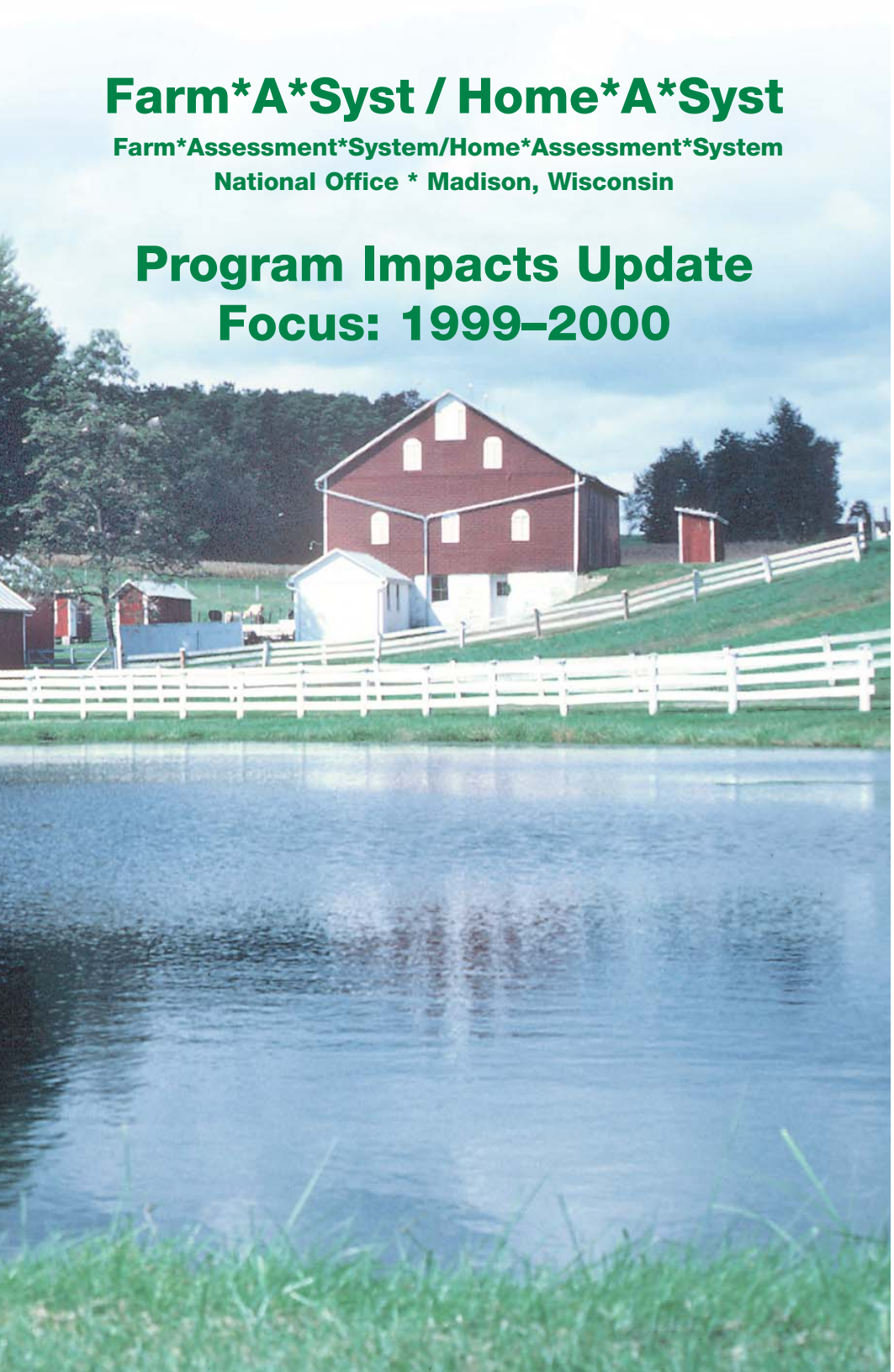
Farm*A*Syst / Home*A*Syst

Farm*Assessment*System/Home*Assessment*System

National Office * Madison, Wisconsin

Program Impacts Update
Focus: 1999–2000



Dear *A*Syst Supporters:

Since 1990 I have had the privilege of supporting innovators across this country and internationally in designing voluntary environmental pollution assessment and prevention education materials and programs. These assessment systems or *A*Syst programs have grown to cover farms and ranches, rural and urban homes, forests, coastal areas and inland waters. These programs have established a firm foundation to create environmental management systems that assist citizens in understanding environmental risks related to their actions, and options available to reduce those risks. They provide a practical approach that incorporates research findings and recommendations into applied systems that support improved day-to-day decision making that prevents pollution. This report summarizes many of the accomplishments of our cooperative efforts, but more importantly it helps to create a foundation for future efforts that build on past successes and lessons learned. Within the next year I will be retiring from my current position, so I want to THANK all of you for the opportunity to work with you in this exciting area. I also want to challenge you to continue to find practical ways of helping farmers, ranchers and rural residents to deal with regulatory pressures and pollution prevention needs through practical environmental assessment and management systems like the *A*Syst series. The National Office has a strong staff that will continue to assist your efforts and report the collective results. I hope to continue in supporting roles in Emeritus status as well.

Best Wishes,

Gary W. Jackson, Director
National Farm*A*Syst/Home*A*Syst Program
March 4, 2002

Contents

About This Report

*[as a result of Farm*A*Syst] you pick up things on your farm that you had never thought about. So it's an educational process that trains us to think a little differently for future plans.*

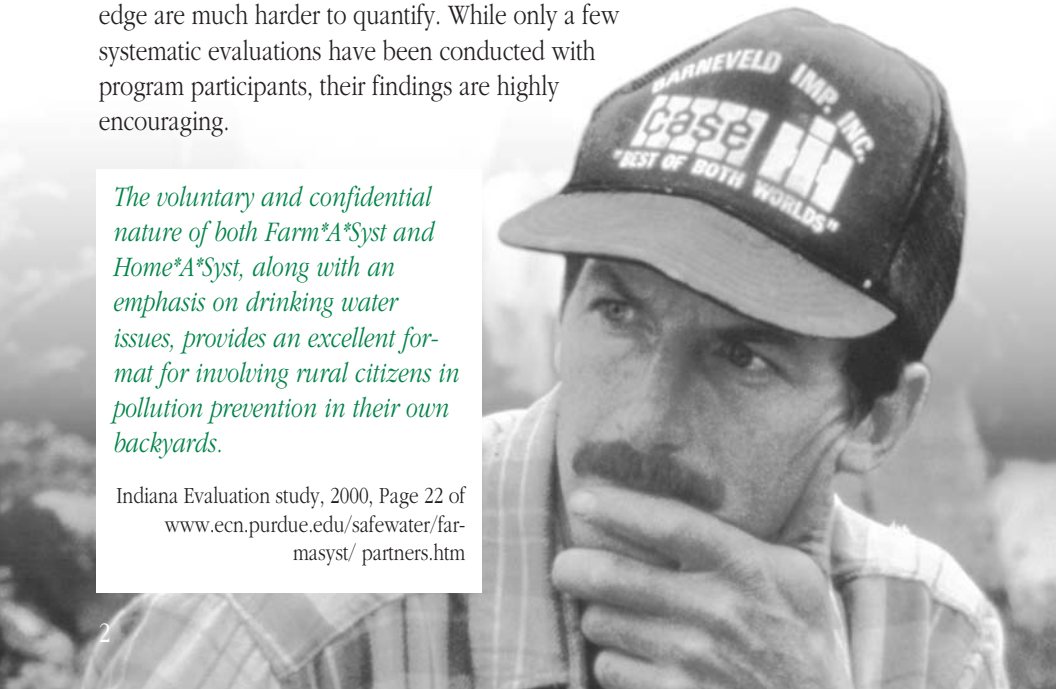
David Martin, farmer

Farm*A*Syst and Home*A*Syst are voluntary, confidential programs to help farmers, ranchers and homeowners evaluate pollution risks to their property and take preventative action to reduce those risks. This document highlights the primary activities and impacts of Farm*A*Syst/Home*A*Syst programs at the national, state and local levels. It also reviews some of the challenges faced in funding and program delivery. The period of coverage is 1999-2000, though relevant details from previous years (1991-1998) are provided for perspective. Key 2001 events—several of which had their origin in 1999-2000—also are included. A single sheet full-color summary of this report is available from the national program office or printable from the World Wide Web at <www.uwex.edu/farmasyst/impacts/twopage_impact.pdf>.

Determining "impacts" is not a simple matter in a program whose goal is to influence viewpoints and change human behavior. The issue is compounded by two of the program's most important features: its risk assessments are voluntary and findings are confidential. Much of what happens to individuals who conduct Farm*A*Syst and Home*A*Syst assessments is difficult to measure. Actions taken or obvious changes in behavior can clearly indicate success, but changes in attitude or level of knowledge are much harder to quantify. While only a few systematic evaluations have been conducted with program participants, their findings are highly encouraging.

*The voluntary and confidential nature of both Farm*A*Syst and Home*A*Syst, along with an emphasis on drinking water issues, provides an excellent format for involving rural citizens in pollution prevention in their own backyards.*

Indiana Evaluation study, 2000, Page 22 of www.ecn.purdue.edu/safewater/farmasyst/ partners.htm



Overview

It's more than an assessment tool, it's a teaching tool.

Phillip Roberts, Univ. of Georgia

The Farm*A*Syst (Farm Assessment System) and Home*A*Syst (Home Assessment System) programs pioneered the development of a voluntary, confidential environmental risk assessment for farmers, ranchers homeowners and rural property owners. The chief aim of both programs is water pollution prevention — particularly the protection of drinking water — but each embraces a wide variety of other topics related to environmental protection and human health. Farm*A*Syst and Home*A*Syst take a comprehensive view of farms, homes and rural properties, focusing systematically on the most important risks to surface and groundwater and on health concerns of people, particularly children.

Evolution of an Idea

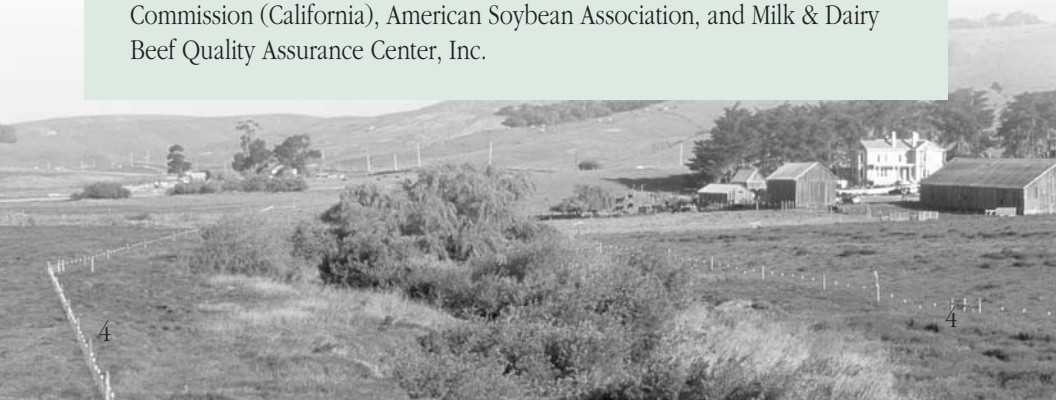
In 1989, grant funds from Region V Environmental Protection Agency and the North Central Center for Rural Development supported the creation of an innovative, multistate project to develop a Farm Assessment System (Farm*A*Syst). Its aim was to help farmers evaluate risks to groundwater and identify voluntary actions to prevent pollution. For its pilot effort, a set of 11 risk-assessment worksheets and accompanying factsheets was developed, principally focused on the farmstead.

In 1990 an informal agreement among the Cooperative State Research, Education and Extension Service (CSREES), Natural Resources Conservation Service (NRCS), and U.S. Environmental Protection Agency (EPA) resulted in a nationwide expansion of the program as part of the USDA Water Quality Initiative. Program objectives were also broadened to address non-point source pollution impacts on water quality. This cooperative effort was coordinated through a national office in Madison, Wisconsin and jointly staffed by CSREES, NRCS and EPA.

Significant growth and expansion of Farm*A*Syst occurred throughout the 1990s. State and local partnerships were created that often involved multiple agencies, private sector associations, and farm and environmental organizations. These partnerships took the original set of risk-assessment materials and customized them to meet the needs of their state or agricultural commodity. By 1992, ten states had completed the assessment modifications and had launched statewide programs. By 1996, 28 states had established their Farm*A*Syst programs, 16 states were in progress and three were in the planning stage.

At-A-Glance
Farm*A*Syst/Home*A*Syst Update

- All states now have either Farm*A*Syst (FAS) or Home*A*Syst (HAS) materials and programs — or both. FAS has had active partnership teams in 46 states and HAS has been active in 38 states. Changes in funding have eroded the capacity of some states to sustain their efforts.
- At least five other nations or territories have incorporated the assessment framework into policies and/or programs, including Canada (Ontario, Quebec and Nova Scotia), U.S. Virgin Islands, Puerto Rico, Mexico, and Australia.
- An estimated 25,000 single- and multiple-worksheet assessments for Farm*A*Syst — and 21,000 assessments for Home*A*Syst — were voluntarily completed during 1999-2000.
- In 1999-2000, at least 342,500 persons nationwide had contact with the program through education and outreach efforts that included direct consultations, county fairs, radio programs, direct mailings, workshops and presentations.
- A conservatively estimated $17.5 million was invested in 1999-2000 to fix problems and prevent pollution by concerned citizens in response to findings in their assessments (based on 1996 research that found an average post-assessment farmer investment of $700). An estimated $120 million has been spent since 1990 .
- During 1999-2000, Farm*A*Syst state coordinators reported leveraging over $4 million to support their state programs, and over $2 million was earmarked for state Home*A*Syst programs.
- In its first year, the Healthy Homes initiative — a spin-off of Home*A*Syst — established active programs in 33 states. As of February 2002, *Help Yourself to a Healthy Home: Protect Your Children's Health* is in its 6th printing and more than 95,000 copies have been distributed.
- Several prominent projects in 1999-2000 involved cooperation with private, commodity-producer organizations such as the Lodi-Woodbridge Winegrape Commission (California), American Soybean Association, and Milk & Dairy Beef Quality Assurance Center, Inc.



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The farmstead risk assessment idea was adopted in other countries as well. Ontario, Canada led the way, basing its Ontario Environmental Farm Plan on the Farm*A*Syst model. The Australian Cotton Industry built on Farm*A*Syst materials for its Best Management Practices Manual.

In the end, watersheds are a collection of individuals. Our job is to help individuals understand how their actions relate to water pollution, what they can do to prevent pollution and help them take actions to protect and improve water quality and the ecosystem.

Gary Jackson, National Director, Farm*A*Syst/Home*A*Syst

Over time, Farm*A*Syst also broadened the scope of its risk-assessment coverage, embracing whole-farm issues, long-term planning and the development of assessment systems that focus on streams, forested areas and specific commodities such as cotton, wine grapes and soybeans. It created some of the first Spanish-language assessments available to farm and non-farm rural residents, helping bridge language barriers and expand the reach of its water protection efforts. The program has also been recognized as an effective pedagogical tool. Going beyond the traditional how-to model of Extension education, the assessment approach shows participants the continuum of farm and home management practices that reduce pollution risks, and encourage a continual process of improvement.

Healthy Homes Materials — On the Right Track

In a follow-up survey of participants of the March 2000 Healthy Homes satellite conference, 96 percent of respondents said they already used or planned to use the ideas presented in the event. Participants noted plans to use the information in communicating with the public via TV shows, newsletters, and press releases, at county fairs and farm safety events, and in workshops for first-time home buyers and in-home daycare providers. In the survey, 98 percent noted that the conference gave them some new programming ideas. Seventy percent rated the Healthy Homes booklet as "Very useful" and another twenty-seven percent said it was "Somewhat useful." Here's what participants said about the booklet:

Great! Will be very useful as handout for programs.
Simple and to the point.
Attractive and easy to follow. A great overview for families.
I cannot believe all the resources listed in this booklet!

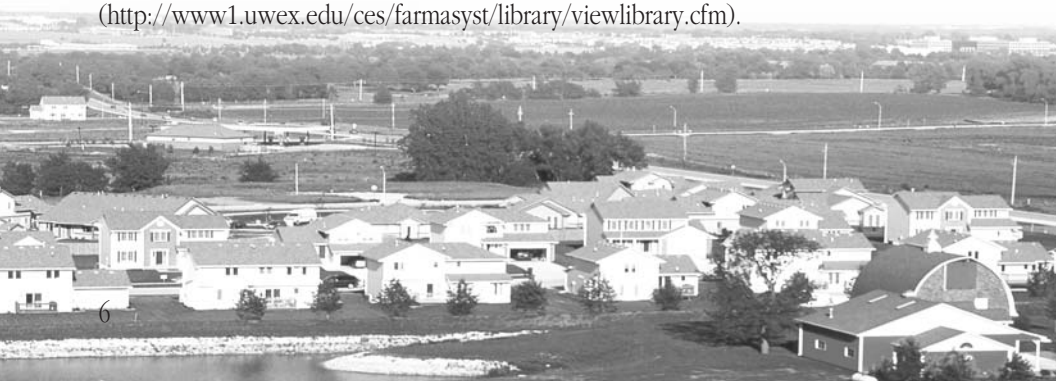
People are used to thinking that their homes are safe. In reality, the indoor environment poses some real threats to people's health, especially that of children. The Health Homes program helps people learn about environmental hazards at home, and more importantly, gives them some simple, low-cost ways to address them.

Sarah Van Tiem,
Healthy Homes National Coordinator

By the mid-1990s, the need for an assessment for non-farm rural residents was recognized and a companion program — the Home Assessment System (Home*A*Syst) — was created. Using the same worksheet/factsheet model as Farm*A*Syst, a group of technical experts from around the country authored *Home*A*Syst: An Environmental Risk-Assessment Guide for the Home*, published in 1997. With the rapid rise in non-farm households and growing concern over environmental hazards to health, the Home*A*Syst program expanded rapidly. Within a year, 38 states had implemented or were in the process of developing state and local programs.

Growing interest in the home environment — in both rural and urban settings — led to development of a streamlined children's-health oriented publication for low-income audiences. *Help Yourself to a Healthy Home: Protect Your Children's Health* was published with support from CSREES and the U.S. Department of Housing and Urban Development (HUD). As of this printing, more than 85,000 of the 24-page booklets, available in English and Spanish, have been distributed, and Healthy Homes programs exist in 40 states. A half-time national coordinator for the program currently is located in the Madison, Wisconsin office.

Each year, the number of creative, locally-tailored risk assessment publications increases as states, associations and other groups adapt Farm*A*Syst and Home*A*Syst to specific commodities, environmental topics or localities. The model set of 11 worksheets initially developed for Farm*A*Syst has led to the creation of over 450 customized worksheets in states and regions. More than 60 new documents were in development during 1999-2000, according to the states that responded to the national survey. For the complete list by state, see the library website (http://www1.uwex.edu/ces/farmasyst/library/viewlibrary.cfm).



Farm*A*Syst/Home*A*Syst Milestones

1990
- Farm*A*Syst is field-tested with farmers in Wisconsin and Minnesota.

1991
- Risk-assessment worksheet/factsheet model is finalized with 11 topics.
- Partnership between USDA and EPA launches national expansion.

1992
- Program expands nationwide. State coordinators are identified in most states.

1993
- 10 states complete assessment modifications and begin implementation. 20 states are in progress.
- Computer Decision Support System software is developed.
- Ontario, Canada, adapts Farm*A*Syst to create the Ontario Environmental Farm Plan.

1994
- Program expands to include whole-farm management, anticipating the need for resource conservation planning to protect waters from nonpoint source (NPS) pollution.
- National video conference has 154 downlink sites and 1,600 participants.
- First training manuals are published.

1995
- 27 states have Farm*A*Syst programs in place.
- Cost-benefit analysis of Farm*A*Syst initiated.
- A team of experts is formed to create Home*A*Syst.

1996
- Farm*A*Syst receives prestigious national Renew America Award in pollution prevention.
- Farm*A*Syst also receives the Mid-America Crop Protection Association's Educator of the Year Award.

- Spanish translation of a new publication, the Farm & Home Assessment, is completed.
- Cost-benefit study completed and published as doctoral dissertation.
- Australia cotton producers use Farm*A*Syst to support development of a Cotton Best Management Practices (BMP) program.

1997

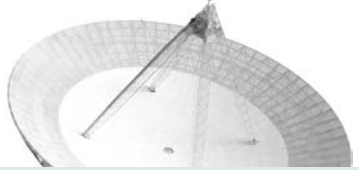
- Home*A*Syst Guidebook is published.
- 45 states have completed or are developing Farm*A*Syst materials. 38 states are participating in Home*A*Syst.
- Farm*A*Syst receives National Pollution Prevention Roundtable MVP2 Award.
- More than 80,000 partial and complete Farm*A*Syst assessments are estimated to have been completed across the nation since the program began.
- Farm*A*Syst/Home*A*Syst receives the Secretary of Agriculture's Honor Award.
- Farm*A*Syst/Home*A*Syst World Wide Web sites created.

1998

- Outreach to underserved and limited-resource producers and homeowners is featured in many states, including Florida, North Carolina and New York.
- An estimated $55 million has been invested in pollution prevention to date by private citizens in response to their Farm*A*Syst assessment findings.
- Farm*A*Syst/Home*A*Syst receives Vice President Gore's "Hammer Award."

1999

- Innovative applications of the worksheet/factsheet model around the U.S. leads to new programs and publications such as Stream*A*Syst in Oregon, Cotton*A*Syst in Georgia, Forest*A*Syst in North Carolina, Coast*A*Syst in South Carolina, Small Business*A*Syst in Alabama, Living in the Mat-Su (the Matanuska/Susitna Valley) in Alaska, and the Lodi Winegrowers Workbook and Dairy Environmental Stewardship Program, both in California.
- New online library lists more than 500 Farm*A*Syst/Home*A*Syst publications developed by states (See http://www1.uwex.edu/ces/farmasyst/library/ viewlibrary.cfm).
- With active assistance from USDA/NRCS the American Soybean Association adapts Farm*A*Syst into its *Soybean Management and the Land Workbook*. State associations seek out partnerships with state Cooperative Extension, for example in Missouri.



Milestones–*continued*

- The support of farm and environmental organizations results in an increase in CSREES Water Quality funds by $500,000 to support state Farm*A*Syst activities. These funds are subsequently folded into and administered through competitive grants.

2000

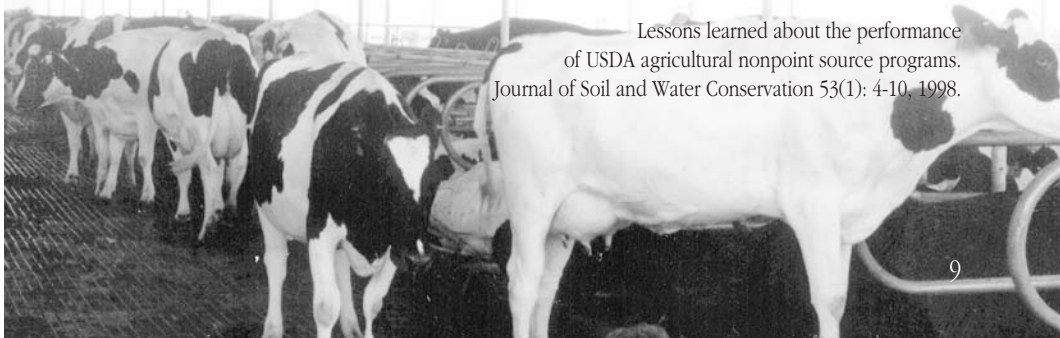
- Healthy Homes Initiative is launched via satellite conference in March 2000 with an estimated 900 participants. To date, 85,000 copies of the booklet *Help Yourself to a Healthy Home* have been distributed and programs have been established in 33 states.
- An estimated 145,000 partial and complete Farm*A*Syst assessments have been conducted across the nation since the program began in 1990.
- A project to expand Farm*A*Syst to support development of livestock environmental management systems (EMS) that meet international standards receives funding from the USDA's Initiative for Future Agriculture and Food Systems.
- CSREES funding is legislated to be continued at 1999 levels, with increases encouraged.

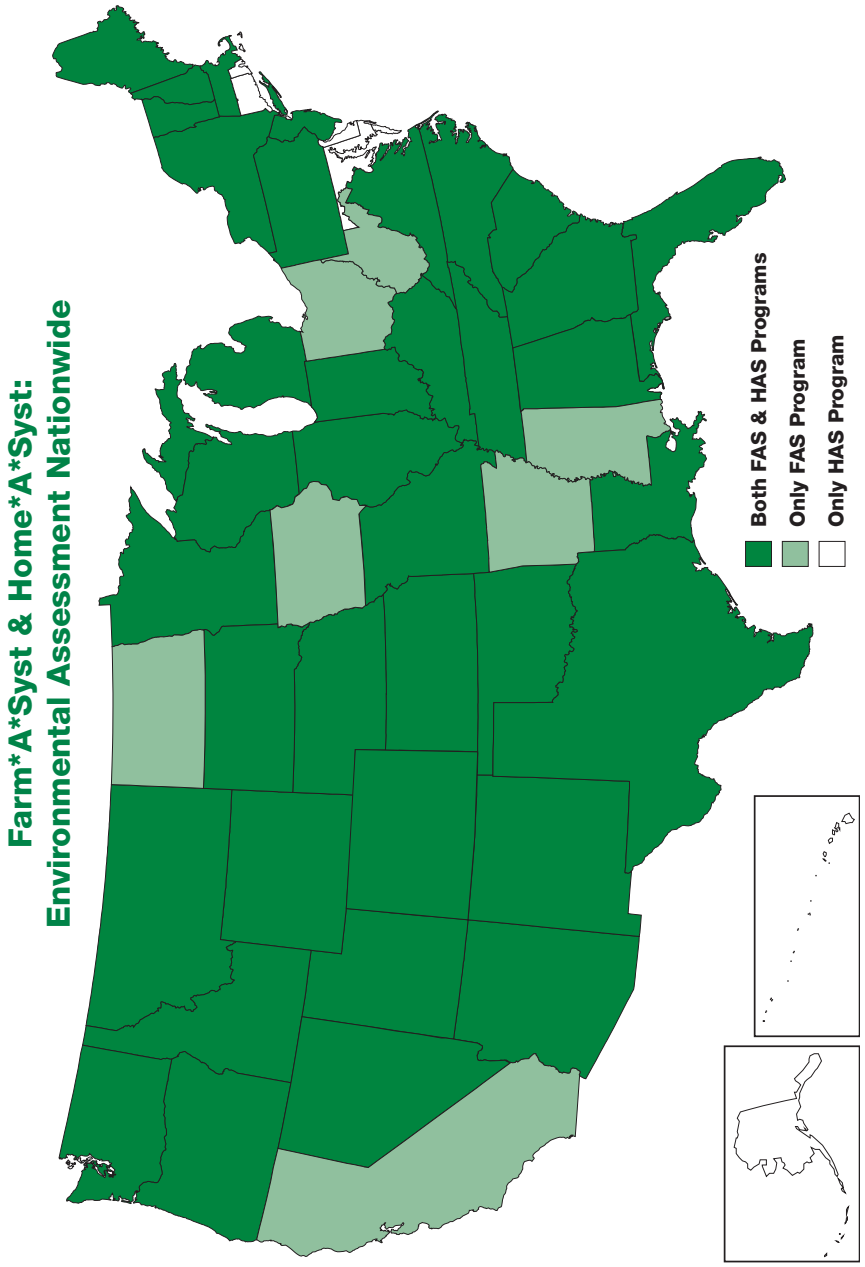
2001

- The national Farm*A*Syst/Home*A*Syst office receives a USDA/CSREES Water Quality Pollution Assessment and Prevention National Facilitation grant.

*If a link between farming activities and personal health can be clearly demonstrated, evidence suggests that farmers are more likely to take action. A successful program for educating farmers about the relationship between their activities and personal health is Farm*A*Syst… It has been effective in getting individuals to take cost-effective, voluntary actions to remediate and prevent problems such as leaking fuel storage tanks, pesticide spills, and poor well maintenance.*

Lessons learned about the performance
of USDA agricultural nonpoint source programs.
Journal of Soil and Water Conservation 53(1): 4-10, 1998.





Partnerships At Work

A huge success of the program has been the development of partnerships. The program facilitated working relationships between local departments of health, departments of housing and Cornell Cooperative Extension.

Katrie DiTella, Extension Associate Water Quality Extension Program, New York

From the beginning, partnerships have been the key to success of the program. Collaboration among partners is what has made Farm*A*Syst/Home*A*Syst diverse and strong. National partners provide coordination support and the all-important connections to stakeholder groups across the country. State, local and commodity-group partnerships consist of a wide variety of agencies and private sector groups working together to help individuals help themselves.

Many organizations and agencies are dedicated to environmental protection—in particular groundwater and surface water stewardship—and to safeguarding human health. Farm*A*Syst/Home*A*Syst's primary national agency partners—the USDA Cooperative State Research Education and Extension Service (CSREES), USDA Natural Resources Conservation Service (NRCS), and U.S. Environmental Protection Agency (EPA)—have supported the program as an important tool to help them achieve their goals.

For example:

- All EPA regions provide support to states for Farm*A*Syst/Home*A*Syst development and/or implementation to help with Community Wellhead Protection, Source Water Protection, Section 319 Non-point Source Pollution and other national programs.
- NRCS incorporates risk-assessments into conservation planning support programs, including Environmental Quality Incentives Program (EQIP), locally led conservation planning, and Animal Feeding Operations/Concentrated Animal Feeding Operations (AFO/CAFO) alternatives. Farm*A*Syst is actively supported by many of the 3,000 Conservation Districts and by resolution through the National Association of Conservation Districts (NACD).
- CSREES and NRCS have integrated Farm*A*Syst into hydrologic unit projects and demonstration projects across the U.S.
- An example at a state level is West Virginia, where the WV Rural Community Assistance Program, Farm Bureau and Bureau of Health assisted in modifying and preparing Farm*A*Syst materials for use in the state.

National Partners or Collaborators Include:

Public

USDA Cooperative State Research Education and Extension Service (CSREES)
USDA Natural Resources Conservation Service (NRCS)
U.S. Environmental Protection Agency (EPA)
Department of Housing and Urban Development (HUD)

Private

American Soybean Association
Groundwater Foundation
Groundwater Guardians
American Farm Bureau Federation

State & Local Partners or Collaborators Include:

Public

State Cooperative Extension Services
State Departments of Agriculture, Health, Environment, Natural Resources
Local Townships
Land Grant Universities
Conservation Districts
Public Health Departments

Private

Several State Farm Bureau Federations
Wisconsin Potato & Vegetable Growers
Lodi-Woodbridge Wine Grape Growers (CA)
Milk & Dairy Beef Quality Assurance Center, Inc.
Retired Senior Volunteer Program (RSVP)

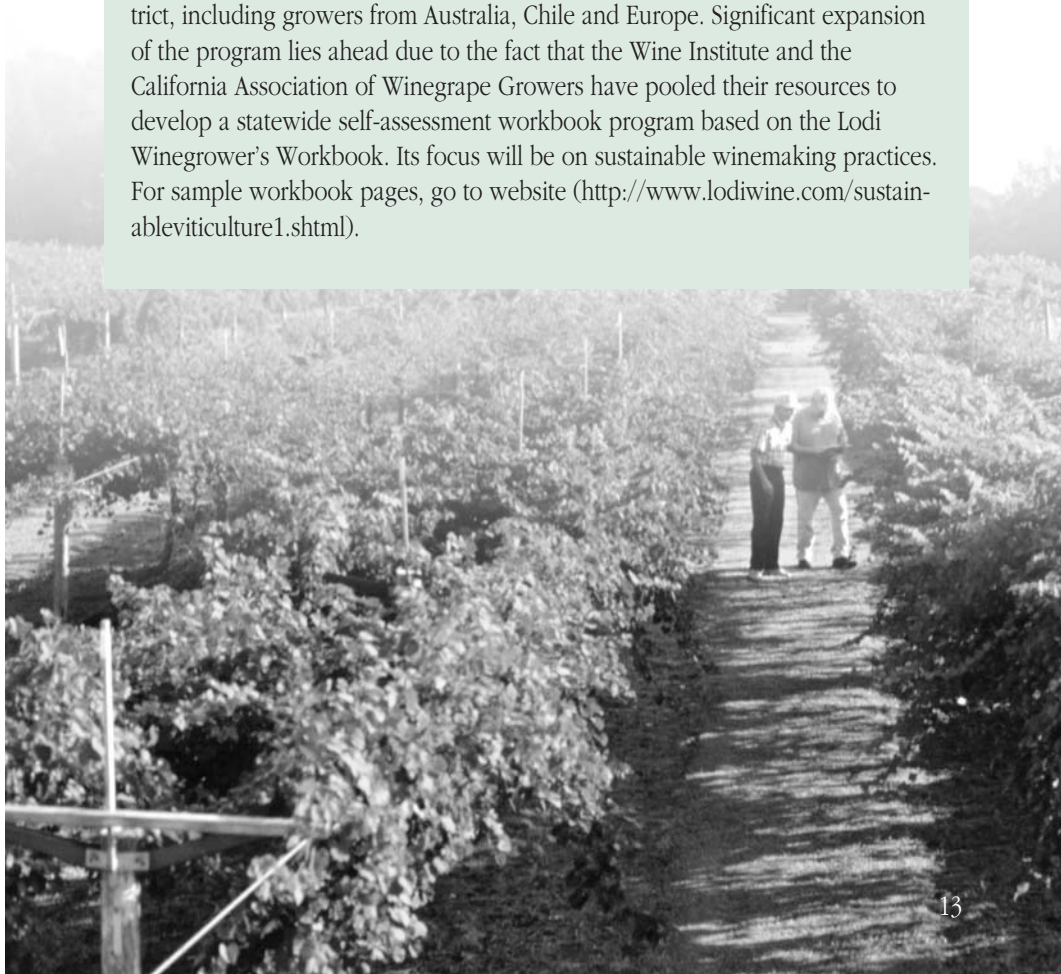
*The Farm*A*Syst/Home*A*Syst program is a cutting edge example of effective Extension programming — translating technical information into easily understood, hands-on education that empowers private citizens to take actions that prevent pollution. Its proven ability to foster partnerships among local, state and federal agencies and the private sector presents a strong model for future Extension programs.*

Colien Hefferan, 1999, then Acting Administrator, CSREES

California Wine Industry Prepares for a Sustainable Future

A recent success story is the assessment-based workbook produced by the Lodi-Woodbridge Winegrape Commission of California. Using Farm*A*Syst as a model and with guidance from the national office, the commission produced the *Lodi Winegrower's Workbook: A Self-Assessment of Integrated Farming Practices*, released in 2000. Promoting sustainable viticulture and Integrated Pest Management (IPM), the workbook has "really captured a lot of attention in the wine industry," according to project coordinator Clifford Ohmart. Locally, 160 growers participated in a workshop promoting the workbook.

The workbook is provided free to Lodi-Woodbridge members, but also has been purchased by 200 winegrape producers from outside the commission district, including growers from Australia, Chile and Europe. Significant expansion of the program lies ahead due to the fact that the Wine Institute and the California Association of Winegrape Growers have pooled their resources to develop a statewide self-assessment workbook program based on the Lodi Winegrower's Workbook. Its focus will be on sustainable winemaking practices. For sample workbook pages, go to website (http://www.lodiwine.com/sustainableviticulture1.shtml).



The Funding Challenge

For most of the 1990s, the national Farm*A*Syst/Home*A*Syst office received its primary funding from USDA Cooperative State Research Education and Extension Service (CSREES), USDA Natural Resources Conservation Service (NRCS), and US Environmental Protection Agency (EPA). These three core partners formed the base of support and provided long-term consistency in programming.

Recent changes in CSREES funding structures, however, have shifted basic support monies away from the national office. Funding from CSREES is now on a competitive grant basis that has significantly reduced the capacity to maintain a network of state coordinators for program development and implementation. The lack of a formal working agreement between the cooperating agencies complicates consistent agency support when personnel changes occur.

In 1999, widespread support from states resulted in CSREES water quality special grant funds being increased by $500,000 to support state Farm*A*Syst development and implementation efforts. In FY 2000 these special grant funds were moved to Section 406 to create a competitive integrated research, education and extension program.

Support at the state level has been achieved year to year through a variety of national, state and local sources. But as funding programs change — particularly the strategy of competitive national project funds — states face increasing challenges to maintain adequate programs. As a result, each year brings a different mix of active, static, and inactive state programs. To paraphrase comments heard from several state coordinators, "The interest is there, but it takes money to put the assessments into the hands of the farmers and homeowners."

Building a Future on Success

For a decade, the Farm*A*Syst/Home*A*Syst risk-assessment model has been widely recognized as an effective approach to environmental analysis and education that can be applied in a variety of settings and programs. In 1999, for example, the CSREES water quality program offered $678,000 in education grants to help underserved communities make informed decisions about their water resources. Of the 17 grants awarded around the country, 10 award recipients incorporated Farm*A*Syst/Home*A*Syst into grant proposals.

In 2000, the CSREES Water Quality program made eight multi-year awards totaling $1,514,500 in Extension Education grants. According to interviews with the principal investigators, four of the award recipients include Farm*A*Syst/Home*A*Syst among their elements (total of $914,500), and two others are developing assessment tools that may contribute to Farm*A*Syst/Home*A*Syst programs in the future (total of $245,000). The program awarded another nine multi-year grants for Integrated Research, Education, and Extension, totaling $3,615,598. One incorporates Farm*A*Syst/Home*A*Syst activities (with $540,000), and two others plan to develop assessment tools that may contribute to Farm*A*Syst/Home*A*Syst programs in the future (total of $711,000).

Overall, 1999 and 2000 brought consistent progress accented with a number of important highlights. All fifty states now have developed Farm*A*Syst or Home*A*Syst materials, or both. Thanks to the efforts of dedicated staff in dozens of states, thousands of assessments have been completed annually by farmers, producers and rural and urban residents. Although levels of support and involvement vary from state to state, the core program of confidential, voluntary risk assessments for farmers and homeowners is firmly established. For new and ongoing EPA, NRCS and other agency programs, Farm*A*Syst and Home*A*Syst will continue to provide useful tools and strategies for helping to meet stewardship objectives.

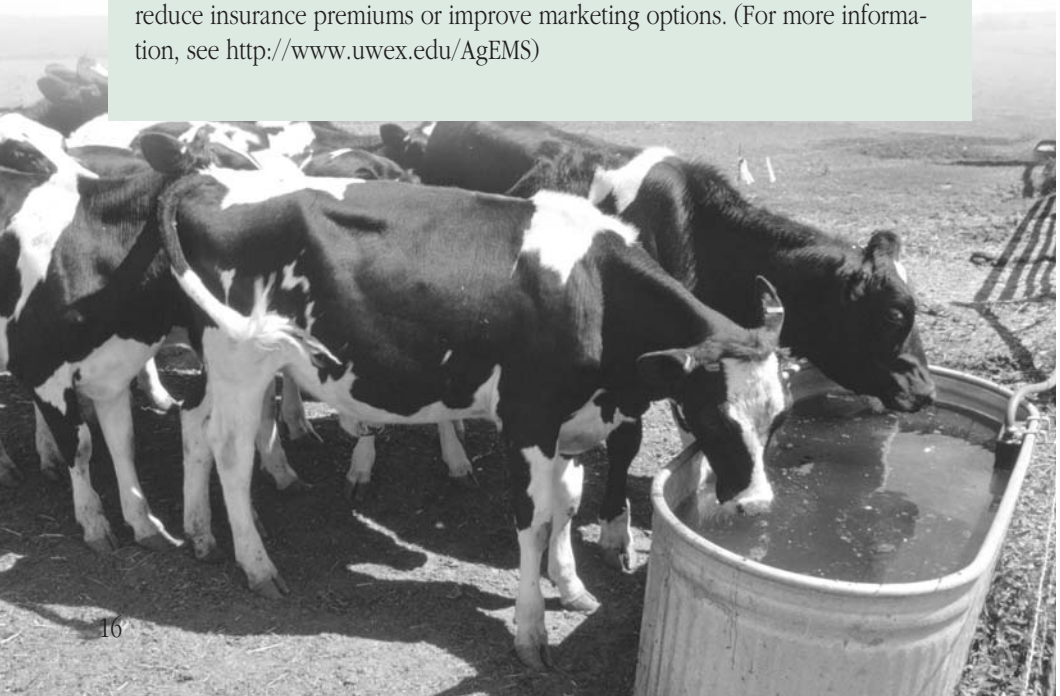
In 2000, the national Farm*A*Syst office responded to interest from producer associations in the U.S. and Australia in using Farm*A*Syst to support the development of agricultural environmental management systems. A CSREES Future Agriculture and Food Programs grant was developed titled "Partnerships for Livestock Environmental Management Assessment Systems." This multi-state proposal was funded, substantially

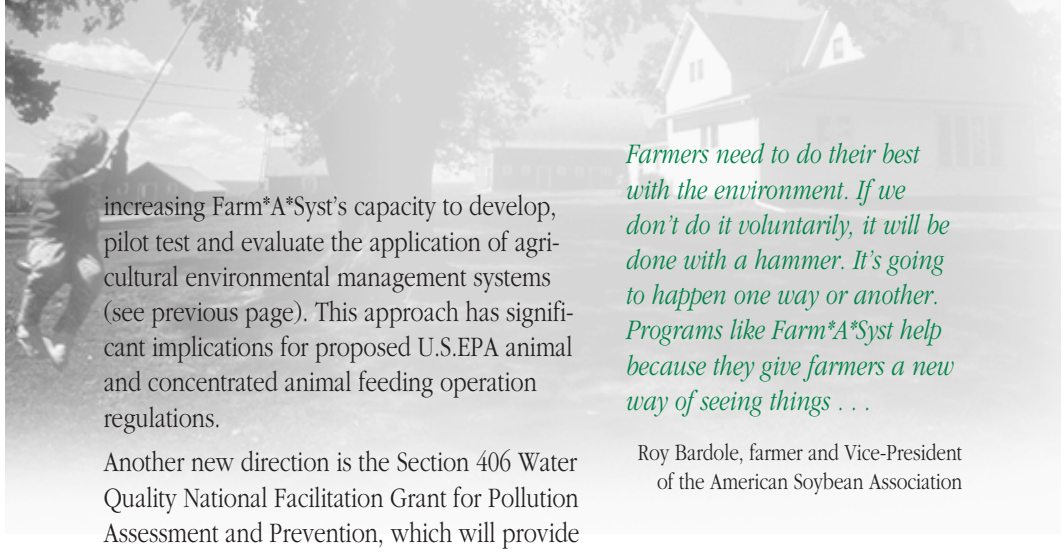
Agricultural Environmental Management Systems (EMS)

Building On the Farm*A*Syst Foundation

Beginning in 2000, a major project was launched to broaden the farm risk-assessment idea into a comprehensive, systematic, continuous-improvement strategy called an Environmental Management System (EMS). This ten-state, four-year project is targeted to dairy, beef and poultry producers who will test and adapt a variety of EMS protocols to agricultural settings. With an environmental management system in place — and audited annually — livestock producers not only will minimize their environmental impact, but also will position themselves to take advantage of emerging regulatory flexibility.

A livestock environmental management system will integrate environmental stewardship into farm management decision-making. The EMS framework helps producers clarify their goals, evaluate existing facilities and management approaches, identify opportunities and plan voluntary actions that reduce potential hazards, ensure compliance with federal, state and local requirements, support farm financial management and document success. Use of environmental management systems can provide opportunities for farmers to find their own creative responses to reducing water or air pollution impact, rather than finding themselves subject to prescribed requirements or techniques. EMSs may also reduce insurance premiums or improve marketing options. (For more information, see http://www.uwex.edu/AgEMS)





increasing Farm*A*Syst's capacity to develop, pilot test and evaluate the application of agricultural environmental management systems (see previous page). This approach has significant implications for proposed U.S.EPA animal and concentrated animal feeding operation regulations.

*Farmers need to do their best with the environment. If we don't do it voluntarily, it will be done with a hammer. It's going to happen one way or another. Programs like Farm*A*Syst help because they give farmers a new way of seeing things . . .*

Roy Bardole, farmer and Vice-President of the American Soybean Association

Another new direction is the Section 406 Water Quality National Facilitation Grant for Pollution Assessment and Prevention, which will provide support for coordinating regional, state and local voluntary water pollution prevention efforts. Headquartered at the national Farm*A*Syst/Home*A*Syst office, the collaborative initiative will build on and improve the quality, reach and outcomes of voluntary water pollution assessment and prevention programs that foster individual household and business responsibility for the environment. A quarterly on-line newsletter and other communications will facilitate information-sharing for professional development and collaboration among field educators and researchers. Specific objectives include developing improved methods for documenting and publicizing the outcomes of Water Quality Pollution Assessment and Prevention programming. Other objectives are to broaden and strengthen the funding base for voluntary water pollution prevention activities, and to synthesize and integrate into extension programming emerging research findings that distinguish the environmental impacts of alternative agricultural practices on water quality. The grant also will assist educators in supporting the development and implementation of agricultural Environmental Management Systems.

The Healthy Homes project is gathering momentum as well. It is developing an expanded edition of *Help Yourself to a Healthy Home* in response to high demand. The new version — to be available in summer 2002 — will cover mold/moisture, asthma and allergies, carbon monoxide, and home safety. The program office is also hard at work on an interactive, web-based version of the booklet.

As with any voluntary program, the long-term viability of Farm*A*Syst/Home*A*Syst will depend on its demonstrable impacts. If one thing is clear, it is the need for more and better evaluations of existing and new programs. Success will breed success, but only if the data are there to show the many ways that Farm*A*Syst/Home*A*Syst make a difference.

Program Highlights and Impacts

Each year, surveys are sent to state program coordinators across the nation asking about activities and accomplishments over the year. Summary numbers and a sampling of state activities are presented below. Sidebars highlight additional tales of important outcomes. Further state program information and web links may be accessed through <http://www.uwex.edu/farmasyst>. Cick on "Resources" and the state of interest.

Farm*A*Syst

National Survey Review

*One of the most basic facts (about FAS) is that every state has a unique Farm*A*Syst program. The materials may look the same; the way programs are operated differs substantially.*

Steve Haviland of Iowa's Agren, Inc., a private sector partner.

Over the two-year period 1999-2000, 36 states and the Virgin Islands reported using Farm*A*Syst in 249 separate projects. Among these were 68 state watershed projects, 56 community wellhead protection projects, 56 Environmental Quality Incentives Program (EQIP) or EQIP/livestock waste management projects, and 31 EPA Section 319 nonpoint source pollution projects. Others included USDA Hydrological Unit Area (HUA) demonstration projects, Groundwater Guardian Community projects and farm organization projects.

Reported funding earmarked for Farm*A*Syst in 1999 (with 36 states reporting) was $2,604,720 and in 2000 (18 states reporting) totaled $1,556,000. These numbers hide the fact that in most states, funding for the program is modest at best. For each of the two years, Michigan accounts for $1 million of the total, a sum acquired through a special tax on pesticide and fertilizer sales. For some states, support for Farm*A*Syst was strong ($100,000 in Georgia, $145,000 in Illinois) and in others monetary support was non-existent or quite low ($1,000 in Louisiana, $2,000 in Nevada). Most states reported support in the $10,000 - $40,000 range.

Participating states attempt to keep accurate records of the number of assessments completed by farmers and producers. The numbers they report, however, likely under-represent reality since many assessments are done privately back on the farm. In 1999, 36 states and the Virgin Islands reported that 16,280 assessments were known to be completed. (These same states noted a total of 86,438 assessments completed since the Farm*A*Syst program began.) In 2000, 8,786 assessments were reported by 17 states and the Virgin Islands.

The combined total of 25,000 new assessments over the two years represents an estimated investment of $17.5 million in pollution prevention. This figure is based on 1996 research in Louisiana where farmers — upon completing their risk-assessments and identifying trouble spots — invested an average of $700 per farm (including labor) to mitigate their highest risks.

States also reported high numbers of people reached through education and outreach during 1999-2000. In 1999, more than 48,100 were reached and in 2000 at least 37,700. Educational opportunities included presentations and workshops, for example at an "Acreage Owners Expo" in Nebraska, county fair displays, mailings and media outlets. In Ohio, producers may receive credit in the pesticide recertification program for completing worksheets and discussing them with their county agents. In addition, many states train individuals to help farmers, ranchers and other agricultural producers conduct Farm*A*Syst assessments. These "train-the-trainer" sessions involved over 3,000 people over the two-year period.

State Program Highlights

California. More than 900 Concentrated Animal Feeding Operations (CAFOs) participated in Farm*A*Syst and more than 90 percent made or planned to make changes both in their operations and in their nutrient management plans.

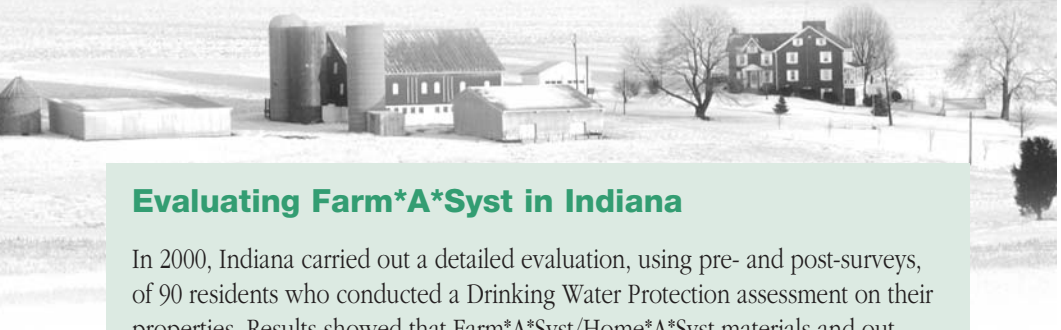
Georgia. In August 1999, a Watershed Health Outreach Field Day was conducted for the Georgia Tribe of the Eastern Cherokee. The event informed more than 50 tribal members of methods to improve water quality through well testing and well curbing. A survey conducted later in the fall found that, as a result of the project, many tribal members had constructed well curbings, done maintenance work on their wells and made other improvements to the land surrounding their well location.

This program is the cornerstone of all environmental educational activities dealing with agricultural production in Alabama. Farmers have reviewed our revised [curriculum] and are in full support of this document and what it can do for them.

Laura Booth, Alabama CES Farm*A*Syst Coordinator, Auburn University

In 2000, Rainbow Acres Farm in Marion County was honored with the Governor's Pollution Prevention Award in the Farmer/Producer category. The Williams family runs the farm, operating 12 poultry broiler houses producing nearly ten tons of live

birds annually on 1,000 acres. Georgia Farm*A*Syst assessments were the building blocks of Rainbow Acres' environmental farm plan. With the assistance of NRCS, nutrient needs were assessed on a field-by-field basis. As a result of changes in management practices, the farm is able to gain the nutrient benefits of poultry litter on hay fields, while protecting local surface and ground water.



Evaluating Farm*A*Syst in Indiana

In 2000, Indiana carried out a detailed evaluation, using pre- and post-surveys, of 90 residents who conducted a Drinking Water Protection assessment on their properties. Results showed that Farm*A*Syst/Home*A*Syst materials and outreach were effective in helping people raise awareness and knowledge. More than 1/3 of participants made at least one activity change within 6 weeks of doing their assessments.

The study compared participants who received trained, on-site assistance during the assessment with those who conducted assessments on their own. Interestingly, 43% of persons who received on-site assistance made at least one activity change compared with only 22% of those who did not. This difference suggests that when a specialist guides the land owner through an assessment and makes recommendations for management changes, participants are more likely to make a change than if they receive no assistance. Overall, farmers were somewhat more likely to make at least one activity change than their non-farm counterparts (41.6% vs. 30.8%).

Examples of changes made:

- Put farm chemicals in secondary containment
- Changed water filter that was on too long
- Eliminated use of weed killer in well area
- Limited laundry loads to ease burden on septic system
- Had septic tank pumped
- Tested for bacteria in drinking water
- Put less solids down the disposal
- Had new septic system put in

For the complete report, see website:
http://www.ecn.purdue.edu/safewater/farmasyst/partners.htm

Putting a Premium on Good Stewardship

A Michigan-based insurance company is rewarding farmers for improved farm management through a generous credit on premiums. To earn the discount, farmers first complete the set of 14 Michigan Farm*A*Syst worksheets with the assistance of a trained state Department of Agriculture technician. If certain high-risk situations are present — such as unplugged wells or unsafe storage of chemicals — they must be corrected. A lifetime credit of 15% is given to farmers who meet all the requirements.

According to Janet Persons, Conservation District Administrator in the northwest part of the state, "It's a simple process to do the work needed for the credit." The program, launched by Auto Owners Insurance Company in 1999, has had 15 participants though many more are anticipated as word of the program spreads. A little-known feature of the program is that any policy holder in Auto Owners' 8-state region can apply for the credit, though farmers need to complete their home state's Farm*A*Syst packet. While Auto Insurance is not a major farm insurer, the vastly larger Michigan Farm Bureau Insurance company currently is looking into offering a similar credit. "Even having them seriously explore this idea is a major accomplishment," notes Persons. With cost-sharing available in the state, the modest investment made by farmers to make improvements can pay long-term dividends through savings on premiums and better stewardship of the land.

Indiana. A high school vocational agricultural class completed environmental assessments on 20 farms. They also spent two weeks studying water wells, pesticide and fertilizer storage, fuel storage and septic systems using the Farm*A*Syst materials. The instructor said "This got the students out of the classroom and put what they learned in class to use in our community." The vo-ag group went on to win the State Envirothon competition.

Five to ten people call the program each week with water-related questions. One caller remarked that Indiana Farm*A*Syst was the first place that was able to really answer her question and point her in the right direction. In several situations the program reported saving participants "several thousand dollars" and in many other cases helped prevent pollution.

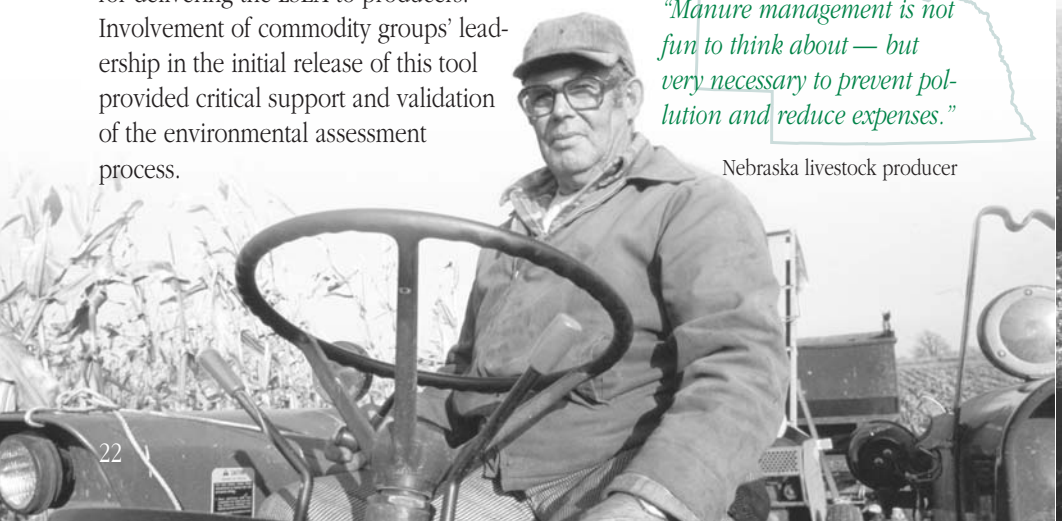
Iowa. Demonstrating a unique partnership between public agencies and the private sector, Iowa is the first state where development of Farm*A*Syst materials was promoted by private initiative. The Iowa Farm Bureau Federation, a private sector association, contracted with Agren, Inc, an agricultural and environmental consulting firm, to develop the assessments specific to Iowa's needs. Completed in 2000, Iowa Farm*A*Syst's set of eleven worksheets is now being distributed statewide. Also significant is the ongoing commitment made by the Farm Bureau Federation to the program. It has agreed to split the cost of 15 months of implementation work with the Iowa Department of Natural Resources. See the website with worksheets [http://www.ifbf.org/government/farmasyst/default.asp] and read about Iowa Farm*A*Syst in Iowa's Maquoketa River Watershed Water Watch newsletter. (See: http://extension.agron.iastate.edu/waterquality/neidpmaterials/WW90Feb01.pdf)

Michigan. Boasting one of the most comprehensive state Farm*A*Syst programs, Michigan Farm*A*Syst takes its message directly to farmers with the help of more than 20 groundwater technicians who perform on-farm assessments. Program funding — about $1 million annually — comes from a tax levied on the sale of pesticides and fertilizers. Approximately 2,500 sets of assessments were completed over 1999-2000, with more than 17,000 people reached through education and outreach.

Nebraska. A Livestock Systems Environmental Assessment (LSEA) tool was developed and tested with 97 livestock producers in three counties. A follow-up evaluation was completed six to nine months later by 61 participants. The seven-worksheet LSEA included three Farm*A*Syst worksheets and four new worksheets (manure land application, odor, feedlot runoff and manure nutrient production). Close collaboration with local livestock commodity groups proved to be the most effective method for delivering the LSEA to producers. Involvement of commodity groups' leadership in the initial release of this tool provided critical support and validation of the environmental assessment process.

"Manure management is not fun to think about — but very necessary to prevent pollution and reduce expenses."

Nebraska livestock producer



The LSEA resulted in significant changes of practice. Fifty percent of the producers had made some changes within 6 to 9 months and 64% intended to make changes due, in part, to their completion of LSEA. Better utilization of manure nutrients in crop production was the most commonly identified change. At the time of the survey, 20 participants had invested more than $1,000 in changes since the assessment, and 5 producers had already spent over $5,000. Significantly, more than half anticipated spending more than $1,000 to implement changes in the future. Sixty-four percent of respondents noted that "desire to improve farm's environmental stewardship" was their chief motivation for making changes. See article with complete story (http://joe.org/joe/2000february/a3.html) in the Journal of Extension, February 2000.

Ohio. A two year project succeeded in involving numerous OSU Extension Agents to integrate Farm*A*Syst with their regular programming, particularly pesticide recertification, manure management, and livestock education programs.

Oregon. An innovative new twist — Stream*A*Syst — was developed as a tool for landowners to examine stream conditions on their property. Stream*A*Syst, which stands for Streamside Assessment System, is a set of materials for people who want to learn more about managing their streamside areas. Landowners go through these materials on their own to determine if there are factors related to their stream that could be improved by better management practices. There are three parts: The Stream*A*Syst Worksheet is a set of yes-no questions to be answered while observing a stream. The Stream*A*Syst Action Plan is a chart to help figure out what to do once potential concerns are identified. The Learn More About Your Stream section directs landowners to publications with more information and advanced assessment tools. There is space to "record-your-actions" so participants can look back and see how their changes in management have made a difference in the health of the stream.

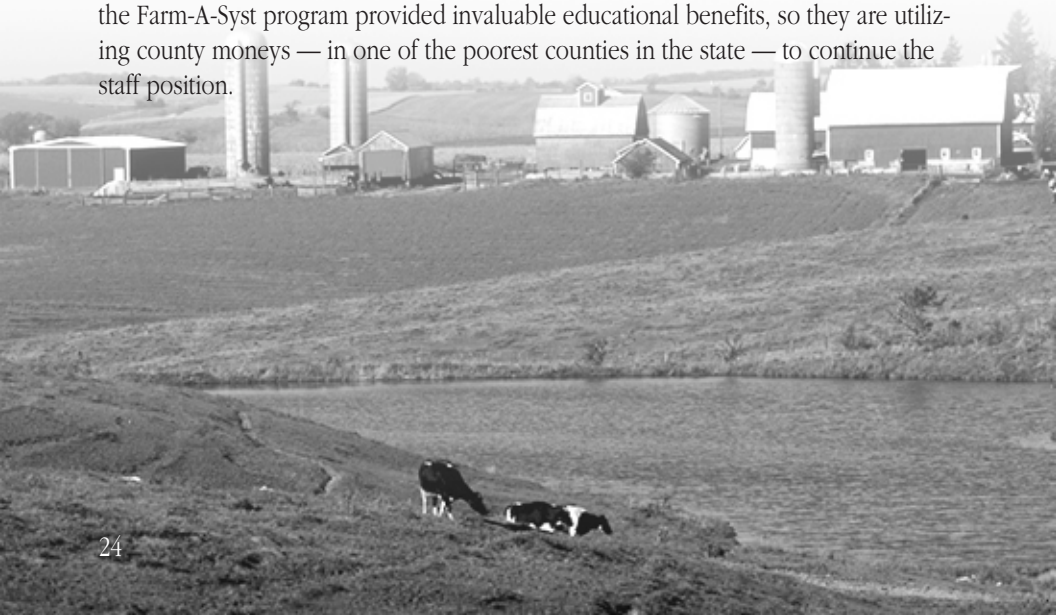
Pennsylvania. Commercial businesses provided premium payments for farmers who scored above a performance threshold.

Texas. Two TEX*A*Syst videos received two separate Aegis Awards for Excellence in the field of video production in 1999. Brad Barnett won the awards for on-line editing of the videos in TEX*A*Syst's Water Well video series. The series was produced by Jerrold Summerlin with graphics by Angel Fattorini. The Aegis Awards are part of a national competition to reward excellence in the field of video production.

With more emphasis on private lands, source water protection and grassroots participation, the FAS is an excellent way to obtain some baseline information concerning a watershed area.

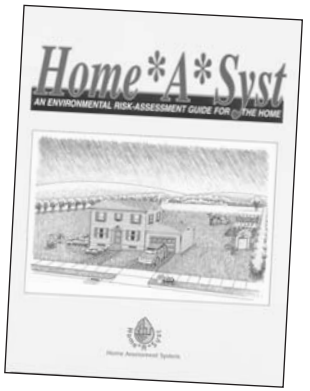
Robert Broz, Missouri State Water Quality Specialist and Extension Water Quality Program Director

Wisconsin. In 1998, a group of farmers in Grant County conducted Farm*A*Syst assessments with staff supported by funds from the USDA Environmental Quality Incentives Program (EQIP). The next year, 42 participants completed a follow-up survey in which they reported — in confidence — their findings plus actions taken or planned. The highest risk areas identified were petroleum product storage, pesticide storage, and water well condition. Just over 26% of survey respondents invested in changes linked directly to their Farm*A*Syst experience, ranging from a $4 anti-siphon device (to protect well water) to $4,000 for a new septic system. Nearly all other respondents listed changes they still intended to make. Ninety percent said they found the program valuable and would recommend it to a neighbor. The EQIP grant ran out in Sept. 2000 but the County Land & Water Conservation Committee felt the Farm-A-Syst program provided invaluable educational benefits, so they are utilizing county moneys — in one of the poorest counties in the state — to continue the staff position.



Home*A*Syst

National Survey Review



Home*A*Syst programs spread rapidly around the country following their launch in 1997, thanks in part to Farm*A*Syst's leading the way with its farm-based environmental risk assessments. By 2000, 38 states had established Home*A*Syst programs.

In surveys of state programs in 1999–2000, 35 states and the Virgin Islands reported data on outreach and monetary support. Cumulatively, state Home*A*Syst programs reported over $1.6 million in funding, ranging from $500,000 (Michigan) and $138,000 (Alaska) to $3,000 (Louisiana) and $1,500 (North Carolina). The most frequent amounts spanned the $10,000 to 50,000 range. As in the past, even programs with low to modest levels of funding made important contributions to public awareness and resource stewardship.

Outreach efforts were especially strong, reflecting the widespread interest in environmental health and safety for homes. States reported that, each year, more than 126,000 persons were contacted through outreach and education efforts, for a combined total of about 267,500. The cumulative number of assessments actually completed by residents during the two years was reported at over 21,000. The true number is likely significantly higher, however, due to thousands of copies of the Home*A*Syst guidebook that were given out to homeowners who may have completed some or all of the assessments on their own.

New materials developed or under construction were reported by many states in 1999-2000. Maine, for example, is working on a petroleum fact sheet and wellhead mapping exercise. Idaho developed several documents including Forest Lot Management, Landscape & New Construction, Roads & Driveways and Lake*A*Syst / Storm Water. Virginia developed an intensive training manual on the hazards of lead and risk-reduction for families, and also for middle and high school Vocational Ag teachers a water quality curriculum using Home*A*Syst. The Virgin Islands created a poster titled *Recipes for a Non-Toxic Kitchen*, plus an introductory brochure for VI*A*Syst with accompanying slide/overhead show. Rhode Island finalized *Your Guide to Public Water*, and developed an approach for Home*A*Syst volunteers to conduct source water assessments. Tennessee released a new video: *Tennessee Home*A*Syst Youth Leader Lessons.* Kansas produced a new publication, *Home*A*Syst for Home-Based Occupations and Hobbies.* Georgia developed a 3-panel exhibit and

four new Home*A*Syst documents, including two in Spanish. Utah State University Extension pioneered a new Farm*A*Syst/Home*A*Syst worksheet format.

Effective delivery methods were reported as well, showing creativity in getting the word out to the public. In New Jersey, mini-grants were awarded to local environmental commissions who in turn disseminated Home*A*Syst to municipalities through a variety of mechanisms. New Mexico developed a cartoon brochure in English and Spanish for school children on pesticide hazards. North Dakota is educating home builders, engineers, architects and realtors about healthy homes. Wyoming incorporated Home*A*Syst information into its Pesticide Applicator Safety Program. Georgia reached many homeowners via county Extension agents. Oklahoma hired student interns to work with rural residents to complete assessments and take water samples for testing. Delaware used a host home in a community to sponsor landscape walk-arounds.

Healthy Homes Initiative

The major new program area affiliated with Home*A*Syst was launched in 2000 with the development and publication of a 24-page booklet: *Help Yourself to a Healthy Home: Protect Your Children's Health*, available in Spanish and English. This joint effort of CSREES and the US Department of Housing and Urban Development has generated wide interest among rural and urban residents. A half-time Healthy Homes coordinator is now on staff at the Madison office.

The initiative was launched with a satellite conference in March 2000 joined by an estimated 900 participants in 200 downlink sites. By February 2002, the program had distributed 95,000 copies of the booklet *Help Yourself to a Healthy Home,* and the number of state programs had grown to 40. Annual mini-grants of $2,000 or more have been available from CSREES to implement Health Homes activities, such as train-the-trainer workshops, materials development and outreach. Highlights of state Healthy Home projects may be viewed at <http://www1.uwex.edu/healthyhome/hhpick.cfm>.

State Program Highlights

Some of the many Home*A*Syst successes and impacts are described below. Further state program information may be accessed through <http://www.uwex.edu/homeasyst>. Click on "In Your State."

Thanks for sharing this information that I have needed and did not have . . . I live in a house that is filled with mold. My landlords do not understand what it is doing to my health."

Minnesota resident

Alabama. 99% of all participant feedback has been positive and supportive of the program.

Florida. In 50 Florida counties, 20-30% or greater of the population is not English-literate according to a 1991 definition established by the U.S. Congress. To reach this mostly rural population, the state program created 14 English and 14 Spanish videos, as well as 14 one-page printed versions at a 3rd grade reading level, covering the same topics as the Home*A*Syst guidebook. The Home*A*Syst guidebook (with 14 topics) was translated into Spanish and 1000 copies were printed. The program produced English and Spanish versions of *Keep Your Well Water Clean* and had 5,000 copies of each printed in December 1999.

Hawaii. In Hawaii, Home*A*Syst is part of the larger program dubbed HAPPI (Hawaii Pollution Prevention Information). Assessment materials are promoted under the title of HAPPI-Home. Another project is HAPPI-School, a set of eight lessons used as resource materials by middle/high school teachers. Lesson titles include: Pollution risks around your school, Landscape and soil characteristics, Impervious surfaces, Trash, Stream assessment, and Know your watershed. These materials were pilot tested in 1999 and 2000.

Kansas. Kansas State University is currently developing Food*A*Syst, a risk assessment program for encouraging food safety. The program had its origins in 2000 and its first materials are available on the web. See http://www.oznet.ksu.edu/library/fntr2/mf2515.pdf and http://www.oznet.ksu.edu/library/fntr2/FOODASYST/foodasys.pdf

Kentucky. Funds from the USDA Healthy Homes initiative and an EPA Children's Environmental Health project supported teaching guides and materials for Extension agent in-service training.

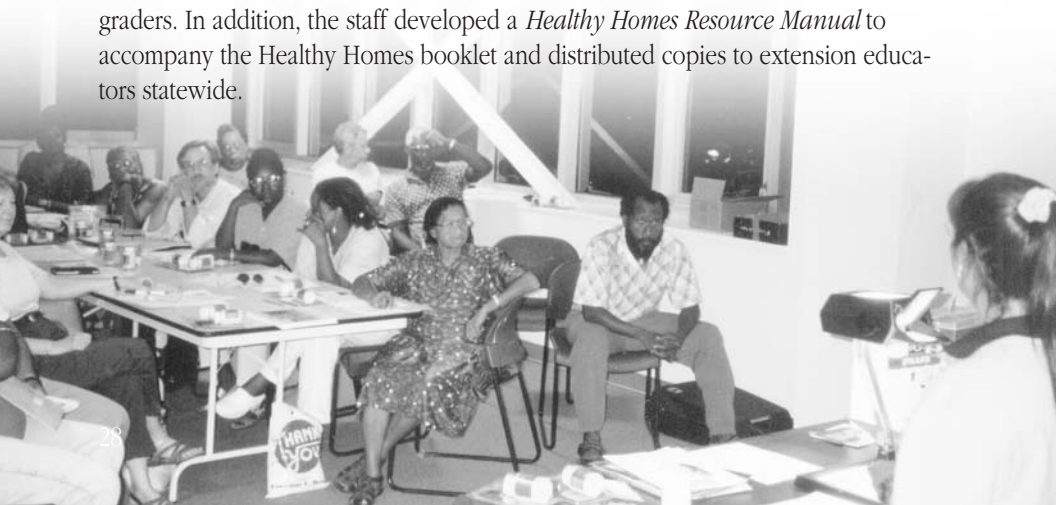
Minnesota. In Minnesota, a multi-faceted marketing effort for Healthy Homes was launched to reach the public. Methods included distributing the booklet in home-buyer and tenant education programs, nutrition education, Head Start and Hispanic

parenting programs. Healthy Homes was promoted through Extension newsletters, newspapers and radio shows. At least 855 households were reached directly by these and other methods, and 440 booklets were distributed. Many impacts of the program were reported, including:

- Fifty sets of cleaning supplies were distributed to low-resource householders who attended a program or had a home visit.
- Several participants commented that they were unaware of the hazards associated with combining chlorine beach and ammonia.
- Twenty-five families in Dakota County demonstrated behavior changes to improve indoor air quality.
- An educator used the material for an educational presentation at a local hospital on cleaning for reduction of allergies.

Nebraska. A follow-up sampling survey found that participants rated their knowledge of water quality risks associated with their Platte River corridor property at 4 before the program and 8 after the program (1 being low and 10 being high). Using the same scale, participants rated their willingness to consider making changes to practices associated with risks to water quality at 5 before the program and 9 after the program. Forty-two percent responding indicated they had completed a change as a result of attending the program. The program was a cooperative effort between the University of Nebraska Cooperative Extension System and the Lower Platte River Corridor Alliance, with partial funding from a $10,000 USDA/CSREES grant.

New York. State office staff developed several low-literacy risk-checklists and fact sheets for limited-resource audiences. Topics include septic systems, wells, household products, lawn and garden care, radon and lead. They created lesson guides for educators using the above resources as well as a Home*A*Syst curriculum for 6th graders. In addition, the staff developed a *Healthy Homes Resource Manual* to accompany the Healthy Homes booklet and distributed copies to extension educators statewide.



Protecting Water Quality on Native American Indian Lands in Wisconsin

On the beautiful 77,000 acre Lac Courte Oreilles Ojibwa Reservation in northern Wisconsin, Dan Tyrolt and his staff began an educational outreach campaign with two goals: (1) to reach every homeowner adjacent to the reservation's three large lakes and raise awareness of potential water contamination risks, and (2) to initiate change in homeowner activities by encouraging greater environmental stewardship.

Tyrolt's team began by presenting Home*A*Syst and environmental education sessions at Lake Association meetings, Lac Courte Oreilles Nation meetings and community events.

Results:

- Voluntary septic system inspections were completed at 1,500 homes adjacent to the three lakes.
- Approximately 150 failing septic systems were repaired or replaced.
- The program helped identify 40 underground petroleum storage tanks that required removal.
- There was an increase in requests for drinking water testing information.
- A 50-foot "No Fertilizer" zone adjacent to waterways was established.

Oklahoma. Historically black and other minority communities of Oklahoma are under-served in terms of education on drinking water quality, community wellhead protection and waste management. These populations, often elderly, low-literacy and/or low-income, have special needs in an educational program. Oklahoma State and Langston Universities collaborated to hire and train a paraprofessional from the target community, and to tailor educational materials to make them accessible. The paraprofessional actively recruited residents and assisted them to complete 116 Home*A*Syst site assessments, and to collect 169 water samples for analysis of coliform bacteria levels by the OK Department of Environmental Quality. Her data showed that 39% of the water wells did not meet the Safe Drinking Water Standard for total coliform bacteria. Through personal instruction participants learned to conduct shock chlorination. Seventy-six percent of the contaminated wells were improved.

Oregon. In an effort to reach Hispanic residents in Marion County, a Bilingual Water Well Clinic was developed. In 2000 and 2001, 21 clinics were held reaching over 800 rural households. Of these, an estimated 5 percent were Hispanic, though many participants were either employers or landlords of Hispanics. Most clinic participants had their well water screened for nitrates and received an individual consultation on well water safety and groundwater protection. Nearly 500 households also had their water tested for coliform bacteria. Other parts of the project included a three-month well-water safety campaign on two Hispanic radio stations, and a series of groundwater protection programs presented to an after-school science club for minorities.

South Carolina. In a 1999 pilot project, more than 600 copies of the South Carolina Home*A*Syst booklet were distributed to 22 middle and high schools. In addition, individual copies were mailed to other K-12 teachers and given out at science teacher meetings. Based on favorable comments from teachers, the state office is exploring ways to use South Carolina's Home*A*Syst to complement school curricula.

Tennessee. Clean Water Team member Karin Beuerlein designed a video to promote Home*A*Syst to Tennessee homeowners. The video won a national bronze award in 1999 from the Agricultural Communicators in Education Critique and Awards program. Beuerlein also headed up development of a high school curriculum based on Home*A*Syst.

The state program office has been effective in documenting impacts. By Fall 1999, nearly 800 Tennessee households had completed the program. Over 90% of respondents to user surveys said the program increased their awareness of the impact of household activities on the environment. Fully 85% said the program was useful and over 76% would recommend Home*A*Syst to others.

Virginia. Home*A*Syst was incorporated as an assessment tool in a healthy indoor air project, a state lead hazard education initiative, a water quality curriculum and in other projects related to home environmental health. In the words of the state coordinator, "Because Home*A*Syst is integrated into all our housing and environmental programs, it is difficult to pull out specific impact data."

Virgin Islands. Comments in this U.S. Territory's annual report revealed how the ripple effect can spread Home*A*Syst's impact. "Our Safe & Healthy Home program is very popular. A local high school teacher and her 5 students who attended the train-the-trainer workshop were so impressed that they then trained a physics class at the high school. Those trainees used the information learned to develop an interactive display at the 2000 St. Croix Earth Day Fair that demonstrated use of alternative, less-toxic household cleaners to over 500 4th–6th graders from schools across the island."

Special Projects & Topics

Veterinarian Project. With funding from U.S. EPA and support from the Milk & Dairy Beef Quality Assurance Center, Inc., Farm*A*Syst / Home*A*Syst recruited veterinarians to educate dairy producers about improvements in herd management that promote animal health and reduce pollution risks. Veterinarians are information providers who are trusted by farmers. They understand that good management of animal wastes and other activities can protect herd health. Good management can also reduce environmental problems such as runoff from barnyards.

The project developed and piloted two educational tools — a risk assessment checklist and a detailed worksheet that focused on manure and other concerns posing both environmental and health risks. Twenty-three veterinarians from Wisconsin agreed to deliver these materials to their dairy producer clients. Survey feedback indicated that the materials were "useful" to "very useful." Veterinarians were also more aware of and likely to work with clients regarding environmental issues after participating in the project.

Forest*A*Syst. A national forestry guidance document was released in May 1999 as a model assessment tool for forests and woodlots. It was developed by the North Carolina State University Department of Forestry. This tool, intended to help private landowners protect water quality and forest health, serves as a template to produce state-specific booklets on local forest management activities and techniques. Seven states have adapted and begun using Forest*A*Syst materials with state support through EPA Section 319 grants.

*Tennessee's Forest*A*Syst takes a different twist. Landowners normally don't seek professional assistance regarding water quality issues. Instead, their interest is selling timber or improving wildlife habitat. It is only after a professional visits them to address one of these issues that the opportunity comes to also educate them on BMPs. The publication begins with a simple self-assessment, helping landowners to more clearly identify their forest goals, and it ends with a mock management plan and a list of technical professional agencies, carrying them to the next step.*

David Mercker, University of Tennessee Extension Forester

An article about the program in Nonpoint Source News-Notes (July 2000, p. 11) reports that, "Forest*A*Syst layers information in a logical progression… using a series of questions to be answered by the landowner on the types of practices conducted on their forest land. These questions are customized to meet the site-specific purposes of each landowner. Information and figures — such as those that demonstrate best management practices (BMPs) that can filter runoff before it goes into a stream — help the landowner convert to more sustainable forest practices."

Cotton*A*Syst. Historically, cotton has been one of the most pesticide-intensive field crops. The University of Georgia's Cooperative Extension Service worked with specialists and farmers to create a Cotton IPM (Integrated Pest Management) publication — with worksheets and IPM information — to encourage Georgia farmers to reduce their dependence on pesticides. Released in 1999, Cotton*A*Syst is an assessment tool to both measure current levels of cotton IPM implementation and serve as an instructional aid to help cotton farmers reduce environmental and health risks. As part of its action-oriented approach, the assessment informs growers of ways to improve management practices and increase use of IPM to help limit or eliminate pollution risks in the most cost-effective manner possible.

Tree Fruits. In 2001 the national Farm*A*Syst/Home*A*Syst Office published a booklet of information and risk management checklists to improve apple food safety at every stage from orchard management through processing. Funding for Reducing Food Safety Risks in Apples was provided by the USDA Food Safety and Quality National Initiative of the Cooperate State Research, Education and Extension service. Concurrently, an Orchard*A*Syst worksheet/factsheet was developed by the Michigan State University Extension Groundwater Stewardship Program with the national Farm*A*Syst/Home*A*Syst office. Pesticide and Nutrient Management for Orchards was published in October 2001, and Seasonal Integrated Pest Management Checklist for Orchards was published in December 2001. The program has begun distributing these materials to commercial fruit growers directly, and through a training program for Michigan Groundwater Stewardship Technicians. The program is seeking restricted pesticide recertification credits for farmers who choose to do Orchard*A*Syst with a Groundwater Technician.

The more success you can show with those folks that are voluntarily involved, I think you're better off. You need results.

John Ledbetter, grape grower in California

Publications

Available from the National Office

2001

Reducing Food Safety Risks in Apples. (20-page booklet with background information and risk assessment worksheets.) Co-authored by Richard Castelnuovo of the National Farm*A*Syst / Home*A*Syst Office, and Steven Ingham, University of Wisconsin Madison, Food Science Department.

Pesticide and Nutrient Management for Orchards (12-page factsheet/worksheet) and *Seasonal Integrated Pest Management Checklist for Orchards* (8-page worksheet). In conjunction with the National Farm*A*Syst office, co-authored by Charles Edson, Allen Krizek, Roberta Dow, David Epstein, Larry Gut, Amy Irish-Brown, Gary Thornton and Don Lehman of Michigan State University, with private crop consultants Doug Murray and John Bakker.

2000

Help Yourself to a Healthy Home: Protect Your Children's Health. (24-page booklet which helps home residents look for risks related to indoor air quality, lead, water, chemical products and pesticides.)

Drinking Water Protection Begins at Home. (4-page introduction to FAS/HAS and the importance of protecting drinking water. Includes checklist for farms and homes.)

La Proteccion del Agua Potable Comienze in Casa. (Spanish language version of *Drinking Water Protection Begins at Home*.)

1999

Helping Local People Help Themselves: Targeting under-served audiences with FAS/HAS. (a 44-page manual to assist in the development and implementation of local FAS and FAS programs for traditionally under-served audiences, specifically Native American, Hispanic and limited-resource farmers and ranchers.)

*Forest*A*Syst: A Self-Assessment Guide for Managing Your Forest*. Authored by Rick A. Hamilton, North Carolina State University Department of Forestry. (A 56-page guide to help landowners create Best Management Practices plans to enhance timber production, wildlife, water quality, recreation and aesthetics on their forest lands.)

Related publication

Moreau, Robert J. 1996. *Cost-benefit analysis of voluntary pollution prevention programs in the agricultural sector: Case study of the Farm Assessment System* (Farm*A*Syst). Ph.D dissertation, University of Wisconsin-Madison.

A Sampling of Farm*A*Syst & Home*A*Syst In Print and In-The-News

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