

Poster Session

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Poster Session Abstracts

Extension Education Category

ENVIRONMENTAL AGRICULTURE DAYS CURRICULUM

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Environmental Agriculture Days are an opportunity for 5th or 6th grade students to learn about agriculture and its relationship with the environment in a field trip setting. While the actual field trip is a single day, the program contents are directed by a curriculum for teachers to use in the weeks prior to and following the field trip. This curriculum was written in 1999-2000 and was developed in consultation with elementary teachers and designed to meet the Profiles of Learning in Minnesota. The Profiles of Learning are a set of standards on specific topics that all Minnesota students must complete to graduate. The curriculum consists of seven topics and has in-class exercises, worksheets and/or support materials - including video and computer software. Topics covered include: Ag Products; Carrying Capacity; Growing Corn and Soybeans; Pest Patrol; Soil; Raising Corn...Raising Careers; Farm Ecosystem; and Ag Olympics. In 2000, almost 1700 students participated in this program. The field day setting is at a local Environmental Learning Center. Students attend hands on, experiential sessions in the Center building, at outdoor stations and in tent classrooms. Pre- and post-testing of students has shown that if classroom teachers utilize the pre- and post-field day materials, students increase their understanding of these topics.

FARM SAFETY CAMP

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A farm safety camp was initiated in Putnam County, Ohio starting in 2000 to educate children about dangerous situations on farms. While a

relatively small percentage of local children are raised on farms, most have relatives or neighbors with crop and livestock farms.

The local health department assisted with the overall implementation of the farm safety camp. A collaborative effort involving a wide range of local agencies and businesses made for a tremendous group effort. The target audience was identified as sixth graders from across the county.

The principals of the 10 school systems in Putnam county were contacted. Nine of the ten school systems agreed to participate in the two day farm safety camp and 604 of the 615 sixth graders in the county participated. The program was held in April on a farm near the center of the county.

Topics discussed included grain entrapment, pretty poisons, machinery pinch points, tractor roll over and pond safety. Evaluations conducted indicated that over 80 percent of participants considered the farm safety camp one of their favorite field days of the school year. A survey of the school principals indicated they were very interested in having their students participate next year.

DEVELOPMENT OF A FIELD TECHNIQUE FOR THE IDENTIFICATION OF *PYTHIUM* AND *PHYTOPHTHORA* SPECIES

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Pythium and *Phytophthora* species cause many devastating plant diseases in Georgia. The two genera are closely related fungi that are classified as Oomycetes and are commonly referred to as “water molds”. *Pythium* and *Phytophthora* diseases include seed rots, seedling diseases, root rots, and fruit rots. Both pathogens have a wide host range that includes field crops, vegetables, ornamentals, and turf. Many plant disease samples require submission to a plant disease clinic for a positive identification of the causal agent. Problems can arise when submitting a plant

disease sample related to one of these organisms. First, these organisms are sensitive to environmental factors such as changes in temperature or lack of moisture. These conditions can be inevitable when sending a sample through the mail. Second, they are subject to being “overtaken” by more aggressive and resilient secondary invaders (both fungi and bacteria). The technique developed by the authors can be used at the county office level since few and simple materials are required. As evident by the name “water molds”, *Pythium* and *Phytophthora* are adapted to and thrive in wet conditions. This technique utilizes their hydrophilic nature to induce the production of reproductive structures that can be used to make a positive identification. The Distance Diagnostics Through Digital Imaging system can then be used as a tool to aid in confirming the diagnosis. By making an accurate and rapid diagnosis of *Pythium* and *Phytophthora* at the county level, a number of benefits are gained. The issue of sample condition following shipment can be avoided. Also, a more rapid diagnosis allows earlier and more targeted management options.

AGRICULTURE IN THE CLASSROOM IN OLMSTED COUNTY

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Agriculture is one of the key industries in the United States, yet most people know very little about it. Agriculture today, is vastly different from agriculture a generation or two ago. The perception the public has about agriculture in the United States comes from the media or what someone remembers about farming years ago. Since less than two-percent of the U.S. population lives on farms today, it is important that people gain a greater knowledge about agriculture and make the connection from farm to table. It is also important that consumers receive answers to their questions about food and the technology of food production. Agricultural literacy - where food comes from, the science behind food and fiber production, food safety issues, and consumer concerns need to be addressed in adult and youth educational programs.

Olmsted County’s Agriculture in the Classroom program has reached up to 2200 elementary students per year, primarily fourth graders, over the past four years. Volunteers’ have been a key to the success of this program. Producers present information about

their commodity (dairy, crops, pork, etc.). Agricultural agency personnel discuss soil conservation, water quality, manure management, and stewardship. Several teaching formats are used to conduct the program. Some sessions are 20 minutes with a rotation among several topics and other are 45 minutes and focus on one or two topics. A formal evaluation of teachers has been conducted each year with a frequent comment being “the students learned how important agriculture is in their lives”.

UPPER GREAT MIAMI ECOLOGICAL REPORT (UGMER) - EFFECTIVE WATERSHED EDUCATION IN THE POPULAR PRESS

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The Upper Great Miami Ecological Report (UGMER) was developed as the primary written communication tool for the Upper Great Miami River Water Quality Protection Project and the Loramie Valley Alliance Watershed Project. A four-color full page ad placed periodically in The Sidney Daily News (circulation nearly 14,000, 70% coverage) and the Bellefontaine Examiner (circulation over 10,000, 88% coverage), is utilized to inform watershed residents about water quality improvement ventures.

Efforts in both watersheds are directed to protect, preserve and enhance surface water quality on the Upper Great Miami River and Loramie Creek mainstems as well as numerous tributaries. These watershed endeavors at the headwaters are valuable not only to watershed residents, but also to everyone downstream to the Gulf of Mexico.

The UGMER has provided basic overall water quality terminology as well as specific details about certain enhancement objectives. Special additions have emphasized filter strips, equipment buydown programs, sewage treatment, construction sites, erosion and TMDL’s (Total Maximum Daily Load).

Newspaper surveys indicate that each UGMER is read by 2.6 people, meaning over 60,000 of 90,000 total watershed residents have learned about watershed activities from the publications.

THE GATEWAY LEARNING GARDENS: A HANDS-ON LEARNING LAB

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The Gateway Learning Gardens: Cultivated by Master Gardeners is a hands-on, outdoor learning laboratory located at the Clark County Extension office to serve consumer and commercial horticulture clientele. The lab is an assortment of demonstration and display gardens designed to teach the different plants and cultural methods that can be utilized in the Ohio growing environment. The focus is on plant selection and it's importance in developing sustainable gardens that require low input. The gardens, started in 1995, are planted and maintained by Master Gardener volunteers. Numerous partners are involved in providing assistance for the garden; for instance local landscapers plow the plots and donate materials and County commissioners split the cost for irrigation installation. Demonstrations include: herbaceous ornamental field trials (250 varieties), butterfly, perennial, herb, vertical, and container gardens. In addition, one of the 11 Ohio Regional Turfgrass Research plots is located in the garden as well as a compost demonstration area. Efforts are made to demonstrate to the homeowner and commercial landscaper or grower plants, gardening methods, and ideas that can be duplicated easily and incorporate sustainable gardening. Sustainable gardens in this case represent low maintenance and pesticide requirements. In 2000, over 2,500 people toured the gardens with Master Gardeners providing the educational tours. They also conduct classes in the gardens, incorporating sound, recommended horticultural practices.

IRRIGATION MANAGEMENT HOME STUDY COURSE

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A group of Extension staff developed an Irrigation Home Study Course which encourages

producers to adopt new techniques and become more efficient in water application. The course is available for a cost of \$60. Participants receive a certificate when the course is completed. In addition, 13 CEU's are available through the Certified Crop Advisor Program. A total of 120 students have registered for the Course thus far. An evaluation was given to the students when they completed the course. The twenty eight students that returned an evaluation form manage or make irrigation recommendations on a total of 152,964 acres. Ninety six percent of the students said that they were satisfied with the course and 93% said they would use the notebook as a reference. When asked if they would make changes in their irrigation system as a result of taking the course, 65% indicated they would probably or definitely make changes. When asked if they anticipated saving any money as a result of taking the course, 61% indicated a dollar amount of savings which averaged \$4.01 per acre on 26,125 acres, for a total savings of over \$104,890.

PENN JERSEY CROP MASTER PROGRAM

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The Crop Master Program was developed to offer grain and forage producers an in-depth, high-level agronomic educational program. This program was offered to farmers in New Jersey and Pennsylvania.

During the last three years, 1999-2001, the Penn Jersey Partnership coordinated and taught a series of

intense educational modules to over seventy regional crop growers. The producers enrolled in the Crop Master Programs for 1999 and 2000 committed one day per week for six weeks to attend an intensive, interactive educational program. The program in 2001 was an intense two-day weed school that explored all aspects of weed biology and control. The program also included participation in field demonstrations and twilight meetings. The farmers attending these programs improved their knowledge of all aspects of crop and forage production through lecture, problem solving, field evaluations, and hands-on training. Farmers completing the program received a Certificate of Recognition as a Crop Master. Specialists from Rutgers University, Penn State University and the University of Delaware team-taught with members of the Penn Jersey Extension Partnership. The program emphasized integrated crop management, soil health and fertility, and weed science. Agronomic and cultural information was presented on small grains, soybean, corn, and forage production.

The program was funded through grant funds from SARE, the Northampton County government, participant fees, and the Penn Jersey Extension Partnership.

AGRICULTURAL PROGRAMMING WITH 4-H MEMBERS IN UNION COUNTY

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A directive given to the Extension Office in Union County by the local advisory committee was to increase agricultural awareness among students. Another directive, provided by the school superintendent, was to provide leadership to the Livestock Program.

A list of objectives was developed that included the following: 1) Increase agricultural awareness among students. 2) Enhance the Livestock Show program to provide opportunities to improve showmanship techniques, increase student's knowledge of beef cattle and provide direction for student's career choices. 3) Develop life skills and good attitudes in students. 4) And to obtain funding to renovate an existing show barn and build a completely new barn.

An Ag Day was developed and is held each January at Union County Elementary School. Speakers are invited to speak about commodities that are important to Union County. Students are rotated to each speaker. Pre-Tests and Post Tests are

administered to determine effectiveness of the program.

Livestock Show Enhancement is effected through Educational Clinics such as Showmanship Clinics, Livestock Shows, Beef Quiz Bowl Competition, Livestock judging Contests and Tours.

Finally, a new show barn was needed to host local and regional shows. Funding was sought from a variety of sources including the Governor's Office, School System, Students and Alumni.

ISO COMES TO PRODUCTION AGRICULTURE

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The International Organization for Standardization (ISO) is a worldwide federation with representatives from 130 countries. Established in 1947 and headquartered in Geneva, Switzerland, ISO is a non-governmental organization with the mission of international quality standardization. Bob Dodds ISU, Lee County Extension Director, Seeley Lodwick, past Under-Secretary of Agriculture, and Nick Houston, Colusa Elevator meet to discuss the sweeping changes in agriculture and how to prosper from change. The discussion resulted in the Southeast Iowa Agricultural Advisory Council being formed. Twenty-four community leaders from 16 southeast counties representing production agriculture, transportation, river navigation, agriculture services, banking and processing agreed to join. Purpose, to be futuristic in developing a blueprint for agriculture in Southeast Iowa. Monthly, decision makers from diverse backgrounds addressed the council; one of those was Dan Meyers, ISU, Center for Research (retired). He introduced ISO and it's economic importance to manufacturing, both domestic and international. ISO Certification had never been accomplished with corn and soybean farmers in the United States. To initiate the pilot project Bob Dodds contacted a local consult to assist with the technical training. Ten producers were selected and invited to an informational meeting. Five farm operations agreed to commit the time necessary to attempt ISO registration. To fund the study grants were secured from ISU Extension \$5,000, Iowa Department of Economic Development \$16,000 and a forgivable University loan of \$15,000. In November the United Registrar Systems registered the first five corn and soybean operations in the United States, all of Lee County.

THE OHIO HYDROPONIC STUDY GROUP INCREASES GROWER SUCCESS

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The Ohio Hydroponic Vegetable Program established a Hydroponic Study Group (HSG) in November 1999 to bring growers and experts together to increase grower knowledge and profitability. The HSG has become an important component of the success of hydroponic greenhouse businesses in Ohio. Many participants drive 60-100 miles to attend the three-hour meeting. The education begins in the Toledo Botanical Garden hydroponic demonstration greenhouse for updates on current horticultural developments and variety trials. Entomologists and plant pathologists from the Ohio State University (OSU) use the greenhouse as a living lab to teach diagnosis and control of tomato and lettuce insects and diseases.

A formal meeting with guest speakers follows the greenhouse tour. Topics range from marketing, entomology, plant pathology, cooperative development, greenhouse design, greenhouse budgets, and market analysis. The study group has taken two tours to Canada to learn about international competition from the largest greenhouse vegetable producing region in North America.

The Hydroponic Study Group has had many beneficial impacts on both prospective and experienced growers. Because strong relationships develop among growers due to the positive and frequent interactions during study group meetings, growers have begun to work cooperatively to market their produce, buy supplies and packaging materials, and share horticultural and problem solving expertise. Growers are now familiar with OSU experts and feel comfortable contacting them for advice. The Hydroponic Study Group has increased grower knowledge and marketing skills. Ohio hydroponic businesses have increased profitability, plant health, and marketing success due to the Hydroponic Study Group.

THE EVOLUTION OF THE BYGL NEWSLETTER - FROM HARDCOPY TO ONLINE

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The Buckeye Yard and Garden Line (BYGL) newsletter began in 1993 as a help for county agricultural extension agents attempting to respond to increasing requests for horticulturally oriented expertise. The demand was not due just to homeowners but included commercial green industry practitioners (garden centers, arborists, landscapers, etc.) BYGL communicates chemical, technical, informative practice changes, and also serves as a weekly inservicing opportunity for agents and other participants. The newsletter is meant to be immediately useful and therefore must be available in a timely manner.

In the first few years, writing, assembling, sending as an email message to county offices, and sequential mailing to local users, took at least one week. During the third and fourth year, faxing centers were established to decrease the time delay. As e-mail usage became common, more clientele accessed the BYGL in a text only format.

In 1997, the newsletter became available on the Web as BYG onLine, in a text format. With each succeeding year, user friendly enrichments, like digital images of items discussed in the newsletter, hot links to relative fact sheets, and a search engine accessing over 23,000 horticultural fact sheets, were added. During the 2000, April-October BYGL season, the BYG onLine received over 14,500 hits.

Currently there are eight writers and the entire BYGL newsletter is written, assembled, sent electronically to over 1,000 subscribers, and posted to the Web site in 48 hours.

UNDERSTANDING HISPANIC CULTURE IN THE WORKPLACE

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The 2000 US Census Bureau estimates that 35.3 million Hispanics are living in the US. It is projected that by 2020 the Hispanic population will reach 53 million (16% of total population). Over 240,000 Hispanics live in Georgia with close to 150,000 living in Metro-Atlanta. In 1999 Governor Roy Barnes appointed a Latin Forum to recommend changes in the state law.

In metro areas most Hispanics work with the Green Industry which exceeds 300 million dollars per year. Landscape and Pesticide Safety Training has been non-existent within the State of Georgia. Language barriers and cultural misunderstanding between the workers and employers has kept Hispanic workers from receiving training and information on current landscape practices.

In August 2000 we conducted a survey in the Metro-Atlanta Green Industry and 16 landscape companies responded with the following results: they employ 696 workers of which 414 (59%) are Hispanic.

Management practices that consider cultural differences between English and Spanish-speaking workers could lead to a safer and more productive work environment, improve quality and minimize misunderstandings.

COMPOSTING LIVESTOCK MORTALITY: AN ECONOMICAL WAY TO RECYCLE DEAD ANIMALS THAT IS ENVIRONMENTALLY SOUND

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More than 2,000 Ohio livestock producers have been certified to compost dead animals. Normal mortality of cattle, horses, poultry, swine, aquaculture, sheep and goats can all be composted on the farm utilizing regulatory guidelines developed by agricultural agencies.

Ohio State University Extension heads the educational certification process developed cooperatively with the Ohio Departments of Agriculture, Natural Resources and Environmental Protection Agency and the Natural Resources Conservation Service.

The purpose of composting is to biologically treat organic materials to protect the environment, stabilize

nutrients, and destroy pathogens in an economical process.

This practice applies where: (1) ground and surface water resources are protected; (2) the risk of spread of disease is reduced; (3) nuisances such as flies, vermin, and scavenging animals are prevented; (4) air quality is maintained, and (5) a compost utilization plan has been developed.

Ohio State University Extension surveyed composting managers early in 2001 to evaluate the effectiveness of mortality composting, and the environmental soundness of the composting practice. Survey comments and results will be utilized to strengthen producer certification programs.

THE RESIDENTIAL LANDSCAPING SEMINAR – A ONE DAY PROGRAM THAT FOCUSES ON TREES AND SHRUBS

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The residential landscaping seminar is a one-day program that focuses on selection, maintenance, and integrated pest management of trees and shrubs in home landscapes. The target audiences are homeowners, Master Gardeners, landscapers, and garden center employees.

This program was first offered in September of 1996, and has been offered each year since then. It attracted a combined attendance of 420 during the last three years. The program received excellent evaluations. In 2000, nearly 100% of respondents indicated that they were able to select better shade trees and ornamental shrubs; make more correct diagnoses of insects and mites in evergreens and cultural and disease problems in trees and shrubs; select more appropriate management measures for pest problems in trees and shrubs. Survey respondents indicated that they would share their new knowledge with 732 additional people. They also estimated that the Residential Landscaping Seminar created an economic impact of \$21,500 with regard to the increased value of their homes and/or increased profitability to the business they own or work for. The Residential Landscaping Seminar has been a highly successful program in Clermont County; a suburban county with a population of 170,000. It would serve as a good program model for other agricultural and horticultural agents.

SELECTION, ADAPTATION AND INTRODUCTION OF GEOSPATIAL TECHNOLOGIES FOR PRECISION AGRICULTURE

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Technologies for precision agriculture applications such as GIS, GPS, and VRT are being introduced rapidly into the market. They are often expensive. This two-county project has established a foundation appropriate to north Florida crops and sites upon which early precision agriculture applications may be built. Primary emphasis is on low-cost, practical, manageable technologies. We begin with sample design for field and soil fertility mapping as basis for variable rate fertilizer application. We also map soil compaction, weeds and nematodes. The project employs a Trimble AS132 DGPS (Differential Global Positioning System) receiver on a Kawasaki Mule with a ruggedized laptop and SST Field Rover logging software to map fields and select grid sample points. Site and soil data are mapped to ESRI ArcView GIS. Data is portrayed as interpolated surfaces using ESRI Spatial Analyst. Shape files are created that fertilizer applicators use to apply custom blends. Low-cost, low-tech variable rate application of P₂O₅ and K₂O have been made by early-adaptor farmer cooperators. A 25 gallon demonstration boom sprayer was built and mounted on the Mule to provide farmers and other agents with an understanding of site-specific variable rate technologies (VRT) input applications. Mapped fields are made available to USDA-NRCS field offices to supplement Conservation Plans and Nutrient Management Plans. Early trials employing geospatial technologies serve as pilots/demonstrations of precision agriculture. This early experience prepares the agents to assist farmers, consultants, and other agents or agencies in assessing geospatial technologies they evolves. Development, documentation and validation of locally appropriate sampling are necessary, and will follow as the project progresses.

EDUCATIONAL OPPORTUNITIES WITH THE OK STEER FEEDOUT

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The OK Steer Feedout is a producer information feedback program. Cattle producers deliver 5 steers that are fed at a commercial feedyard until harvest. Data is collected evaluating steer feeding performance, retained ownership expenses and carcass merit. Many educational components are integrated into the OK Steer Feedout as a total educational thrust. Major components are listed below.

1. Wrap-up meetings are held following each test. PowerPoint slides of steer pictures and data are utilized.
2. Beef Congress, an educational program at the feedyard, includes presentations on carcass grade factors, beef quality assurance, and live animal demonstrations.
3. A bi-annual bus trip to Excel Inc. in Dodge City, Ks. is organized. Feedout cattle are evaluated in the cooler during a plant tour.
4. A carcass index system was developed to allow multiple year feedout participants to track carcass acceptability.
5. Cattle are marketed on a value-based grid. Premiums and discounts provide evaluation and educational tools.
6. A tenderness test on steak samples is run for an optional fee. Since 1999, over 240 steaks have been tested for Warner-Bratzler shear force values.
7. Two Feedouts (fall & spring born) are held annually.

A Junior Cattlemen's Steer Feedout is held in partnership with the Oklahoma Cattlemen's Association. Youth participants enter three steers and are recognized at an OCA banquet.

TEACHING THE TEACHERS-AGRICULTURAL AND NATURAL RESOURCES EDUCATION WORKSHOPS FOR ELEMENTARY SCHOOL TEACHERS

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For the past two years, day-long professional development workshops on the topic of agricultural and natural resources education have been developed and taught for elementary school teachers through a collaborative effort of Extension, Soil & Water Conservation Districts, and environmental education groups. These workshops have been conducted on farms and at outdoor education camps and feature hands-on learning by participants in the forest, in the stream, in farm fields, in the milking parlor, and other locations. The objective of the workshops is to help elementary school teachers increase their knowledge about agriculture, natural resources, and the environment, and to provide teachers with curricula and teaching tools/activities which they can use with their students. Continuing education credits have been awarded to participants. The workshops have been very well-received by teachers, typically reaching maximum enrollment quickly, with waiting lists for future workshops. Workshop participants have increased their knowledge by an average of 42 percent during the past two years as measured by pre and post testing.

AMISH WATER QUALITY EDUCATION

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The Amish are a religious group who, typically, make a living on small diversified livestock farms. Water quality and nutrient management problems occur on many Amish farms. Problems include misapplication of manure, fertilizer and pesticides; over-grazing pastures; a lack of livestock exclusion from streams; soil erosion; and contaminated wells.

A USDA-CSREES grant provided funds for a two-year pilot project (1999-2000) to teach best management practices (BMP's) to three Amish communities. An objective was to educate 200 Amish families on BMP's through on-farm visits, meetings, and monthly newsletters. Education techniques included soil sampling and manure testing which resulted in 90 completed nutrient management plans (920 soil samples, 6600 acres). Fourteen replicated manure test plots were conducted in two years to teach efficient manure nutrient allocation. Corn yields increased 22 bushels in 1999 and 34 bushels in 2000 on two-ton applications of poultry manure over a check plot. Ten (10) sprayers, 19 planters, and 10 manure spreaders were calibrated at three calibration

clinics. Ninety-four percent (17 of 18) of dairy farmers adopted Management Intensive Grazing in one community. These farmers constructed 10,000 feet of fencing to exclude livestock from local streams. Well water testing was conducted on 133 Amish wells. Thirty-eight (28.6%) tested positive for total coliform bacteria and 7 (5.3%) positive for E.Coli O157:H7. Outcomes included gain in knowledge, change in attitudes, and adoption rates of 75% to 90% for selected BMP's to improve water quality.

AN INVESTIGATION OF THE FACTORS RELATED TO AND THE EFFECTIVENESS OF TEACHING TECHNIQUES USED BY OSU EXTENSION AGENTS IN NORTHWEST OHIO AND THE CHANGE IN KNOWLEDGE OF AGRICULTURAL PRODUCERS ATTENDING PRIVATE PESTICIDE APPLICATOR RECERTIFICATION TRAINING.

Jones, D.A.

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Eleven County Extension Agent in the Northwest District of OSU Extension volunteered to be part of an investigative study that looked at teaching techniques used by OSU Extension Agents who taught private pesticide applicator training classes between January 1, 2001, and March 31, 2001. Two content teaching modules were selected for the study including a weed control update, and crop disease-soybean cyst nematode update. Agents' teaching sessions were videotaped for evaluation of the teaching techniques at a later date. 1150+ farmers who were in attendance at the teaching sessions completed a fourteen question pretest-posttest instrument intended to measure change in knowledge before and after the teaching session. Preliminary data indicates that there was a 50.7% gain in knowledge for those attending the weed control update training sessions with a range of from 34.0% to 69.5%. There was a 45.6% gain in knowledge of those attending crop disease-soybean cyst nematode update training sessions with a range of from 40.2% to 51.2%. Factors and teaching technique evaluated were Agents academic major, years with Extension, years of formal teaching experience, knowledge of questions, teaching beliefs, and use of questions during the teaching sessions.

MANAGE, SECURING A SOUND FARM FINANCIAL FUTURE

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The MANAGE program is a comprehensive and intense farm management program that uses group meetings and one-on-one sessions to help producers plan and develop sound farm financial plans. Producers are first exposed to the program through group meetings. These meetings are held in conjunction with winter production meetings. Producers are informed about farm management topics such as marketing strategies, budgeting, lease arrangements and the economics of University of Tennessee recommended production practices. Producers are also informed of the individual one-on-one farm management sessions that are available. These one-on-one sessions are conducted at the producers home on their kitchen table using a portable computer, a printer and the computer farm financial program FINPACK. Long term farm financial plans are developed using a producer's own records and production practices. The producer can look at several alternatives and changes to their operation with a financial evaluation of each alternative. The MANAGE program also helps producers with short term farm financial problems such as enterprise budgets, market information, and lease arrangements.

In the eight county area of the Cumberland District an average of 309 producers have been educated and assisted each year with enterprise budgeting, marketing information, and general farm management techniques. Also, on average an additional 23 farm families have participated in the comprehensive one-on-one farm financial plans each year. These farm families have used these plans as guides on whether or not to make any changes in their current farming operations. Some of these plans have been used to make changes in a farm family's operation resulting in an increase in the annual net farm income. These increases ranged from very little to \$250,000. Some farm plans have shown that proposed changes in the current operation would result in a decrease in the annual net farm income and erode the operations net worth.

SUDDEN DENSITY CHANGE WORKSHOPS- HELPING FARMERS IDENTIFY COMPACTION

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During the summer of 1999 and 2000, Soil & Water Conservation Districts in Henry, Wood and Fulton Counties, Ohio State University Extension, and the Conservation Action Project held three "Sudden Density Change Workshops". The workshop had the goals of helping farmers better understand how compaction occurs, potential solutions to correct the compaction and then return the fields to no-till production.

A pre-workshop survey measured farmers concerns about no-till and the effects they felt compaction had in limiting yields. Eighty-six percent of the farmers indicated that compaction was a yield-limiting factor. Estimated yield loss was 14.2, 3.9 and 7.2 bushels per acre respectively for corn, soybeans and wheat. At USDA Marketing Loan Rate of \$1.90, \$5.60 and \$2.56 respectively for corn, soybeans and wheat the estimated economic loss to farmers is \$18,544 per farm in Northwest Ohio.

A follow-up survey was mailed to the workshop participants six to twelve months after the workshop to measure the changes that they implemented based on workshop attendance. Sixty-five usable surveys were returned with a 63% response rate. A total of 64 individuals indicated they were better able to identify compaction layer in the soil. Forty-five had gone out into the growing crops and dug up plants looking for root growth difference. A total of 54 indicated they were planning to correct compaction problems they identified and return the field to no-till practices.

YOUNG LEADERS DOUGLAS COUNTY

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Young Leaders Douglas County (YLDC) is a one-day community leadership program designed to develop informed, involved and knowledgeable young leaders for Douglas County, Nevada. No other program provides an opportunity for high school students to learn about various issues that confront

our ever changing community and enlighten them on different approaches leaders take to resolve business, industry and community challenges. The goals of YLDC are to; make participants aware of community service and gainful employment opportunities in the community; increase participant understanding of the community in which they live and their part in it; and develop leadership skills. The program's success has elevated school district support and brought the attention of other sponsors and collaborators. Youth have evaluated YLDC very high and have offered the following testimonials: "I thought the farmer was very inspirational on his discussion about the organics of the earth. He really made me think!" and "(Today) made a big impact on how I look at our communities." YLDC has spurred the creation of an expanded youth leadership program and opened the opportunity for youth to serve in meaningful community decision-making roles.

CHANGING ENVIRONMENTAL POLICIES

Poenicke, E.F., and Linville*, D.L., University of Georgia - Cooperative Extension Service Agents, Chatham County Extension Service, PO Box 9866, Savannah, GA 31412

Chatham County was faced with many different environmental problems, such as meeting federal and state landfill reduction rates, county landfills almost filled to capacity, master plan for storm damage removal, and desire by county commissioners and public for recycling centers. The residents were used to having all of their yard waste co-mingled with all their dry trash and charging for extra services was not acceptable. This whole process needed to be changed with the acceptance of the general public. The Chatham County Extension Service was asked to educate the public on a new set of rules which included changes in separating trash, new pick up dates, and the environmental benefits of the program. In short, the Extension Service had the mission of changing the public solid waste habits and to accept the new procedures. This was accomplished by having Master Gardeners go to selected areas in the county with the new solid waste issue. This endeavor was a huge success with very few complaints from the citizens. The county saved over \$400,000 in tipping fees in a two-year period. Over 21,000 tons of mulch were produced and utilized by homeowners and landscapers. Seven research studies were conducted from the \$80,000 grant given to the Chatham County Extension Service. The Xeriscape Garden was also

funded from the grant money. The Chatham County Extension Service is now preparing Phase II, which will include various other recyclable products.

WEED AND TURF TOUR

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The purpose of the Weed and Turf Tour is to combine recreation and education into a fun-filled day. The joint program between Richland and Roosevelt Counties started two years ago because we wanted a different approach of delivering educational material and at the same time allow participants to interact with each other. The outside classroom allowed us to utilize a variety of topics. Based upon the layout and environment of the golf courses, we were able to demonstrate rodent control, aquatic/noxious weed control, calibration of hand sprayers, and plant identification. Each t-box either had a demonstration or plants added for identification. We coordinated the event with the golf course manager so that we had adequate time to put on the demonstrations and play a round of golf without being rushed. Each golf team was made up of experienced and inexperienced golfers. This helped keep the game moving smoothly. Prizes were awarded based on combined golf and weed identification scores. Weed control related items were given out for the traditional golf scramble categories. Following the golf scramble, participants listened to chemical updates and weed management strategies. Private and commercial recertification points were also provided at the event. The golf game and lunch were provided by local sponsors. Neighboring agents have seen the positive response and now want to plan a similar event in their county. This was a win-win situation, we were able to teach Ag producers and local businessmen about the importance of weed control and the golf course picked up a few new golfers.

A MULTI-STATE AND AGENCY APPROACH TO TEACHING CONSERVATION TILLAGE

Marrison,* D.L.¹, Miller, L.², Hockensmith, R.³, Stout, R.⁴, James, R.⁵, Oelker E.⁶

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The Tri-State (OH, PA, NY) Conservation Tillage conference has been held annually since 1998 to help agricultural producers better implement conservation tillage practices. This multi-agency and state event was developed to promote conservation tillage practices and to specifically address how these practices can be implemented given the very challenging soil and weather conditions of northwest Pennsylvania, northeastern Ohio, and south western New York.

Attendance at each conference has averaged 210 producers from the Tri-State area. Specific topics that have been addressed at the conferences include: earthworms and water quality; precision farming; annual and perennial weed management in reduced tillage operations; understanding soil fertility; soil structure and health; managing Sclerotinia in reduced tillage alfalfa, adoption of conservation tillage practices, managing soil compaction in conservation tillage systems, zone tillage, adapting your equipment for conservation tillage.

Post evaluations of participants at the four conferences have indicated that 96 percent of the farmers in attendance would implement at least one new conservation tillage practice. According to reported information, participants till more than 30,000 acres of which 75 percent are already under some form of conservation tillage. Additionally, 67 percent indicated that they had changed a conservation management practice such as crop rotation or disease, insect or weed control on the farm. Thirty-eight percent of those attending had purchased at least one conservation tillage implement in the last three years.

Collaborating Agencies for the conservation tillage conference include: Ohio State University Extension, Penn State Cooperative Extension, Cornell University Extension, Penn Soil Resource Conservation

and Development Area and the USDA Natural Resources Conservation Service (NRCS) from Ohio, Pennsylvania and New York.

A MULTI-COUNTY STAFF AND ADVISORY COMMITTEE MEMBER APPROACH TO PROVIDING WEEKLY NEWSPAPER GARDEN COLUMNS

Marshall,* David W.¹

¹County Horticulture Agent and Program Leader, University of Florida/Leon County Extension, 615 Paul Russell Road, Tallahassee FL 32301-7099

165 Extension newspaper garden columns appear annually in the Tallahassee Democrat newspaper. These columns are planned and developed, under the leadership of the Leon County Agent, by the Leon County Extension Horticulture & Urban Forestry Advisory Committee and the Northwest Florida Horticulture Program Implementation Team (PIT) of horticulture agents. The columns are shared with all the agents in the Hort PIT for use in their local newspapers also. Our objective is to provide gardening information, supporting the objectives of our county major programs, through newspaper columns to approximately 607,520 citizens in northwest Florida and southwest Georgia. The Leon County Extension Horticulture & Urban Forestry Advisory Committee meets 2-3 times annually to select topics and writers for two weekly garden columns. Columns are written either by advisory committee members themselves or by local experts they select. A Leon County Master Gardener volunteer assumes the responsibility of making sure columns are collected on time, in an electronic format. After the agent reviews the columns, they are then uploaded by Extension staff to the newsroom server, along with high-quality jpg photos selected by the agent. Until last year, the Leon County Agent also wrote two weekly columns and submitted photos with them. However, the District I Hort PIT members decided to experiment in selecting a different agent weekly to write a column that would be shared with all the northwest Florida papers. The columns are sent electronically, with photos when possible, to all agents participating in the project at least nine days before the press date. This gives the local agent time to do any desired editing for local conditions. The columns provide environmental landscape information supporting our major programs to approximately 607,520 citizens and give Extension visibility across the district.

REDUCING SOYBEAN POPULATIONS FOR PROFITS

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Growers have traditionally planted high soybean populations of conventional varieties for early-season weed control through plant competition. Low seed costs have also been a contributing factor. With the availability and adoption of Roundup Ready™ (RR) Technology, weed control is not as difficult and seed costs have increased due in part to technology fees. Growers now can achieve higher yields from reduced populations for most RR varieties while also experiencing reduced plant heights thus lodging, dry-down time, disease pressure, and seed costs. Also reduced populations are believed to enhance seed quality. Agricultural industry representatives and growers have visually observed the plant growth benefits through three years of on-farm tests and tours. Planting lower populations of RR soybeans in 60% of the county acreage would increase farm income by at least \$250,000. Growers have been made aware of this through grower educational meetings and newsletters.

NACAA/RISE HORTICULTURE AND TURFGRASS TOUR - AN EXCELLENT PROGRAM FOR LEARNING AND SHARING

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³Horticulture Extension Agent and Former Western Regional Chair of Horticulture and Turfgrass Committee, and 2000 RISE Tour Planning Committee Chairman, Utah State University Extension Service and Ogden River Parkway Botanical Gardens, 1750 Monroe Boulevard, Ogden, UT 84401

⁴Agricultural Extension Agent, Former National Chair of Horticulture and Turfgrass Committee and

Council Chair of Professional Improvement Council, Texas A&M University Extension Service, Deaf Smith County, P.O. Box 953, Herford, TX 79045

Twenty Extension Agents from across the United States participated in the NACAA/RISE Horticulture and Turfgrass Study Tour during the second week of October, 2000. The tour was designed to teach participants more about the importance of botanical gardens, arboretums, museums containing environmental displays, pest management, ornamental horticulture, and turfgrass management. Participants found all tour stops very educational and enlightening. They also shared successes of their own programs related to urban horticulture and integrated pest management. The study tour was held in the Midwest with the group touring areas of Chicago, IL, and West Lafayette and Indianapolis, IN. Major stops included Chicago Botanic Gardens, Morton Arboretum, Ball Seed Company, the City of Chicago's Rooftop Garden, Field Museum, Purdue Turf and Greenhouse facilities, Indy 500 Speedway Golf Course, and DowAgroSciences. Tour participants learned ways to educate and inform the urban population about the importance of green spaces in cities, plant selection, and proper landscape management practices. We all have a much greater appreciation for science and expenses associated with pesticide discovery, testing, and marketing. Many participants indicated that they would incorporate the newly acquired knowledge into their educational programs for the commercial horticultural industry and backyard gardeners. Last but not least, we would like to thank NACAA, RISE (Responsible Industry for a Sound Environment), PlantAmerica, and TrueGreen Chemlawn for providing transportation, lodging, meals, and supplies for this educational experience of a lifetime.

ON-FARM NITRATE TESTING PILOT PROJECT REDUCES CATTLE LOSSES FROM NITRATE TOXICITY IN NORTHEAST GEORGIA

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Northeast Georgia is one of the top poultry producing areas in the world. Eight of the top 10 poultry producing counties in Georgia are located within a 100 mile area. According to the University of Georgia Farmgate Value Report, during 1999, this area produced over \$1,288,909,565 of broilers alone. This large number of birds generates a comparably large amount of poultry litter, most of which is applied to pastures as fertilizer.

During the fall and winter of 1999, all over north Georgia, cattle started to die of nitrate toxicity in hay. A quick, simple test was needed so Extension Agents could test forages for nitrates on the farm. After a brainstorming session with a group of County Extension Agents, Dr. Paul Vendrell of the UGA Feed and Environmental Lab, developed a kit for on-farm testing of nitrates in forages. Extension Agents from four counties were then trained to pilot Nitrate Test. This kit turned out to be accurate enough to be used as a screening tool to determine which samples should be sent to the lab.

The results of this project have had positive impact to the cattle producers in northeast Georgia. Agents were able to do "real county agent work" with these farmers. Reports from the Extension Agents involved state that they advised farmers on hay production, proper hay and forage sampling techniques, prevention of nitrates in hay, nutrient management plans and the proper utilization of poultry litter for fertilization. Before the summer of 2000 ended, 21 Georgia counties were using the nitrate test kits.

MICHIGAN FIELD CROP PEST ECOLOGY AND MANAGEMENT

Mutch,* D.M., District Agent, Michigan State University Kellogg Biological Station, Land and Water Program, Hickory Corners, Kalamazoo County, Mich.

This poster was developed to promote and educate individuals about a new Michigan State University Extension bulletin (MSUE bulletin E-2704). The focus of this new bulletin revolves around helping Extension agents, NRCS, consultants and other agricultural educators understand the

interrelatedness of pest management strategies. An interdisciplinary team of specialists worked together to produce this publication, which is modeled on the 1998 Michigan Field Crop Ecology (MSUE bulletin E-2646). Michigan Field Crop Pest Ecology and Management (MSUE bulletin E-2704) uses Michigan farm case studies to highlight concepts presented in chapters on insects, plant pathogens, weeds and nematodes that feature alternative pest management strategies. The 7,500 copies printed will help readers, whether they are farmers, Extension educators, FFA students or agency representatives, understand the ecological principles that can be used to manage field crop pests in new and more effective ways. We have displayed this poster at two international programs (Switzerland and Toronto) and five statewide programs (Ag Expo, ANR Week, Organic Conference, MSAN and Food Systems 21st Century, Extension Fall Conference) totaling approximately 4,000 people.

ON-FARM SWEET POTATO SUMMER ORIENTAL BEETLE SURVEYS FOR THE DEVELOPMENT OF AN IPM ACTION THRESHOLD FOR THE PREVENTION OF JUVENILE WHITE GRUB DAMAGE TO MATURE TUBERS

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In 1997 Southern Maryland sweet potato growers reported up to 60% culls due to damaged tubers from the juvenile white grub of the Oriental beetle *Anomala orientalis* Waterhouse. No treatment threshold existed for the control of adult Oriental beetles at egg-laying, and their subsequent fall juvenile white grub feeding. Therefore, adult beetle counts at

egg-laying in the sweet potato canopy were conducted in 1998, 1999, and 2000. This on farm study was spawned from a farmer sweet potato “round-table” extension meeting. Five farmers cooperated in the study to directly solve this specific production problem, which promoted confidence in this IPM approach. In Southern Maryland an insecticide treatment threshold at egg laying was determined to be the capture of three or more Oriental beetle adults in a single bucket trap during the period from June 10th to July 10th.

VOLUNTEERING FOR THE ENVIRONMENT

Nelson,* R. Mark

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In Utah water is everything. Without it crops can't be grown, lawns can't be watered and it effects recreation and way of life. Monitoring of the Beaver River has identified a variety of problems ranging from high rates of sediment movement to high amounts of phosphorus. The Beaver County Extension Agent has worked with many different agencies, schools and private organizations to increase public awareness of the importance of taking care of the Beaver River and surrounding watershed. One method to accomplish this has been to create an annual Beaver River Watershed day. For the past four years more than 800 volunteers have participated in this conservation activity. High school students, 4-H & FFA members, dedicated hunters, state and federal agency people and anyone who cares about the environment have all joined together to plant willows and windbreaks in the watershed. The willow planting project along the Beaver River is designed to help stabilize the river bank, reducing sediment, and as the trees grow, absorb phosphorus from the water. The Beaver County Extension Agent has also worked with 4-H clubs to adopt sections of the river and pledge to continue looking after the areas on an on-going basis. As part of this Adopt A Water body program, 4-H youth have cleaned up trash and garbage from 20 miles of river bank. The obvious value of these volunteer activities is the improvement of the riparian area along the river but another possibly greater value is making the kids and adults that take part aware of the importance of taking care of the river and the whole Beaver River Watershed.

DEVELOPMENT OF AN EDUCATIONAL IPM POSTER FOR FARM MARKETS

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The development of an educational IPM (integrated pest management) poster evolved from a farmer request for help in educating his farm market customers about his IPM practices. A 2 foot by 3 foot laminated poster was developed and displayed in ten farm markets in New Jersey to determine it's value in educating farm market customers about IPM. Six hundred self-addressed, stamped postcards with five survey questions designed to measure the impact of the poster were placed with the posters, along with a Rutgers Cooperative Extension fact sheet on IPM. Forty-two of the cards or 7.8% were returned. Thirty-three percent of the respondents were aware of IPM prior to seeing the poster, however, the poster helped 98% of them to better understand what IPM was. Seventy-five percent of the respondents indicated they would be interested in learning more about IPM. Ninety-five percent of the respondents did not know that the farms at which they purchased their produce practiced IPM. Ninety-seven percent of the respondents felt that IPM was a positive farm practice. In additional comments, 47% of respondents indicated that they are more inclined to purchase IPM produce.

BUILD GREEN AND PROFIT

Odegaard,*W.M.

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Build Green and Profit is a 14-hour, highly interactive, continuing education program designed for builders, inspectors, and architects. Program modules address concepts and techniques that allow construction professionals to conserve resources more effectively, while profitably producing energy and

water efficient housing. Build Green and Profit covers various sustainability areas: site selection and passive design, green materials, indoor environmental quality, energy and water conservation, and construction operations to reduce environmental impact. Program information is presented via videotapes, readings, exercises, and discussions. Hernando County, along with 34 other Florida counties, offered this program in 2000. Green building practices are highly desirable and marketable in Florida homes. Green features may cost 5% to 10% more, but 53% of home buyers are willing to pay for these improvements, according to a Professional Building Consumer Survey.

MANAGING FESCUE

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Managing fescue is a topic of interest for grazing livestock producers in the Eastern half of the U.S. An educational program was developed for the ten North Central region states to address this issue. The major topics addressed are: Cultivar Selection; Managing Endophyte; and Stockpiling for Winter Grazing. Each of these topics use examples from replicated research conducted by the authors and supported by literature and research from specialists in this field. Some issues covered include: the history and relevance; quality, yield and animal preference of endophyte free and endophyte infected fescue; an explanation of endophyte and the effects on fescue and livestock; management techniques to reduce endophyte infected fescue in the sward; reducing the effects of the toxins on livestock; and techniques to extend the grazing season with fescue.

This program is part of an Advanced Grazing School curriculum consisting of thirteen programs funded through a Sustainable Agriculture, Research and Education grant, but is also used as a “stand alone” program. This program is available in slides, overheads and on CD’s to Extension Agents.

TO TILL OR NOT TO TILL, THAT IS THE QUESTION: SOIL QUALITY IN GEORGIA

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Some growers in Georgia had noticed improvements in soil quality from conservation tillage, and research from other areas has also shown numerous benefits. As conservation tillage alliances formed and grew to promote the practice, more information specific to Georgia was needed to document the soil quality benefits and convince conventional growers.

The Georgia Soil Management Team was formed to educate and disseminate information on soil quality. As part of that mission, we are developing a Soil Quality database to compare soil quality conservation tillage practices with conventional tillage within the same soil series.

Information on soil quality is collected using the NRCS Soil Quality Toolkit and the Georgia Conservation Tillage Alliance Soil Quality Card. These methods are user-friendly and can involve grower participation. Information collected includes physical (organic matter, water stable aggregates, bulk density, infiltration) and chemical (pH, nutrients) status.

In addition, the group partnered with the University of Georgia Institute of Ecology to gather information on the soil biology/ecology. The information collected indicates higher organic matter and more numerous soil critters with conservation tillage. This information has been used for the Southern SARE PDP/Southern SSAWG Annual Meeting, Georgia Conservation Tillage Alliance annual meetings, Conservation Tillage Systems Workshop, NCAA national meetings, Cooperative Extension Winter School, and summer 4-H program. The information has been shared with 400 producers and over 190 agricultural professionals.

TEACHING FARM MANAGEMENT IN MONGOLIA

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Two county agricultural extension educators were recruited by ACDI/VOCA, a USAID contractor, to teach farm management workshops to Mongolian farmers in June 2000. In Mongolia the extension educators were assigned to two teams. The first team consisted of an extension educator, an interpreter, and a driver. This team taught four two-day workshops on farm management to small vegetable and wheat farmers. Approximately 100 farmers participated in these workshops. The second team consisted of an extension educator, an Iowa farmer, two interpreters, and a driver. This team taught four two-day workshops on farm management to owners and managers of large wheat farms. Approximately 75 owners and managers participated in these workshops. Curriculum for both teams included basic farm management, record keeping, enterprise budgets, cash flow, calculating net worth and some production issues. Both teams submitted final reports, which provided a summary of the training and identified management and production issues and needs for follow-up projects.

LEADERSHIP ENHANCEMENT AND DEVELOPMENT- BUILDING COMMUNITY LEADERS IN SOUTHEAST WASHINGTON

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L.E.A.D., which stands for Leadership Enhancement And Development, is the name of the leadership program in Southeast Washington that empowers people to affect personal and community change. This four-session program that spans two-years is the foundation for educating, energizing and investing in the leaders of this four-county area in SE Washington. One of the unique features about the

LEAD program is the partnerships that were created in implementing the program. Tri-State Memorial Hospital, County Health Departments and Cooperative Extension in two counties teamed to provide this program to rural residents. LEAD participants gain skills in problems solving and issue identification, personal and gender communication styles, group dynamics, consensus, personality and leadership types, personal goal setting, time management, working with the media, ethical decision making and influencing community decision-makers. Private consultants, WSU Faculty and other professionals deliver the program curriculum through a variety of interactive techniques. Participants gain valuable information during the sessions and receive a resource notebook for future reference. Graduates of the program gained skills that allowed them to be more effective leaders in their families, professions and communities.

MANAGING A HISPANIC WORKFORCE - A CONFERENCE FOR THE NORTHEAST DAIRY INDUSTRY

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The Managing A Hispanic Workforce Conference was a joint effort between Penn State Cooperative Extension, Pennsylvania Dairy Alliance, Cornell Cooperative Extension and the PRO-DAIRY Program at Cornell. The conference was held in two locations, in Camp Hill, PA on January 16, 2001 and in Rochester, NY on January 18, 2001. A total of 187 people attended the conferences.

The primary objective of the Managing A Hispanic Workforce conference was to increase the awareness of important management issues related to employing Hispanic workers on dairy farms. Our audience included dairy farm owners and managers who were currently employing Hispanic workers or who were considering that option. Other audience members included dairy industry representatives, fellow extension agents and university students.

Topics covered during the conference included characteristics of successful dairy managers,

the importance of language and communication, understanding the Hispanic culture, employee team building, regulatory issues, training and supervision. The program consisted of a variety of teaching methods including lecture, role-playing, panel discussion, problem solving sessions and group discussion.

As a result of this conference, many participants indicated that they were better prepared to manage Hispanic workers. Participants increased their awareness of cultural differences, improved their understanding of legal issues, recognized the need to improve communication with Hispanic workers by learning Spanish, and had an overall improved understanding and outlook on managing Hispanic workers.

Proceedings from the conference were provided to everyone in attendance. Many supplemental materials that will enhance the participant's ability to effectively manage Hispanic workers were provided also provided.

PENN JERSEY CROP MASTER PROGRAM

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The Crop Master Program was developed to offer grain and forage producers an in-depth, high-level agronomic educational program. This program was offered to farmers in New Jersey and Pennsylvania.

During the last three years, 1999-2001, the Penn Jersey Partnership coordinated and taught a series of

intense educational modules to over seventy regional crop growers. The producers enrolled in the Crop Master Programs for 1999 and 2000 committed one day per week for six weeks to attend an intensive, interactive educational program. The program in 2001 was an intense two-day weed school that explored all aspects of weed biology and control. The program also included participation in field demonstrations and twilight meetings. The farmers attending these programs improved their knowledge of all aspects of crop and forage production through lecture, problem solving, field evaluations, and hands-on training. Farmers completing the program received a Certificate of Recognition as a Crop Master. Specialists from Rutgers University, Penn State University and the University of Delaware team-taught with members of the Penn Jersey Extension Partnership. The program emphasized integrated crop management, soil health and fertility, and weed science. Agronomic and cultural information was presented on small grains, soybean, corn, and forage production.

The program was funded through grant funds from SARE, the Northampton County government, participant fees, and the Penn Jersey Extension Partnership.

SMALL ACREAGE FARMING SHORT COURSE

Parker-Clark, V.¹ and Steele*, V.²

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A growing number of new and existing land owners are interested in putting acreage into some kind of sustainable agriculture activity that will eventually supplement or replace existing income. The goal of the course was to provide new and potential small acreage farmers with information to successfully plan a small farm enterprise and move beyond hobby status. Participants varied from those who are already producing a commodity crop and wish to diversify their operation to those who are new or soon to be producers. In order to address the issues and needs of this growing population of "ranchette" owners, an eight week short course was developed to introduce the topics of self-assessment, business planning and marketing, land evaluation, and case studies in herb production, blueberry production, nursery production, rabbit and goat farms, and

vegetable production. A resource panel shared information on the availability of and requirements for local, regional, and national financial and technical assistance programs. The course also offered local tours to an herb processing facility and a native plants nursery. All class participants received a resource notebook and had the option to receive academic credit, C.E.U.s or a certificate of completion. Response has been very positive. Many of the class members want to continue networking - possibly by forming an association.

RISK MANAGEMENT FOR FLORIDA CITRUS GROWERS

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As in other areas of agriculture, citrus growers are facing greater risks. Some areas of risk include: increasing foreign competition, low fruit prices, urban competition for land and water, and expanding government regulation. A risk management educational program was designed, beginning with a statewide scientific survey of citrus managers in the spring of 1999. Survey results revealed that only 19% of managers believed they could shift some of their risk to others and only 26% understood the relationship between risk and potential returns. Managers reported the main source for new production and management information was other citrus growers (78%), followed by Extension newsletters (61%). The educational program included newsletters, a series of day-long meetings, and development and promotion of a Web site. In addition, a series of nine publications on risk management were published and an article was published in a widely-read citrus magazine. An evaluation survey of program participants was conducted in the summer of 2000. Ninety-three percent of respondents reported being more aware of risk management as part of business management and 72% had taken action to mitigate one or more risks. Fifty-five percent of managers reported discussing risk management with an average of 2.2 other citrus managers. A total of 72% of managers recognized the

relationship between risk and potential return and 62% believed that they could shift some of their risk to others. Sources of information about risk management reported by managers included: meetings and seminars - 83%, magazine article - 52%, newsletters - 41%, Internet - 10% and other- 10%.

BUTTERFLY FARMING TECHNIQUES IN COSTA RICA WITH APPLICATIONS FOR GEORGIA AESTHETIC AGRICULTURE ENTHUSIASTS

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Butterfly attracting plants and gardens have enjoyed a recent surge in public interest in Georgia as well as world-wide. Additionally, school programs, zoos, and larger botanical gardens are increasingly including these plants and plantings, as well as creating a growing supply demand for viable population of butterfly species in the form of shipped pupae.

Findings from a mini-study tour of the world's largest butterfly farm and exporting facilities in San Jose, C.R. are highlighted. Highly successful entrepreneurial business marketing skills and cultural/production specifics that embrace environmental conservation and responsibility, are documented with an emphasis of what could be applied easily, and economically, here in Georgia.

A publish featured news article had encouraged several Jasper County farmers and 4-H members to put this (new) knowledge to work and raise butterflies in the county commercially.

TRI-COUNTY WATER STEWARDSHIP FORUM

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As drought situations have occurred throughout the state year after year, water resources for municipal systems and private wells can decrease and result in difficulty with meeting the demand for clean drinking water. The need for education in water resources

availability and water quality improvements aimed towards local decision makers and the general public must be met.

The University of Georgia Cooperative Extension Service in Jasper, Newton and Butts Counties, in cooperation with Georgia Pollution Prevention Assistance Division, USDA-Natural Resources Conservation Service, Georgia Soil & Water Conservation Commission, and Upper Ocmulgee RC&D Council developed a Water Stewardship Seminar entitled "Meeting the Demand for Water." The seminar began with a Forum for thirty-two community decision makers, water-related business people and county employees where they were provided a better understanding of the condition of local water resources, and provided them with options for managing these resources in a growing community. There was also a public meeting in which twenty-three concerned community members attended, where they learned about water availability and conservation, and how to get involved at the local level. The two-day seminar ended with nineteen community members attending tours at local municipal water supply systems, demonstrations on the protection of private drinking water and septic systems and experienced methods to properly manage a pond.

There are hopes of future expansion of this seminar to an annual event or to include even more counties. There will be a follow-up six months after the seminar to determine further impact and usage of the materials and knowledge gained from the Seminar.

COUNTY MARKET SWINE AND MARKET LAMB CARCASS SHOWS

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Market Swine and Market Lamb Carcass Shows were conducted in conjunction with the Hancock County Fair in order to increase total muscling and to decrease back fat for improved consumer demand. Twenty animals of each species were entered which was the total allowed for the local slaughter plant. The 2000 results indicated the loin-eye measurements on swine increased from 5.17 sq. inches in 1991 (first year) to 6.93 sq. inches for a 34 percent increase. Swine backfat measurements decreased from .95 inches in 1991 to .52 inches in 2000 for a 45 percent

improvement. The loin-eye measurements for lambs increased from 2.44 sq. inches in 1994 (first year) to 2.86 sq. inches for a 17 percent increase. Lamb backfat measurements decreased from .21 in 1994 to .17 inches in 2000 for a 19 percent improvement. These carcass show opportunities encouraged many youth to bring an extra animal to the fair in order to learn carcass qualities. The Hancock County Agricultural Society provides premiums for each class and video recordings of the judging are used for additional educational sessions.

FORAGE EDUCATION IN NORTHEAST OKLAHOMA – ESTABLISHING A BENCHMARK FOR EVALUATION

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The major agriculture enterprise in northeast Oklahoma is a forage-based livestock industry. Forage management education is a key program component for the 2001-2004 four-year program plan for 21 counties in the northeast Extension district. A survey was conducted during February and March 2001 to establish a baseline against which behavioral changes could be measured and documented at the conclusion of the 4-year plan of work. This survey was distributed to approximately 2000 clientele in northeast Oklahoma based on a preexisting relationship with Cooperative Extension and to an additional randomly selected pool of 8500 forage producers statewide. Questions on the survey provide information regarding type of livestock enterprise, forages used, stocking rates, fertilizer practices, method used for stored forage, grazing practices, herbicide use, reasons for involvement in a forage/livestock enterprise, and sources used to obtain information on forage management. Results of the survey will determine current management practices used by forage producers, identify opportunities for developing future educational programs, and methods preferred by clientele for obtaining forage management information. Correlations showing a cause and effect relationship between management practices will be useful for supporting forage management recommendations and program development.

HELTERBELT PLANTINGS AROUND LIVESTOCK FACILITIES: BENEFITS AND ODOR MITIGATION

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The arrangement of farmstead structures and vegetation within the farmstead or livestock feedlot areas affect aesthetic quality, operational efficiency, energy consumption, runoff, and specific functions on these sites. Manipulation of these elements can establish desirable views, buffer noise, determine air circulation, manage odor, modify air temperature, affect snow or windblown soil deposition, and optimize use of available space. In addition, proper placement of vegetation can help reduce health and safety hazards and enhance quality of life values.

Some early literature suggests benefits of odor reduction from vegetative plantings. More research is needed to address the total impact of vegetative barriers on odor reduction from livestock feedlot areas. However, many people give testimonials to their benefit. Shelterbelts also provide a visual screen, keeping the public from "smelling with their eyes".

Conservation incentive programs make it easier for producers to fund these plantings with minimal investment. Producers need to be aware of all management tools to reduce environmental impact from their livestock operation.

WILDLIFE MANAGEMENT FOR THE PRIVATE WOODLAND OWNER

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The Eastern Ohio Wildlife Management Conference for the Private Woodland Owner was a cooperative effort among Ohio State University Extension agents and specialists, the Ohio Division of Wildlife and the Ruffed Grouse Society. The number of absentee landowners interested in wildlife

management represents a tremendous potential audience for Extension educational programs. This conference was designed to teach these landowners how they could implement proper wildlife management practices. The conference included morning presentations on topics related to forest resources, forest wildlife management and the identification and management of forest song birds. Afternoon break-out sessions allowed participants to select from a number of topics, including: grouse and deer management; squirrel and turkey management; a discussion of hunting laws and regulations; a discussion about establishing a hunting camp; and establishing and maintaining wildlife food plots.

Evaluations completed by the nearly one-hundred eighty people who participated in the conference were very positive. A post conference survey found that, on a scale of one to four, one being poor and four being excellent, the overall average of all presentations was 3.4. Participants indicated that as a result of attending the conference they would implement several management changes on their property, including: planting trees, establishing food plots, using selective timber harvests to create wildlife habitat, conducting soil sampling and educating deer hunters about deer management.

Participants also provided examples of how the conference helped them to save time, money or other resources. Examples included being able to gain valuable information in one setting, having the opportunity to talk to the experts in wildlife management, learning what to do and not to do on their property, and being able to interact and learn from other landowners.