX evaluation in Texas.

Childers, R.E.; Metzer, R.B.; Parnell, C.B.; Akins, D.C.
Memphis, Tenn. : National Cotton Council and The Cotton Foundation.
Proceedings - Beltwide Cotton Production Research Conferences. p. 155-158. ill; 1988. Conference held on January 3-8, 1988, New Orleans, Louisiana. Includes references.

Language: English

Descriptors: Texas; Gossypium; Computer simulation; Experts; Systems; Plants; Growth; Crop yield; Lint; Prediction; Nitrogen fertilizers; Irrigation

144 NAL Call No: 4 AM34P
HERB: decision model for postemergence weed control in soybean.
Wilkerson, G.G.; Modena, S.A.; Coble, H.D.
Madison, Wis. : American Society of Agronomy.
Agronomy journal v. 83 (2): p. 413-417; 1991 Mar. Includes references.
Language: English

Descriptors: Glycine max; Weed control; Chemical control; Decision making; Economic thresholds; Herbicides; Computer software; Microcomputers; Crop yield; Yield losses; Crop weed competition; Returns Abstract: To efficiently use postemergence herbicides, decision makers must determine when weed populations exceed economic treatment thresholds. An interactive microcomputer program named HERB has been developed to help evaluate potential crop damage from multi-species weed complexes in soybean [Glycine max (L.) Merr.] and determine the appropriate course of action. Seventy-six weed species were rated on a scale of zero to 10 according to their competitiveness with soybean. Potential yield loss is estimated from these rankings, the number of weeds of each species present in the field, and expected weed-free yield. The recommendation whether to apply a herbicide and, if so, which one, is based on herbicide cost and efficacies under different conditions and expected soybean selling price. Alternative herbicide choices are ranked according to expected

net return. HERB is intended to provide the latest research information in an organized and easily usable format. The approach should be applicable to other crops and pests.

145 NAL Call No: S494.5.D3C652
HERBICIDE ADVISOR: a decision support system to optimise atrazine and chlorsulfuron activity and crop safety.

Ferris, I.G.; Frecker, T.C.; Haigh, B.M.; Durrant, S.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 6 (4): p. 295-317; 1992 Jan. Includes references.
Language: English

Descriptors: Australia; Atrazine; Chlorsulfuron; Computer software; Simulation models; Weather forecasting; Expert systems; Efficiency; Safety; Flow charts; Databases; Extension; Decision making

146 NAL Call No: 57.8 C734
How much does recycling reduce the waste stream?.
Patterson, G.E.
Emmaus, Pa. : J.G. Press.
BioCycle v. 31 (7): p. 46-49; 1990 Jul. Includes references.
Language: English

Descriptors: Washington; Recycling; Wastes; Waste disposal; Computer assisted instruction; Data collection

147 NAL Call No: T57.6.A1I5 no.87-12
A hybrid approach to information and decision support systems hazardous substances and industrial risk management.

Fedra, K.
Laxenburg, Austria : International Institute for Applied Systems Analysis,.
iii, p. 169-175 : ill. ; 30 cm. (Research reports / International Institute for Applied Systems Analysis ; RR-87-12). June 1987. Reprinted from Economics and Artificial Intelligence (forthcoming)., Pergamon Books, Ltd.
Bibliography: p. 173.
Language: English

148 NAL Call No: 290.9 AM32P
HyperCard instruction system for drinking water quality.
Makuch, J.R.; Robillard, P.D.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (90-7001): 12 p.; 1990. Paper presented at The 1990 International Summer Meeting sponsored by the American Society of Agricultural Engineers, June 24-27, 1990, Columbus Ohio. Includes references.
Language: English

Descriptors: Water quality; Drinking water; Computer assisted instruction

149 NAL Call No: QA76.76.E95A5
IMPACT: an expert system for environmental impact assessment.
Loehle, C.; Osteen, R.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 4 (1): p. 35-43. ill; 1990. Includes references.
Language: English

Descriptors: South Carolina; Environmental impact reporting; Environmental assessment; Wetlands; Wildlife; Habitats; Experts; Systems; Environmental pollution

150 NAL Call No: QH540.N3
Implementing a computer-aided support system for water resources research and management.

Barritt-Flatt, P.E.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 87-96; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Water management; Computer analysis; Computer hardware; Computer software

151 NAL Call No: QH540.N3
Implementing a decision support system for operations planning at Manitoba Hydro.

Barritt-Flatt, P.E.; Cormie, A.D.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 357-374; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Manitoba; Water resources; Water management; Hydroelectric schemes; Decision making; Simulation models; Computer simulation; Computer software

152 NAL Call No: 79.9 W52
Improving chemical applications statewide: an on-going program conducted by the Montana Cooperative Extension Service to improve chemical applications at the field level.

Howard, H.S.; Nelson, J.E.
Reno : The Society.
Proceedings - Western Society of Weed Science v. 39: p. 51-54; 1986. Paper presented at the annual meeting of the Western Society of Weed Science, March 18-20, 1986, San Diego, California.
Language: English

Descriptors: Montana; Pesticides; Application methods; Spraying equipment; Calibration; Training; Computer software

153 NAL Call No: S494.5.D3C68 1992
Information requirements and critical success factors for corn/soybean decision support systems.

Barrett, J.R.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 147-152; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Maize; Glycine max; Information systems; Decision making

154 NAL Call No: HD1.A3
An integrated expert decision support system for agricultural management.

Plant, R.E.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 29 (1): p. 49-66. ill; 1989. Includes references.

Language: English

Descriptors: Crop management; Computer software; Microcomputers; Decision making; Integrated methods; Support systems; Structure; Data collection; Cotton

155 NAL Call No: S539.5.J68
An integrated systems approach to potato crop management.
Connell, T.R.; Koenig, J.P.; Stevenson, W.R.; Kelling, K.A.;

Curwen, D.; Wyman, J.A.; Binning, L.K.
Madison, Wis. : American Society of Agronomy.
Journal of production agriculture v. 4 (4): p. 453-460; 1991 Oct. Includes references.

Language: English

Descriptors: Wisconsin; Solanum tuberosum; Cultivars; Crop management; Integrated systems; Integrated pest management; Integrated control; Weed control; Insect control; Plant disease control; Irrigation; Ammonium nitrate; Pesticides; Productivity; Production costs; Returns; Crop yield; Environmental impact; Emergence; Irrigation scheduling; Computer software; Computer analysis; Monitoring; Petioles; Plant analysis; Nitrate; Agricultural chemicals; Environmental factors

156 NAL Call No: QH540.N3
Integrating database, spreadsheet, graphics, GIS, statistics, simulation models and expert systems: experiences with the RAISON system on microcomputers.

Lam, D.C.L.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 429-459; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Water management; Computer software; Computer graphics; Databases; Computer simulation; Simulation models; Expert systems; Microcomputers

157 NAL Call No: 290.9 AM32P
Integrating geographical information & decision support systems to evaluate potential groundwater contamination.

Ascough, J.C. II; Deer, L.A.; Engel, B.A.; Monke, E.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-7608): 19 p.; 1989. Paper presented at the 1989 International Winter Meeting of the American Society of Agricultural Engineers, December 12-15, 1989, New Orleans, Louisiana. Includes references.
Language: English

Descriptors: Groundwater pollution; Expert systems; Decision making; Models

158 NAL Call No: 290.9 AM32T
Integrating multiple knowledge sources.

Engel, B.A.; Beasley, D.B.; Barrett, J.R.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Transactions of the ASAE v. 33 (4): p. 1371-1376; 1990 Jul.
Includes references.
Language: English

Descriptors: Erosion; Simulation models; Expert systems
Abstract: A knowledge engineering tool, MKSMART (Multiple Knowledge Source Management And Reasoning Tool), was developed for building applications that use a blackboard architecture. MKSMART is useful for applications such as constructing knowledge-based decision support systems that use multiple knowledge sources, developing blackboard-like systems, and constructing systems that require the coupling of numeric and symbolic reasoning. To demonstrate MKSMART's capabilities, a decision support program for estimating soil erosion losses was developed. The advantages over traditional modeling techniques include use of the optimal knowledge representation and reasoning paradigm, integration of diverse types of knowledge, and modular program structure.

159 NAL Call No: FICHE S-72
Integrating water resource tools: process models, geographic information systems and expert systems.

Heatwole, C.D.; Dillaha, T.A.; Mostaghimi, S.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 87-2043): 12 p.; 1987. Paper presented at the 1987 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Water resources; Water management; Geography; Information services; Experts; Systems; Integration

160 NAL Call No: QH540.E288
Intelligent geographic information systems for natural resource management.

Coulson, R.N.; Lovelady, C.N.; Flamm, R.O.; Spradling, S.L.; Saunders, M.C.
New York, N.Y. : Springer-Verlag.
Ecological studies : analysis and synthesis v. 82: p. 153-172; 1991. In the series analytic: Quantitative Methods in Landscape Ecology: the Analysis and Interpretation of Landscape Heterogeneity / edited by Monica G. Turner and

Robert H. Gardner. Includes references.
Language: English

Descriptors: Landscape ecology; Natural resources; Management; Geography; Information systems; Problem solving; Decision making; Computer techniques

161 NAL Call No: QH540.N3
Intelligent geo-information systems (IGIS) for water resources planning and management.

Arnold, U.; Rouve, G.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 45-85; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Water management; Expert systems; Planning; Decision making; Computer hardware

162 NAL Call No: 290.9 AM32P
Intelligent optimization for a barley management expert system.
Broner, I.; Comstock, C.S.; Parente, A.C.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (90-7013): 12 p.; 1990. Paper presented at The 1990 International Summer Meeting sponsored by the American Society of Agricultural Engineers, June 24-27, 1990, Columbus Ohio. Includes references.
Language: English

Descriptors: Barley; Expert systems

163 NAL Call No: S494.5.D3C68 1992
Interactive needs documentation for unsewered communities.
Dux, D.L.; Jones, D.D.; Krause, A.E.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 286-290; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Sewage; Waste water treatment; Decision making;

164 NAL Call No: QH540.N3
The interface between GIS and hydrology.

Wallis, J.R.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 189-197; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Hydrology; Water management; Computer simulation; Simulation models; Computer hardware; Computer graphics; Computer software

165 NAL Call No: FICHE S-72
Knowledge acquisition: a case history of an insect control expert system.

Jones, P.; Jones, J.W.; Everett, P.A.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-5041): 19 p. ill; 1986. Paper presented at the 1986 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.

Language: English

Descriptors: Glycine max; Insect pests; Insecticide application; Spraying; Experts; Systems; Computer software; Models

166 NAL Call No: QA76.76.E95A5
Knowledge acquisition for a crop-plot suitability expert system.
Nevo, A.; Amir, I.; Dag, J.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 4 (3): p. 53-57. ill; 1990. Includes references.
Language: English

Descriptors: Field crops; Land use; Farm planning; Expert systems; Knowledge; Acquisition; Graphs

167 NAL Call No: S494.5.D3C68 1992
A knowledge-base for the detection of lead contamination in drinking water.

Rhykerd, L.M.; Engel, B.A.; Urban, C.; Dalessandro, J.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 740-745; 1992. (ASAE publication ; 1-92). Includes references.
Language: English

Descriptors: Drinking water; Lead poisoning; Detection; Expert systems

168 NAL Call No: 286.8 N47M
Knowledge-based decision support systems: a background to expert systems.

Colomb, R.M.
Pyrmont : N.S.W. Dept. of Agriculture, Division of Marketing and Economic Services.
Review of marketing and agricultural economics v. 55 (2): p. 162-166; 1987 Aug. Includes references.
Language: English

Descriptors: Pest control; Experts; Decision making; Computer software; Knowledge

169 NAL Call No: QA76.76.E95A5
A knowledge-based information retrieval system for Florida aquatic weed control.

Li, L.; Beck, H.; Peart, R.M.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 4 (2): p. 33-40. ill; 1990. Includes references.
Language: English

Descriptors: Florida; Aquatic weeds; Weed control; Information retrieval; Systems; Semantics; Models; Herbicide application; Computer applications

170 NAL Call No: 290.9 AM32P
Knowledge-based interface for improved use of models as management tools.

Heatwole, C.D.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (90-2642): 11 p.; 1990. Paper presented at the "1990 International

Winter Meeting", December 18-21, 1990, Chicago, Illinois. Includes references.
Language: English

Descriptors: Groundwater; Water quality; Simulation models; Expert systems

171 NAL Call No: S671.A66
Knowledge-based system for environmental design of stream modifications.

Shields, F.D. Jr; Aziz, N.M.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Applied engineering in agriculture v. 8 (4): p. 553-562; 1992 Jul. Includes references.
Language: English

Descriptors: Watershed management; Streams; Modification; Expert systems; Erosion control; Flood control
Abstract: A knowledge-based, microcomputer software package was developed for preliminary selection of environmental features for use with streambank protection projects, straightened and enlarged channels, and flood control levees. The system contains a module for each of the three major alteration types: bank protection, levees, and channels. Each module queries the user for information regarding environmental factors to be protected and a description of the project setting, with the internal logic configured to minimize the number of questions asked. System output consists of a list of environmental design features suitable for the specific location and descriptive information. Help screens explain why certain questions are asked, define terms, and suggest responses or sources of information. At the conclusion of a consultation, additional help screens may be displayed that provide a discussion of each recommended feature, a list of existing projects that incorporate the feature, and a bibliography. The streambank protection module screens a master list of 20 methods based on the dominant erosion mechanisms operative at the project site, and the channel module performs a rough channel stability assessment using regime equations. The latest version of the software aids in feature selection, but does not design channel alterations. However, the software interfaces with routines that perform basic hydraulic computations (e.g., composite roughness, normal depth, riprap size) for steady flow in order to allow users to quickly evaluate feasibility of in-channel environmental features. A survey of users indicated that the package has been used by entry-level and experienced professionals to perform a limited range of specialized tasks. Seventy-four percent of the users described the software as a useful instrument for planning and preliminary design.

172 NAL Call No: 275.8 AG8
Landscaping with microcomputers.

Harris, C.
Henry, Ill. : The Magazine.
The Agricultural education magazine v. 64 (8): p. 5-7, 17; 1992 Feb.
Language: English

Descriptors: Landscaping; Agricultural education; Computer assisted instruction; Computer techniques

173 NAL Call No: S671.A66
Maize: a decision support system for management of field corn.
Heinemann, P.H.; Calvin, D.D.; Ayers, J.; Carson, J.M.; Curran, W.S.; Eby, V.; Hartzler, R.L.; Kelley, J.G.W.; McClure, J.; Roth, G.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Applied engineering in agriculture v. 8 (3): p. 407-414; 1992 May. Includes references.

Language: English

Descriptors: Zea mays; Crop management; Support systems; Decision making; Computer techniques
Abstract: A decision support system was developed to assist county agents, consultants, and farmers with the management of field corn (maize). The program includes production and post-harvest recommendations. Management recommendations in the production season section are primarily based on several experts' experience and knowledge. A combination of knowledge-based approaches and numerical optimization techniques are used in the post-harvest section for identifying and evaluating potential storage sites stored grain insect diagnosis and control, and optimal bin number and size for high- and low-temperature grain drying. The program is currently being used in the field by crop management association technicians and extension personnel who assist farmers with management decisions.

174 NAL Call No: 290.9 AM32T
Malting barley water and nutrient management knowledge-based system.

King, J.P.; Broner, I.; Croissant, R.L.; Basham, C.W.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Transactions of the ASAE v. 34 (6): p. 2622-2630; 1991 Nov. Includes references.
Language: English

Descriptors: Hordeum vulgare; Malting barley; Crop management; Expert systems; Irrigation water; Nitrogen fertilizers; Phosphorus fertilizers Abstract: A knowledge-based system for malting barley management was developed. The system gives advice on fertilizer and water applications to

maximize crop yield under strict quality constraints. An uncertainty handling routine based on fuzzy set theory was implemented to resolve conflicts between two sources of evidence on which the decisions are based. Initial testing of the fertilizer module revealed disagreement between the knowledge-based system recommendation and field agronomists' recommendations. However, in many cases the knowledge-based system recommendation was more reliable than the human expert.

175 NAL Call No: TD427.N5M3
Management systems on personal computer and videotex to reduce impacts of nitrates.

Wimmer, P.; Mangstl, A.; Reiner, L.
New York : Elsevier Applied Science.
Management systems to reduce impact of nitrates / edited by J.C. Germon ; assisted by S. Dupain. p. 236-252. ill; 1989.
Includes references.

Language: English

Descriptors: Nitrates; Groundwater pollution; Fertilizer requirement determinatio; Growth models; Simulation models

176 NAL Call No: MdULD3231.M70d
Swartz, D.G.A marine recreational fisheries decision support system.
Swartz, David G.
University of Maryland at College Park, Dept. of Agricultural and Resource Economics
1991.
viii, 205 leaves : ill. ; 29 cm. Thesis research directed by Dept. of Agricultural and Resource Economics. Includes bibliographical references (leaves 178-182).
Language: English

Descriptors: Fishery management; Fishing

177 NAL Call No: HC79.E5E5
A method of approach to landscape stability. 2. Ecooptimization of experimental territorial landscape segment in Bohemian Forest.
Skopek, V.; Sterbacek, Z.; Vachal, J.
New York, N.Y. : Springer-Verlag.
Environmental management v. 15 (2): p. 215-225; 1991 Mar.
Includes references.
Language: English

Descriptors: Czechoslovakia; Watersheds; Landscape ecology; Optimization; Surface water; Water pollution; Farming; Forestry; Expert systems; Site types

178 NAL Call No: 290.9 AM32T

A microcomputer model for design of agricultural stormwater management systems in Florida's flatwoods.

Stone, K.C.; Campbell, K.L.; Baldwin, L.B.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Transactions of the ASAE v. 32 (2): p. 545-550; 1989 Mar.
Includes references.
Language: English

Descriptors: Florida; Watershed management; Water management; Storms; Runoff water; Computer analysis; Models; Water composition and quality; Hydrology

179 NAL Call No: TD223.1.C4 1986
Microcomputer software for education in groundwater contamination.

Appling, J.
University Park, PA : Northeast Regional Center for Rural Development.
Chautauqua groundwater workshop for extension agents : proceedings of the workshop held at the Chautauqua Institution, Chautauqua, New York, May 7-9, 1986 / editor, Althea Rudd. p. 136-137; 1987 Jan. (Northeast Regional Center for Rural Development publication ; no. 48).

Language: English

Descriptors: Groundwater pollution; Community education; Educational methods; Computer applications; Computer software

180 NAL Call No: 290.9 AM32T
Modvex: MOdel Development and Validation EXpert system phase I: validation.

McKinion, J.M.
St. Joseph, Mich. : The Society.
Transactions of the ASAE - American Society of Agricultural Engineers v. 30 (4): p. 1126-1130; 1987 Jul. Includes references.
Language: English

Descriptors: Simulation models; Crop yield

181 NAL Call No: S539.5.A77
MOUSE: a management model for evaluating groundwater contamination from diffuse surface sources aided by computer graphics.
Steenhuis, T.S.; Pacenka, S.; Porter, K.S.
New York : Springer.
Applied agricultural research v. 2 (4): p. 277-289; 1987.
Includes references.

Language: English

Descriptors: Groundwater pollution; Computer software; Computer graphics; Microcomputers

182 NAL Call No: QH540.N3
Multidimensional modeling for water resources management.
Camara, A.S.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 92-111; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Water resources; Water management; Computer simulation; Simulation models; Models; Computer graphics

183 NAL Call No: TD403.G7
OASIS: a graphical decision support system for ground-water contaminant modeling.

Newell, C.J.; Haasbeek, J.F.; Bedient, P.B.
Dublin, Ohio : Water Well Journal Publishers.
Ground water v. 28 (2): p. 224-234. maps; 1990 Mar. Includes references.
Language: English

Descriptors: Groundwater; Contaminants; Models; Support systems; Computer software; Databases; Expert systems

184 NAL Call No: QA76.76.E95A5
OASIS: an intelligent water management system for South Florida.
Goforth, G.F.; Floris, V.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 5 (1): p. 47-65. maps; 1991. Includes references.
Language: English

Descriptors: Florida; Water management; Systems; Decision making; Models; Knowledge; Acquisition

185 NAL Call No: 290.9 AM32P
On site waste water system tutorial.

Strickland, R.M.; Jones, D.D.; Yahner, J.E.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-5523):

5 p.; 1989. Paper presented at the "1989 International Winter Meeting sponsored by The American Society of Agricultural Engineers," December 12-15, 1989, New Orleans, Louisiana.
Language: English

Descriptors: Waste water; Computer assisted instruction

186 NAL Call No: S494.5.D3I5 1988
Padfert--A computerised aid to whole farm fertiliser management.
Ada, R.; Vance, P.
Gainesville : Florida Cooperative Extension Service, IFAS, Univ. of Florida, [1988?].
Proceedings of the 2nd International Conference on Computers in Agricultural Extension Programs Fedro S. Zazueta, A.B. (Del) Bottcher, eds. p. 52-57; 1988 Feb. Conference held February 10-11, 1988 at the Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, Orlando, Florida. Includes references.
Language: English

Descriptors: Australia; Fertilizers; Farm management; Computer techniques

187 NAL Call No: QA76.76.E95A5
Partial survey of expert support systems for agriculture and natural resource management.

Lambert, D.K.; Wood, T.K.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (2): p. 41-52; 1989. Bibliography.
Language: English

Descriptors: Farming systems; Computer software; Farm management; Natural resources; Resource management; Surveys

188 NAL Call No: TD746.N37 1984
Personal computer program to design onsite waste treatment systems.

Jones, D.D.; Yahner, J.E.; Black, R.E.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Proceedings of the Fourth National Symposium on Individual and Small Community Sewage Systems : December 10-11, 1984, Hyatt Regency New Orleans, New Orleans, Louisiana. p. 20-29; 1985. (ASAE publication ; 07-85). Includes 12 references.
Language: English

Descriptors: Waste disposal; Treatment; Computer applications

189 NAL Call No: SB950.A2B74

Pest advisory packages and their development for a Viewdata system.

Mann, B.; Wratten, S.D.; Jepson, P.
Surrey : British Crop Protection Council.
Brighton Crop Protection Conference-Pests and Diseases v. 3: p. 1027-1034; 1986. Paper presented at the British Crop Protection Conference, Pests and Diseases, November 17-20, 1986, Brighton, England. Includes references.
Language: English

Descriptors: Cereals; Brassica; Insect control; Computer software; Insecticides

190 NAL Call No: S494.5.D3C652
PESTLAW: a hypertext book on pesticide legislation in the United Kingdom.

Warwick, C.J.; Mumford, J.D.; Norton, G.A.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 7 (1): p. 47-60; 1992 Apr. Includes references.
Language: English

Descriptors: Uk; Pesticides; Law; Computer software; Expert systems; Books; Reference works; Legislation; Flow charts

191 NAL Call No: QA76.76.E95A5
Planning expert system projects.

Stock, M.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (4): p. 9-16; 1988. Includes references.

Language: English

Descriptors: Natural resources; Resource management; Agricultural sciences; Computer software; Program development; Prototypes

192 NAL Call No: 243.9 IN84Q
Planning, forecasting and simulation models in agricultural advisory work.

Mangstl, A.; Troll, V.; Vogels, J.C.
Wageningen : The
Association.
Quarterly bulletin of the International Association of Agricultural Librarians and Documentalists; Bulletin trimestriel de l'Association Internationale des Bibliothecaires et Documentalistes Agricoles v. 36 (1/2): p. 32-35; 1991. Proceedings of the VIII World Congress of the International Association of Agricultural Librarians and

Documentalists: Information and the End User, May 28-31, 1990, Budapest, Hungary. Includes references.
Language: English

Descriptors: Nitrogen fertilizers; Nitrogen balance; Soil fertility; Herbicides; Weed control; Computer simulation; Simulation models; Expert systems; Agricultural planning; Forecasting

193 NAL Call No: FICHE S-72
Potential soil and water application of expert systems technology.

Clemmens, A.J.; Solomon, K.H.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-5038): 20 p.; 1986. Paper presented at the 1986 Summer Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Water management; Soil management; Knowledge; Diffusion of information; Experts; Systems

194 NAL Call No: QL461.I57
Programmed instructional materials for enhancing pest management teaching.

Barfield, C.S.; Strayer, J.R.; Andrews, K.L.
Oxford : Pergamon Press.
Insect science and its application v. 8 (4/5/6): p. 955-959; 1987. Recent Advances in Research on Tropical Entomology, Proceedings of the International Conference on Tropical Entomology, Nairobi, Kenya, 31 Aug-5 Sept 1986. Includes references.
Language: English

Descriptors: Pest control; Integrated pest management; Teaching materials; Programmed learning; Computer assisted instruction

195 NAL Call No: 286.8 N47M
A proposed expert system for the management of lucerne: LATIS.
Bishop, A.L.; Lodge, G.M.; Waterhouse, D.B.
Pyrmont : N.S.W. Dept. of Agriculture, Division of Marketing and Economic Services.
Review of marketing and agricultural economics v. 55 (2): p. 174-177; 1987 Aug. Includes references.
Language: English

Descriptors: Alfalfa; Pest control; Experts; Computer software; Decision making

196 NAL Call No: HD1.A3
Prospects for grass--clover swards in beef production systems: a computer simulation of the practical and economic implications.
Doyle, C.J.; Morrison, J.; Peel, S.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 24 (2): p. 119-148; 1987. Includes references.
Language: English

Descriptors: Beef production; Beef cattle; Grasses; Trifolium repens; Sward renovation; Forage; Profitability; Computer simulation; Mathematical models; Nitrogen fertilizers; Feed intake

197 NAL Call No: 500 N813
A prototype design of a computer-controlled spreader system for prescription farming technology.

Tsui, T.L.; Smith, D.A.
Grand Forks, N.D. : The Academy.
Proceedings of the North Dakota Academy of Science v. 46: p. 64; 1992 Apr.

Language: English

Descriptors: Spreaders; Fertilizer distributors; Computer software

198 NAL Call No: QA76.76.E95A5
Rangeland grasshopper treatment selection: an expert system for decision support in resource management.

Kemp, W.P.; Onsager, J.A.; Lemmon, H.E.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (4): p. 1-8. ill; 1988. Includes references.
Language: English

Descriptors: Western states of U.S.A.; Rangelands; Range management; Computer software; Orthoptera; Insect pests; Density; Pest control methods; Insecticides; Pest resistance; Land capability; Forage; Uses; Weather

199 NAL Call No: FICHE S-72
Representation and reasoning issues in expert systems.
Thieme, R.H.; Whittaker, A.D.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-4512): 20 p.; 1986. Paper presented

at the 1986 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Experts; Systems; Educational programs; Consultants

200 NAL Call No: QA76.76.E95A5
Representing and applying knowledge about spatial processes in environmental management.

Davis, J.R.; Whigham, P.; Grant, I.W.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (4): p. 17-25. ill; 1988. Includes references.
Language: English

Descriptors: Natural resources; Resource management; Computer software; Geographical distribution; Location theory; Environment; Prototypes; Models

201 NAL Call No: FICHE S-72
Residue management decision support system.
Stott, D.E.; Barrett, J.R.; Stuart, B.L.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 88-7541): 11 p.; 1988. Paper presented at the 1988 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Erosion control; Plant residues; Mulching; Tillage; Techniques; Decision making; Information needs

202 NAL Call No: QA76.76.E95A5
Resource Technology 88: International Symposium on Advanced Technology in Natural Resource Management, Fort Collins, Colorado, June 20-23,1988.
Saveland, J.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (1): p. 53-56; 1989.
Language: English

Descriptors: U.S.A.; Natural resources; Resource management; Conferences; Technology; Workshops (programs); Remote sensing;

Technology transfers; Computer software

203 NAL Call No: QH540.N3
A river water quality management model for Canal de Isabel. II. Comunidad de Madrid.

Cubillo, F.; Rodriguez, B.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 375-385; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Spain; Water management; Rivers; Water quality; Water pollution; Waste water treatment; Simulation models; Computer simulation; Computer software

204 NAL Call No: TD365.S97 1987
A rule-based control system for the activated sludge process., 1st ed.

Vitasovic, Z.; Andrews, J.F.
Oxford : Pergamon Press.
Systems analysis in water quality management : proceedings of a symposium held in London, U.K., 30 June-2 July 1987 / editor, M.B. Beck. p. 423-432; 1987. (Advances in water pollution control). Includes references.
Language: English

Descriptors: Texas; Sewage products; Waste water treatment; Control; Dynamic models; Computer software; Simulation models

205 NAL Call No: HD1.A3
SELECT: an expert system shell for selecting amongst decision or management alternatives.

Morgan, O.W.; McGregor, M.J.; Richards, M.; Oskoui, K.E.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 31 (1): p. 97-110; 1989. Includes references.
Language: English

Descriptors: Scotland; Winter wheat; Varieties; Farm management; Experts; Systems approach; Decision making; Computer software; Cultivars

206 NAL Call No: QA76.76.E95A5
A selective bibliography of expert systems in natural resource

management.

Davis, J.R.; Clark, J.L.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 3 (3): p. 1-18. ill; 1989. Bibliography. Includes references.
Language: English

Descriptors: Natural resources; Management; Experts; Systems; Models; Computer applications; Bibliographies

207 NAL Call No: 290.9 AM32P
Sensitivity analysis of an expert system to determine the suitability of low-level radioactive waste shallow landfill burial sites.
Ascough, J.C. II; Lane, L.J.; Monke, E.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-7578): 7 p.; 1989. Paper presented at the 1989 International Winter Meeting, December 12-15, 1989, New Orleans, Louisiana. Includes references.

Language: English

Descriptors: Groundwater; Expert systems; Radioactive wastes

208 NAL Call No: S530.J6
SIMFERT: its use for teaching the effects of forest fertilization.

Johnson, J.E.; Allen, H.L.
Madison, Wis. : American Society of Agronomy.
Journal of agronomic education v. 18 (1): p. 42-44; 1989. Includes references.
Language: English

Descriptors: Virginia; North Carolina; Pinus taeda; Forest plantations; Fertilizer application; Stand characteristics; Owner's equity; Returns; Agricultural education; Computer software

209 NAL Call No: 290.9 AM32P
Simulation of remedial measures and remedial strategies for soil conservation.

Dickinson, W.T.; Rudra, R.P.; Wall, G.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-7045): 13 p.; 1989. Paper presented at the 1989 International Summer Meeting, June 25-28, 1989, Quebec, PQ, Canada. Includes references.
Language: English

Descriptors: Ontario; Soil conservation; Computer simulation;

Computer assisted instruction

210 NAL Call No: S596.7.S62
Simulation of tillage residue and nitrogen management.
Molina, J.A.E.; Shaffer, M.J.; Dowdy, R.H.; Power, J.F.
Madison, Wis. : American Society of Agronomy.
Soil erosion and crop productivity / editors, R.F. Follett and B.A. Stewart ; consulting editor, Iris Y. Ballew. p. 413-430. ill; 1985. Includes references.
Language: English

Descriptors: Tillage; Soil management; Erosion; Erosion control; Crop production; Computer simulation; Decision making

211 NAL Call No: QH540.N3
Smart software for water resources planning and management.
Fedra, K.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 145-172; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.
Language: English

Descriptors: Water resources; Water management; Planning; Computer software; Computer simulation; Computer graphics; Groundwater flow

212 NAL Call No: S530.J6
SOILSOLN: a program for teaching equilibria modeling of soil solution composition.

Wolt, J.D.
Madison, Wis. : American Society of Agronomy.
Journal of agronomic education v. 18 (1): p. 40-42; 1989. Includes references.

Language: English

Descriptors: Tennessee; Agricultural education; Physico-chemical properties of soil; Problem solving; Soil solution; Equilibrium moisture content; Computer software

213 NAL Call No: TD172.J6
Solid waste information management system (SWIMS).
Mandhani, P.; Tittlebaum, M.; Singh, S.; Barry, C.
New York, N.Y. : Marcel Dekker.
Journal of environmental science and health : Part A : Environmental science and engineering v. 27 (5): p. 1195-1212; 1992 Jul. Includes references.

Language: English

Descriptors: Solid wastes; Recycling; Management; Systems; Information retrieval; Databases; Computers

214 NAL Call No: HD1.A3
SOYBUG: an expert system for soybean insect pest management.
Beck, H.W.; Jones, P.; Jones, J.W.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 30 (3): p. 269-286; 1989. Includes references.
Language: English

Descriptors: Florida; Glycine max; Anticarsia gemmatalis; Heliothis zea; Insect pests; Computer software; Computer simulation; Phenology; Economics; Pesticides; Application methods; Insect control

215 NAL Call No: S494.5.D3I5 1990
SOYHERB: a computer program to assist growers in soybean herbicide decision making.

Renner, K.; Black, J.R.
Gainesville, FL : Florida Cooperative Extension Service, University of Florida.
Proceedings of the 3rd International Conference on Computers in Agricultural Extension Programs / Fedro S. Zazueta, editor. ; January 31-February 1, 1990, Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, FL. p. 343-348; 1990. Includes references.

Language: English

Descriptors: Soybeans; Weed control; Herbicides; Expert systems

216 NAL Call No: QA76.8.I2594S77
STN Mentor introduction to CJO (chemical journals online). (Introduction to CJO Introduction to chemical journals online.)
American Chemical Society, STN International (Columbus, Ohio)
Columbus, Ohio : American Chemical Society,.
1 computer disk ; 5 1/4 in. + user's manual (5 p. ; 12 cm.).. Title from title screen. "STN Mentor is a family of computer-based training tutorials designed to explain how STN International can help you find the scientific and technical information relevant to your information needs and work assignments."--User's manual. "CAS0390"--User's manual.
Language: N/A

Descriptors: Information storage and retrieval systems; Chemistry; Computer-assisted instruction

217 NAL Call No: 290.9 AM32P
Stormwater management, erosion, & sediment control by computer aided design (SEDCAD): landfill application.

Schwab, P.; Warner, R.C.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (89-2017): 19 p.; 1989. Paper presented at the "1989 International Summer Meeting" jointly sponsored by the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering, June 25-28, 1989, Quebec, Canada.

Language: English

Descriptors: Landfills; Runoff water; Erosion control; Sediment; Computer software; Structural design

218 NAL Call No: SB249.N6
Strategies for implementing an integrated expert system in cotton: experience with CALEX/cotton in California.

Goodell, P.B.; Kerby, T.A.; Ver Linden, C.; Strand, J.; Plant, R.E.; Wilson, L.T.; Vargas, RR; Johnson, SS
Memphis, Tenn. : National Cotton Council of America.
Proceedings - Beltwide Cotton Production Research Conferences. p. 100-101; 1990. Meeting held January 9-14, 1990, Las Vegas, Nevada. Includes references.
Language: English

Descriptors: California; Gossypium hirsutum; Crop production; Expert systems

219 NAL Call No: S494.5.D3C652
Structured induction for agricultural expert systems knowledge acquisition.

Broner, I.; King, J.P.; Nevo, A.
Amsterdam : Elsevier Science Publishers, B.V..
Computers and electronics in agriculture v. 5 (2): p. 87-99; 1990 Oct. Includes references.
Language: English

Descriptors: Expert systems; Decision making; Algorithms; Hordeum vulgare; Malting; Barley; Crop management; Irrigation

220 NAL Call No: FICHE S-72
Symbolic computers and AI tools for a cotton expert system.
McKinion, J.M.; Lemmon, H.E.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 85-5520): 16 p.; 1985. Paper presented at the 1985 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950

Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices.
Language: English

Descriptors: Simulation models; Computers; Decision making; Cotton; Crop production

221 NAL Call No: 290.9 AM32P
A system for analyzing spray samples.

Panneton, B.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-0017): 18 p. ill; 1989. Paper presented at the "1989 International Summer Meeting jointly sponsored by the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering," June 25-28, 1989, Quebec, PQ, Canada. Includes references.

Language: English

Descriptors: Pesticide residues; Sprays; Samples; Computers; Digital displays; Droplets

222 NAL Call No: SB950.93.P45
A system for examination of the pesticide dose transfer process.
Hall, F.R.; Reichard, D.L.; Alm, S.R.
Philadelphia, Pa. : ASTM.
Pesticide formulations and application systems : seventh volume : a symposium sponsored by ASTM Committee E-35 on Pesticides, Phoenix, Ariz., 5-6 Nov. 1986 / G.B. Beestman and D.I.B. Vander Hooven, editors. p. 85-92. ill; 1987. (ASTM special technical publication ; 968). Includes references.
Language: English

Descriptors: Insecticides; Spraying; Droplet size; Distribution; Transfers; Videotapes; Tests; Tetranychus urticae; Imagery; Computer applications

223 NAL Call No: 80 AC82
System of computer-aided fertilizer recommendations (DS 87) in field vegetable production in the GDR.

Beer, K.; Ansorge, H.; Geyer, B.
Wageningen : International Society for Horticultural Science.
Acta horticulturae (260): p. 181-193; 1989 Sep. Paper presented at the "International Symposium on Growth and Yield Control in Vegetable Production," / edited by G. Vogel, May 22-25, 1989, Berlin, German Democratic Republic. Includes references.
Language: English

Descriptors: German democratic republic; Vegetables; Field

experimentation; Fertilizer requirement determination; Decision making; Computer techniques

224 NAL Call No: 290.9 AM32P
Teaching drainage & culvert design with microcomputers.
Langlinais, S.J.
St. Joseph, Mich. : The Society.
Paper - American Society of Agricultural Engineers (89-3043): 35 p.; 1989. Presented at the 1989 International Summer Meeting sponsored by the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering, June 25-28, 1989, Quebec, Canada. Includes references.
Language: English

Descriptors: Drainage; Runoff water; Drainage channels; Culverts; Design; Education; Computer assisted instruction

225 NAL Call No: 275.9 N213
Teaching farm management using a computer-simulated farm.
Winter, J.R.
Urbana, Ill. : National Association of Colleges and Teachers of Agriculture.
NACTA journal v. 33 (1): p. 34-38; 1989 Mar. Includes references.
Language: English

Descriptors: Agricultural colleges; Farm management; Decision making; Computer assisted instruction; Simulation analysis

226 NAL Call No: 56.8 J822
Teaching land management with a microcomputer-based model.
Ross, D.; Nash, T.; Harbor, J.
Ankeny, Iowa : Soil and Water Conservation Society of America.
Journal of soil and water conservation v. 47 (3): p. 226-230; 1992 May. Includes references.
Language: English

Descriptors: Land management; Soil conservation; Teaching methods; Land use; Computer assisted instruction; Microcomputers; Computer simulation; Simulation models; Universal soil loss equation; Water erosion; Runoff; Measurement; Erosion control; Sediment; Geological sedimentation; Gully erosion; Land types

227 NAL Call No: SD143.S64
Teams: a decision support system for integrated resource management.

Covington, W.W.; Dewhurst, S.M.; Wood, D.B.
Bethesda, Md. : The Society.
Proceedings of the ... Society of American Foresters National Convention. p. 516-517; 1991. Meeting held Aug 4-7, 1991, San

Francisco, California. Includes references.
Language: English

Descriptors: Arizona; Forest management; Decision making; Computer software; Watershed management; Models; American indians

228 NAL Call No: S494.5.D3I5 1988
Terrace system design using expert system with computer graphics.

Cook, R.; Hirschi, M.C.; Mitchell, J.K.
Gainesville : Florida Cooperative Extension Service, IFAS, Univ. of Florida, [1988?].
Proceedings of the 2nd International Conference on Computers in Agricultural Extension Programs Fedro S. Zazueta, A.B. (Del) Bottcher, eds. p. 13-17; 1988 Feb. Conference held February 10-11, 1988 at the Grosvenor Resort Hotel, Disney World Village, Lake Buenavista, Orlando, Florida. Includes references.
Language: English

Descriptors: Terraces; Design; Expert systems; Computer graphics

229 NAL Call No: SB610.2.B74
Three years field experience with an advisory computer system applying factor-adjusted doses.

Baandrup, M.; Ballegaard, T.
Surrey : BCPC Registered Office.
Brighton Crop Protection Conference-Weeds v. 2: p. 555-560; 1989. Paper presented at the Brighton Crop Protection Conference--Weeds, November 20-23, 1989, at Brighton, England. Includes references.
Language: English

Descriptors: Hordeum vulgare; Weed control; Herbicides; Computer techniques

230 NAL Call No: FICHE S-72
Timber harvesting equipment selection: an expert system.
Gibson, H.G.; Jones, D.D.; Barrett, J.R. Jr; Shih, C.H.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 86-1604): 7 p.; 1986. Paper presented at the 1986 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.

Language: English

Descriptors: Logging machines; Selection; Experts; Systems; Training; Microcomputers

231 NAL Call No: S530.J6
TURFBLIGHT: an interactive turfgrass management model for teaching.

Danneberger, T.K.
Madison, Wis. : American Society of Agronomy.
Journal of agronomic education v. 17 (2): p. 73-76; 1988.
Includes references.

Language: English

Descriptors: Lawns and turf; Models; Computer software; Computer assisted instruction

232 NAL Call No: SB950.93.I5
The U.S. Forest Service and aerial delivery systems.
Reardon, R.C.
Bethesda, MD : Agricultural Research Institute, [1988?].
Improving on-target placement of pesticides : a conference : June 13-15, 1988, Sheraton International Conference Center, Reston, VA / sponsored by the Agric Res Inst in cooperation with the U.S.D.A., Science and Education. p. 151-155; 1988.
Language: English

Descriptors: U.S.A.; Lymantria dispar; Insecticides; Aerial application; Forestry operations; Computer applications; Systems; Insect control

233 NAL Call No: S530.J6
Use of an expert system for integrating weed control strategies in a weed science laboratory.

Mortensen, D.A.; Coble, H.D.; Smart, J.R.; Bauer, T.A.
Madison, Wis. : American Society of Agronomy.
Journal of agronomic education v. 19 (2): p. 181-183; 1990.
Includes references.
Language: English

Descriptors: Expert systems; Integrated systems; Weed control; Laboratory tests; Glycine max; Teaching; Students; Decision making

234 NAL Call No: HD1.A3
The use of biological simulation models in agricultural management information systems.

Thornton, P.K.
Essex : Elsevier Applied Science Publishers.
Agricultural systems v. 17 (1): p. 51-57. ill; 1985. Includes

references.

Language: English

Descriptors: Management; Information services; Fungicides; Barley; Uredinales; Computer simulation

235 NAL Call No: SB608.R5C65 1990
Use of computer tools for the design of pest management strategies.

Wareing, D.R.; Holt, J.; Cheng, J.A.; Norton, G.A.
New York Published for the Society of Chemical Industry by Elsevier Applied Science.
Pest management in rice / edited by B.T. Grayson, M.B. Green, and L.G. Copping. p. 231-242; 1990. Paper presented at the "Conference on Pest Management in Rice," June 4-7, 1990, London. Includes references.
Language: English

Descriptors: China; Philippines; Oryza sativa; Nilaparvata lugens; Outbreaks; Insect control; Insecticides; Irrigated conditions; Natural enemies; Computer programming; Simulation models; Systems analysis

236 NAL Call No: 100 C12H
The use of computer-assisted mapping techniques to delineate potential areas of salinity development in soils. I. A conceptual introduction.
Corwin, D.L.; Werle, J.W.; Rhoades, J.D.
Berkeley, Calif. : California Agricultural Experiment Station.
Hilgardia : a journal of agricultural science v. 56 (2): p. 1-17. maps; 1988 May. Includes references.

Language: English

Descriptors: U.S.A.; South western states of U.S.A.; Soil salinization; Computer mapping; Computer software; Irrigated soils; Physico-chemical properties of soil; Water management; Decision making; Soil surveys

237 NAL Call No: 100 C12H
The use of computer-assisted mapping techniques to delineate potential areas of salinity development in soils. II. Field verification of the threshold model approach.

Corwin, D.L.; Rhoades, J.D.
Berkeley, Calif. : California Agricultural Experiment Station.
Hilgardia : a journal of agricultural science v. 56 (2): p. 18-32. maps; 1988 May. Includes references.
Language: English

Descriptors: Arizona; Soil salinization; Computer mapping; Computer software; Irrigated soils; Threshold model; Field

tests; Physico-chemical properties of soil

238 NAL Call No: 290.9 AM32P
Use of expert system to select soil conservation practices.
Montas, H.J.; Madramootoo, C.A.
St. Joseph, Mich. : The Society.
Paper -American Society of Agricultural Engineers (89-2013): p. 1-12; 1989. Paper presented at the "1989 International Summer Meeting" jointly sponsored by the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering, June 25-28, 1989, Quebec, Canada. Includes references.
Language: English

Descriptors: Soil conservation; Expert systems; Watershed management

239 NAL Call No: QA76.76.E95A5
Use of expert systems to assist development in the less industrialized world.

Fisher, P.F.; Balachandran, C.S.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 2 (4): p. 54-55; 1988.

Language: English

Descriptors: Developing countries; Karnataka; Rural development; Environmental degradation; Prototypes; Computer software; Land evaluation; Land resources

240 NAL Call No: S494.5.D3C68 1992
Use of knowledge engineering to maximize forage production of Medicago sativa L.

Rhykerd, L.M.; Rhykerd, R.L.; Engel, B.A.; Rhykerd, C.L.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 165-170; 1992. (ASAE publication ; 1-92). Includes references.
Language: English

Descriptors: Alfalfa; Fodder legumes; Expert systems

241 NAL Call No: TD223.R87
Using crop models as a decision support system to reduce nitrate leaching.

Ritchie, J.T.

Chelsea, Mich. : Lewis Publishers.
Rural groundwater contamination / [edited by] Frank M. D'Itri, Lois G. Wolfson. p. 179-192. ill; 1987. Includes references.
Language: English

Descriptors: Nitrate fertilizers; Leaching; Crop management; Simulation models; Computer software; Computer simulation

242 NAL Call No: QA76.76.E95A5
Using expert systems to generate fertilizer recommendations.
Evans, M.; Mondor, R.; Flaten, D.
Moscow, Idaho : AI Applications.
AI applications in natural resource management v. 4 (2): p. 3-10. ill; 1990. Includes references.
Language: English

Descriptors: Fertilizer application; Guidelines; Computer applications; Experts; Systems

243 NAL Call No: TD170.2.M4
Using geographic information systems for environmental decision making. (Geographic information systems for environmental decision making.)

McLemore, William H.; Alhadeff, S. Jack
Atlanta : Dept. of Natural Resources, Environmental Protection Division, Georgia Geologic Survey,.
vi, 95 leaves : ill. (some col.) ; 28 cm. (Project report (Georgia Geologic Survey) ; no. 13.). Cover title. Includes bibliographical references (p. 94).

Language: English

Descriptors: Environmental protection; Decision making; Data processing

244 NAL Call No: S530.A4
Using microcomputers in teaching.

Rohrbach, N.F.; Stewart, B.R.
Gainesville, Fla. : The Association.
The Journal of the American Association of Teacher Educators in Agriculture v. 27 (4): p. 18-25; 1986. Includes references.
Language: English

Descriptors: Agricultural education; Farm management; Record keeping; Teaching; Microcomputers; Computer assisted instruction

245 NAL Call No: S530.J6
Using the software package "MathCAD" as a tool to teach soil physics.

Cassel, D.K.; Elrick, D.E.
Madison, Wis. : American Society of Agronomy.
Journal of natural resources and life sciences education v. 21 (1): p. 74-78; 1992. Includes references.
Language: English

Descriptors: Soil physics; Computer software; Water transport; Solutes; Mathematics; Computer assisted instruction; Graduate study; College students

246 NAL Call No: QH540.N3
Validation of climate models with workstation tools.
Craig, R.G.; Wood, E.F.
Berlin, W. Ger. : Springer-Verlag.
NATO ASI series : Series G : Ecological sciences v. 26: p. 113-144; 1991. In the series analytic: Decision support systems: Water resources planning / edited by D.P. Loucks and J.R. da Costa. Proceedings of the NATO Advanced Research Workshop on Computer-Aided Support Systems for Water Resources, Research and Management, September 24-28, 1990, Ericeira, Portugal. Includes references.

Language: English

Descriptors: Climate; Climatic factors; Hydrology; Water resources; Simulation models; Computer simulation; Water management; Computer graphics

247 NAL Call No: FICHE S-72
Vortical particle size distribution system.
Burcham, T.N.; Hayes, J.C.
St. Joseph, Mich. : The Society.
American Society of Agricultural Engineers (Microfiche collection) (fiche no. 88-2539): 12 p. ill; 1988. Paper presented at the 1988 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. Includes references.
Language: English

Descriptors: Water erosion; Runoff water; Sediments; Particle size; Computers

248 NAL Call No: SB610.W39
WEEDING: a Weed Ecology and Economic Decision Making INstructional Game.

Wiles, L.J.; Wilkerson, G.G.; Coble, H.D.
Champaign, Ill. : The Society.
Weed technology : a journal of the Weed Science Society of America v. 5 (4): p. 887-893; 1991 Oct. Includes references.

Language: English

Descriptors: Glycine max; Weed control; Decision making; Simulation models; Computer assisted instruction; Teaching materials; Computer games; Educational games

249 NAL Call No: SB610.W39
Weeds--a system for developing a computer-based herbicide recommendation program.

Linker, H.M.; York, A.C.; Wilhite, D.R. Jr
Champaign, Ill. : The Society.
Weed technology : a journal of the Weed Science Society of America v. 4 (2): p. 380-385; 1990 Apr. Includes references.
Language: English

Descriptors: Glycine max; Herbicides; Herbicide mixtures; Decision making; Computer software; Microcomputers; Soil texture; Weeds; Soil organic matter

250 NAL Call No: 1.98 AG84
What's new in oilseeds? Check out Crambe].
Cooke, L.; Konstant, D.A.
Washington, D.C. : The Service.
Agricultural research - U.S. Department of Agriculture, Agricultural Research Service v. 39 (3): p. 16-17; 1991 Mar.
Language: English

Descriptors: Crambe abyssinica; Crop production; Expert systems; Computer techniques

251 NAL Call No: SB599.C35
Wheat disease control advisory, a decision support system for management of foliar diseases of wheat in Israel.

Shtienberg, D.; Dinoor, A.; Marani, A.
Guelph, Ont. : Canadian Phytopathological Society.
Canadian journal of plant pathology; Revue Canadienne de phytopathologie v. 12 (2): p. 195-203; 1990 Jun. Includes references.
Language: English

Descriptors: Israel; Triticum aestivum; Puccinia recondita; Puccinia striiformis; Mycosphaerella graminicola; Disease models; Decision making; Plant disease control; Fungicides; Application date; Timing; Climatic factors; Technology transfer; Semiarid zones; Computer software

252 NAL Call No: 23 AU783
'WHEATMAN' a decision support system for wheat management in subtropical Australia.

Woodruff, D.R.

Melbourne : Commonwealth Scientific and Industrial Research Organization.
Australian journal of agricultural research v. 43 (7): p. 1483-1499; 1992. Includes references.
Language: English

Descriptors: Australia; Triticum; Crop management; Decision making; Environmental factors; Information needs; Simulation models; Subtropics; Sustainability

253 NAL Call No: S494.5.D3C68 1992
WHEATWHIZ, an expert system for wheat variety selection: modifications and applications in Kansas.

Zhang, M.; Shroyer, J.P.
St. Joseph, Mich. : American Society of Agricultural Engineers.
Computers in agricultural extension programs : proceedings of the 4th international conference, 28-31 January 1992, Orlando, Florida / sponspored by the Florida Cooperative Extension Service, University of Florida. p. 153-158; 1992. (ASAE publication ; 1-92). Includes references.

Language: English

Descriptors: Kansas; Triticum aestivum; Varieties; Selection; Expert systems

254 NAL Call No: 1.9 P69P
A working description of the Penn State apple orchard consultant, an expert system.

Travis, J.W.; Rajotte, E.; Bankert, R.; Hickey, K.D.; Hull, L.A.; Eby, V.; Heinemann, P.H.; Crassweller, R.; McClure, J.; Bowser, T.
St. Paul, Minn. : American Phytopathological Society.
Plant disease v. 76 (6): p. 545-554; 1992 Jun. Includes references.

Language: English

Descriptors: Pennsylvania; Malus; Orchards; Crop production; Expert systems; Integrated pest management; Plant disease control; Chemical control; Decision making; Diffusion of information; Information processing; Microcomputers; Computer techniques; Innovation adoption

255 NAL Call No: S494.5.D3I57 1988
ZEA--stock management for maize.
LeCorfec, F.
Frankfurt am Main : Deutsche Landwirtschafts-Gesellschaft (DLG).
Knowledge based systems in agriculture : prospects for application : Frankfurt a. M., Bad Soden, June 19-22, 1988 /

editor: Deutsche Landwirtschafts-Gesellschaft, Frankfurt am Main. p. 343-382; 1988. Includes references.

Language: English

Descriptors: Maize; Crop management; Expert systems

AUTHOR INDEX

SUBJECT INDEX

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SEARCH STRATEGY

Set	Items	Description
S1	1560	ARTIFICIAL()INTELLIGENCE OR CAI OR (COMPUTER?(5N)(AID? OR ASSIST? OR BASED)(5N)(TRAIN? OR INSTRUCT?)) OR ((EXPERT OR DECISION)(5N)SYSTEM?)
S2	175840	SH=(P200 OR W000 OR F120 OR M000 OR P000 OR H000 OR C100 OR J800)
S3	330	S1 AND S2
S4	4247	(COMPUTER? AND (AID? OR EDUCATION? OR INSTRUCT? OR TRAIN? OR ASSIST? OR SYSTEM? OR DECISION OR EXPERT))/TI,DE
S5	149782	((WATER OR GROUNDWATER)()(POLLUT? OR CONTAMINA?))OR WASTE? OR WASTEWATER? OR CHEMICAL? OR PESTICIDE? OR INSECTICIDE? OR HERBICIDE? OR FUNGICIDE? OR FERTILIZE? OR RUNOFF OR RESIDUE? OR MANURE)/TI,DE
S6	199	S4 AND S5
S7	510	S3 AND S6
S8	500	RD S7 (unique items)
S9	391	S8 AND PY=(1985 OR 1986 OR 1987 OR 1988 OR

1989 OR 1990 OR 1991 OR 1992 OR 1993)

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