

References & Abstracts  
For Potentially Relevant Publications Under Review

The references and abstracts in this document are for the publications being reviewed to identify audience-specific best education practices (BEPs). They are sorted in the order of their appearance in the listed reference database. The publications found in multiple databases are listed here only once. Click here for a list of the audiences and the number of references in which they are addressed. [AudienceLink]

**AGRICOLA**

**AGRICOLA**

AU: Lanyon,-L.E.; Kiernan,-N.E.; Stoltzfus,-J.H.

TI: Evaluating barriers to participation by **fertilizer and agricultural chemical dealers** in a federal water quality project.

SO: J-nat-resour-life-sci-educ. Madison, WI : American Society of Agronomy, c1992-. Fall 1996. v. 25 (2) p. 160-165.

CN: DNAL S530.J6

LA: English

PT: Article

DE: pesticides-. fertilizers-. crop-management. integrated-pest-management. educational-programs. program-development. extension-education. water-quality. groundwater-pollution. low-input-agriculture. state-government. federal-government. regulations-. pennsylvania-.

**AGRICOLA**

AU: Dietz,-M.E.; Clausen,-J.C.; Warner,-G.S.; Filchak,-K.K.

TI: Impacts of extension education on improving residential stormwater quality: monitoring results.

SO: J-ext. United States : Extension Journal, Inc., [1987-. Dec 2002. v. 40 (6) online access

CN: DNAL LC45.4.J682

LA: English

PT: Article

DE: suburban-areas. runoff-water. education-. homeowners-. educational-objectives. water-quality. pollution-control. water-management. behavior-change. program-evaluation. program-effectiveness. extension-. connecticut-.

**AGRICOLA**

AU: Al-Jamal,-M.S.; Sammis,-T.W.; Ball,-S.T.

TI: A case study for adopting the nitrate chloride technique to improve irrigation and nitrogen practices in farmers' fields.

SO: Appl-eng-agric. St. Joseph, MI : American Society of Agricultural Engineers, 1985-. Sept 2001. v. 17 (5) p. 601-610.

CN: DNAL S671.A66

LA: English

PT: Article

DE: chloride-. tracers-. irrigation-water. infiltration-. furrow-irrigation. irrigation-. water-use-efficiency. nitrate-nitrogen. leaching-. pollution-control. groundwater-pollution. innovation-adoption. resistance-to-change. technology-transfer. crop-management. crop-yield. lactuca-sativa. capsicum-annuum. field-crops. horticultural-crops. farmers'-attitudes. new-mexico.

AB: Groundwater contamination caused by nitrate-nitrogen (NO<sub>3</sub>(-)-N) leaching through soils is becoming a serious problem in the irrigated Mesilla Valley of southern New Mexico. The greatest

References & Abstracts  
For Potentially Relevant Publications Under Review

groundwater contamination probably results from large amounts of nitrogen fertilizer being applied to shallow-rooted, high-value vegetable crops (i.e., onion, lettuce, and chile). The main objective of the study was to demonstrate to farmers that a chloride tracer could be used to determine the irrigation and nitrogen-use efficiency of their management system and how decreasing nitrogen (N) inputs will affect profitability. Five farmers (representing 60% of the farmers that are the technology diffusion leaders in the county) were chosen as innovative farmers who would transfer the technology to others. The average estimated irrigation efficiencies obtained from the farmers' fields were high, ranging from 87 to 97%. These unexpectedly high irrigation efficiencies under furrow irrigation were a result of the farmers practicing deficit irrigation due to limited water resources. However, deficit irrigation resulted in yields below maximum yield (considered to be near the average county yield). The amount of NO<sub>3</sub>(-)-N leached ranged from 9 kg/ha under fall lettuce to 152 kg/ha under chile. The 152 kg/ha obtained from the chile fields had a calculated average N application efficiency of 57%, resulting in an average NO<sub>3</sub>(-)-N concentration greater than the maximum contamination level allowed for drinking water of 10 mg/L. Although the NO<sub>3</sub>(-)-N leached below farmers' fields was high, the farmers did not think it was their responsibility to change management practices unless their profits would increase. Farmers rejected the adoption of the technology because they felt the costs outweighed the benefits. Consequently, transfer of this technology to the farmers failed. The farmers indicated that they would adopt the technology only if forced to by a regulatory agency.

**AGRICOLA**

AU: Holsman,-R.H.; Krueger,-D.

TI: The long and short of groundwater education for Michigan farmers.

SO: J-ext. United States : Extension Journal, Inc., [1987-. Feb 2002. v. 40 (1) p. n/a.

CN: DNAL LC45.4.J682

LA: English

PT: Article

DE: extension-. groundwater-pollution. farmers'-attitudes. decision-making. liquid-fertilizers. pesticides-. farm-surveys. educational-programs. program-evaluation. michigan-.

**AGRICOLA**

AU: Shepard,-R.

TI: Making our nonpoint source pollution education programs effective.

SO: J-ext. United States : Extension Journal, Inc., [1987-. Oct 1999. v. 37 (5) p. n/a.

CN: DNAL LC45.4.J682

LA: English

PT: Article

DE: pollution-control. extension-education. watershed-management. farmers-. manures-. application-rates. nitrogen-fertilizers. phosphorus-fertilizers. diffusion-of-information. educational-programs. program-evaluation. program-effectiveness. teaching-methods. wisconsin-

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Ribaud,-M.O.; Horan,-R.D.

TI: The role of education in nonpoint source pollution control policy.

SO: Rev-agric-econ. Ames, Iowa : American Agricultural Economics Associations. Fall/Winter 1999. v. 21 (2) p. 331-343.

CN: DNAL HD1773.A3N6

LA: English

PT: Article

DE: water-quality. water-pollution. pollution-control. educational-programs. program-evaluation. profitability-. environmental-policy. usa-.

AB: Education is often used to provide producers with information on how to operate more efficiently with current technologies or on profitable new technologies that generate less pollution. While such "win-win" solutions to water quality problems are attractive, we use a simple economic framework to show that education cannot be considered a strong tool for water quality protection. Its success depends on a number of factors related to profitability and altruism, and "win-win" solutions are not always guaranteed, even when they appear to exist. Evidence suggests that net returns are the chief concern of producers when they adopt alternative management practices.

**AGRICOLA**

AU: Knox,-D.; {Jackson;?} Nevers,-E.

TI: Farm\*A\*Syst: a partnership program to protect water resources.

SO: Clean water, clean environment, 21st century team agriculture, working to protect water resources conference proceedings, March 5-8, 1995, Kansas City, Missouri /. St. Joseph, Mich. : ASAE, c1995.. v. 3 p. 167-170.

CN: DNAL TD365.C54-1995

LA: English

PT: Article

DE: pollution-control. prevention-. water-pollution. risk-. groundwater-pollution. programs-. educational-programs. pollutants-. identification-. farms-. farmers-. rural-population.

**AGRICOLA**

AU: Cooper,-D.; Giebink,-B.; Olson,-K.

TI: Water quality education to protect Minnesota's Anoka Sand Plain Aquifer.

SO: Clean water, clean environment, 21st century team agriculture, working to protect water resources conference proceedings, March 5-8, 1995, Kansas City, Missouri /. St. Joseph, Mich. : ASAE, c1995.. v. 3 p. 69-72.

CN: DNAL TD365.C54-1995

LA: English

PT: Article

DE: pollution-control. groundwater-pollution. aquifers-. water-quality. extension-education. extension-. low-input-agriculture. research-projects. pilot-farms. minnesota-.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Bosch,-D.J.; Cook,-Z.L.; Fuglie,-K.O.

TI: Voluntary versus mandatory agricultural policies to protect water quality: adoption of nitrogen testing in Nebraska.

SO: Rev-agric-econ. Manhattan, Kan. : Department of Agricultural Economics, Kansas State University. Jan 1995. v. 17 (1) p. 13-24.

CN: DNAL HD1773.A3N6

LA: English

PT: Article

DE: groundwater-. water-quality. irrigation-water. nitrogen-. soil-testing. innovation-adoption. agricultural-policy. environmental-protection. farm-management. nebraska-.

AB: Agriculture is an important source of nonpoint source pollution and potential damage to water quality. Voluntary incentives and regulatory policies are followed by both the states and the federal government to reduce water quality damage from agricultural practices. Policy makers are concerned about the relative effectiveness of each approach for protecting water quality. The effectiveness of regulation versus a combination of voluntary incentive approaches are evaluated for an area in central Nebraska. Policy effectiveness is measured in two parts: (1) whether farmers receiving incentives are more likely to conduct soil or tissue nitrogen (N) tests; and (2) whether farmers use the test results as the most important factor in N management decisions. Personal interview surveys of Nebraska farmers were analyzed to determine farmers' use of soil and/or tissue testing to help make N fertilizer decisions on fields planted to corn. The effects of regulation and voluntary programs on the use of N testing were evaluated. The effects on adoption of farmers' education and experience; type, size, and tenure status of the farm; irrigation; and soil characteristics of the sample field were also considered. The results show that while regulation leads to higher levels of N test adoption, it does not have an "educational" effect on adopters. Voluntary incentive policies appear to be more effective in encouraging farmers to use information from N tests. Regulation to enforce adoption of practices to protect water quality may not induce the desired behavioral changes. Educational programs may be needed to complement regulations to insure that farmers change their behavior to achieve the goals of water quality protection.  
programs.

**AGRICOLA**

AU: Murray,-H.; Butler,-L.M.

TI: Whole farm case studies and focus groups: participatory strategies for agricultural research and education programs.

SO: Am-J-altern-agric. Greenbelt, MD : Henry A. Wallace Institute for Alternative Agriculture. Winter/Spring 1994. v. 9 (1/2) p. 38-44.

CN: DNAL S605.5.A43

LA: English

PT: Article

DE: farming-systems. sustainability-. farming-systems-research. research-projects. educational-programs. community-involvement. extension-. washington-. oregon-.

AB: Research and extension personnel are beginning to look for new strategies to involve more farmers and the non-farm public in their programs. Two approaches we have used are whole farm case studies (WFCS) and focus groups. WFCS in Oregon and Washington led to several

References & Abstracts  
For Potentially Relevant Publications Under Review

research and educational programming ideas that are currently being pursued in both states. A focus group to study water quality, nitrate leaching and farming practices in Skagit County, Washington is one outcome of the WFCS process. It is made up of 16 people, including farmers, university personnel, members of environmental groups, and government representatives. We review these two complementary participatory strategies for systems-oriented sustainable agriculture research and education programs. Both have been very useful for building problem-solving partnerships between the land-grant universities and agricultural and governmental constituents in our area. Noteworthy outcomes include: complementary applied on-farm and experiment station research; farming systems analysis; public education; new linkages with environmental and agricultural interest groups; additional grant funds to address identified priority issues; and interdisciplinary teams that cut across the biological and social sciences and include diverse citizen representation.

**AGRICOLA**

AU: Gamon,-J.; Roe,-R.; Campbell,-S.M.

TI: Evaluation of the use of water quality videotapes by county extension offices in Iowa.

SO: J-appl-commun. Gainesville, Fla. : Agricultural Communicators in Education. 1994. v. 78 (2) p. 13-22.

CN: DNAL S494.5.C6A24

LA: English

PT: Article

DE: water-quality. videotapes-. teaching-materials. usage-. extension-education. questionnaires-. evaluation-. iowa-.

**AGRICOLA**

AU: Feather,-P.M.; Amacher,-G.S.

TI: Role of information in the adoption of best management practices for water quality improvement.

SO: Agric-econ. Amsterdam ; New York : Elsevier, c1986-. Dec 1994. v. 11 (2/3) p. 159-170.

CN: DNAL HD1401.A47

LA: English

PT: Article

DE: water-quality. information-. incentives-. farm-management. innovation-adoption. profitability-. demonstration-farms. federal-programs. usda-. mathematical-models. usa-.

AB: This study investigates the role of information in influencing the adoption of improved farm management practices. A lack of producer information regarding both the profitability and the environmental benefits of adopting improved practices may be a reason why widespread adoption of these practices has not occurred. Compared to direct regulation or financial incentives, raising producer information levels may be a more cost-effective method of increasing adoption. The United States Department of Agriculture has recently established and begun implementing a program based on this idea. To test the validity of the program, a two-stage adoption model is specified and estimated using data from a survey of producers in the program area. The results indicate that producer perceptions play an important role in the decision to adopt. Changing these perceptions by means of an educational program may be a reasonable alternative to financial incentives in encouraging BMP adoption.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Contant,-C.K.; Young,-C.L.

TI: Evaluating the effectiveness of field demonstration programs.

SO: IFM-Iowa-State-Univ-Ext. Ames, Iowa : The Extension. May 1990. (6) 17 p.

CN: DNAL S561.6.I8I35

LA: English

PT: Article

DE: demonstration-farms. field-tests. information-. effects-. integrated-pest-management. groundwater-pollution. water-quality. farmers'-attitudes. extension-education. iowa-.

**AGRICOLA**

AU: Johnson,-S.E.; Jacobs,-H.M.

TI: Public education for growth management: lessons from Wisconsin's Farmland Preservation Program.

SO: J-soil-water-conserv. Ankeny, Iowa : Soil and Water Conservation Society. July/Aug 1994.

v. 49 (4) p. 333-338.

CN: DNAL 56.8-J822

LA: English

PT: Article

DE: land-use-planning. social-participation. farmland-. resource-conservation. educational-programs. non-formal-education.

**AGRICOLA**

AU: Constance,-D.H.; Rikoon,-J.S.; Ma,-J.C.

TI: Landlord involvement in environmental decision-making on rented Missouri cropland: pesticide use and water quality issues.

SO: Rural-sociol. Urbana, Ill. : Rural Sociological Society. Winter 1996. v. 61 (4) p. 577-605.

CN: DNAL 281.28-R88

LA: English

PT: Article

DE: landowners-. farmland-. rent-. farm-management. decision-making. participation-. pesticides-. usage-. water-quality. tenure-systems. trends-. sociology-. missouri-.

AB: The need to better understand landlord involvement in decision-making related to pesticide use and water quality issues is evidenced by several trends. These trends include the increasing documentation of water pollution by farm pesticides, the changing characteristics of farm ownership and operator tenure, and evolutions in resource policy and protection planning. This paper utilizes a theoretical approach to the sociology of land tenure to interpret results from an investigation of landlord involvement in environmental decision making regarding pesticide selection on rented land. Eight counties with high susceptibility of water contamination by pesticides were selected for study. Structured, in-person interviews were administered to in-county landlords, and a mail survey was used to poll out-of-county landlords. Results indicate that participation is generally low with very little difference between landlord groups. Renters make most of the organizational and operational decisions on rented farmland. Landlord participation is predominantly based on economic, rather than on social or environmental, factors. Furthermore, while economic variables are important predictors of participation for both groups, gender and social ties to the renter tend to increase local landlord involvement, but not absentee involvement. These results have important implications for both federal programs and further research on land tenure and environmental stewardship.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Stanley,-J.W.

TI: The key to successful farmer participation in Florida's Rural Clean Water Program.

SO: Proceedings: the National RCWP Symposium 10 years of controlling agricultural nonpoint source pollution the RCWP experience Sept 13-17, 1992, Orlando, Florida. Washington, DC : U.S. Environmental Protection Agency, [1992].. p. 269-272.

CN: DNAL TD223.N36-1992

LA: English

PT: Article

DE: water-management. water-quality. programs-. farmers-. participation-. florida-.

**AGRICOLA**

AU: Cameron-Howell,-K.

TI: Factors leading to permanent adoption of best management practices in South Dakota Rural Clean Water Program projects.

SO: Proceedings: the National RCWP Symposium 10 years of controlling agricultural nonpoint source pollution the RCWP experience Sept 13-17, 1992, Orlando, Florida. Washington, DC : U.S. Environmental Protection Agency, [1992].. p. 255-259.

CN: DNAL TD223.N36-1992

LA: English

PT: Article

DE: water-management. water-quality. programs-. farmers-. participation-. south -dakota.

**AGRICOLA**

AU: Davis,-C.T.; Clatterbuck,-W.K.

TI: Role of the Tennessee Master Logger Program in implementation of Best Management Practices on non-industrial private forests.

SO: South-j-appl-for. Bethesda, MD : Society of American Foresters. Feb 2003. v. 27 (1) p. 36-40.

CN: DNAL SD1.S63

LA: English

PT: Article

DE: logging-. forest-management. extension-education. professional-education. technology-transfer. roads-. harvesting-. water-quality. Tennessee-.

AB: A field evaluation of Best Management Practices (BMPs) was used to determine the effectiveness of the Tennessee Master Logger Program (TMLP) in 1997-1998. The study was conducted on non-industrial private forestland (NIPF) and excluded harvests on land owned by forest industry or public forests. Completed logging jobs were evaluated in relation to four components of timber harvesting: (1) haul roads, (2) skid trails, (3) log decks, and (4) Streamside Management Zones (SMZs). The scores assigned during evaluation to each of the four components were added together to yield an overall score. An overall percentage score was calculated because some sites did not have all four components, for example, SMZs are not necessary on sites without streams. Of 191 randomly chosen logging sites across the state of Tennessee, 38, or 19.9%, were harvested by trained Master Loggers. A significant association ( $P < 0.05$ ) was found between overall percentage score and logger training. The mean overall percentage score for Master Loggers was 75.1%, and the mean score for untrained loggers was 60.4%. Only 17 of the 627 possible scores or 2.6%, exhibited threats to water quality. Of these

References & Abstracts  
For Potentially Relevant Publications Under Review

17, Master Loggers were only responsible for 3. Point biserial correlations indicated that a substantial association ( $P < 0.05$ ) existed between harvests completed by Master Loggers and the scores of haul roads, skid trails, log decks, and SMZ grades. This study indicates that loggers who received training from the TMLP were more likely to implement BMPs during harvesting operations on NIPF than loggers who did not participate in the Tennessee Master Logger Program.

**AGRICOLA**

AU: Napier,-T.L.; Robinson,-J.; Tucker,-M.

TI: Adoption of precision farming within three Midwest watersheds.

SO: J-soil-water-conserv. Ankeny, Iowa : Soil and Water Conservation Society. Second Quarter 2000. v. 55 (2) p. 135-141.

CN: DNAL 56.8-J822

LA: English

PT: Article

DE: farmers-. site-specific-crop-management. watersheds-. innovation-adoption. landowners-. prediction-. farmers'-attitudes. age-. education-. nature-conservation. erosion-. risk-assessment. water-quality.

**AGRICOLA**

AU: Varlamoff,-S.; Florkowski,-W.J.; Jordan,-J.L.; Latimer,-J.; Braman,-K.

TI: Georgia homeowner survey of landscape management practices.

SO: HortTechnology. Alexandria, VA : American Society for Horticultural Science, c1991-. Apr/June 2001. v. 11 (2) p. 326-331.

CN: DNAL SB317.5.H68

LA: English

PT: Article

DE: homeowners-. surveys-. landscape-gardening. land-management. fertilizers-. herbicides-. insecticides-. fungicides-. application-rates. home-gardens. extension-education. runoff-. water-quality. surface-water. watersheds-. weeds-. georgia-.

AB: A survey of Georgia homeowners provided insights about their use of fertilizers and pesticides. Knowledge of current homeowner practices is needed to develop a best management practices manual to be used by Master Gardeners to train the general public through the existing outreach programs. The objective of the training program is to reduce nutrient runoff and garden chemicals and improve the quality of surface water in urban watersheds. Results showed three of four homeowners did their own landscaping and, therefore, fully controlled the amount of applied chemicals and the area of application. Fertilizers were primarily applied to lawns, but a high percentage of homeowners also applied them to trees, shrubs, and flowers. Insecticides were applied by a larger percentage of homeowners than herbicides. Control of fire ants (*Solenopsis invicta*) was likely the reason behind the frequent use of insecticides. The desire for a weed free lawn was the plausible motivation behind the use of herbicides, which were used mostly on lawns. Fungicide use was infrequently reported by Georgia homeowners. The pattern of fertilizer and pesticide use suggests that the developed manual should emphasize techniques and cultural practices, which could lower the dependence on chemicals, while ultimately assuring the desired appearance of turf and ornamental plants.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Lefko,-S.A.; Rice,-M.E.; Pedigo,-L.P.

TI: Producer perceptions and pest management practices in Iowa alfalfa.

SO: J-prod-agric. [Madison, WI] : American Society of Agronomy, c1987-. Apr/June 1999. v. 12 (2) p. 257-263.

CN: DNAL S539.5.J68

LA: English

PT: Article

DE: medicago-sativa. farmers'-attitudes. surveys-. empoasca-fabae. pest-resistance. crop-management. injuries-. intensive-production. symptoms-. hypera-postica. drought-. water-stress. yield-losses. insect-pests. iowa-.

AB: In June 1997, 1900 self-administered surveys were sent to Iowa alfalfa (*Medicago sativa* L.) producers. The sample was split into early adopter and general populations. Early adopters were those producers who purchased potato leafhopper [*Empoasca fabae* (Harris)] resistant alfalfa seed during the first year it was available commercially. The general population was randomly selected and no producer was present in both populations. Producers were asked questions on pest perceptions, management practices, and perceptions of leafhopper-resistant alfalfa. Seven hundred forty-seven usable surveys were returned. Results showed that the early adopter population farmed larger production systems and produced more alfalfa per acre than the general population. Overall, producers from the early adopter population had greater fundamental knowledge of serious alfalfa pests than producers from the general population. The potato leafhopper was reported as the most important pest in both populations. Producers seemed confused between the injury symptoms of potato leafhopper and alfalfa weevil [*Hypera postica* (Gyllenhal)] injury, and it was apparent that leafhopper injury symptoms were often confused with drought stress. Positive relationships were found between the frequency of scouting, the frequency of insecticide use, and alfalfa yield. The majority of producers expected leafhoppers to avoid resistant alfalfa varieties, resulting in smaller pest infestations. Adoption of leafhopper-resistant alfalfa probably will be limited by producers' knowledge of previous yield loss from this pest. Results of this survey will be used to develop improved educational materials on insect pest management in alfalfa.

**AGRICOLA**

AU: Shaffer,-R.M.; Meade,-G.S.

TI: Evaluation of harvest planning training.

SO: For-prod-j. Madison, Wis. : Forest Products Society. July/Aug 1997. v. 47 (7/8) p. 69-71.

CN: DNAL 99.9-F7662J

LA: English

PT: Article

DE: harvesting-. logging-. training-. planning-. virginia-.

AB: Interest in logger education and training related to best management practices (BMPs) has increased dramatically in recent years. Harvest planning is a critical part of forestry water quality BMPs. The BMP manuals of all the states recommend timber harvest planning, and several states require written timber harvest plans. The objective of this study was to evaluate the impact of harvest planning training and the preparation and use of written timber harvest plans on BMP compliance, landowner satisfaction, and weather-related downtime in the Virginia piedmont. Nine randomly selected loggers ("trained" group) completed 2 days of intensive harvest planning field training, then prepared and followed written timber harvest plans for the 29 tracts they harvested during the 8-month

References & Abstracts  
For Potentially Relevant Publications Under Review

study period immediately following the training. The trained loggers outperformed a "control group" of loggers for mean BMP compliance (90% vs. 86%, respectively); mean landowner satisfaction (3.54 vs. 3.27); and mean weather-related downtime (10% vs. 13%). Evaluation criteria scores for both groups were good, and the differences, though statistically significant, were relatively small, leading to conclusions that 1) loggers in the Virginia piedmont are generally doing a good job; 2) they are planning their operations, whether a written plan is required or not; and 3) harvest planning training and written timber harvest plans can marginally improve BMP compliance, landowner satisfaction, and weather-related downtime, even for loggers who are already performing well.

**AGRICOLA**

AU: Ryder,-B.A.; Swoope,-K.S.F.

TI: Learning about riparian rehabilitation: assessing natural resource and landscape architecture student teams.

SO: J-nat-resour-life-sci-educ. Madison, WI : American Society of Agronomy, c1992-. Fall 1997. v. 26 (1) p. 115-119.

CN: DNAL S530.J6

LA: English

PT: Article

DE: riparian-vegetation. rehabilitation-. agricultural-education. environmental-education. educational-courses. teaching-methods. educational-objectives. ecology-. natural-resources. resource-management. landscape-architecture. washington-.

**AGRICOLA**

AU: Nowak,-Peter-J.

CA: United States. Cooperative State Research, Education, and Extension Service.

TI: Communication and adoption evaluation of USDA water quality demonstration projects : evaluation report.

SO: Washiington, D.C. : Plant and Animal Science Production, Protection, and Processing, CSREES/USDA, [1997] iv, 43 p. : ill. (1 col.), col. map

CN: DNAL aTD223.C662--1997

LA: English

PT: Monograph; Bibliography

DE: Water-quality-management-United-States. Farmers-United-States-Attitudes.

**AGRICOLA**

AU: Napier,-T.L.; Sommers,-D.G.

TI: Farm production systems of Mennonite and non-Mennonite land owner-operators in Ohio.

SO: J-soil-water-conserv. Ankeny, Iowa : Soil and Water Conservation Society. Jan/Feb 1996. v. 51 (1) p. 71-76.

CN: DNAL 56.8-J822

LA: English

PT: Article

DE: farming-systems. farm-structure. comparisons-. social-differentiation. religion-. ethnicity-. farmers-. cultural-behavior. farmers'-attitudes. innovation-adoption. technical-progress. environmental-protection. resource-conservation. educational-programs. technology-transfer. diffusion-of-information. rural-sociology. ohio-.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Caffey,-R.H.; Kazmierczak,-R.F.-Jr.

TI: Factors influencing technology adoption in a Louisiana aquaculture system.

SO: J-agric-appl-econ. Lexington, Ky. : Southern Agricultural Economics Association, 1993-. July 1994. v. 26 (1) p. 264-274.

CN: DNAL HD101.S6

LA: English

PT: Article

DE: crabs-. production-. technology-. innovation-adoption. water-systems. factor-analysis. probabilistic-models. decision-analysis. aquaculture-. louisiana-.

AB: Abstract: A multinomial logit model was estimated and used to analyze the impact of various producer characteristics on the adoption of flow-through and recirculating technology in soft-shelled crab production. Because of the industry's geographic isolation and high turnover rate, data was collected by personal interviews in 1991. The results suggest that increased adoption might be fostered by targeting education programs towards full time, family operated businesses in non-traditional production regions. However, development of effective education programs may be hindered by the lack of a significant relationship between producer adoption decisions and the information provided by university or extension personnel.

**AGRICOLA**

AU: Sommers,-D.G.; Napier,-T.L.

TI: Comparison of Amish and non-Amish farmers: a diffusion/farm-structure perspective.

SO: Rural-Sociol. Bozeman, Mont. : Rural Sociological Society. Spring 1993. v. 58 (1) p. 130-145.

CN: DNAL 281.28-R88

LA: English

PT: Article

DE: farm-management. cultural-differentiation. farmers'-attitudes. environmental-degradation.

AB: Considerable attention has focused on farming practices and behavioral patterns that characterize Amish farmers from other agriculturalists. It has been suggested that Amish farmers are more concerned about the physical environment than non-Amish farmers because Amish employ fewer technology-intensive farming practices, though there is little empirical evidence to support such an assertion. To address this issue, data were collected from a sample of Amish and non-Amish owner-operators in Ohio to compare environmental attitudes and farming systems presently in use. Discriminant analysis was used to examine factors chosen to differentiate the two groups. Findings reveal that Amish respondents believed more strongly than other farmers that ground water pollution was an important environmental problem and that farmers should reduce chemical application rates to protect ground water resources. Other farmers exhibited greater willingness to participate in educational programs designed to reduce pesticide application rates. The two groups could not be differentiated by criteria used to make adoption decisions about farm technologies and farming practices; both used productivity and efficiency criteria when making adoption decisions.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Padgitt,-S.C.

TI: Farm practices and attitudes toward groundwater policies: a statewide survey.

SO: IFM-Iowa-State-Univ-Ext. Ames, Iowa : The Extension. Oct 1989. (3) 30 p.

CN: DNAL S561.6.I8I35

LA: English

PT: Article

DE: groundwater-. environmental-policy. surveys-. farmers'-attitudes. statistics-. conservation-tillage. crop-production. livestock-farming. demonstration-farms. extension-education. iowa-.

**AGRICOLA**

AU: Tucker,-M.; Napier,-T.L.

TI: Determinants of perceived agricultural chemical risk in three watersheds in the Midwestern United States.

SO: J-rural-stud. Oxford ; New York : Pergamon, 1985-. Apr 2001. v. 17 (2) p. 219-233.

CN: DNAL HT401.J68

LA: English

PT: Article

DE: watersheds-. agricultural-chemicals. risk-. health-hazards. farmers' -attitudes. decision-making. farm-surveys. regression-analysis. multivariate -analysis. ohio-. iowa-. minnesota-.

AB: Recent epidemiologic research on the relationship between agricultural chemical use and human health has focused on possible risks to both farmers and nonfarm publics through such avenues as airborne chemical drift and contamination of drinking water. While agricultural chemical use has been defined as a public health issue, decisions about applying chemicals are made primarily by individual farmers who consider not only highly publicized health and environmental risks but also potentially severe economic risks of not using chemicals for production of food and fiber. The critical decision-making role played by farmers relative to agricultural chemical use creates a need for accurate information on their perceptions of various chemical-related hazards and the factors that may influence such judgments. Understanding farmers' perceptions toward agricultural chemical risk is essential to formulate effective risk-mitigation programs and policies and to target educational and technical assistance programs that encourage sound chemical practices at the farm level. This paper reports findings from a study of 1011 farm operators in three Midwestern watersheds in Ohio, Iowa, and Minnesota to assess their perceptions of risk associated with use of agricultural chemicals. A theoretical model developed from components of social learning, risk perception, and farm structure theories is used to identify predictors of agricultural chemical risk. Findings show that farmers in the three watersheds do not view agricultural chemical use as a serious health or environmental hazard. Regression findings provide partial support for the theoretical model. The statistical models explained from 30 to 37%.of the variance in farmers' risk perceptions in the three study watersheds. Findings are discussed in the context of developing future education/information programs in the three watersheds.

References & Abstracts  
For Potentially Relevant Publications Under Review

**AGRICOLA**

AU: Zipper,-C.E.; Rockett,-J.S.

TI: Locality-based programming: Virginia Tech's Powell River Project.

SO: J-ext. United States : Extension Journal, Inc., [1987-. Dec 1997. v. 35 (6) p. n/a.

CN: DNAL LC45.4.J682

LA: English

PT: Article

DE: cooperative-extension-service. models-. coal-. mining-. land-use-planning. local-planning. program-evaluation. community-involvement. program -effectiveness. extension-education. virginia-

**AGRICOLA**

CA: United States. Environmental Protection Agency. Office of Water.

TI: Section 319 success stories III, the successful implementation of the clean water acts section 319 non point source pollution program.

SO: [Washington, D.C.] : U.S. Environmental Protection Agency, Office of Water,[2002]

CN: DNAL TD223-.S44-2002

LA: English

PT: Monograph

DE: Nonpoint-source-pollution-United-States-Management. Water-quality -management-United-States.

AB: EPA Section 319 Success Stories III Section 319 Success Stories, Vol. III Contact Us Print Version EPA Home Programs Water Nonpoint Source Pollution CWA Section 319 Success Stories, Vol. III Section 319 Nonpoint Source Success Stories: Volume I Section 319 Nonpoint Source Success Stories: Volume II Introduction Information and Education Programs Innovative State Programs State Funding Programs Tribal Section 319 Projects States and Territories Alabama Alaska American.

**AGRICOLA**

AU: Miller,-D.R.; Smith,-M.F.

TI: Who participates and why? Factors affecting participation in a state issues -based program.

SO: J-Ext. Madison, Wis. : Extension Journal. Fall 1991. v. 29 p. 12-14.

CN: DNAL 275.28-J82

LA: English

PT: Article

DE: extension-. programs-. participation-. decision-making. water-quality. maryland-.

**Agris**

**Agris**

TI: Extension education approaches on environmental management in Southern Tagalog, Philippines.

AU: Rebancos,-C.M.

CA: Philippines Univ. Los Banos, College, Laguna (Philippines).

SO: College, Laguna (Philippines). Feb 1996. 161 leaves.

LA: En (English)

PT: B (Monograph); U (Thesis-or-Dissertation); E (Summary); V (Non-Conventional)

References & Abstracts  
For Potentially Relevant Publications Under Review

ENI: \*philippines-; \*extension-activities; \*education-; \*environment-; \*farmers -; \*community-development; \*indigenous-knowledge; \*human-behaviour; \*nongovernmental-organizations; \*social-consciousness

ENC: agricultural-population; asia-; behaviour-; human-population; occupations -; professional-services; rural-development; rural-population; services-; social-behaviour; socioeconomic-development; south-east-asia

ESI: \*filipinas-; \*extension-; \*educacion-; \*medio-ambiente; \*agricultores-; \*desarrollo-de-la-comunidad; \*conocimiento-indigena; \*comportamiento-humano; \*organizaciones-no-gubernamentales; \*conciencia-social

ESC: asia-; asia-sudoriental; comportamiento-; comportamiento-social; desarrollo-economico-y-social; desarrollo-rural; ocupaciones-; poblacion -agraria; poblacion-humana; poblacion-rural; servicios-; servicios-profesionales

FRI: \*philippines-; \*vulgarisation-; \*education-; \*environnement-; \*agriculteur -; \*developpement-de-la-communaute; \*connaissance-indigene; \*comportement -humain; \*organisation-non-gouvernementale; \*conscience-sociale

FRC: asie-; asie-du-sud-est; categorie-professionnelle; comportement-; comportement-social; developpement-rural; developpement-socioeconomique; population-agricole; population-humaine; population-rurale; service-; service -professionnel

ENAB: The study attempted to describe and analyze STRAP [Southern Tagalog Rural Assistance Programs] and SPP [Solidarity for Peoples' Power] management in terms of their objectives, mission, resources, organization and funding; identify the extension education approaches employed, assess the effects of the approaches used in terms of the community partner's knowledge, and attitude level toward some environmental issues; and identify the problems and issues related to the use of the extension education approaches. Guide questions and participant-observation guided the researcher in data collection. Frequencies, percentage and average weighted means were used in analyzing the effect of the extension education approaches on the end-users' knowledge and attitude level toward some environmental issues. The projects/activities of STRAP were on organizational building support program, technology development and dissemination, watershed rehabilitation and protection and community-based environmental education, SPP's projects' activities were focused on environmental campaign to save Mt. Makiling and Laguna Lake [Philippines] and campaign against quarrying and land-use conversion. From the findings, different extension education approaches were utilized by STRAP and SPP in implementing their environmental projects. These extension approaches were agricultural extension approach, resource-sharing and participatory agricultural extension approach. In the case of STRAP, there were indigenous extension education approaches utilized i.e. farmer-to-farmer and on-site training. These strategies were developed in response to their projects and end -users (farmers). On the other hand, one of the SPP's extension education strategies utilized was community organizing as a vehicle for campaigning on environmental issues. Although the same extension education approaches were utilized by the STRAP and SPP, there were some variations/modifications on the manner the approaches were used. The presence of the NGO's [nongovernmental organization] in the area resulted to the increase of community partners' knowledge and attitude level toward some environmental issues which led to their participation on environmental activities.

AN: 97-126566

References & Abstracts  
For Potentially Relevant Publications Under Review

**Agris**

TI: Rural nonpoint source pollution control in Wisconsin: the limits of a voluntary program.

AU: Wolf,-A.T.

SO: Water-resources-bulletin (USA). (Dec 1995). v. 31(6) p. 1009-1022.

LA: En (English)

PT: J (Journal-Article)

ENI: \*wisconsin-; \*water-quality; \*watershed-management; \*environmental -policies; \*water-; \*water-pollution

ENC: america-; lake-states-usa; north-america; north-central-states-usa; policies-; pollution-; quality-; usa-

ESI: \*wisconsin-; \*calidad-del-agua; \*ordenacion-de-cuencas; \*politica -ambiental; \*agua-; \*polucion-del-agua

ESC: america-; america-del-norte; calidad-; estados-de-los-lagos-eua; estados -del-centro-norte-eua; eua-; politicas-; polucion-

FRI: \*wisconsin-; \*qualite-de-l'-eau; \*amenagement-de-bassin-versant; \*politique-de-l'-environnement; \*eau-; \*pollution-de-l'-eau

FRC: amerique-; amerique-du-nord; etats-des-lacs-eu; etats-du-centre-nord-eu; etats-unis; politique-; pollution-; qualite-

ENAB: This paper examines the relationship between best management practices, institutional needs, and improved water quality within the watersheds of Wisconsin's program for controlling rural nonpoint source pollution. The first section describes the federal requirements for state nonpoint source programs and the legislative and management methods the state of Wisconsin uses to put those requirements into practice. The emphasis of the paper, described in the second section, is the institutional difficulty in evaluating the success of a large, integrated water quality program. Measurements which are investigated include (1) watershed water quality before and after implementation of BMPs; (2) program participation as measured by eligible vs. participating landowners, BMPs considered necessary vs. BMPs implemented, or dollars allocated to the NPS program vs. dollars expended; and (3) institutional goal coordination and management effectiveness. It is found that, despite the size and sophistication of Wisconsin's NPS program, there is little if any improvement in ambient water quality in these watersheds, probably because of a general lack of adequate participation in this voluntary program.

AN: 96-144525

**Agris**

TI: Information environment of technodemo farmers.

AU: Abaoag,-L.dR.; Barroga,-R.F.

CA: 30. Annual Scientific Conference of the Crop Science Societies of the Philippines. Batac, Ilocos Norte (Philippines). 2-7 May 2000.

SO: Philippine-Journal-of-Crop-Science (Philippines). (May 2000). v. 25(Supplement no. 1) p. 68. Issued May 2000.

LA: En (English)

PT: J (Journal-Article); E (Summary); K (Conference)

ENI: \*oryza-sativa; \*production-; \*technology-; \*technology-transfer; \*farmers -; \*innovation-adoption; \*philippines-

ENC: agricultural-population; asia-; gramineae-; human-population; occupations -; oryza-; rural-population; south-east-asia; technology-transfer

References & Abstracts  
For Potentially Relevant Publications Under Review

ESI: \*oryza-sativa; \*produccion-; \*tecnologia-; \*transferencia-de-tecnologia; \*agricultores-; \*adopcion-de-innovaciones; \*filipinas-  
ESC: asia-; asia-sudoriental; gramineae-; ocupaciones-; oryza-; poblacion -agraria; poblacion-humana; poblacion-rural; transferencia-de-tecnologia  
FRI: \*oryza-sativa; \*production-; \*technologie-; \*transfert-de-technologie; \*agriculteur-; \*adoption-de-l'-innovation; \*philippines-  
FRC: asie-; asie-du-sud-est; categorie-professionnelle; gramineae-; oryza-; population-agricole; population-humaine; population-rurale; transfert-de -technologie  
ENAB: An exploratory study involving 27 farmers from Isabela, Nueva Ecija and Quezon [Philippines] was conducted from January to June 1997 to document how the information environment in the Gintong Ani TechnoDemo project affected the practices and yield of farmer cooperators and non-cooperators. Results of the study indicated that: 1) Knowledge of the scientific concepts and rationale behind each step affected the practice of farmers; 2) the technodemos made new information on rice accessible to rice farmers; 3) current technology used by farmers were passed on to them by members of their family or neighbors; 4) important sources of information were technicians of DA [Department of Agriculture] and chemical companies; 5) in the technology package recommended in the technodemo, basal fertilizer application and reduced spraying were adopted by farmer-cooperators and non-cooperators alike. The recommendation on reduced seeding rate and one seedling per hill were not completely followed by the cooperators after the demo project since they claimed that it was difficult to hire laborers to pull seedlings from the seedbed; 6) cooperators attributed the increase in their yield to- added fertilizer, proper timing of fertilizer application, use of foundation seeds, proper water management and good weather; and 7) low yields was attributed to poor weather condition and untimely water supply.  
AN: 2001-031062

**Agris**

TI: A report on extension and education programmes: review, evaluation and recommendations.  
AU: Martel,-F.  
CA: FAO, Rome (Italy). Forestry Dept.  
Ministry of Agriculture, Forests, Fisheries and Meteorological Services, Apia (Samoa). Forestry Div.  
UNDP, New York (USA).  
SO: Apia (Samoa). 1996. 162 p.  
RN: FAO-FO-SAM-92-003.  
LA: En (English)  
PT: B (Monograph); E (Summary); V (Non-Conventional)  
ENI: \*samoa-; \*watershed-management; \*education-; \*extension-activities  
ENC: oceania-; professional-services; services-  
ESI: \*samoa-; \*ordenacion-de-cuencas; \*educacion-; \*extension-  
ESC: oceania-; servicios-; servicios-profesionales  
FRI: \*samoa-; \*amenagement-de-bassin-versant; \*education-; \*vulgarisation-  
FRC: oceanie-; service-; service-professionnel  
AN: 1998-098848

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For Potentially Relevant Publications Under Review

**Agris**

TI: Farm operators' pref. for soil conservation service information: results from three Tennessee watersheds.

AU: Pompelli,-G.; Morfaw,-C.; English,-B.C.; Bowling,-R.G.; Bullen,-G.S.; Tegegne,-F.

SO: Journal-of-production-agriculture (USA). (Jul-Sep 1997). v. 10(3) p. 472 -476.

LA: En (English)

PT: J (Journal-Article)

ENI: \*tennessee-; \*soil-conservation; \*water-quality; \*diffusion-of -information; \*farmers-; \*surveys-

ENC: agricultural-population; america-; appalachian-states-usa; human -population; north-america; occupations-; quality-; resource-conservation; resource-management; rural-population; soil-management; southern-states-usa; usa-

ESI: \*tennessee-; \*conservacion-de-suelos; \*calidad-del-agua; \*difusion-de -informacion; \*agricultores-; \*encuestas-

ESC: america-; america-del-norte; calidad-; conservacion-de-los-recursos; estados-apalaches-eua; estados-del-sur-eua; eua-; manejo-del-suelo; ocupaciones -; ordenacion-de-recursos; poblacion-agraria; poblacion-humana; poblacion-rural

FRI: \*tennessee-; \*conservation-des-sols; \*qualite-de-l'-eau; \*diffusion-de-l' -information; \*agriculteur-; \*enquete-

FRC: amerique-; amerique-du-nord; categorie-professionnelle; conservation-des -ressources; etats-appalachiens-eu; etats-du-sud-eu; etats-unis; gestion-des -ressources; gestion-du-sol; population-agricole; population-humaine; population-rurale; qualite-

ENAB: Recent water quality legislation requires that the Soil Conservation Service (SCS) reach a more diverse range of farm operators, especially small farm operators. With few, if any, additional resources, the effectiveness of the SCS's efforts to communicate soil conservation information to new audiences is critical. Thus, a better understanding about farm operators' predispositions toward SCS information may help SCS personnel reach these new audiences more efficiently. This study examines the extent to which farm and farm operator characteristics can be used to predict farm operators' attitudes about the usefulness of soil conservation information supplied by the SCS. The results of this study indicate that farm operators contacted by SCS and extension personnel, who also participate in government commodity programs have an increased likelihood of considering SCS information useful. Although regional influences negatively affect the likelihood that farm operators will consider the SCS soil conservation information useful, farm size, gross sales, years of education, and other farm and farm operator characteristics were not found to be significant factors.

AN: 1998-088090

**Agris**

TI: Skin cancer prevention and detection practices in a Michigan farm population following an educational intervention.

AU: Mullan,-P.B.; Gardiner,-J.C.; Rosenman,-K.; Zhu,-Z.; Swanson,-M.

SO: The-Journal-of-rural-health (USA). (1996). v. 12(4,suppl.) p. 311-320.

LA: En (English)

PT: J (Journal-Article)

ENI: \*michigan-; \*melanoma-; \*disease-control; \*health-; \*health-services; \*education-; \*testing-; \*farmers-; \*human-behaviour; \*farm-surveys; \*rural -population

References & Abstracts  
For Potentially Relevant Publications Under Review

ENC: agricultural-population; america-; behaviour-; human-population; lake -states-usa; neoplasms-; north-america; north-central-states-usa; occupations-; organic-diseases; rural-population; social-services; surveys-; usa-

ESI: \*michigan-; \*melanoma-; \*control-de-enfermedades; \*salud-; \*servicios-de -salud; \*educacion-; \*ensayo-; \*agricultores-; \*comportamiento-humano; \*encuestas-sobre-explotaciones; \*poblacion-rural

ESC: america-; america-del-norte; comportamiento-; encuestas-; enfermedades -organicas; estados-de-los-lagos-eua; estados-del-centro-norte-eua; eua-; neoplasmas-; ocupaciones-; poblacion-agraria; poblacion-humana; poblacion -rural; servicios-sociales

FRI: \*michigan-; \*melanome-; \*controle-de-maladies; \*sante-; \*service-de-sante -publique; \*education-; \*testage-; \*agriculteur-; \*comportement-humain; \*enquete-sur-exploitations-agricoles; \*population-rurale

FRC: amerique-; amerique-du-nord; categorie-professionnelle; comportement-; enquete-; etats-des-lacs-eu; etats-du-centre-nord-eu; etats-unis; maladie -organique; neoplasme-; population-agricole; population-humaine; population -rurale; service-social

ENAB: Farmers face an increased risk of skin cancer, presumed to be secondary to their increased occupational exposure to sunlight. This study examines skin cancer prevention and detection beliefs and practices among adult farmers in defined control and comparison farming communities in four contiguous counties of Michigan, before and after a community-based educational intervention. The educational intervention included mailing packets containing information on skin cancer risks and community sources for screening, disseminating articles in local newspapers on skin cancer prevention and control measures, and providing information and screening at local county fairs and agricultural community fairs. The responses of 2,999 survey participants were analyzed to identify the interrelationships among their beliefs and their descriptions of their (primary preventive) self-care and professional medical care seeking (for detection and treatment) practices. Factors associated with the likelihood of skin cancer screening and with measures of knowledge and practices associated with medical care of skin cancer were examined. The intervention appeared to improve the practice of preventive behaviors and seeking medical care.

AN: 97-140155

### **Agris**

TI: Reliance on sources of information for water-saving practices by irrigators in the High Plains of the U.S.A.

AU: Kromm,-D.E.; White,-S.E.

SO: Journal-of-rural-studies (USA). (1991). v. 7(4) p. 411-421.

LA: En (English)

PT: J (Journal-Article)

ENI: \*southern-states-usa; \*nebraska-; \*colorado-; \*kansas-; \*new-mexico; \*groundwater-; \*irrigation-; \*information-services; \*uses-; \*farmers-; \*water -conservation; \*innovation-adoption; \*water-management; \*surveys-; \*natural -distribution; \*plains-; \*occupations-

ENC: agricultural-population; america-; biogeography-; human-population; mountain-states-usa; natural-resources; north-america; north-central-states -usa; northern-plains-states-usa; occupations-; physiographic-features; resource-conservation; resource-management; rural-population; technology -transfer; usa-; water-management; water-resources; western-states-usa

ESI: \*estados-del-sur-eua; \*nebraska-; \*colorado-; \*kansas-; \*nuevo-mexico; \*aguas-subterranas; \*riego-; \*servicios-de-informacion; \*usos-; \*agricultores -; \*conservacion-de-

References & Abstracts  
For Potentially Relevant Publications Under Review

aguas; \*adopcion-de-innovaciones; \*ordenacion-de-aguas; \*encuestas-; \*distribucion-natural; \*llanuras-; \*ocupaciones-

ESC: administracion-de-recursos; america-; america-del-norte; aspectos -fisiograficos; biogeografia-; conservacion-de-los-recursos; estados-de-la -montana-eua; estados-del-centro-norte-eua; estados-del-oeste-eua; estados -llanos-del-norteeua; estados-unidos-de-america; ocupaciones-; ordenacion-de -aguas; poblacion-agraria; poblacion-humana; poblacion-rural; recursos -hidricos; recursos-naturales; transferencia-de-tecnologia

FRI: \*etats-du-sud-eu; \*nebraska-; \*colorado-; \*kansas-; \*nouveau-mexique; \*eau -souterraine; \*irrigation-; \*service-d'-information; \*utilisation-; \*agriculteur-; \*conservation-de-l'-eau; \*adoption-de-l'-innovation; \*amenagement-hydraulique; \*enquete-; \*distribution-naturelle; \*plaine-; \*categorie-professionnelle

FRC: amenagement-hydraulique; amerique-; amerique-du-nord; biogeographie-; categorie-professionnelle; conservation-des-ressources; element -geomorphologique; etats-de-l'-ouest-eu; etats-du-centre-nord-eu; etats -montagneux-eu; etats-plaines-du-nord-eu; etats-unis; gestion-des-ressources; population-agricole; population-humaine; population-rurale; ressource-en-eau; ressource-naturelle; transfert-de-technologie

ENAB: Who do farmers trust? Irrigators in the High Plains are confronted with a wide range of information source's with respect to water-saving practices. From a survey of 709 irrigators in 10 countries the most widely accepted sources are identified, regional variability or information is examined, the role of irrigator characteristics on source selection is determined, and the level of association between adoption and source preference is analyzed. Differences in irrigators' reliance on specific sources are more associated with location than irrigator characteristics. Information sources viewed as important by many irrigators frequently influence adoption decisions less than sources having a wide range of preference among irrigators. Mass media and advisor-oriented sources are much more significantly linked to adoption than inter-personal sources such as friends and neighbors. The three sources that best discriminate adoption behavior are private agricultural consulting firms, university research stations, and trade magazines.

AN: 92-099716

**Agris**

TI: Monitoring audience response to demonstration projects: baseline reports: Des Moines County.

AU: Padgitt,-S.C.

SO: Jun 1990. 29 p.

LA: En (English)

PT: B (Monograph); V (Non-Conventional)

ENI: \*iowa-; \*pilot-farms; \*testing-; \*tillage-; \*soil-conservation; \*farmers-; \*water-pollution; \*groundwater-; \*water-quality; \*education-; \*surveys-

ENC: agricultural-population; america-; corn-belt-usa; cultivation-; enterprises-; evaluation-; farms-; human-population; natural-resources; north -america; north-central-states-usa; occupations-; pollution-; quality-; resource-conservation; resource-management; rural-population; soil-management; usa-; water-resources

ESI: \*iowa-; \*fincas-experimentales; \*ensayo-; \*labranza-; \*conservacion-de -suelos; \*agricultores-; \*polucion-del-agua; \*aguas-subterranas; \*calidad-del -agua; \*educacion-; \*encuestas-

ESC: administracion-de-recursos; america-; america-del-norte; calidad-; conservacion-de-los-recursos; corn-belt-eua; cultivo-; empresas-; estados-del -centro-norte-eua; estados-unidos-de-

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For Potentially Relevant Publications Under Review

america; evaluacion-; explotaciones -agrarias; manejo-del-suelo; ocupaciones-; poblacion-agraria; poblacion-humana; poblacion-rural; polucion-; recursos-hidricos; recursos-naturales  
FRI: \*iowa-; \*ferme-pilote; \*testage-; \*travail-du-sol; \*conservation-des-sols; \*agriculteur-; \*pollution-de-l'eau; \*eau-souterraine; \*qualite-de-l'eau; \*education-; \*enquete-  
FRC: amerique-; amerique-du-nord; categorie-professionnelle; conservation-des -ressources; corn-belt-eua; entreprise-; etats-du-centre-nord-eu; etats-unis; evaluation-; exploitation-agricole; gestion-des-ressources; mise-en-valeur-du -sol; pollution-; population-agricole; population-humaine; population-rurale; pratique-culturelle; qualite-; ressource-en-eau; ressource-naturelle  
AN: 92-071355

**Agris**

TI: Watertable watch. Seeking the salinity solution. A report on the salinity awareness campaign piloted in the Sunraysia irrigation district during October, 1988.

AU: Brown,-M.D.

SO: Melbourne, Vic. (Australia). Department of Agriculture and Rural Affairs. 1990. 56 p.

LA: En (English)

PT: B (Monograph)

ENI: \*victoria-; \*extension-activities; \*groundwater-table; \*salinity-; \*education-; \*irrigated-farming

ENC: australia-; chemico-physical-properties; cultural-methods; groundwater-; natural-resources; oceania-; professional-services; services-; water-resources

ESI: \*victoria-; \*extension-; \*capa-freatica; \*salinidad-; \*educacion-; \*agricultura-de-regadio

ESC: aguas-subterraneas; australia-; metodos-de-cultivo; oceania-; propiedades -fisico-quimicas; recursos-hidricos; recursos-naturales; servicios-; servicios -profesionales

FRI: \*victoria-; \*vulgarisation-; \*nappe-souterraine; \*salinite-; \*education-; \*culture-irriguee

FRC: australie-; eau-souterraine; mode-de-culture; oceanie-; propriete -physicochimique; ressource-en-eau; ressource-naturelle; service-; service -professionnel

ENAB: Watertable Watch was an extension campaign intended to make people aware of the link between irrigation, rising groundwater and salinity. Easy-read test wells were installed in problem drainage areas, sites with a high public profile, and school grounds. A well-known TV weather presenter launched the campaign. A television documentary was screened on local television, highlighting the fact that salinity is a community problem. Irrigation field days were held on properties where irrigation scheduling had been practised and monitored over the past season. A telephone survey was conducted before and after the campaign to measure its effectiveness. Watertable Watch doubled the Sunraysia community understanding of the link between rising watertables and salinity.

AN: 95-095713

**Agris**

TI: Evaluating landcare groups in Australia: how they facilitate partnerships between agencies, community groups, and researchers.

AU: Curtis,-A.; DeLacy,-T.

SO: Journal-of-soil-and-water-conservation (USA). (Jan-Feb 1995). v. 50(1) p. 15-20.

LA: En (English)

PT: J (Journal-Article)

References & Abstracts  
For Potentially Relevant Publications Under Review

ENI: \*australia-; \*land-resources; \*resource-management; \*soil-conservation; \*sustainability-; \*social-consciousness; \*administration-; \*cooperative -activities  
ENC: behaviour-; natural-resources; oceania-; resource-conservation; resource -management; social-behaviour; soil-management  
ESI: \*australia-; \*recursos-de-la-tierra; \*ordenacion-de-recursos; \*conservacion-de-suelos; \*sostenibilidad-; \*conciencia-social; \*administracion -; \*cooperativas-  
ESC: comportamiento-; comportamiento-social; conservacion-de-los-recursos; manejo-del-suelo; oceania-; ordenacion-de-recursos; recursos-naturales  
FRI: \*australie-; \*ressource-fonciere; \*gestion-des-ressources; \*conservation -des-sols; \*durabilite-; \*conscience-sociale; \*administration-; \*activite -cooperative  
FRC: comportement-; comportement-social; conservation-des-ressources; gestion -des-ressources; mise-en-valeur-du-sol; oceanie-; ressource-naturelle  
AN: 95-163124

**Agris**

TI: Participation in the CRP: implications of the New York experience.  
AU: Force,-D.; Bills,-N.  
SO: Journal-of-soil-and-water-conservation (USA). (Sep-Oct 1989). v. 44(5) p. 512-516.  
LA: En (English)  
PT: J (Journal-Article)  
ENI: \*new-york; \*soil-conservation; \*water-conservation; \*statistical-analysis; \*mechanical-properties; \*water-quality  
ENC: america-; chemico-physical-properties; middle-atlantic-states-usa; north -america; north-eastern-states-usa; quality-; resource-conservation; resource -management; soil-management; usa-; water-management  
ESI: \*nueva-york; \*conservacion-de-suelos; \*conservacion-de-aguas; \*analisis -estadistico; \*propiedades-mecanicas; \*calidad-del-agua  
ESC: administracion-de-recursos; america-; america-del-norte; calidad-; conservacion-de-los-recursos; estados-del-atlantico-medio; estados-del-nordeste -eua; estados-unidos-de-america; manejo-del-suelo; ordenacion-de-aguas; propiedades-fisico-quimicas  
FRI: \*new-york; \*conservation-des-sols; \*conservation-de-l'-eau; \*analyse -statistique; \*propriete-mecanique; \*qualite-de-l'-eau  
FRC: aménagement-hydraulique; amerique-; amerique-du-nord; conservation-des -ressources; etats-atlantique-central; etats-du-nord-est-eu; etats-unis; gestion-des-ressources; mise-en-valeur-du-sol; propriete-physicochimique; qualite-  
AN: 91-023191

**ASFA: Aquatic Sciences and Fisheries Abstracts**

**ASFA**

DN: Database Name: ASFA: Aquatic Sciences and Fisheries Abstracts  
TI: Title: Environmental Education and Outreach: Experiences of a Federal Agency  
AU: Author: Newton, BJ  
SO: Source: Bioscience [Bioscience]. Vol. 51, no. 4, pp. 297-299. Apr 2001.  
AB: Abstract: Conservation of natural resources is inextricably bound to public attitudes and opinions. Other articles in this issue of BioScience argue for greater involvement by the scientific

References & Abstracts  
For Potentially Relevant Publications Under Review

community in public education and outreach. This one addresses the effectiveness of various outreach and education techniques, based on the experiences of the Natural Resources Conservation Service (NRCS), a US Department of Agriculture nonregulatory agency that is responsible for helping farmers, ranchers, and landowners conserve natural resources on private lands.

**ASFA**

DN: Database Name: ASFA: Aquatic Sciences and Fisheries Abstracts

TI: Title: Michigan Salmon in the Classroom: A fisheries and watershed education curriculum developed by assessing the concerns of education and fisheries stakeholders

AU: Author: Granack, LI

SO: Source: Masters Abstracts International [Masters Abst. Int.]. Vol. 40, no. 4, p. 925. Aug 2002.

AB: Abstract: Salmon in the Classroom (SIC) is a program that combines the hands-on activity of raising salmon in aquaria with curriculum activities that teach various fisheries topics. The program was designed to foster public understanding of fisheries management and stewardship of fisheries and watersheds. The program was developed and implemented in the Pacific Northwest where salmon have been an important commodity and cultural resource. The purpose of this study was to investigate stakeholder perspectives and apply these in the development of a Michigan SIC curriculum. In Phase I, a mail survey was developed and administered to SIC teachers, other educators, Fisheries Division personnel, and opinion leaders of sport fishing groups and watershed coalitions (N = 503). An overall 77% survey response rate was achieved. In Phase II, a writing retreat was used to discuss concepts and activities for a Michigan-specific SIC curriculum. Fisheries stakeholders believed that it was more important to teach resource management topics, whereas education stakeholders believed that the SIC curriculum should address Michigan Curriculum Framework topics. Educators extensively used hands-on teaching methods. All of the SIC teachers found the program to be worthwhile and plan to continue using the program. Mandatory in-service training, program implementation through organizational and community partnerships, and educator participation in curriculum development will enhance the success of the Michigan SIC program.

**ASFA**

DN: Database Name: ASFA: Aquatic Sciences and Fisheries Abstracts

TI: Title: Environmental education: A tool for coastal management? A study of the Caribbean region

AU: Author: Dijksterhuis, OW

SO: Source: Coastal Management [Coast. Manage.], vol. 24, no. 4, pp. 339-353, Dec 1996

AB: Abstract: This article assesses the application of environmental education to management of the use of natural coastal resources and other issues affecting the coastal zone. Degradation of coastal habitats, on land and at sea, has drawn attention to the concept of integrated coastal management. If an integrated approach to coastal management is to succeed, there is a need for nongovernmental organizations and local communities to get involved. Environmental education can be the means by which such involvement can be achieved. Six of the small developing island states of the Caribbean region were surveyed to reveal the way in which environmental education is currently applied to achieve coastal management objectives. The study highlights the methods that are used, the problems that are encountered by organizations providing environmental education, and their strategies and the success of the service that they provide.

References & Abstracts  
For Potentially Relevant Publications Under Review

**ASFA**

DN: Database Name: ASFA: Aquatic Sciences and Fisheries Abstracts

TI: Title: Community-based educational outreach to at-risk urban anglers

AU: Author: Pflugh, KK; Shaw, JA; Leighann, VH

SO: Source: SECOND ANNUAL MARINE AND ESTUARINE SHALLOW WATER SCIENCE AND MANAGEMENT CONFERENCE., U.S. EPA, PHILADELPHIA, PA (USA), 1995, p. 35

AB: Abstract: In 1982, research conducted by the New Jersey Department of Environmental Protection (NJDEP) showed elevated levels of chemical contaminants in certain fish and crabs in the Newark Bay Complex. Subsequently, advisories were adopted by the State of New Jersey to guide citizens on safe consumption practices. Since that time, fish consumption advisories in New Jersey have become a subject for political debate, especially as many advisories are issued in urban centers. Traditionally, advisories have been issued primarily through the media complemented by brochures and flyers. As issues of environmental justice are raised, the State has become increasingly aware of the need to conduct more innovative education programs that will reach culturally diverse, economically depressed and non-English speaking populations. This paper will describe the grassroots community-based education effort that was targeted primarily to: (1) ethnic communities, such as Portuguese, Korean, and Vietnamese who may be non-English-speaking, of low economic status, and whose cultural traditions may include consumption of species identified as contaminated; (2) subsistence anglers who may not be affiliated with professional and recreational organizations and whose primary source of protein may be contaminated fish; and (3) school age children interested in understanding the relationship between pollution, fish consumption and public health. The paper will also describe the results of an evaluation of this effort noting the effectiveness of the education campaign. The evaluation discussion will include how community leaders were identified, the importance of incorporating cultural and local traditions into an education effort, and what governments need to consider when issuing advisories in culturally diverse communities in order to ensure environmental justice and equity.

**ASFA 3: Aquatic Pollution and Environmental Quality**

**ASFA 3**

DN: Database Name: ASFA 3: Aquatic Pollution and Environmental Quality

TI: Title: Bay of Quinte Remedial Action Plan: "Partnerships for delisting"

SO: Source: Lake and Reservoir Management [LAKE RESERV. MANAGE.], vol. 11, no. 2, p. 195, 1995

AB: Abstract: Implementation of the Bay of Quinte Remedial Action Plan (RAP) began in September 1993 with the formal release of the Bay of Quinte RAP Stage 2 Report - Time to Act. Many important cleanup actions are planned, underway or complete. The actions include expansion of the Trenton secondary sewage treatment plant; decommissioning of the Prince Edward Heights trickling filter sewage treatment plant; improving agricultural practices through the Quinte RAP Rural Water Quality; capping diffuse contaminant inputs with a Stormwater Quality Program and an objective of No Net Increase; restoring the Belleville Marsh; enhancing operations at the Belleville and Batawa secondary sewage treatment plants; rebuilding sewers in Tweed and Deseronto; providing input to municipal Official Plans; and, broadening public outreach with programs such as Take A Little Lead Out and the Big Cleanup communications trailer. Within the RAP context, strong and viable partnerships between agencies, governments, industry and citizens are required. Partnerships, and thus success, depend on five key elements:

References & Abstracts  
For Potentially Relevant Publications Under Review

ongoing communications and outreach, unique funding arrangements, technical understanding, innovative approaches and renewable public support. In this paper, the five elements will be discussed in relation to the Bay of Quinte RAP cleanup actions and partnerships.

**ASFA 3**

DN: Database Name: ASFA 3: Aquatic Pollution and Environmental Quality

TI: Title: Public perceptions of river corridors and attitudes towards river works

AU: Author: House, M; Fordham, M

SO: Source: Landscape Research [Landscape Res.]. Vol. 22, no. 1, pp. 25-44. Mar 1997.

AB: Abstract: The Environment Agency has accepted the need for public participation in decisions concerning river management in keeping with Agenda 21 concerns for environmental policies that command a good measure of public support. In the past, public participation has often relied upon consultations involving formal meetings with interest groups and local politicians. Methods of public consultation are changing. In tapping public opinion the Environment Agency now relies less on public meetings and increasingly more on a direct approach and involvement of the public. Research at Middlesex University is part of the attempt to provide opportunities for the representation of views of the lay public to be considered within the management of rivers and river corridors. The research has used surveys of representative samples of members of the public, often at riverside sites. This paper reports on some of the research projects that have developed on these themes, and analyses the implications of their results for river management and the protection of nature conservation values.

**Current Contents(CC)**

**CC**

**Authors:** McKenrick LL. Ii K. Lawrence B. Kaufmann M. Marshall M.

**Title:** Helping the auto repair industry manage hazardous wastes: An education project in King County, Washington

**Source:** Journal of Environmental Health. 66(4):9-14, 2003 Nov.

**Abstract:** From January 1, 2000, to August 31, 2001, a team of environmental health specialists from Public Health-Seattle & King County, a partner in King County's Local Hazardous Waste Management Program, made educational visits to 981 automotive repair shops. The purpose was to give the auto repair industry technical assistance on hazardous waste management without using enforcement action. Through site inspections and interviews, the environmental health staff gathered information on the types and amounts of conditionally exempt small-quantity generator (CESQG) hazardous wastes and how they were handled. Proper methods of hazardous waste management; storage, and disposal were discussed with shop personnel. The environmental health staff measured the impact of these educational visits, by noting changes made between the initial and follow-up visits.

This report focuses on nine major waste streams identified in the auto repair industry. Of the 981 shops visited, 497 were already practicing proper hazardous waste management and disposal. The remaining 484 shops exhibited 741 discrepancies from proper practice. Environmental health staff visited these shops again within six months of the initial visit to assess changes in their practices. The educational visits and technical assistance produced a 76 percent correction of all the discrepancies noted. [References: 13]

**Publication Type:** Article

References & Abstracts  
For Potentially Relevant Publications Under Review

CC

**Authors:** Karlen DL. Ditzler CA. Andrews SS.

**Title:** Soil quality: why and how?

**Source:** Geoderma. 114(3-4):145-156, 2003 Jun.

**Abstract:** The soil quality concept evolved throughout the 1990s in response to increased global emphasis on sustainable land use and with a holistic focus emphasizing that sustainable soil management requires more than soil erosion control. The concept includes two areas of emphasis-education and assessment-both based soundly on principles of soil science. Soil quality test kits, farmer-based scorecards, visual assessment procedures, fact sheets, and video presentations were developed as educational materials because many people have no basis to recognize, understand or appreciate the complexity of soil resources. Assessment tools for indexing soil quality at various scales were pursued to show the multiple functions (e.g. nutrient and water cycling, filtering and buffering of contaminants, decomposition of crop residues and other organic matter sources, and recycling of essential plant nutrients) that soils provide as the foundation for sustainable land management. Worldwide research and technology transfer efforts have increased awareness that soil resources have both inherent characteristics determined by their basic soil formation factors and dynamic characteristics influenced by human decisions and management practices. Soil quality assessment and education are intended to provide a better understanding and awareness that soil resources are truly living bodies with biological, chemical, and physical properties and processes performing essential ecosystem services. (C) 2003 Elsevier Science B.V. All rights reserved. [References: 55]

**Publication Type:** Article

CC

**Authors:** Rhodes HM. Leland LS. Niven BE.

**Title:** Farmers, streams, information, and money: Does informing farmers about riparian management have any effect?

**Source:** Environmental Management. 30(5):665-677, 2002 Nov.

**Abstract:** We assessed relationships between the extent to which farmers reported exposure to relevant information and their attitudes towards, knowledge about, and degree of adoption of riparian management strategies. We also examined associations between knowledge of, or receipt of, financial assistance for riparian fencing/planting and intentions for and extent of adoption of this strategy. A mail survey of 718 pastoral farmers in Otago and Southland in New Zealand [294 surveys returned (41%)] yielded 279 usable questionnaires. Indices were developed to reflect range and frequency of information use and range of practices adopted. Attitudes were measured using Likert-type responses to 11 statements, and knowledge as a score on a ten-question true/false test. Positive relationships between information and the three main response variables (attitude, knowledge, and adoption) were weak but significant and systematic. These associations remained significant when important demographic and farm characteristics were taken into account. Informed farmers were more likely to report intentions to carry out riparian fencing or planting within the next year. Farmers who were aware that funding was available were also more likely to state this intention, independent of information level. The reported extent to which waterways had been fenced to exclude stock was related to receipt of funding, but not to information level. Financial factors were the most influential barrier preventing adoption of permanent fencing. Our research shows a positive correlation between the receipt of information and funding and the adoption of specific riparian management measures. [References: 37]

**Publication Type:** Article

References & Abstracts  
For Potentially Relevant Publications Under Review

**CC**

**Authors:** Lowrie KW. Greenberg M.

**Title:** PROMOTING GROUND WATER POLLUTION PREVENTION IN SMALL BUSINESSES

**Source:** Water Resources Bulletin. 33(1):193-204, 1997 Feb.

**Abstract:** Although they have not been the focus of major regulations, small businesses can contribute pollutants to ground water through routine practices. Because strict regulation of millions of micro firms is not likely, water resource professionals face a challenge of how to reach small business operators with effective pollution prevention messages. The purpose of this study was to examine the factors that influence a small business operator to adopt measures that reduce potential ground water pollution. We looked at how information delivery, internal business characteristics, and external relationships are associated with voluntary preventive measures. Mail surveys from small businesses in New Jersey municipalities and interviews with business owners provided data about business characteristics and current pollution prevention activities. Findings suggested that businesses doing the most to prevent ground water pollution were generally more connected to external organizations and had more financial and technical resources. The study also discovered that small business owners fear government involvement in their affairs. The study concludes with recommendations to encourage more voluntary adoption of prevention measures by businesses. These center on separating assistance programs from enforcement and involving industry peer groups in an effort to make information available in a non-threatening manner. [References: 37]

**Publication Type:** Article

**CC**

**Authors:** Pinho OD.

**Title:** Community involvement in projects to reduce nonpoint source pollution

**Source:** Journal of Shellfish Research. 19(1):445-447, 2000 Jun.

**Abstract:** Baynes Sound, located on the east coast of Vancouver Island in western Canada, is one of the prime shellfish culture areas of British Columbia. In 1994 the Baynes Sound Stewardship Action Group, a multistakeholder group, was formed to address and to remediate nonpoint sources of bacteriological pollution threatening the economic and environmental health of the sound. Remediation action projects for urban stormwater, malfunctioning on-site septic systems, and agricultural runoff have successfully involved hundreds of community volunteers and dozens of financial supporters in simple and effective pollution reduction activities. The community-based "hot spots" projects have engaged and educated citizens in actions to improve water quality, in ways government authorities alone could not have done. This work demonstrates that partnerships among government, the shellfish industry, community groups, and citizens can create a powerful means for improving water quality. The projects also show that citizens are capable of creating positive environmental changes in their communities through monitoring, education, and remediation programs. Citizen volunteers can be dedicated and passionate agents of change when provided with the opportunity to participate in creating healthier communities that benefit themselves and a clean-water-dependent industry, such as shellfish culture. [References: 8]

**Publication Type:** Article

References & Abstracts  
For Potentially Relevant Publications Under Review

**CC**

**Authors:** Leach WD. Pelkey NW.

**Title:** Making watershed partnerships work: A review of the empirical literature

**Source:** Journal of Water Resources Planning & Management-ASCE. 127(6):378-385, 2001 Nov-Dec.

**Abstract:** Two main goals are achieved in this review of the empirical literature on factors affecting conflict resolution in watershed partnerships. The first is an assessment of two public policy theories relevant to partnership structure and function. The second is a set of practical suggestions for designing successful partnerships. The 37 available studies collectively identified 210 "lessons learned," which were grouped into 28 thematic categories. The most frequently recurring themes are the necessity of adequate funding (62% of the studies), effective leadership and management (59%), interpersonal trust (43%), and committed participants (43%). Exploratory factor analysis was used to search for patterns in the lessons. Four factors were identified, which together explain 95% of the variance in the 28 themes. The first two factors emphasize the importance of (1) balancing the partnership's resources with its scope of activities; and (2) employing a flexible and informal partnership structure. The third and fourth factors offer modest support for two theoretical perspectives on collaborative resource management-the alternate dispute resolution framework and the institutional analysis and development framework. [References: 81]

**Publication Type:** Article

**CC**

**Authors:** Ryan J. Mathew K. Anda M. Yuen E.

**Title:** Introduction of water conservation education packages: the opportunities and constraints affecting their success

**Source:** Water Science & Technology. 44(6):135-140, 2001.

**Abstract:** The Remote Area Developments Group in the Institute for Environmental Science at Murdoch University developed a video and booklet education package on water conservation. The package was developed after research, review of current efforts in water conservation, and consultation with communities showed that there was a need in this area. The package was distributed to all communities within Western Australia. Several different workshops were conducted with Indigenous Environmental Health Workers from around Western Australia in remote areas and in the Perth Metropolitan communities using the package. This paper will briefly describe the opportunities and constraints that exist for water conservation in remote Aboriginal communities in Western Australia as well as give an evaluation of the education package based on workshops, trials and survey instrument. This paper will explain the conclusions that have been drawn from the study: that a broad delivery style is the most advantageous style for remote communities, allowing the facilitator to assess the best style of delivery. [References: 16]

**Publication Type:** Article

References & Abstracts  
For Potentially Relevant Publications Under Review

CC

**Authors:** Howard J. McGregor D.

**Title:** Reducing nutrient enrichment of waterways through public education: a tale of two cities

**Source:** Environmental Conservation. 27(4):351-358, 2000 Dec.

**Abstract:** Eutrophication of waterways, expressed as excess growth of cyanobacteria, is frequently caused by excessive inputs of phosphorus. Human activities are often the origin of such nutrient enrichment and so many governments have addressed the issue by implementing a range of technological, legislative and biological measures. By contrast, Australia has taken a different approach and also relied heavily on public education. This paper compares the success of two of these 'Phoswatch' public education programmes. One campaign occurred within the R Murray-Darling Basin in a country town called Albury-Wodonga. The other occurred within the Haw Hawkesbury-Nepean Basin in the western suburbs of Sydney. The campaigns were evaluated using a series of community surveys and by monitoring phosphorus loads at a sewage treatment plant. The Albury-Wodonga campaign was the most effective of the two campaigns with increases in the number of people reporting a range of behaviours and these resulted in a decrease in phosphorus loads entering the local treatment plant. The comparison suggests that clear simple messages, a diversity of media exposure, and some form of feedback are critical to programme success. It is concluded that campaigns such as Phoswatch can provide a long term, cost effective way of addressing eutrophication by focusing on the problem at source and creating community support for an integrated strategy. [References: 30]

**Publication Type:** Article

CC

**Authors:** Campbell M. Buckeridge D. Dwyer J. Fong S. Mann V. Sanchez-Sweatman O. Stevens A. Fung L.

**Title:** A systematic review of the effectiveness of environmental awareness interventions

**Source:** Canadian Journal of Public Health. Revue Canadienne de Sante Publique. 91(2):137-143, 2000 Mar-Apr.

**Abstract:** The Canadian public is chronically exposed to a wide range of environmental pollutants and hazardous agents.(1-3) Some agents, such as ultraviolet (UV) radiation(4) and lead,(5) can clearly result in adverse health effects. For other agents, such as electromagnetic fields (EMFs)(6) and hormonally active environmental contaminants,(7) there appears to be cause for concern, but the evidence for adverse health effects is not as strong. Nonetheless, public concern about the potential effects of the biophysical environment on human health remains high and generates many inquiries for response by public health units. The Ontario Ministry of Health requires health units to prevent or reduce adverse health outcomes resulting from exposure to hazardous agents in the environment.(8) This is to be done by: employing effective health hazard management strategies; consulting with and providing advice to the community about environmental risks; and providing educational materials to raise public awareness.(8) The challenge for health unit staff is to ensure that the general population and those sub-populations at greatest risk are aware of environmental risks to their health; are aware of their capacity to improve environmental conditions or avoid environmental hazards; and are taking appropriate measures to protect themselves and their families. The purpose of this study was to examine the effectiveness of interventions available to public health staff that could be used to enable the public to protect itself from environmental risks to health. The interventions examined in this study included a variety of health promotion strategies such as educational

References & Abstracts  
For Potentially Relevant Publications Under Review

sessions, curriculum development, networking and coalition development, counselling, mass campaigns, home assessment, workshops and health fairs. The environmental hazards of interest included chemical, physical and biological agents such as air pollutants, water contaminants, land contamination, trace toxics in foods, UV radiation (due to link with ozone layer depletion) and pesticides. The systematic review sought to answer the research question: "What is the effectiveness of community-based interventions applicable to public health practice in promoting public awareness of environmental risks to health or adoption of risk reduction measures?" This paper evaluates and summarizes the evidence on the effectiveness of environmental awareness interventions. [References: 24]

**Publication Type:** Article

CC

**Authors:** Randhir T.

**Title:** Interactive community decision modeling: Public involvement in watershed policy research  
Book Editors Kendy E

**Source:** SCIENCE INTO POLICY: WATER IN THE PUBLIC REALM. PG. 257-262. 1999 [Figures].

**Abstract:** Public decision-making is complicated by the group process and the multiplicity of potential impacts. A continuing challenge to watershed planners is how to overcome the significant gap between scientific knowledge and its use in policy decisions. This knowledge gap is perpetuated by the lack of an effective interacting mechanism linking science to decision-makers. The Integrated Watershed Model is an interactive, community-based mechanism that integrates scientific principles into public decision making on watershed issues. An effective interactive mechanism involves a feedback channel and an education channel. Applied to Ware watershed in Massachusetts, model results indicate that spatial distribution of activities and natural resources and the nature of community preferences are critical in developing a transfer mechanism that incorporates scientific principles into public decision-making. Model inputs were developed and model results were analyzed through involvement of local community members during a series of participatory workshops. Another model was developed for the Blackstone watershed and accounted for economic, ecological, and water resources implications. This comprehensive watershed approach brings science into watershed decision-making. [References: 7]

**Publication Type:** Article

CC

**Authors:** Watson RK. Murphy MH. Kilfoyle FE. Moore SM.

**Title:** An opportunistic field experiment in community water conservation

**Source:** Population & Environment. 20(6):545-560, 1999 Jul.

**Abstract:** This quasi-experimental, seven-year study evaluated the effectiveness of an educative versus a price structuring approach to the strategic management of domestic water consumption. The Knowledge, Attitudes, and Behavior scales of the Water Survey Questionnaire (Watson, Moore, McLachlan, Bradley & Murphy, 1988) measured the effects of the two strategies on water conservation. Two thousand six hundred parents, teachers, high, and elementary students in cross-sectional and longitudinal samples were measured in three data gathering rounds at the first, fourth, and seventh years. In the educative phase between the first and second rounds, water conservation increased. Although there was no significant change in behavior, some decline in positive attitudes and intentions occurred during the price structuring phase between the second

References & Abstracts  
For Potentially Relevant Publications Under Review

and third rounds. The implications of these findings are discussed in relation to other studies. Findings on the stability of inter-group and inter-variable relationships and on the consistency of the measuring instrument across time are also presented and discussed. [References: 15]

**Publication Type:** Article

CC

**Authors:** Michelsen AM. McGuckin JT. Stumpf D.

**Title:** Nonprice water conservation programs as a demand management tool

**Source:** Journal of the American Water Resources Association. 35(3):593-602, 1999 Jun.

**Abstract:** Water providers nationwide are implementing nonprice conservation measures such as education, public information, appliance retrofit and ordinances, with the expectation that these programs will reduce residential water demand. However, little empirical information exists on the effectiveness of nonprice conservation programs in reducing water demand. Previous econometric studies indicate these programs have had minimal impact. We examine the types and number of major nonprice conservation programs that have been implemented during an 11-year period in seven cities in the southwestern United States. A cross sectional, monthly time series residential water demand model, with parameters to control for variation in prices, temperature, precipitation and other factors, was used to empirically investigate the effectiveness of nonprice conservation programs in reducing water demand. We found significant reductions in use ranging between 1.1 percent and 4.0 percent per program. Because of the lack of information, we were unable to distinguish the effectiveness of individual or specific types of programs. Beyond finding that nonprice programs can be effective in reducing demand, questions regarding the efficiency and benefits to be achieved by conservation remain. As a step towards separating and evaluating the effects of individual programs, program benefits and efficiency, we recommend that utilities maintain more detailed and consistent information regarding the implementation of their nonprice programs. [References: 33]

**Publication Type:** Article

CC

**Authors:** Poe GL. van Es HM. VandenBerg TP. Bishop RC.

**Title:** Do participants in well water testing programs update their exposure and health risk perceptions?

**Source:** Journal of Soil & Water Conservation. 53(4):320-325, 1998.

**Abstract:** Water quality tests of private wells are widely used in educational and extension programs across the country. Moreover, public information provision programs about environmental risks are emerging as a policy tool at all levels of government. It remains an open question, however, if these programs are informative in the sense that participants modify their exposure and health risk perceptions. Taking data from well testing studies conducted in Wisconsin and New York, this paper demonstrates that individuals do use water test results and associated information to systematically update their exposure and health risk perceptions. Evidence of such updating has not, to our knowledge, been demonstrated in previous water quality research, and provides an essential first step in assessing the cost effectiveness of public information provision programs about environmental risks. [References: 11]

**Publication Type:** Article

References & Abstracts  
For Potentially Relevant Publications Under Review

**The ERIC Database**

**ERIC**

AN: EJ538785

AU: Cobourn,-John; Donaldson,-Sue

TI: Reaching a New Audience.

PY: 1997

SO: Journal-of-Extension; v35 n1 Feb 1997

NT: To retrieve this article, send the following message to [almanac@joe.org](mailto:almanac@joe.org): send joe february 1997 feature 3; to retrieve this issue, send the following message: send joe february 1997.

DT: Reports-Descriptive (141); Journal-Articles (080)

DEM: \*Audience-Analysis; \*Extension-Education; \*Outreach-Programs

DER: Adult-Education; Program-Development; Water-Quality

AB: The following methods for reaching new extension audiences were used by a small ranch water quality program in Nevada: agency collaboration in identifying audience needs and idiosyncracies; an array of teaching techniques (workshops, individual visits, print materials); audience participation in program development; and maintenance of interest through frequent contact and feedback. (SK)

**ERIC**

AN: ED382485

AU: Hansen,-Nancy-Richardson; and-others

TI: Controlling Nonpoint-Source Water Pollution: A Citizen's Handbook.

CS: Conservation Foundation, Washington, DC.; National Audubon Society, New York, NY.

PY: 1988

AV: The Conservation Foundation, 1250 Twenty-Fourth St., N.W., Washington, DC 20037.

PR: EDRS Price MF01/PC07 Plus Postage.

DL: <http://www.edrs.com/members/sp.cfm?AN=ED382485>

DT: Books (010); Guides-Non-classroom (055)

DEM: \*Citizen-Participation; \*Federal-Legislation; \*State-Regulation; \*Water -Pollution; \*Water-Quality

DER: Activism-; Adult-Education; Community-Education; Environmental-Education; Environmental-Standards; Planning-; Program-Development; Program-Implementation

AB: Citizens can play an important role in helping their states develop pollution control programs and spurring effective efforts to deal with nonpoint -source pollution. This guide takes the reader step-by-step through the process that states must follow to comply with water quality legislation relevant to nonpoint-source pollution. Part I provides background on nonpoint-source pollution. Parts II, III, and IV describe in detail the nonpoint-planning process. Chapter titles are: (1) "Introduction: An Opportunity for Citizen Action"; (2) "A Different Kind of Pollution"; (3) "Identifying Water-Quality Problems"; (4) "Identifying Sources of Nonpoint Pollution"; (5) "Selecting Best Management Practices"; (6) "Establishing Institutional Mechanisms"; (7) "Drawing Up an Implementation Schedule"; and (7) "Monitoring Implementation and Enforcement." References are provided at the end of each chapter. Appendices contain: (1) a listing of offices of the Environmental Protection Agency and states within each EPA region; (2) state water pollution control agencies; (3) nonpoint-source provisions in the Water Quality Act of 1987; (4) report of the Conference Committee, U.S. House of Representatives pertaining to management of nonpoint sources of pollution; (5) state water resources research institutes; (6) major nonpoint-source pollution categories and subcategories; and (7) agricultural chemicals for which EPA has recommended water quality criteria. (LZ)

References & Abstracts  
For Potentially Relevant Publications Under Review

**ERIC**

AN: ED377070

TI: Give Water a Hand. Home Site Action Guide. Organizing Water Conservation and Pollution Prevention Service Projects in Your Community.

CS: Wisconsin Univ., Madison. Coll. of Agricultural and Life Sciences.; National 4-H Council, Chevy Chase, MD.

PY: 1994

AV: University of Wisconsin-Extension, Cooperative Extension, Environmental Resources Center, College of Agriculture & Life Science, Madison, WI 53706.

NT: Additional funding provided by Church & Dwight Co., Inc. For related documents, see SE 055 455-459.

PR: EDRS Price MF01/PC02 Plus Postage.

DL: <http://www.edrs.com/members/sp.cfm?AN=ED377070>

DT: Guides-Non-classroom (055)

DEM: \*Conservation-Environment; \*Environmental-Education; \*Student-Projects; \*Urban-Areas; \*Water-Quality

DER: Activism-; Citizen-Participation; Drinking-Water; Environment-; Instructional-Materials; Intermediate-Grades; Junior-High-Schools; Pollution-; Study-Guides; Water-; Water-Resources

AB: Students grades 4-8 can use this guide to explore the topics of water and water conservation within the home while conducting an environmental community service project. Youth groups, led by a group leader, work with local experts from business, government, or environmental organizations to complete the project. Nine activity sections involve students in: (1) exploring background information; (2) mapping watersheds; (3) researching water quality impacts associated with the home; (4) consulting with an expert; (5) choosing a service project; (6) creating an action plan; (7) tracking project progress; (8) measuring and recording results; and (9) brainstorming additional projects. Activities provide background and procedural information, as well as worksheets and discussion questions. Sidebars highlight key vocabulary. The guide contains an application for a Youth Earth Service Award and advice on how to create partnerships with community organizations. (LZ)

**Pollution Abstracts (PA)**

**PA**

DN: Database Name: Pollution Abstracts

TI: Title: The best and the brightest

AU: Author: Thompson, W

SO: Source: Water Environment and Technology [WATER ENVIRON. TECHNOL.], vol. 8, no. 3, pp. 54-58, 1995

AB: Abstract: Water education programs are thriving across the United States. Large or small, simple or complex, focused on a single, easily attainable goal or on broad, future benefits, influential programs are taking place in many communities.

References & Abstracts  
For Potentially Relevant Publications Under Review

**PA**

DN: Database Name: Pollution Abstracts

TI: Title: Are we reaching the target audience? Evaluation of a fish fact sheet

AU: Author: Burger, J; Waishwell, L

SO: Source: Science of the Total Environment [Sci. Total Environ.]. Vol. 277, no. 1-3, pp. 77-86. 28 Sep 2001.

AB: Abstract: According to the US Environmental Protection Agency, over 16% of freshwater lakes and 7% of the rivers are under some sort of fish consumption advisory because of the presence of toxic chemicals. There is considerable interest in the issuing of information, advisories, and fact sheets concerning the consumption of wild-caught fish from contaminated waters, and in the actual consumption patterns of subsistence and recreational anglers. Despite the large number of consumption advisories issued by state agencies, there is little information on how these advisories, or other forms of risk communication, are perceived by target audiences, notably fishermen and women of child-bearing age. The states of South Carolina and Georgia issue consumption advisories for fish from the Savannah River, among other sites. To gain a greater insight into the perception of anglers about a supplemental fish fact sheet jointly developed by South Carolina, Georgia, federal agencies, and the Consortium for Risk Evaluation with Stakeholder Participation, we interviewed fisherman along the Savannah River. The objectives were to determine: (1) whether they had previously read the Fish Fact Sheet or had heard about the consumption advisories; (2) what major message they obtained from the sheet; (3) who they felt the fact sheet was aimed at, and who should get the Fish Fact Sheet; (4) who should be concerned about health risks from consuming the fish; and (5) the best method of disseminating such information. We interviewed 92 fishermen (37% black, 62% white) during the fishing season of 1999. Half had heard some information about consumption advisories, mainly from the media (64%). The study concluded that there were no ethnic differences in whether they had heard about the advisories, understood the major message of the fact sheet, felt they could reduce their risk from consuming the fish, or felt that it made a difference which agency issued the fact sheet. There were significant ethnic differences in the ways people thought the risk from eating fish could be reduced, sources of information about the risks from consuming fish, and what other information they would like about the risks associated with contaminated fish.

**Water Resources Abstracts (WRA)**

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Impacts of voluntary conservation initiatives in the Darby Creek watershed of Ohio

AU: Author: Napier, TL; Johnson, EJ

SO: Source: Journal of Soil and Water Conservation [J. SOIL WATER CONSERV.]. Vol. 53, no. 1, pp. 78-84. 1998.

AB: Abstract: Land owner-operators in the Darby Creek watershed located in central Ohio were provided the opportunity to participate in a comprehensive soil and water conservation program sponsored by several public and private conservation organizations. Extensive human and economic resources were appropriated by the cooperating organizations to implement a conservation effort that emphasized information, education, and cost-sharing to motivate land owner-operators to adopt soil and water protection practices at the farm level. Data were collected in 1991 prior to the implementation of the conservation program and again in 1994

References & Abstracts  
For Potentially Relevant Publications Under Review

after conservation efforts had been in operation for approximately 3 years. Analysis of longitudinal data revealed that conservation efforts were not very successful in motivating land owner-operators to change production practices. While significant modifications in production practices were observed over time, the changes were not uniformly desirable from the perspective of soil and water conservation. The findings also revealed that land owner-operators within the study area become more polarized in terms of the types of farm production systems employed. Such findings suggest that it may become more difficult to motivate land owner-operators who have resisted using conservation production systems in the past to adopt conservation production systems in the future. Study findings bring into serious question the utility of continuing to implement soil and water conservation practices using traditional voluntary approaches such as those used in the Darby Creek watershed.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Computer simulation models in environmental engineering education

AU: Author: Egemen, E; Edwards, F; Nirmalakhandan, N

SO: Source: WATER QUALITY INTERNATIONAL '98-PART 9. WATER QUALITY: MANAGEMENT. pp. 295-302. Water Science & Technology [Water Sci. Technol.]. Vol. 38, no. 11.

AB: Abstract: The traditional lecture-based teaching process has been criticized as a passive knowledge delivery process with much room for improvement in the teaching-learning process. It is now recognized that one of the essential prerequisites for improving the teaching-learning process is active and interactive participation of the students, both in and out of the classroom. In this paper, computer simulation models are identified as an effective teaching aid to promote active participation between student and teacher as well as among students. Using a sample simulation model, the different ways in which models in general can be used to encourage active and interactive participation are discussed. It is concluded that the use of such computer simulation models is appealing to students with diverse learning styles.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Adult education and watershed knowledge in upstate New York

AU: Author: Wagenet, LP; Pfeffer, MJ; Sutphin, HD; Stycos, JM

SO: Source: Journal of the American Water Resources Association [J. Am. Water Resour. Assoc.]. no. 3, pp. 609-622. Jun 1999.

AB: Abstract: Integrated watershed management encompasses complex physical and social issues that have impacts on environmental resources. A key aspect of this holistic effort is public education. Most researchers and practitioners agree that an informed public is a crucial part of the environmental management process. Yet, educational programs that provide stakeholders with information about physical processes in watersheds are often unavailable. This paper assesses the effect of an education program for residents of the New York City watershed. Surveys evaluated certain knowledge levels and attitudes of participants and compared three groups: individuals who utilized the educational materials completely (full users), those who received the materials but did not use them completely (partial users), and watershed residents who did not receive the educational program (nonrecipients). Full users displayed a higher level of knowledge concerning specific watershed processes than did partial users and nonrecipients.

References & Abstracts  
For Potentially Relevant Publications Under Review

In terms of applying that knowledge across linked concepts, however, we observed no significant differences between the three readership levels. Furthermore, partial users engaged in less evaluation of issues that related to the broader watershed context. The findings from this project have implications for educational and regulatory institutions and program development relating to watershed protection.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Adoption of conservation production systems in two Ohio watersheds: A comparative study

AU: Author: Napier, TL; Bridges, T

SO: Source: Journal of Soil and Water Conservation [J. Soil Water Conserv.]. Vol. 57, no. 4, pp. 229-235. Jul-Aug 2002.

AB: Abstract: Data were collected from land owner-operators who were managing farms within the Darby Creek watershed and within a selected area in the upper Scioto River watershed in central Ohio during the late winter of 1998 and the summer of 1999. Information was collected to assess the types of agricultural production systems used by farmers within each watershed during the previous growing season. Information about agricultural production systems being used in each watershed was compared to determine if farming practices differed between the two watersheds. Study findings revealed that agricultural production systems employed by farmers within the upper Scioto River watershed were not significantly different from those being used within the Darby Creek watershed. This finding was inconsistent with research expectations derived from the traditional diffusion model. Farmers within the Darby Creek watershed had been expected to report adoption of significantly more conservation production systems because they had been exposed to more extensive conservation programming designed to motivate them to adopt and to use conservation practices. Farmers within the upper Scioto River watershed had been exposed to relatively little conservation programming even though the two watersheds were located approximately 40 miles apart. Study findings strongly suggest that massive human and economic resources employed to motivate land owner-operators to adopt and use conservation production systems within the Darby Creek watershed were not successful in accomplishing that objective.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Nonpoint sources

AU: Author: Line, DE; McLaughlin, RA; Osmond, DL; Jennings, GD; Harman, WA; Lombardo, LA; Spooner, J

SO: Source: Water Environment Research [Water Environ. Res.]. Vol. 70, no. 4, pp. 895-912. Jun 1998.

AB: Abstract: Nonpoint source (NPS) pollution originates from diffuse land areas that intermittently contribute pollutants to surface and ground water. This article is a review of 1997 literature on several aspects of NPS pollution, including policy, economics, and management issues; effects and extent of pollutants in surface and ground water; pollution controls; and modeling and monitoring. Several publications addressed the broad topic of NPS pollution. Osmond, Line, et al. (1997) provided an overview of the Section 319 National Monitoring Program of the Clean Water Act. Under this program, selected watersheds around the country are

References & Abstracts  
For Potentially Relevant Publications Under Review

monitored during a 6- to 10-year period to evaluate how implementation of best management practices (BMPs) leads to improved water quality. Proceedings from a national conference on NPS Pollution Information/Education Programs included papers on various education and outreach efforts aimed at adults and children for protecting water resources.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Evaluating Adult Groundwater Education

AU: Author: Gerakis, A

SO: Source: Journal of Environmental Education [J. Environ. Educ.]. Vol. 30, no. 1, pp. 20-24. 1998.

AB: Abstract: The Michigan Association of Soil Conservation Districts and the Michigan Soil Conservation Service organized a series of 1-day groundwater education workshops throughout Michigan. The workshops were held primarily to educate soil conservation personnel. The effect of the training on participant knowledge and attitude was measured with a quasi-experimental design. Three workshops were evaluated. Only 1 workshop was effective in increasing participants' knowledge of groundwater. All 3 workshops, however, were effective in increasing the pretested participants' knowledge of groundwater. The workshops did not change participants' attitudes toward groundwater conservation, but attitudes were already positive at the outset. The practical recommendation is that a pretest should be incorporated into adult groundwater training to effect immediate results.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Awareness of operation future among landowner-operators in the Darby Creek watershed of Ohio

AU: Author: Napier, TL; Johnson, EJ

SO: Source: Journal of Soil and Water Conservation [J. Soil Water Conserv.]. Vol. 53, no. 4, pp. 353-357. 1998.

AB: Abstract: Data were collected in 1994 from 245 farmers in the Darby Creek watershed in central Ohio to assess awareness of a local conservation organization, Operation Future, and to evaluate its effectiveness. Research findings revealed that a minority of farmers in the watershed were aware of the organization or its programs. Of those who indicated they were aware of the conservation group and its programs, a minority believed that the organization was effective in motivating watershed farmers to adopt soil and water protection practices. Discriminant analysis revealed that the variables used to predict awareness of the conservation organization were not useful for predictive purposes. The implications of the study findings are discussed in the context of future conservation efforts in the watershed. The inadequacies of using local information-education organizations, such as those implemented in the Darby Creek watershed, for conservation purposes are examined.

References & Abstracts  
For Potentially Relevant Publications Under Review

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Homeowner perceptions and management of private water supplies and wastewater treatment systems

AU: Author: Schwartz, JJ; Waterman, AB; Lemley, AT; Wagenet, LP; Landre, P; Allee, DJ

SO: Source: Journal of Soil and Water Conservation [J. Soil Water Conserv.]. Vol. 53, no. 4, pp. 315-319. 1998.

AB: Abstract: Approximately 3 million upstate New York residents rely on groundwater to supply their drinking water, and approximately 1.5 million households have on-site wastewater treatment systems (septic systems). Individual homeowners are responsible for maintaining their private water supplies and septic systems. This study surveyed 244 homeowners in three counties regarding their water quality practices and perceptions. Their drinking water was tested, and water supplies and septic systems were inspected. Positive coliform results ranged from 18 to 60%, with an average of 32% for all three counties. Nitrate results varied widely across the counties, yet only two samples had concentrations greater than the current federal drinking water standard of 10 mg/L NO<sub>3</sub>-N. Nearly 82% of respondents are satisfied with their water supply yet 31% of those satisfied have coliform in their drinking water. Nearly half the participants never tested their drinking water for contaminants, and more than one-third never pumped their septic tank. A general lack of homeowner knowledge suggests the need for increased educational programs targeted to the rural audience, as well as additional research to better understand what influences homeowner perceptions and management practices.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Family factors affecting adoption of sustainable farming systems

AU: Author: Salamon, S; Farnsworth, RL; Bullock, DG; Yusuf, R

SO: Source: Journal of Soil and Water Conservation [J. Soil Water Conserv.], vol. 52, no. 4, pp. 265-271, Aug 1997

AB: Abstract: A paired comparison of 60 Illinois farm families was employed, 30 using sustainable systems and 30 using conventional systems, to determine factors affecting adoption of sustainable farming systems. The groups do not diverge significantly along dimensions typically accounting for farming contrasts, but are distinctive socially. Families using sustainable systems have traditions of environmentalism, systematically do on-farm experimentation, and are prudent about resources. Rather than making a paradigm shift to environmentally sensitive farming, families who adopt have a predisposition toward sustainable practices in all aspects of their lives. Adoption of sustainable systems is therefore as much for efficiency or financial motives as it is for environmental reasons. Families farming conventionally but sharing many characteristics identified with sustainable families, potentially are those best targeted for educational programs.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Farm Operators' Preferences for Soil Conservation Service Information: Results from Three Tennessee Watersheds

AU: Author: Pompelli, G; Morfaw, C; English, BC; Bowling, RG; Bullen, GS; Tegegne, F

SO: Source: Journal of Production Agriculture [J. Prod. Agric.]. Vol. 10, no. 3, pp. 472-476. Jul-Sep 1997.

References & Abstracts  
For Potentially Relevant Publications Under Review

AB: Abstract: Recent water quality legislation requires that the Soil Conservation Service (SCS) reach a more diverse range of farm operators, especially small farm operators. With few, if any, additional resources, the effectiveness of the SCS's efforts to communicate soil conservation information to new audiences is critical. Thus, a better understanding about farm operators' predispositions toward SCS information may help SCS personnel reach these new audiences more efficiently. This study examines the extent to which farm and farm operator characteristics can be used to predict farm operators' attitudes about the usefulness of soil conservation information supplied by the SCS. The results of this study indicate that farm operators contacted by SCS and extension personnel, who also participate in government commodity programs have an increased likelihood of considering SCS information useful. Although regional influences negatively affect the likelihood that farm operators will consider the SCS soil conservation information useful, farm size, gross sales, years of education, and other farm and farm operator characteristics were not found to be significant factors.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: WQIP: An assessment of its chances for acceptance by farmers

AU: Author: Kraft, SE; Lant, C; Gillman, K

SO: Source: Journal of Soil and Water Conservation [J. Soil Water Conserv.], vol. 51, no. 6, pp. 494-498, Dec 1996

AB: Abstract: During the debate surrounding the Food, Agriculture, Conservation, and Trade Act of 1990 and in the subsequent report of the conference committee, the Water Quality Incentives Program (WQIP) was held as the centerpiece of the 1990 farm bill's nonpoint source reduction mandate. Using data collected from surveys of 770 farmers with land critical for surface or groundwater quality located in ten diverse counties in the Cornbelt, results of logistic regression of factors influencing farmers' willingness to participate in the WQIP are presented. Farmer interest in the WQIP is limited and is significantly influenced by farmers' attitudes toward governmental involvement with wetland regulation, education, tenure status, contact with Natural Resources Conservation Service, and percentage of farm sales derived from specialty crops. The results raise doubts as to whether the WQIP can serve as the "centerpiece" of the USDA's nonpoint source pollution control efforts.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: County commissioners' water knowledge

AU: Author: Berry, KA; Markee, NL; Stewart, MJ; Giewat, GR

SO: Source: Water Resources Bulletin [Water Resour. Bull.], vol. 32, no. 5, pp. 1089-1099, Oct 1996

AB: Abstract: This study examines the social construction of county commissioners' knowledge about water. Factors that influence what commissioners know about water include each commissioner's personal characteristics, education, experience in natural resources management, involvement in policy making, and use and evaluation of various sources of information. This study focused on county commissioners representing rural, mixed, and urban counties in Arizona, Nevada, and Utah and collected data through mail surveys and interviews. County commissioners in the survey were well educated; however, few had taken college courses directly addressing technical, management, or legal aspects of water issues. Approximately one-

References & Abstracts  
For Potentially Relevant Publications Under Review

third had direct experience in farming and ranching; nearly two-thirds indicated that farming and ranching played a major role in their communities. Respondents had experience with a broad range of water policy issues. In evaluating thirteen information sources in terms of their frequency of use, relevancy, and reliability, respondents assessed fellow commissioners and local government staff and managers most positively and nonprofit organizations most negatively. The media was also broadly rated as less relevant and reliable than other sources of information. The commissioners in the study expressed a high level of general concern about water issues and a strong preference for local sources of information.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Improving the acceptability to farmers of soil conservation practices

AU: Author: Ashby, JA; Beltran, JA; Guerrero, MDP; Ramos, HF

SO: Source: Journal of Soil and Water Conservation [J. SOIL WATER CONSERV.], vol. 51, no. 4, pp. 309-312, 1996

AB: Abstract: Non-adoption of soil conservation practices by farmers in low-income countries is a major obstacle to reversing soil degradation. Farmer involvement in designing these practices is required to improve adoption. This study tested participatory research methods which dramatically increased adoption among 115 farmers over the first year, and stimulated farmer-to-farmer recommendations leading to adoption by an even larger number of farmers. Farmers' evaluations were shown to predict future acceptability of optional practices. When participatory research methods are used to elicit farmers' input into the design of recommendations, these can help to realize the potential of many hitherto unadopted conservation practices.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: The delisting of Collingwood Harbour as an Area of Concern: Partnerships in action

SO: Source: Lake and Reservoir Management [LAKE RESERV. MANAGE.], vol. 11, no. 2, pp. 157-158, 1995

AB: Abstract: Collingwood Harbour was one of 43 Great Lakes Areas of Concern (AOC) due to extreme eutrophic conditions. A history of industrial use also posed environmental concerns. The provincial and federal Remedial Action Plan (RAP) Team garnered a group of citizens representing a broad range of interests in the harbour's future in 1988. The Public Advisory Committee (PAC) established goals and a common vision for Collingwood Harbour, and a plan of remedial actions to achieve those goals and visions. A critical component of the strategy was to reduce the amount of phosphorus entering the harbour. Technical solutions focused on optimizing phosphorus removal at the Collingwood Wastewater Treatment Plant through an innovative demonstration project. A strong emphasis has been placed, however, on educating the community on the environmental significance of water and energy conservation, waste reduction and the use of environmentally helpful products. The Greening of Collingwood is a community based Action Plan targeted at pollution prevention for residents, businesses and industries. Stormwater management, erosion control, and the clean up of contaminated sediment, was integrated into a rehabilitation strategy for fish and wildlife habitat in the harbour and the watershed. For the first time in North America, and with the perseverance of all partners in the RAP, Collingwood Harbour ecosystem has been enhanced and sustains healthy plant and animal communities, and is delisted as an Area of Concern.

References & Abstracts  
For Potentially Relevant Publications Under Review

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Chemical use practices and opinions about groundwater contamination in two unsewered subdivisions

AU: Author: Mechenich, C; Shaw, BH

SO: Source: Journal of Environmental Health [J. ENVIRON. HEALTH], vol. 56, no. 6, pp. 17-22, 1994

AB: Abstract: Residents of two subdivisions with private wells and septic systems in central Wisconsin were surveyed about use of various household and lawn chemicals and their opinions about causes and severity of groundwater pollution problems. The overall response rate in the survey was 78 percent. Of 139 homeowners surveyed, 109 reported fertilizing their lawns an average of 1.8 times per year. Commonly used lawn and garden insecticides included diazinon, malathion and Sevin. Most commonly used household products were laundry detergent, toilet bowl cleaner, and tub and tile cleaners. Residents of both subdivisions were fairly accurate in describing the largest sources of groundwater contamination both in the county and in their own subdivisions. Their greatest concerns about groundwater quality were nitrate and pesticide contamination. Overall, 90 percent of participants were aware that individual homeowners may adversely affect groundwater quality, and 87 percent believed that education is the most effective solution to groundwater problems. Education needs for groundwater protection in these subdivisions include regular water testing, record keeping on well depth, the potential interrelationships of wells and septic systems in shallow groundwater systems, alternatives to hazardous household cleaning products, and modifications of lawn care practices.

**WRA**

DN: Database Name: Water Resources Abstracts

TI: Title: Consumer response to public notification

AU: Author: Harding, AK; Anadu, EC

SO: Source: Journal of the American Water Works Association [J. Am. Water Works Assoc.]. Vol. 92, no. 8, pp. 32-41. Aug 2000.

AB: Abstract: What happens when consumers receive public notification that their water supply is at risk? Although several studies have investigated consumers' awareness of public notification, few researchers have focused on how consumers responded or whether their responses differed in emergencies versus ongoing water crises. A recent survey uncovered information that may help water suppliers improve the effectiveness of their public notification programs. Most respondents were aware of the public notification and boiled their water, drank bottled water, or both. Bottled water proved to be the most popular choice, even when a specific boil-water notice was issued. Of the sources used by respondents to obtain information about their water supply, the top three were the newspaper, mail, and flyers from the utility. Utilities will be encouraged by two findings in particular; mail from the utility was considered to be the most reliable information source, and most consumers were willing to pay more to improve water quality. Sooner or later, many water providers will face the necessity of issuing public notification regarding the quality of their supply. This study suggests that consumers are more likely to take desired risk-reduction measures (e.g., drinking boiled or bottled water) when the notice is from a credible source (such as the utility), provides sufficient explanation of the water quality problem, and offers explicit instructions about what course of action to take.

References & Abstracts  
For Potentially Relevant Publications Under Review

**Articles Found Through Other Searches and Means**

(Searches of Academic Search Elite, CAB Abstracts, BioAbstracts in late 2002 using old search terms; Browse of last ten years of TOCs from Journal of Environmental Education, reference recommendations from individuals)

**Álvarez, Pedro, Emilia I. de la Fuente, F. Javier Perales, and Juan García. 2002.** Research Summary: Analysis of a Quasi-Experimental Design Based on Environmental Problem Solving for the Initial Training of Future Teachers of Environmental Education. *The Journal of Environmental Education* 32 (2):19-21.

**Notes:**

- no specific resource of interest
- comparison; pretest & post test with control
- young people (6-12 year-olds) {the reported study was of teacher trainees from the Department of Science Education at the University of Granada (Spain) who were preparing to education 6-12-year-old children.}
- constructivist, problem-based learning/teaching model
- Spain

Our results showed that the participants who used the experimental approach had significantly higher scores both in their attitudes about the environment and in their conceptual knowledge about environmental problems. (20)

Our results showed a clear change in the relationships. Posttest knowledge was significantly higher for the experimental groups, which probably resulted from the experimental approach. (20)

**de Bruijn, Theo J.N.M., and Peter S. Hofman. 2000.** Pollution Prevention in Small and Medium-Sized Enterprises. *Greener Management International* 30:71-82.

**Notes:**

- Pollution prevention
- comparison of two types of pollution prevention projects
- partnership networks with trade associations and suppliers
- Small and medium sized enterprises
- Netherlands.

"An evaluation of the various pollution prevention projects over the years highlights that project methods have shifted from the (extensive) PRISMA method to the less time-consuming, quick-scan methods." (77)

"Good results require commitment, time, and money. The PRISMAs, therefore, have produced measures of superior quality to those produced by the quick-scan methods." (78)

**Duram, Leslie A., and Katharin G. Brown. 1999.** Assessing Public Participation in U.S. Watershed Planning Initiatives. *Society and Natural Resources* 12 (5):455-467.

**Abstract:**

A mail survey of 126 federally funded watershed planning initiatives yielded valid responses from 64 watershed contacts. Quantitative analysis revealed wide variation among watershed initiatives in terms of population size and land area encompassed. Likewise, watershed organization and participation characteristics (agencies involved, frequency of meetings, and number of active

References & Abstracts  
For Potentially Relevant Publications Under Review

participants) vary greatly. Qualitative analysis delineated the key issues of concern to watershed contacts: agricultural land use, stakeholder awareness, and interaction between local and federal entities. While specific situations vary by watershed, results indicate that door-to-door contact, public meetings, and information programs are the most useful methods for soliciting participation. Participation was perceived to be most helpful in the planning stages of outreach, identifying issues, and prioritizing issues. The perceived effects of participatory watershed planning include increasing awareness of watershed conditions, heightening interagency coordination, reaching consensus on resource management plans, and lending legitimacy to final plans.

**Dwyer, William O., Frank C. Lemming, Melissa K. Cobern, Bryan E. Porter, and John Mark Jackson. 1993.** Critical Review of Behavioral Interventions to Preserve the Environment: Research Since 1980. *Environment and Behavior* 25 (3):275-321.

**Abstract:**

This review integrates and evaluates the environmental-preservation research published during the 1980s. The focus is environmental *behavior* change as targeted by behavior analysts and others designing interventions to encourage environmental-preservation behavior. A modified taxonomy of behavioral interventions, based on a taxonomy presented by Geller et al., categorizes these reported interventions by antecedent and consequence conditions. Fifty-four studies were categorized and evaluated according to which of these taxonomic interventions were reported. The conclusions were that (a) antecedent conditions using commitment, demonstration, and goal-setting strategies were generally most effective in encouraging environmentally responsible behavior, and (b) consequence conditions were effective in producing behavior change during the experiment's duration. However, some other important findings were that (a) much of the research in this field during the 1980s did not directly compare interventions, (b) few meaningful follow-up measures were reported, and those evaluations that included follow-up assessment showed little maintenance of the behavior changes, and (c) many potentially effective intervention strategies have been ignored (i.e., group interventions and penalties). Suggestions or future directions of research to produce and maintain environmental-preservation behaviors are offered.

**Marlowe, Mike, and Woodrow Trathen. 1996.** *The Adventures of Lead Commander: An Environmental Education Program to Prevent Lead Poisoning in Young Children.* *The Journal of Environmental Education* 28 (1):19-23.

**Abstract:**

This study examined the effectiveness of a family-based environmental education program in lowering young children's exposure to lead-lowering intervention was associated with changes in behavioral function. Thirty preschool-age children were divided up into treatment and comparison groups, with the treatment group given an environmental education program on preventing lead exposure. This prevention program included preschool materials/activities and parent/family materials/activities. Prior to treatment, and again 9 months later, both groups had hair analysis for lead levels and ratings of problem behavior. Posttest hair-lead levels and teacher and parent ratings of nonadaptive behavior were significantly lower for the treatment group than for the comparison group. Although limited by the modest sample size, the results suggest that lead exposure degrades behavior performance in young children and that family-based environmental education programs can reduce young children's exposure to lead.

References & Abstracts  
For Potentially Relevant Publications Under Review

**Milton, Barbara, and Eliza Cleveland. 1995.** Changing Perceptions of Nature, Self and Others: A Report on a Park/School Program. *Journal of Environmental Education* 26 (3):32-39.

**Abstract:**

The Park/School Program was developed by the Urban Resources Initiative at the Yale School of Forestry and Environmental Studies in cooperation with school teachers and urban park rangers. During the pilot project, graduate students in environmental studies conducted field studies in ecology with the 46 fifth graders to introduce them to natural resources and to develop social skills in a neighborhood park. The process of developing teamwork through cooperative games and group projects, of increasing understanding of urban ecosystems through outdoor investigations and indoor laboratory activities, and of applying the teamwork and understanding to teaching others instilled in the children a sense of ownership and internalization of their knowledge of the park. The program succeeded in its aims of increasing ecological knowledge and improving the social skills of the students. Unanticipated outcomes included the changing perceptions of teachers and students toward each other, of the park, and students' perceptions of themselves. An overview of the pilot project, its potential of effecting change inside and outside the classroom, and recommendations for future programs and research are presented.

**Tsuiji, Leonard J. S., and Evert Nieboer. 2001.** A Comment on "The Adventures of Lead Commander: An Environmental Education Program to Prevent Lead Poisoning in Young Children". *The Journal of Environmental Education* 32 (2):15-17.

**Abstract:**

This article comments on a study designed to examine the effectiveness of the family-based, environmental education lead-poisoning program. *The Adventures of Lead Commander* (Marlowe & Trathen, 1996). Design and methodological weaknesses, such as the use of hair lead concentrations as a biomarker, call into question conclusions reached in the study. The effectiveness of the educational program cannot be ascertained from the data collected. It should be stressed, however, that environmental education projects such as *The Adventures of Lead Commander* are important in helping to educate the public and school children about lead poisoning and ways of minimizing exposure to this neurotoxin. Education and removal of lead sources are primary methods of reducing lead exposure.

**Wood, Barbara Bonsall. 2001.** Stake's Countenance Model: Evaluating an Environmental Education Professional Development Course. *The Journal of Environmental Education* 32 (2):18-27.

**Abstract:**

The purpose of this study was to evaluate an environmental education professional development course using Stake's Countenance Model as the organizational framework. A complex analysis of 10 course features using 8 evaluation instruments focused on congruence between what was intended to occur and what was actually observed to occur before, during, and after instruction. The Stake model demonstrated its effectiveness by facilitating a thorough examination of both quantitative and qualitative data during all phases of course execution.