GALAXY IV POSTER SESSION #2

The Galaxy IV Poster Session #2 will take place Wednesday, September 18 in the Exhibit Hall of the David Lawrence Convention Center. As you enter the exhibit hall you will find the posters labeled "L" to your left while those labeled "R" are on your right. The numbering begins at the front and center of the poster exhibits and proceed back, returning at the end of the posters. Signage will be provided to assist you in finding the posters you want to see. Every attempt has been made to group posters by categories. The only exception occurs when primary authors are providing more than one poster during this session. Hopefully the numbering will assist you in locating those that are a bit out of sequence.

Exhibit Time – Wednesday – 12:00 – 5:00 PM
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BUILDING SUCCESSFUL COLLABORATIONS

L-1-READYCOMMUNITY: FOSTERING RESILIENCE IN RURAL PLACES

Barbara Andreozzi, Mississippi State University Extension Service
Rachel Welborn, Mississippi State University Extension Service

The severity and diversity of disasters experienced in the United States in recent years is staggering. Rural places tend to suffer longer than metropolitan places in the aftermath of a disaster. The lack of infrastructure, limited resources, and sheer distances between people compound the challenges. Yet these same places often struggle with comprehensive disaster planning that could help mitigate these difficulties. Those tasked with the responsibility of planning often wear multiple hats and have limited support resources. In recent years, the Federal Emergency Management Administration released "Developing and Maintaining Emergency Operations Plans: Comprehensive Preparedness Guide 101" designed to promote the development and implementation of sound, community-based emergency operation plans. The guide seeks to promote a common understanding of the fundamentals of risk-informed planning and decision-making. In addition, it assists planners in developing and maintaining viable all-hazards and all-threats emergency plans drawing on a broad base of community participants. Yet even with this guidance in place, rural places often need help in identifying, connecting, and coordinating the people and resources that can be vital in disaster response and recovery. To assist in overcoming this hurdle, ReadyCommunity resource materials were developed to complement and add greater depth to the six steps delineated in FEMA's Comprehensive Preparedness Guide. Led by a neutral ReadyCommunity coach, rural places are guided through a complete, collaborative planning process that aligns with state and federal guidelines, while preserving the uniqueness of each individual community. ReadyCommunity gives the coach the tools and processes to provide guidance to a community wide planning process, working collaboratively with those officially designated to write and implement disaster plans. During 2012 and continuing into 2013, seven pilot locations have tested these materials, providing vital feedback on the process and tools. These rural places face a broad range of natural hazards including severe winter storms, floods, tornadoes, wildfires, and hurricanes. One pilot location, Anaconda, Deer Lodge County, Montana, was the first to complete the pilot process. This presentation will showcase the materials available through ReadyCommunity and highlight some of the results seen in Anaconda as well as in other pilot communities.

L-2-EXTENSION/COMMUNITY COLLABORATION DEMONSTRATES ECONOMIC ACCOUNTABILITY

Rebekka Dudensing, Texas A&M AgriLife Extension Service

Tightened budgets for both extension units and local governments have increased the need for accountability as well as collaboration. The Brazos County (Texas) Expo Complex contracted with the Texas A&M AgriLife Extension Service to pilot an economic impact study using volunteer survey-takers. The pilot program shows significant potential for expansion to other venues. As part of a three-year contract, Extension and Expo staff created a scannable survey, survey protocol, and

volunteer training materials, all approved by the Texas A&M Institutional Review Board (IRB). The Expo secures staff and volunteers to survey participants and attendees according to the practices of good human subjects research. Surveys are then delivered to Extension for scanned data entry and result tabulation, generating three reports annually. Reported metrics include gross sales (output), value added (contribution to GDP), labor income, employment, and local sales and hotel tax receipts for cities, counties, and state. The Expo elected to have Extension faculty present spending and economic impact results to county officials and the media. The county pays an annual fee to Extension for conducting the economic analysis as well as an extra fee for faculty presentations. The FY 2012 results showed that local spending by out-of-county visitors at the 21 surveyed events alone totaled $1.1 million, resulting in $1.7 in economic output and 25 jobs across the county. Because 13 of 25 horse events and four of 10 livestock events were surveyed, spending could be extrapolated across all events in those categories. Visitor spending associated with horse events totaled $830,800, resulting in $1.3 million in output and 19 jobs across the county economy. Visitor spending at livestock events totaled $493,500, generating $768,800 in output and 10 jobs. County officials and Hotel and Occupancy Tax committee members responded positively to the FY2012 report. Additional events in other categories will be targeted in FY 2013 and FY2014 so that the impact of all events will be estimable by the third year of the study. Because not all event types can be surveyed (e.g., weddings) an organizer survey collects information about hotel blocks, number and visitor status of event attendees, and event vendor (e.g., caterers) receipts. This information will be combined with published visitor expenditure data to estimate the economic impact of the venue's entire schedule. In the year ahead, the program will incorporate IRB-approved onsite web-based surveys using laptops, iPads, or iPhones accessing the Expo's Wi-Fi network. The venue is also considering testing older youth (mostly 4-H) volunteers in addition to adults and college students. By year three, the report will include a separate component describing the impact of the Expo's local expenditures. In Summer 2012, the program will be made available to venues across the state. In addition to generating non-traditional funds, the program allows Extension to harvest information about spending and economic impacts associated with Extension-led events.

L-67-CODE CAMP: A NEW BRIDGE TO SERVING TECH COMMUNITIES

Paul Hill, Utah State University Cooperative Extension

Half of all U.S. employers are experiencing difficulty filling skilled trade positions (ManpowerGroup, 2012). Since February 2011 nearly 3 million jobs have gone unfilled for this very reason (Solis, 2011). Small software development companies are toiling to find and retain talent in a competitive industry forecasted to reach $101.2 billion globally by 2017 (SmartphoneApps, 2011). With such a demand for computer programming jobs, these companies need better opportunities to find talent, collaborate, and build community. Code Camp is a networking competition where computer programmers and business minds come together to launch a product in 24 hours. The event is an innovative platform which showcases talents, ingenuity, and collaborative achievements. More importantly, it serves as a social environment where talent is discovered, products are launched, and start-ups are born! In a new era for Extension, Code Camp is a bridge we can take to serve thriving tech communities. Code Camp is an annual event that can be established by following the "9 Steps to Launching Your First Code Camp." These steps are:

1. Taking a leadership role & organizing a committee (only takes 2 months to plan).
2. Selecting a venue with Wi-Fi (and plenty of bandwidth).

3. Approaching sponsors (Goal: $5,000 for the venue, food, prizes, and t-shirts).
4. Building a website and logo with in-kind sponsors.
5. Marketing event with help of in-kind SEO sponsors.
6. Finding participants through local businesses, universities, and high schools.
7. Partnering with local organizations (SBDC, chamber of commerce, university, existing tech groups).
8. Providing a platform for local businesses during the event.
9. Stepping back (and letting it happen).

These steps will be covered along with handouts provided to take home. In 2012, the Southern Utah Code Camp raised over $5,000 in sponsorships from 20 local businesses that brought together 134 participants, comprising 44 teams competing in the following categories:

- Industry: Professionals who compete to develop individual and company ideas.
- Collegiate: College students who want to impress potential employers.
- Novice: High school and college students who are exploring the industry and learning new techniques.

Every team completed judged projects in 24 hours, of which 13 mobile and web apps went straight to market generating combined revenues of over $26,000 in 30 days. 24 other projects are set to launch in 2013. Since 2010, Southern Utah Code Camp has increased value-added revenues to Washington County, Utah, improved business relationships, increased collaboration, and connected businesses with talent. 48 students have been hired, 17 programmers have found higher paying jobs, 3 start-ups have launched with combined revenue surpassing $300,000, and the overall local tech community has been strengthened.

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COLLABORATIONS & ALLIANCES

L-3-MSU PRODUCT CENTER FOOD-AG-BIO: CREATING ECONOMIC IMPACT ACROSS MICHIGAN

Brenda Reau, Michigan State University Extension

The MSU Product Center Food-Ag-Bio is creating economic impact across Michigan. The Product Center stimulates and develops business innovation and economic growth through business counseling, in-depth market analysis and technical assistance for new entrepreneurs and existing businesses. The use of best practices, knowledge and experience along with collaboration from internal MSU and external partners supports clients in the creation of successful ventures.

A multidisciplinary group of educators from across MSU Extension institutes have been trained to serve as innovation counselors and are located throughout the state. These educators provide client counseling and connect with campus staff of the center and university resources to meet the needs of clients.

In 2012 the Product Center provided 5,347 counseling sessions to clients. Four hundred and eighty eight clients received assistance with business concept development. Specialized services such as product testing, market analysis and feasibility studies were provided to 282 clients.

Two hundred and eighty six clients reported venture start-ups based on a commencement and continuation of plans for a new business or expansion of an existing business. Actual venture launches of new economic activity through new sales, investment or employment numbered 81 ventures. These ventures resulted in the creation of 145 jobs and the retention of an additional 82 jobs.

Graduate student research and program evaluation data documents the important role that the Product Center plays in assisting clients in launching their ventures.

PARTNERSHIPS

L-4-USING PARTNERSHIPS TO EDUCATE YOUTH IN NATURAL RESOURCE ISSUES

Janice Alexander, University of California Cooperative Extension
Jane Chin Young, University of California Cooperative Extension
David Lewis, University of California Cooperative Extension
Linda Manton, University of California Cooperative Extension

While providing outreach on natural resource issues in Marin County, CA, an opportunity arose to work with the 4-H Youth Development program. This collaboration begged the question, In the context of environmental education, how can experts from the realms of natural resources and youth development effectively work together to provide age-appropriate and scientifically-accurate outreach to youth? In our case, this led to more than five years of fruitful collaboration, even after the official assignment was over. We use our experience as a case study to explain how to move beyond our silos in "natural resources" and "youth development" within Cooperative Extension, as well as how to branch out to partnerships with other like-minded agencies and organizations. We will highlight the specific programs developed through internal and external partnerships, including:

1. the "Can My Tree Catch the Flu?" program and other youth activities focused on sudden oak death, with the California Oak Mortality Task Force;
2. an environmental stewardship curriculum delivered by AmeriCorps to at-risk youth during a summer camp, with the Conservation Corps North Bay;
3. the Firewood Pest Passport activity about invasive forest pests moving on firewood, with the California Firewood Task Force and The Nature Conservancy's Don't Move Firewood campaign; and
4. the new "Trees for you and me!" program delivering scientific information to youth on urban forestry issues, with the USDA-Forest Service Pacific Southwest Research Station.

Through a mix of formal and informal evaluations, we see that these internal and external partnerships have strengthened the overall natural resources outreach program, while providing relevant science-based materials to youth. From a natural resources angle, we recognize the benefit of expanding this information beyond the usual professional and homeowner audiences. We also know that research shows youth benefit from contact with the natural world, yet this contact is less and less likely in the urbanized areas where the majority of children live and play. For 4-H, it may be especially beneficial to reach urban youth via other natural resource issues, as we have done with our urban forestry and firewood pest issues, and move beyond any agricultural stereotypes. While we share what we've learned over the course of these collaborative partnerships, we welcome you to add your own thoughts and experiences on expanding this model to more areas. Visit our Environmental Education Resources web page (http://cemarin.ucanr.edu/Programs/Custom_Program816/Environmental_education_resources/) to view our various programs and take our survey on whether and how you can use them in your own work. With decreasing resources, working across disciplines and agencies allows for a greater expansion than one program alone. Through this lens of partnership, we invite you to join the discussion.

GLOBALIZATION OF EXTENSION & MULTICULTURAL PROGRAMMING

L-5-SOCIAL INTERACTION AND COMMUNITY ENGAGEMENT IN IMMIGRANT HISPANIC POPULATIONS

Debra Bolton, Kansas Cooperative Extension Service

Two studies explored densely-settled rural Kansas communities with Hispanic populations that ranged from 30% to 53%. The research addressed a social capital literature that has mostly targeted an Anglo (White) majority population in the United States. Hispanic audiences, especially new immigrant populations, have not been primary survey respondents in most studies. The goal of this study was to understand to what extent Hispanic, compared to Anglo, families in rural Kansas experienced different levels of social interaction and community engagement. In mixed methods approaches, surveys were sent to randomly selected households in English and Spanish, focus groups were conducted in appropriate languages (English, Spanish, Burmese, and Somali), and online surveys were offered. The independent variables gender, age, race/ethnicity, education, income, and community longevity were analyzed with dependent variables made up of grouped items that measured health, well-being, social connectedness and community engagement. Race/ethnicity, education, and income appeared to be the strongest predictors of health wellness, social connectedness and community engagement. Six studies, of the past seven years, completed in this unique population area (rural immigrant populations) were conducted in English only to randomly dialed land-line telephones. With 21 different languages and dialects in this region, those studies had completely missed majorities in three major population centers. Those three population centers are densely-settled rural with minority populations that are the majority race/ethnicity. The unique approach of these studies (multi-lingual with mixed methods) garnered important data about health and social well-being in these under-served populations. A critical piece of this study was the development of methods to reaching ethnic minority, English language learners with educational programming. Implications of the results will be discussed along with recommendations for incorporating new audiences into Extension programming.

L-6-ATTITUDES FOR SUCCESS YOUTH LEADERSHIP PROGRAM

Patricia Dawson, Oregon State University Extension Service

Hispanics represent the largest ethnic minority in the nation (Census Bureau, 2011). The challenges faced by Hispanics are overwhelming: language barriers, low income and high school drop-out rates. The “Attitudes for Success” youth leadership program was developed to address academic needs of Hispanic students in rural, Eastern Oregon. Now in its 23rd year, “Attitudes for Success” helps Hispanic youth develop the skills and confidence necessary to become committed and involved in their schools and community. As the Hispanic population continues to grow in the nation, similar outreach programs will meet a critical need in many communities. “Attitudes for Success” demonstrates a successful coalition model designed to reach underserved youth and families. The program is managed by 4-H with a coalition of educators, social service agencies, teens and community members. The program consists of two parts: monthly educational

workshops addressing Leadership, College Life, Self-Esteem, Communication Skills, Careers and Study Skills. And a daylong leadership/college preparation conference for youth in grades 7-12. The conference gathers together over 500 youth, Hispanic mentors, Career Advisors and College staff from OR, WA and ID. Participating schools provide busing and faculty support for youth to attend the event. The willingness of school administration to budget support for this program is significant. Program objectives include: *Encourage Hispanics to complete high school and further their education;*Assist Hispanics in developing the skills and confidence to become involved in their community as leaders;*Enhance self-esteem, communication skills and confidence; and *Increase awareness of scholarship and career opportunities. To date the program has served over 9,000 youth. Over 780 students have served as program officers, workshop facilitators and advisory board members. IRB approved evaluation results and participant testimonials clearly validate the effectiveness of this program in reaching out to strengthen underserved youth and families. 93% of participants stated that "Attitudes for Success" helped them gain leadership skills and 98% indicated the program helped them to be more likely to attend college. Impact studies of former participants indicated 85% had continued their education. Although the program was originally designed for Hispanic youth, it has had a strong impact on the entire region. Hispanic parents are more aware of the importance of their children completing their education and advancing to higher education opportunities. This change is crucial as gaining parental support for their children's educational future appears to be one of the factors involved in the likelihood of Hispanic youth completing high school and college (Franklin & Soto, 2002). Replication: As Extension enters a new era, programs similar to "Attitudes for Success" will meet a critical need for communities experiencing Hispanic population growth. Resources: A CD with replication tools will be provided to participants.

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PUBLIC POLICY ISSUES

L-7-THE ROLE OF EXTENSION IN CONTROVERSIAL ISSUES

Patricia Dawson, Oregon State University Extension Service
Joe Bixler, Michigan State University Extension
Joel Brumley, Purdue Extension
David Crawford, Ohio State University Extension
Pennie Crinion, University of Illinois Extension
Jennifer Grogan, University of Georgia Cooperative Extension
Margie Hudson, University of Tennessee Extension
Deborah Thomason, Clemson Cooperative Extension
Karen Vines, Penn State Extension

Extension educators in all program areas and at all levels have become increasingly involved with controversial public issues in recent years. Extension's continued involvement in "Hot" topics seems inevitable given the nature of these issues and the expectations placed on specialists and agents by the public, elected officials and university officials. In times of controversy, the public often turns to Extension to facilitate dialogue and provide public education. (Welch, Braunworth, 2010). Barrows (1984) makes a case that supports Extension's involvement in public issues stating, "Extension is publically funded for the specific purpose of applying knowledge of the land-grant university to improve the quality of life of the people." This trend provides opportunities for Extension to develop well-conceived, research-based analysis of critical issues. However, care must be taken to provide guidance in an objective and scholarly manner without alienating stakeholders. This session will provide a conceptual framework that addresses potential roles for the Extension professional in dealing with public issues. Steps to utilize in resolving conflict will be discussed including:

1. Finding balance between reason and emotion
2. Utilizing a participatory process to facilitate buy-in
3. The long term benefits of conflict resolution
4. The role of Extension Educators as facilitators
5. The role Extension Educators should play in developing community capacity to resolve conflicts.

The poster session will also address important issues to consider when dealing with a controversial issue including the decision for involvement and tips for designing public meetings to assure that all viewpoints are heard and individual biases are minimized. A CD resource kit to assist in working with controversial public issues will be available. Contents will include meeting management techniques, tips for working with the press, guidelines for delivery of technical information in an understandable format, and guidelines for structuring a forum where all stakeholders have an opportunity for input. Without a doubt, Extension has the unique capability of "Bridging the Centuries" as we help our clientele learn from the past and collectively work together to solve controversial issues that will shape our future.

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Goodwin, J. (1993). Contrasting Viewpoints about Controversial Issues. Journal of Extension [Online], Fall 1993, Volume 31, Number 3, Feature Article 3FEA7. Available at http://www.joe.org/joe/1993fall/a7.php

Welch, T. & Braunworth, W. (2010). Education in the Face of Controversy: When Water and Politics Mix. Journal of Extension [Online], June 2010, Volume 48, Number 3, Article 3FEA1. Available at http://www.joe.org/2010june/a1.php

L-8-CONNECTING PUBLIC ISSUES TO PUBLIC POLICY

Susan Moffat, Oklahoma Cooperative Extension Service
Lynette Flage, North Dakota State University Extension Service
Sarah Hamlen, Montana State University Extension
Carroll Welte, University of Nebraska - Lincoln Extension

Communities are made up of people working together to improve the situation in which they live but they are often confronted with challenging public problems that do not have simple answers. Public issues are prevalent matters of concern in a community that grow out of regular occurrences in the community. This four-module training guide will assist participants in better understanding public issues, public deliberation, methods to research the issue, and suggested ways to advocate to decision-makers on the issue that public policy may ultimately be developed or changed. The modules were designed to be used on their own or all together as the trainer sees fit. This four-module training guide will assist participants in better understanding public issues, public deliberation, methods to research the issue, and suggested ways to advocate to decision-makers on the issue that public policy may ultimately be developed or changed.

Module 1 – Public Issues Overview Module objectives:

- Recognize a public issue
- Identify the stakeholders in the community with interest in public issues
- Understand the methods for creating common ground around public issues
- Identify the Seven Stages of Coming to Public Judgment

Module 2 – Long Term Consequences of Decisions Module objectives:

- Recognize the community capitals model
- Identify how a community issue may affect any or all capitals in the community
- Understand how your vision , values and priorities impact public issues

Module 3- Making Ideas Reality Module objectives:

- Prepare information to make a responsible judgment
- Translate research on public issue into an action plan

Module 4 – Citizens as Advocates Module objectives:

- Understand how to name and frame the issue effectively
- Recognize the various methods of communicating with decision-makers on a public issue
- Enhance communication skills for positive advocacy on a public issue

L-9-COOKING WITH HERBS: BUILDING BRIDGES FOR INTERDISCIPLINARY EXTENSION PROGRAMMING

Marjorie Moore, University of Florida/IFAS Extension
Paula Davis, University of Florida/IFAS Extension
Scott Jackson, University of Florida/IFAS Extension
Julie McConnell, University of Florida/IFAS Extension

Objective: To market to new Extension clientele and increase our capacity to serve through team-teaching by faculty representing all disciplines….4-H, Family and Consumer Sciences (FCS), Horticulture, and Sea Grant. Methods: Agents coordinated teaching around the central theme of "Cooking with Herbs". This theme was used to present issue-based information. Growing and identifying culinary herbs were presented by the Horticulture agent and Master Gardener volunteers. FCS provided health and nutrition information on sodium, relationship of sodium to high blood pressure and replacing salt with herbs. 4-H focused on engaging kids in meal preparation. Sea Grant agent taught selecting and safely preparing quality seafood. Teaching segments ranged from 45 - 60 minutes for 3- 4 hours. Agents prepared handouts that included a growing guide and recipes using herbs. Participants tasted several food samples and completed a program survey. Results: Cooking with Herbs has been conducted three times in the past 24 months. One hundred twenty-two individuals participated with 108 returning surveys. Surveys revealed that 100% of participants considered the information beneficial. Sixty-four percent said they intended to make changes to their eating habits as a result of what they learned and 38% stated they plan to grow herbs. Sixty-one percent plan to cook with herbs and use herbs in place of salt. Conclusions: "Cooking with Herbs" is an Extension interdisciplinary program model useful for our agents and very popular with our clientele. By conducting programs together, it increases community awareness of the total Extension program.

L-10-USU EXTENSION AND SALT LAKE COUNTY PARKS AND RECREATION NEEDS ASSESSMENT

Stanley Guy, Utah State University Cooperative Extension

The Salt Lake County Parks and Recreation Department approached USU Extension to help them with a needs assessment survey that they had faltered on for many years. They wanted the needs assessment but their staff lacked the technical skills to carry out the project. They also had budget constraints for completing the needs assessment. USU Extension provided technical assistance to refine their lengthy questionnaire, collect, enter, and analyze data using SPSS, and provide a report so they could prioritize Salt Lake County parks and recreation facilities and programs. The Salt Lake County Parks and Recreation Department Director had staff and a Parks and Recreation advisory board that served as the survey committee for the project. Prior experiences and attitudes of Parks and Recreation staff and Recreation Advisory Board members towards needs assessments had to be overcome. The director and advisory board had created a questionnaire which USU reworked and reformatted so parks, services, and programs could be analyzed using scales of Not a Priority, Low Priority, Medium Priority, or High Priority. The survey's eight sections contained questions on Salt Lake County parks, youth recreation programs, adult recreation programs, recreation services, special events and programs, potential actions for the Salt Lake County Parks and Recreation Department, recreation organizations used by households, and household demographics. The survey and a Salt Lake County Mayor's cover letter was printed, stuffed along with a Salt Lake County business reply envelope and mailed by a distribution contractor to 20,000 random residential household addresses provided by Salt Lake County. From February-April 2012 Salt Lake County received back 2,906 surveys. This is a 15% rate of return. The unopened surveys were delivered to Utah State University Extension. Due to usability of returned surveys and contract constraints, 2,535 surveys were tabulated. The survey provides detailed opinions on Salt Lake County Parks and Recreation parks, programs, and services from those who responded to the survey. Comments or interpretations of survey results are restricted to completed survey respondents and not firmly extrapolated to Salt Lake County as a whole. This session explores the needs assessment survey process used, survey results, and the challenges and benefits of collaborating with a Parks and Recreation Department in a large metropolitan County. Pitfalls and lessons learned about surveying large metropolitan areas will be discussed as well as how Extension can help counties with community needs assessments.

L-66-GROWING PROGRAM AND FUNDING OPPORTUNITIES FROM A COMMUNITY ASSESSMENT

Rebecca Nesbitt, Ohio State University Extension

Statement of the Problem: Empowering community leaders and assisting with community growth is a tenant of Extension Community Development programming. Extension Educators employ a variety of processes and tools to engage community dialogue, decision-making, and action. Among these is a comprehensive community assessment process, which allows community leaders to take stock of the community's assets and issues by collecting data, opinions and practices to discover

community service gaps and concerns. However accomplishing meaningful changes in a community requires more than just surveying residents, collecting responses and analyzing data. The community assessment itself is just the first step in a series of actions that can direct community leaders onto a path of strategically identifying and addressing the most pressing and critical community concerns. By using the community assessment process as a first step to identifying and addressing community needs, Extension Educators can provide additional program opportunities and realize new sources of revenue generation. Methods: In an effort to address a variety of undesirable elements such as rising unemployment, an increased incidence of drug abuse, and lack of locally provided, affordable health care, two southern Ohio counties contracted with Ohio State University (OSU) Extension, Community Development to conduct comprehensive community assessments. With the input of community leaders and health care providers, web-based surveys were developed for each county. The survey results were combined with other collected data relevant to each county and presented to the communities. After the data was presented, the Extension Educators discussed with the community leaders, strategies to address the concerns and service gaps highlighted in the reports. The leaders agreed to offer additional funding contracts for the Educators to move deeper into the data, engaging specific user groups and community leaders in further dialogue of the issues. Eight focus group interviews with specific user groups were conducted in the two counties. The group dialogue provided information related to attitudes, experiences and practices of the participants and raised additional concerns for the community leaders. To help the leaders envision a plan of action to address these concerns, the Extension Educators discussed the idea of developing a strategic plan to begin to set goals to address the concerns. Community organizations then further contracted with the Educators to facilitate the development of strategic plans addressing the identified concerns. Results: What began as one funding contract to conduct a community assessment process in two counties became a variety of additional funding opportunities for OSU Extension Educators. Essential for the community leaders to envision and fund the additional contracts, was the targeted discussion held with the leaders during the assessment report presentations. Helping the leaders better understand the process of assessment, focus group dialogue, and strategic planning, the Educators built a comprehensive project for community development and realized additional project funding opportunities.

COMMUNITY DEVELOPMENT

L-11-A COMMUNITY DESIGNED HEALTHY FOOD SYSTEM

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Susan Colbert, Ohio State University Extension
Julie Fox, Ohio State University Extension
Michael Hogan, Ohio State University Extension

For more than 18 months, a team of OSUE faculty and staff from Family & Consumer Sciences, Ag.& Natural Resources, Community Development and 4-H Youth Development have been involved in a multi-faceted community development project in the Weinland Park neighborhood in the University District just east of the OSU Columbus Campus. The goal of the project is to redevelop a low-income neighborhood using an agrarian overlay. That is, food production, processing, marketing, and use, would be the central guiding premise in all planning for neighborhood revitalization, including housing, business development, education and training, community services, infrastructure, and financing. The result would be a Food District neighborhood. This two-year planning project is funded by the federal government (HUD Community Challenge Grant), is managed and led by MORPC (Mid-Ohio Regional Planning Commission), and is guided by a Steering Committee with broad representation of many neighborhood and community entities and organizations, and several OSU entities including OSU Extension. The project includes research, designs for a network of neighborhook facilities, and development of both education and business plans. While this project is a planning project, the OSUE Weinland Park team has begun to implement several new urban agriculture and local foods educational programs in the Weinland Park neighborhood, in order to provide neighborhood residents with a foundation for the implementation phase of the project.. Several new educational programs were developed and implemented in the neighborhood (GAPs for Urban Food Producers; Urban Local Food Production Workshop Series; Urban Ag Workshop for Health Department Officials; Market Ready Workshop). These programming efforts have been very well-received by hundreds of participants from the neighborhood and other areas in Franklin County. Additionally, several deliverables are in the final stage of development by the OSUE Weinland Park team and will be available for statewide implementation in the near future. These include the Master Urban Farmer Curriculum - a new curriculum devoted to Urgan Agriculture and a Food District Educational Plan and Resource Guide which will list programs applicable to the neighborhood, the basic information related to the curriculum, cost (if any), facility needed for the class, etc. This plan should also be useful to other communities.

L-12 - COUNTY FOOD SYSTEM AND HOW IT IS ACCESSED

Patrick Nehring, University of Wisconsin-Extension

In the past century of Cooperative Extension in Wisconsin, there has been research into components of the food system in various locations in Wisconsin. In Waushara County, this has primarily been looking at the production side of the food system. Rarely has there been an analysis of the entire food system for a county, because different components of the food system correspond

to the focus of a academic department/program area within Extension. These components were usually agriculture production and sales and consumers ability to acquire nutritional food for their family. A new era for Extension began a number of years ago, with encouragement to work across program or academic department lines and to look at entire systems, how everything fits together. A focus group study had been conducted with the Waushara County Department of Human Services to understand and address poverty in the county. One of the issues identified to be of concern to those in poverty was access to nutritional food. Because access to food had already been identified as an issue, UW-Extension came up with an innovative new model of how to research local food accessibility issues and the local food system, rather than focus on if there was a problem accessing food. UW-Extension worked with a local committee to create a process to accurately study the local food system, understand how it used by low income households, determine ways to address food insecurity or food accessibility issues, and maintain the local grocery stores. Effective strategies were used by UW-Extension to engage the local committee, who learned about research techniques, and together developed a study process that involved the correct use of surveys, focus groups, interviews, and fact finding to produce and accurate assessment of the local food system. The study reviews the local food system from food producer to distribution to consumer and provides options for improving the food system and making it more accessible. The study proved a number of preconceived assumptions to be false including: assumptions about local grocery stores being overly expensive, local grocery stores not wanting to deal with local producers, and lack of public transportation prevented people from getting food. The study proved that other assumptions were true including: local grocery stores are critical to the accessing food, individual farmer stands work better in the county than a farmers' market, food pantries are an important source of food assistance, and hunting, fishing, and gardening are a significant source of food for people in the county. The study has led to the development of a number of projects for enhancing use of the food pantries, the creation of new food assistance programs, improved the marketing and operation of local grocery stores, initiated better marketing of local grown produce easily available at farm stands throughout the county, and a greater awareness of the local food system and how the actions of the local population influence its effectiveness at meeting people's needs.

L-13 - A METHODOLOGY FOR CONDUCTING A COUNTY FAIR ECONOMIC IMPACT ANALYSIS

Russell Kashian, University of Wisconsin-Whitewater
Paul Ohlrogge, University of Wisconsin-Extension

While the primary purpose of the county fair is to bring together urban and rural citizens in an environment of community, it is important to recognize that the fair contributes to the regional economy. In 2009, the Fiscal and Economic Research Center (FERC) at the University of Wisconsin–Whitewater surveyed fair attendees to estimate the Walworth County Fair's regional economic impact. Over the past several years, the FERC has conducted similar surveys for the Waukesha County Fair and has taught University of Wisconsin Extension Specialists how to conduct surveys, while providing off-site, back office support and analysis. The FERC developed a system to train volunteers who randomly interview fairgoers regarding the amount of money they spend at the fair. The extension specialists use proven surveys that track the amount of money spent by fairgoers by category. In addition to the focus on financial issues, the FERC also inquired about visitors' interests by including questions as to which area of the fair they enjoyed the most. The loyalty of fair participants was recorded as well as demographic considerations such as gender, income and education. In recognition of the cost constraints presented by having FERC employees conduct the surveys, it was found that the Fair itself (though County Fair volunteers and the local 4-H) could conduct the surveys and write much of the report. It is the goal of this session to teach extension leaders how to acquire the data necessary for an economic impact study. While the County Fair may appear as a remnant of an earlier era, it serves as an important regional attraction for the current residents and the historic families. Given the experience in teaching this methodology to the extension leaders, this is a skill reasonably transferred in a workshop, thus expanding the specialist's toolbox of knowledge.

L-14-STREAMLINING TRADE-CENTER HIERARCHY STUDIES

Bruce Schwartau, University of Minnesota Extension

Rural communities located outside of the primary metropolitan areas provide the jobs, education, goods and services, homes, meeting places, and identity for much of a state's population. In our research, we describe an updated process to understand the economic vitality the cities outside of the state's largest metropolitan area. A major focus of our efforts is to classify cities into a trade-center hierarchy from largest to smallest. We do this because trade-center hierarchy is related to the number of goods and services available to consumers. Most things can be purchased close to home, but some require longer trips to larger cities that have the necessary goods and services. This trade-center hierarchy has implications for the state-highway network, as well as other public and private policy decisions. Previous trade-center research was time consuming and costly, and the details were complex and sometimes confused readers. It relied on a complex system of counting the number and types of retail and wholesale businesses. The purpose of that initial study was to describe the functions and hierarchies of cities to better inform decisions by local citizens,

businesses, planners, and policy makers. The authors of subsequent trade-center reports suggested moving to a simpler approach based on sales-tax data. Our research attempts to make the bridge from the methods used in the 1960s and the 1990s. In our study, we followed the suggestion of using sales-tax data, first testing the comparability of sales-tax results with those of the earlier studies as a method for determining trade-center level, then applying the most recent sales-tax data to determine what changes have taken place in the trade-center hierarchy. To explore this relationship, we used sales, trade-center level, and population for 48 Greater Minnesota cities where sales data were available. We used taxable-sales data from 1990 and 1998. We found a strong connection between sales and trade-center levels for both 1989 and 1999. To test the statistical significance of this relationship, we conducted an analysis of variance to determine whether the mean sales of the various trade-center level groups were statistically different from each other. The analysis produced an F-score that indicated that the differences between the mean sales values were very statistically significant, with a less than 1 in 1000 probability ($p < 0.001$) that this difference could be due to chance. Clearly, then, taxable retail and service sales were good measures of trade-center level. We found that sales-tax data are a good substitute for traditional ways of measuring economic activity in cities across Greater Minnesota. We presented these findings at a 2012 transportation conference attended by state highway planners and found the alternative method was well received. My hope is that this study might convince a few more states to make sales tax information more available since it has the potential of creating more efficient government as well as assist economic development decisions.

L-15-LEADERSHIP INSTITUTE: BUILDING EMOTIONAL INTELLIGENCE LEADERSHIP CAPACITY FOR THE NEXT 100 YEARS

Jeff King, Ohio State University Extension
Karen Argabright, Ohio State University Extension
Claire Yueh-Ti Chen, Ohio State University Extension
Graham Cochran, Ohio State University Extension

Given the changing dynamics of society and the pressures put on organizations to adapt, leadership effectiveness within those organizations is a crucial element of success. Leaders must possess an eclectic blend of skills and abilities that go beyond standard intelligence and into the realm of emotional and social intelligence. Emotional intelligence (EI) is defined as "understanding oneself and others, relating to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands" (Bar-On, 2004, p.1). This program was created for existing managers, supervisory staff, individuals aspiring towards advancement, and any professional experiencing leadership challenges in their current employment. Participants of the program better understood and were able to apply the dynamics of emotional intelligence, which enabled them as leaders to inspire commitment, motivate others, and build lasting relationships for the continued success of their organizations. Adopting the premise that enhancing emotional intelligence is a process as opposed to an outcome (Hess & Bacigalupo, 2010), the program was intentionally designed for participants to learn about their EI, explore strategies to enhance EI, apply strategies in the workplace, and process experiences. This program encompassed two months of initial 'course work' to which participants then applied over an extended length of time, (i.e., 12 months, between pre and post assessments). Research has shown this to be an appropriate amount of time for participants to practice and employ techniques provided in the sessions and observe sustainable changes (Goleman et al., 2002; Boyatzis, 2009). This program has been offered for two consecutive years with 36 participants completing the requirements. The program was received by participants as incredibly motivational and an excellent way to spend professional development resources. An evaluation of the program using a self-report EI measure (Bar-On EQ~I, 2004), yielded results in its first year showing an 8.3% increase on participants overall assessment scores. The pretest mean scores of the assessment ranged from 75 to 118 (μ =99.94, σ= 13.05), and posttest ranged from 93 to 121 (μ = 108.25, σ= 9.60). Increases were seen across all 5 scales and 15 subscales in the assessment. Based on the assessment results, individuals showed enhanced EI as a result of participating in this program.

L-16-ORGANIZATIONAL VALUES: PERCEPTIONS OF OHIO STATE UNIVERSITY EXTENSION PERSONNEL DURING TIMES OF ORGANIZATIONAL CHANGE

Jeff King, Ohio State University Extension
Karen Argabright, Ohio State University Extension
Graham Cochran, Ohio State University Extension

PURPOSE OF STUDY: Leading change is a necessity within organizations due to the continually evolving dynamics of society, wavering economic conditions, and other unstable factors influencing the organizational environment (Cameron & Quinn, 2011). According to Jaskyte (2004), beliefs and values of personnel engaged in the organization are important factors for leaders to consider when initiating organizational change, as outcomes of change initiatives are greatly influenced by the collective values and beliefs of personnel. The purpose of this study was to identify organizational values held by Ohio State University Extension (OSUE) personnel and explore perceived evidence based on daily practices. Specific study objectives were:

1. Identify current OSU Extension organizational values as perceived by OSU Extension personnel and
2. Explore congruency of perceived value and evidence of identified OSU Extension organizational values.

METHODS: This quantitative study was designed to examine perceptions of employees within OSU Extension using a descriptive survey approach. Data were collected through a web-based questionnaire achieving a response rate of 66.6%. Instrumentation for this study was adapted from the Organizational Values Questionnaire developed by Conklin, Jones, & Safrit (1991). Participants were asked to rate 62 work-related concepts from '1-not valued/evident' to '4-extremely valued/evident'. Data were analyzed using descriptive statistics and exploratory factor analysis (EFA).

FINDINGS: EFA was utilized as a means of data reduction to identify organizational values (Gliem, 2012). Four factors emerged utilizing 39 of the 62 concepts. Resulting factors and associated individual concepts within each were identified as the OSU Extension organizational values. The named factors include:

a) Program Planning & Implementation,
b) Value & Relevance of the Organization,
c) Diversity, and
d) Employment Conditions.

Frequencies were used to describe the perceived value and evidence of individual concepts with each respective factor. Congruence was addressed by comparing percentages of personnel responding to value and evidence. Varying levels of congruence were found. Across the 39 concepts, percentages for evidence were less than percentages for value. Particularly low levels of congruence were noted among concepts within 'Employment Conditions' and 'Program Planning and Implementation'. Higher levels of congruence were noted among 'Diversity' and 'Value & Relevance of the Organization'.

IMPLICATIONS: Change is necessary as Extension moves into a new era; therefore leaders responsible for change outcomes require knowledge to make change successful (Cameron & Quinn, 2011; Gilley, McMillan, & Gilley, 2009). Findings of this study provide a comprehensive set of organizational values holistically representing the OSU Extension organization. Leaders and administrators within OSU Extension can utilize this knowledge when making decisions towards establishing a foundation for continued and successful organizational change initiatives. Comprehensive value sets improve organizational vision, guide recruitment targets, reduce turnover, improve worker satisfaction, and increase productivity (Adkins, Russell & Werbel, 1994). The findings of this study provide a replicable framework beneficial to all organizations wishing to replicate this study.

L-18-PLANNING AND IMPROVED CONDITIONS IN APPALACHIAN WEST VIRGINIA

Michael Dougherty, West Virginia University Extension

West Virginia counties have improved their standing along the continuum of economics levels delineated by the Appalachian Regional Commission (ARC) over the last decade. There are only 8 ARC-Designated "Distressed Counties" in the Mountain State in FY2013, compared to 27 for FY2002 (www.arc.gov/research). This positive change occurred at about the same time that the state planning enabling legislation changed. The Chapter 8A of the West Virginia Code, enacted in 2004, includes economic development, redevelopment, and preferred development areas among the 13 mandatory components of for a comprehensive plan (WVC 8A-3-4(c)). Conversely, the prior enabling legislation did not list anything related to economic development among the 18 factors to be examined in a plan (WVC 8-24-17, repealed). Thus, the focus of this research is the potential connection between counties' improvement in the ARC rankings and their planning status. The connection between planning and economic development is one that has been expounded upon in the literature. In Contemporary American Planning, Levy (2009) explains interconnectedness and complexity found in modern society necessitates planning. He goes on to list a variety of activities where planning activity occurs – land use patterns, location of public facilities, preservation, housing, economic development, environmental issues, and regional coordination. Specifically about economic development, he notes that in places with high unemployment, planning efforts "may be devoted to creating conditions that encourage existing industry to remain and expand and new firms to locate in the community" (page 4). The research is based upon on previous efforts where I have found that counties with active planning commissions fared better than their non-planning counterparts on indicators related to economic conditions and quality of life. These measures are similar to the criteria used by the ARC – unemployment, income, and poverty rate – to create its county economic status classification system (www.arc.gov/research). In 2000, I found that counties with active planning commissions had higher per capita income, more employment per capita, lower unemployment, higher property values, greater employment growth, and scored higher on the WV Human Development Index than counties that did not undertake planning activities (Community Development Society paper presentation). A decade later in 2010, I found that counties with planning were larger, were growing faster and had higher income levels and lower unemployment rates when compared to those counties not undertaking planning (Internal WVU-ES Study). This new research will follow the same process as has the previous studies. Counties will be divided into groups, depending on whether or not they have active planning commissions or updated plans (independent variables). Then their standing on the indicators used by the ARC to designate the status of counties (dependent variables) will be compared, primarily using analysis of variance. It will also take into account changes in definitions by the ARC. It is anticipated the research will show a correlation between counties undertaking planning activities and better performance on the economic indicators examined. This would be in line with the previous findings discussed above. If the expected correlations are found, future efforts would explore causality.

ORGANIZATIONAL SYSTEMS

L-19-BUILDING THE RELATIONAL LEADER IN YOU!

Sharon Kinsey, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

Author and professor Susan Komives has written, ""Leadership is a relational and ethical process of people together attempting to accomplish positive change." In this workshop participants will:

1. learn about and understand the key elements of the Relational Leadership Model,
2. evaluate how they can build the Relational Leadership Model into their own personal leadership philosophies, and
3. determine how the Relational Leadership Model can be utilized and integrated into their own organizations as a way to create a healthy, ethical, effective work environment.

The key elements of the model include:

1. Purposeful – commitment to a goal or activity
2. Inclusive – understanding, valuing and actively engaging diversity in views, approaches, styles and aspects of individuality
3. Empowering – building ownership and promoting the full involvement of others
4. Ethical – leadership driven by values and standards and leading by example
5. Process-oriented - how a group accomplishes its purpose, understanding group dynamics

Finally, processes essential to Relational Leadership will be discussed which include collaboration, reflection, feedback, and community building.

L-20-BRIDGING 4-H MARKETING NEEDS - SPANNING THE CHASM

Cheryl Varnadoe, University of Georgia Cooperative Extension
Jeanette Rea-Keywood, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

Marketing is one of the most difficult yet most crucial parts of the any Extension program. Many times, marketing is the last thing Extension professionals have time to consider when planning and conducting events. Promoting and marketing any program or product is an ever-changing process in today's world, so how can we simplify it for all Extension Agents to easily adapt in their states and communities? Members of the NAE4-HA Public Relations and Information Committee present a poster session explaining marketing, including simple steps to marketing your Extension program as well as social media marketing.

L-21-PROFESSIONAL DEVELOPMENT FROM YOUR DESK: A VIRTUAL CONFERENCE FOR ANY EXTENSION PROGRAM AREA

Carrie Stark, University of Idaho Extension

According to Timothy Koegel, author of "The Exceptional Presenter Goes Virtual," the number of virtual presentations is growing exponentially. The improved technology, lack of funding for travel and increased availability of online communication tools has elevated virtual presentations as a practice, safe, and cost effective means of communicating with employees, clientele, prospective employees and/or clientele, and co-workers. In 2009, the University of Idaho 4-H Youth Development program restructured it's face-to-face training to a more targeted topic area rather than an array of topics and updates. This shift, along with recent state and county budget cuts identified a need for training on general 4-H curriculum and programming ideas; thus, the Professional Development from Your Desk Virtual Conference was born. In 2011, the first virtual conference was held during the last week of January. The format of the conference was to offer 2 webinars per day for a full week, with the webinars selected through an RFP process. Workshop sessions are selected and a schedule with proceedings is sent out at least 2 weeks ahead of time to everyone in the state.In 2011, there were 8 sessions held with 48 unique participants, 112 total participants, and 25 participants who attend 2 or more sessions. In 2012, those numbers increased to 61 unique participants, 112 total participants, and 28 participants who attended 2 or more sessions. The average mean score for participant satisfaction of the various workshops was 4.59 (out of 5.0 scale).The success of this program is shown through the increase in participation each year. There were 13 more unique 4-H professionals who participated in the conference in 2012 than in 2011 and three more individuals participate in two or more sessions. In 2013, the conference is being opened up to the entire Western Region to participate.One advantage of hosting an online conference vs. a face-to-face conference is the assessibility of out-of-state presenters without accuring additional expenses. Each year, out-of-state presenters have conducted at least one webinar, either on a specific curriculum or a new methodology. In 2013, the national 4-H Common Outcomes and Measures will be introduced to 4-H professionals by NIFA as part of the virtual conference.Step-by-step guidance on how to create, organize, and faciliate a week-long virtual professional development conference will be communicated, including ideas that worked and those that didn't work so well. Materials and resources will be shared to help any state or program area replicate this successful professional development platform.

L-23-4-H FCS 101

Courtney Dodd, Texas A&M AgriLife Extension Service
Angela McCorkle, Texas A&M AgriLife Extension Service

The Texas 4-H and Youth Development Program places great value on the 4-H Family and Consumer Sciences (FCS) projects. These projects expose 4-H members to the academic disciplines of family and consumer science and help them gain valuable skills and knowledge that can be applied to daily life. The 4-H FCS 101 initiative grew out of a need to provide new agents across the state the same information regarding their roles and responsibilities in managing the 4-H FCS projects in their counties. Many new agents were coming to Extension without a background in the 4-H program. The outcome of the initiative was the development of a systematic plan for providing information to all new FCS agents and 4-H agents during the on-boarding process. Under the 4-H FCS 101 Initiative, resources and training have been developed to support new and tenured county Extension agents. A resource guide, "Managing County 4-H FCS Projects: A Guide for County Extension Agents" was developed with the purpose of helping agents understand the 4-H FCS projects and how to manage them. The 4-H FCS 101 process also includes face-to-face training and a series of six online trainings. Participants in the face-to-face training complete a retrospective post evaluation to reveal their perceptual knowledge gained and anticipated behavior changes as a result of participating in the 4-H FCS Training. A six month follow-up evaluation has also been sent to each of the participants to track their adoption of behavior changes and look for feedback on ways that the training could be improved as well as identify additional training needs of the new agents. The follow-up evaluation results indicated that 93% of the participants have felt that what they learned in the 4-H FCS 101 training has provided them with the ability to better manage the 4-H FCS program in their county; 93% have also used the resources and/or activities that they learned in the 4-H FCS 101 training; 93% have shared the project information with 4-H members and volunteers; and 71% have developed a project timeline for their 4-H FCS program.

L-26-INVESTIGATION TO DETERMINE EXPOSURE OF URBAN BACKYARD GARDENERS TO HEAVY METAL CONTAMINANTS

Michele Bakacs, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension
Carol Baillie, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension
Brian Buckley, Rutgers University, Environmental and Occupational Health Sciences Institute
Beth Ravit, Rutgers University, Center for Urban Environmental Sustainability
Amanda Gallear, Unity Square Partnership, Catholic Charities, Diocese of Metuchen

Urban soils often have high lead (Pb) levels due to contamination from lead based paint, and emissions from leaded gasoline. The consumption of produce grown in Pb contaminated soil may pose a health risk to urban gardeners. In New Brunswick, New Jersey many Latino immigrants grow culturally important vegetables and herbs directly in the soil of their yards. Soil testing on these backyard gardens has shown significant Pb contamination. However, Pb bioavailability under local soil conditions is not known, nor is the rate that popular herbs and vegetables are taking up Pb. In light of the potential health risks associated with Pb, it is important to understand what chronic long-term dietary Pb exposure New Brunswick gardeners may be experiencing. In 2012, Rutgers researchers, in collaboration with local community groups, began to investigate Pb uptake rates of locally popular garden produce and develop a human risk assessment based on a typical New Brunswick Latino diet. Utilizing contaminated soil from five New Brunswick backyards, three popular herbs (papalo, ruda, and cilantro) and two popular vegetables (chile de arbol and tomatillo) were planted in the Rutgers greenhouses. Three pots per species were planted using soil from the same yard. Two plants of each species were also planted in pots using control soil (soil from a New Brunswick yard with low lead concentrations). Plant tissue analysis was conducted to determine lead uptake by individual species. Results of the lead uptake analysis will be presented. Next steps include developing a dietary risk assessment based on typical consumption of the popular foods composed of the herbs and vegetables analyzed. The risk analysis will be used to develop best gardening practices that minimize potential Pb exposure through various ingestion pathways. Lead contaminated garden soil is a ubiquitous problem in urban communities across the nation. Other Extension professionals that deal with lead education and remediating urban garden sites will benefit from learning about the results of this research project as well as the methodology used to determine risk associated with gardening in contaminated soils. Extension agents need to insure that we are developing programming and research projects that address the changing demographics within our communities. This research project aims to help develop Extension programming that will educate the Latino immigrant community on safe gardening practices, thereby relating directly to the new era of Extension theme of the Galaxy meeting.

L-27-INCREASING FORAGE PRODUCTION WITH RYZUP SMARTGRASS ON FESCUE PASTURE

Chris L. Bruynis, Ohio State University Extension
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Following the summer drought of 2012, cattle producers in Ohio were looking for options to grow additional forage. This research was designed to determine the effects of gibberellin (Ryzup SmartGrass) on short term pasture production in late fall when grasses typically do not grow as rapidly. A fescue pasture at the Ohio Agricultural Research Station in Jackson Ohio was selected for use in this research. Cattle had just been removed from the pasture which was actively growing and with little thatch. A random block research plot containing three replications was used to compare the treated verses untreated strips. Application of 15 gallons of water, 0.4 oz RyzUp SmartGrass, and crop oil concentrate was applied to the treated strips. Soil test showed that the pH was 6.2, phosphorous 19 ppm, and potassium 144 ppm. No additional fertilizer was applied during the research trial. Pasture mass (yield) was measured collecting 30 readings per strip using a calibrated rising plate meter both pre application and 29 days later in all plot strips. Plots treated with RyzUp SmartGrass yielded an additional 397.46 pound of dry matter (LSD 320.43, p=0.05) per acre over the non-treated check strips. Adjusting the additional forage to 88% moisture, the gain equals an additional 451.66 pounds of hay. Estimating the value of fescue hay at $80.00 per ton, this would have an additional value of $18.00 per acre. The cost of the RyzUp SmartGrass with application was estimated at $8.00 resulting in a net gain of $10.00 per acre for this research results.

L-28-SOYBEAN YIELD RESPONSE IN 30 INCH ROWS AT VARYING PLANT POPULATIONS DURING A DROUGHT YEAR

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Farmers are presented with soybean seeding rate decisions annually with those decisions being made before knowing if the growing season will experience drought stress. According to the Ohio State Climatologist, NW Ohio experienced drought conditions 4 out of 10 years during 2003-2012. This study conducted in 2012 shows the yield response of soybean seeding rates under severe drought conditions. A plot was established in a randomized complete block design with five different planting population treatments per acre (80K, 100K, 140K, 180K, 220K). Treatments were replicated six times and planted, May 14. Each treatment area was four 30-inch rows measuring 10 feet wide by 30 feet long. Stand counts were conducted when soybeans were at VE/VC growth stage on May 31 and repeated on June 8 at V1 growth stage. Plots were harvested with a small plot combine with an on-board calibrated scale to determine yield measurements. Yield from the lowest planting population of 80,000 seeds per acre was significantly lower than planting populations of 100,000 and 220,000 seeds per acre. There was no significant difference in yield of the four highest planting populations. The differences between target and actual populations were large. Actual populations at V1 for treatments 80,000, 100,000 and 140,000 were 53%, 59% and 56%, respectively, of the target population. Rainfall shortages during emergence are

believed to have reduced actual stands of all treatments. The planting population of 100,000 seeds per acre showed the highest net return ($875.30/acre) because of the highest yield (70.1bu/acre) and lower relative seed cost ($36/acre). Overall yields for the field were excellent for a drought year that was six inches short of normal rainfall. Late season rainfall, especially in August and September, was timely to support critical yield producing periods of the soybean growing season.

L-29-CONTROLLING WIREWORMS WITH THIAMETHOXAM INSECTICIDE IN WHEAT

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Wireworm (*Limonius spp.)* populations and crop damage increased in wheat (*Triticum aestivum L.*) production across eastern Washington. At the inception of this project thiamethoxam, a seed applied neonicotinoid insecticide for wireworm control, was used primarily at 0.07 g ai/100 kg. The goal of this project is twofold;

1. to determine if increased long-term use of higher rates of thiamethoxam can improve yield and reduce wireworm populations, and
2. to determine if incorporating no-till fallow into the rotation can reduce wireworm populations.

In 2008 an on-farm test (OFT) was established near Davenport, WA to examine spring wheat treated with 0, 10, 20 and 39 g ai thiamethoxam/100 kg impact on grain yield and economic return over costs. A no-till fallow system was also included as a treatment. In 2009 a second OFT was established near Wilbur, WA. The OFT were maintained four years with the treatments being sequential each year. Both locations were randomized complete block designs with four replications. Wireworm populations were measured by placing four modified solar bait traps in the plots each spring (April) prior to seeding. Within the insecticide treatments, a significant location x treatment interaction was detected. At the location near Davenport, yield and economic return over costs was increased 30 and 24 percent. However, wireworm populations were not significantly different among insecticide treatments. At the location near Wilbur, yield and economic return over costs were increased only four percent and wireworm populations decreased 80 percent with increased insecticide rate. Some of this interaction may be related to the wireworm species present. At Davenport *Limonius californicus* (Mannerheim) is the predominate species and at Wilbur *Limonius infuscatus* (Motschulsky) is the predominate species. Within the no-till fallow system, a significant location x treatment interaction was not detected meaning both locations had a similar response. Overall at both locations, incorporating a no-till fallow system into rotation averaged 53 percent less wireworms than a spring wheat cropping system with seed applied insecticides.

L-30-MEASURING SOIL QUALITY AND COMPARING NUTRIENT TESTING METHODS IN MAINE HIGH TUNNELS GROWING TOMATOES

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There is little research available about soil quality in high tunnels, and nutrient recommendations often rely on soil testing methods developed for field conditions. This study evaluated soil quality and soil and plant nutrient levels in 29 high tunnels used to grow tomatoes. The tunnels varied in age, and 66% a year or less old. All but one of the tunnels had received compost or manure between the fall of 2010 and late summer 2011. Soil samples were collected between June and August 2011 and were analyzed for soil quality parameters and nutrients using standard soil test methods and saturated media extract (SME). The saturated media extract method has been suggested as an appropriate method of evaluating nutrients in long-term high tunnels. Tomato leaf samples were collected from 22 of these tunnels at least 28 days after the soil samples were collected.

Most soils had organic matter and potentially mineralizable N levels above optimum (48% and 50% of samples, respectively). Seventy-two percent of soils had optimum levels of soil biomass/active carbon. Most soils had below optimum plant-available water (86 % of samples) and water-stable aggregate levels (72%).

The majority of soils had optimum pH (6.0-7.0), although 17% were below 6.0. Fifty-nine percent of soils had pH below 6.5, a level below which tomato production may be reduced. All soils had salt levels below the recommended threshold of 3.5 mmohs/cm, although 17% had levels above 2.5 mmohs/cm, which can be detrimental to some crops.

Results from standard soil test, SME, and foliar methods were compared for the 22 tunnels that included all these analyses (21 samples for nitrate-N and %N measurements). Standard soil test methods showed that most soils had above optimum levels of nitrate-N (76%), P (73%), and K (59%). Most soils had optimum levels of Ca (64%) and Mg (64%). However, using the saturated media extract, most soils tested below optimum for nitrate-N (62%), P (100%), K (86%), and Ca (82%) and within optimum levels for Mg (55%). Given the constraints of the study, we cannot determine which analytical method and recommendation levels better predict yield. However, foliar nutrient levels provide a limited view of whether or not the plant had adequate levels of nutrients available. Most foliar samples had below optimum levels of N (68%) and P (82%), mirroring the SME results. For K, most foliar samples showed optimum (50%) or below optimum (45%) levels, results which are similar to the below optimum SME results. Foliar calcium levels were mostly above optimum (82%), unlike either soil method. Foliar Mg levels were mostly optimum (86%), similar to standard soil levels. The differences in number of optimum samples with different methods could be the result of the methods extracting different pools of a nutrient, with one better estimating plant-availability during the season. Or, they could be the result of more or less appropriate definition of optimum ranges. Further research is needed to identify which methods are most appropriate.

L-31-HELIOTHIS MOTH TRAPPING IN PHILLIPS COUNTY ARKANSAS

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Heliothis Moth Trapping in Phillips County Arkansas Cotton production in Phillips County Arkansas is a major crop for the producers of the county. To assist producers in making decisions in controlling bollworms (helicoverapa zea) and tobacco budworms (Heliothis virescens) an annual series of moth traps were established to sample populations of each species during the growing season. While this knowledge was established primarily for cotton, an added aspect has been found to aid producers in control of heliothis species in both soybeans and corn. The overall purpose of this project was to see if an increased moth count could be predicted by using historical data. This information would allow both local suppliers and producers to be more aware of the situation as well as being prepared ahead of time to react to this increased populations. A series of 18 sets of traps was established for each species at approximately the same location in the county for three growing seasons. Data was gathered and analyzed from 2010 to 2012 to try to predict the peak flight period of both bollworm and tobacco budworm moths. Initial examination showed increase activity for bollworms around early July each year, with an added peak (but smaller) later on in the month. Tobacco budworm moth flights have increasing numbers in late July for all three growing seasons. By knowing the general time period of increased moth populations, recommendations can be made by local Extension agents and area consultants to promote higher profitability in area cotton fields. The knowledge of this timing will also benefit other Extension agents in cotton growing areas as well as other grains to assist with Integrated Pest Management decisions concerning Lepidoptera control. This program will continue Phillips County to provide information to local producers to assist in making management decisions.

L-32-ECONOMIC AND BIOLOGICAL IMPACT OF COMPANION CROP PLANTED ONIONS AND NON-COMPANION CROP PLANTED ONIONS ALONG THE FRONT RANGE OF COLORADO

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Onion production across the United States has been impacted by Iris Yellow Spot Virus (IYSV) which is vectored by the onion thrips (*Thrips tabaci*). Reducing thrips populations can sometimes help reduce infection rate of IYSV in onions. In Colorado, companion crops (living mulch) such as barley and spring wheat planted with onions to reduce wind and water erosion, has sometimes had an effect on thrips populations. The objectives of this study were to determine:

1. which thrips predators and parasites inhabit the barley or spring wheat companion crop and what other insects/arachnids dwell in this living mulch,
2. if there is a relationship between the densities of predators/parasites and thrips populations,

3. if there is a relationship between thrips populations and IYSV incidence and severity, and
4. if there is a relationship between predator/arachnids populations and onion market yields.

Two farm locations had both companion crop and non companion crop treatments replicated four times. Up to six beneficial predator and parasite families and seven plant feeding arthropod families were identified from the two field locations. At both locations there were numerically more thrips and beneficial arthropods in the companion crop treatment compared to the non companion crop treatment. There were significantly more beneficial populations in the companion crop treatment than the non companion crop treatment at one field location. There was a positive trend between thrips populations and IYSV incidence at both locations. There were no significant differences in thrips per plant, incidence or severity of IYSV, nor onion market yields between the companion crop treatment and the non companion crop treatment at either location. This study also showed that low field population levels of IYSV carrying thrips can have a significant effect on IYSV incidence and severity.

L-33-LAKE AERATION TO BREAK UP THERMAL STRATIFICATION AND REDUCE CYANOBACTERIA BLOOMS

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In eutrophic lakes and ponds, conditions of warm, calm water with elevated nutrients, can cause photosynthetic blue- green algae (cyanobacteria) to increase dramatically. These “blooms” may be visible as floating scum that resembles blue, green or even red paint on the surface of the water. Blue-green algae can spoil water quality producing pungent odors or a thick scum, affecting recreational use, reducing oxygen levels, as well as impacting other plants and animals in the water. When these cyanobacteria respire they use oxygen that can alter the balance of the ecosystem to the point of causing fish kills. Decomposition of the bloom also consumes oxygen in the pond. In addition, some species produce toxins that can cause human, pet or livestock illness. The 5 acre Hopkins Pond located in Haddonfield, New Jersey, part of the Camden County Parks System, experiences intense blue-green alga blooms due to thermal stratification, and eutrophication caused by excessive nutrients. Increased nutrients enter the pond as runoff from nonpoint sources such as fertilized lawns or recreation fields, soil erosion, allochthonous material, or from bottom sediments. High phosphorous and low nitrogen levels lead to blue-green algae blooms during warmer, sunny weather with little wind. This pond was fitted with a Hydro Logic “Airlift” diffused air aeration system designed to maximize the water lift rate and transfer rate of dissolved oxygen by the release of bubbles ranging in size from 500 to 100 micron in diameter along the pond bottom. The rise of bubbles to the lake surface draws bottom water along with them creating an artificial circulation. This circulation mixes water that otherwise would thermally stratify, increasing the dissolved oxygen content throughout the water column. By oxygenating deeper waters near the sediment, there may be a decrease in the release of phosphorous from the sediment. The circulation also keeps blue-green algae moving through the water column and doesn’t allow it to reach nuisance conditions.

L-34-DAIRIES UTILIZING HIGH STOCK DENSITY GRAZING IN THE NORTHEAST

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High density stock grazing (i.e. mob grazing) is a practice that is being evaluated and used by experienced and new grazing dairy farmers. We have since learned that most dairy farmers call mob grazing, “high density stock grazing". The cattle are grazing pastures higher and leaving higher grass residuals, while the farmers are still striving for high quality forage. High density stock grazing is a very new practice in dairy production and the study captures some of the ground-level practices of the innovative farm families. There is very little research-based information for farmers, extension personnel and conservation professionals to use. Each farm has resource challenges and opportunities that impact the ability to use this type of grazing. Our goal was to collect pasture data and interview the farmers to understand their management goals and practices. We developed a sampling protocol and questionnaire. The questionnaire was used to capture a variety of responses from 5 farm families. This information included indicators of profitability, sustainability and community. Case studies will be developed in winter 2013 and are designed to create a “snapshot” of the farms. Outreach will be conducted in the growing season of 2013. Pasture data was taken in advance of cattle grazing a paddock. Data includes grass height, BRIX measurement, forage analysis, botanical composition, soil testing and soil bulk density. Measurements are being evaluated the winter of 2013, with additional measurements being taken in spring of 2013. Outcomes for behavior change will be monitored by evaluating participants at the proposed field day and other items. The project assisted 4 partners to work in a collaborative fashion and would benefit their own understanding of this practice by innovators.

L-35-ANIMAL HEALTH PRODUCT HANDLING AND MANAGEMENT IN IDAHO

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A comprehensive vaccination program is a key component of maximizing production efficiency and minimizing production losses in beef cattle herds. A well planned and implemented vaccination program leads to reduced morbidity and mortality rates, reduced treatment costs, and improved gains. Additionally, Federal Regulatory Code states that biological products shall be protected at all times against improper storage and handling, including improper refrigeration temperatures. This

code further states that biological products shall be considered worthless after the expiration date has passed. Studies conducted in Arkansas and Nevada identified problems with vaccine storage and handling, which could ultimately lead to vaccine failure. These problems included being set improperly, temperature variations in the function of the refrigeration unit, variability due to location, poor maintenance of the unit, etc. Such variations lead to incorrect storage conditions for animal health products which may ultimately compromise the effectiveness of the product. Chute-side practices can also affect vaccine efficacy. Ineffective animal health products may affect the quality of beef delivered to the consumer. Animals vaccinated with ineffective products are more likely to become sick and need antibiotic treatment. Stress caused by disease/sickness can reduce carcass quality. Idaho beef producers and animal health product retailers participated in a study to gather data on the handling and management of animal health products. Data loggers were placed in 176 refrigerators (129 producers and 47 retailers), recording temperatures in 10-min intervals for a minimum of 48 h. The approximate age, type, and location of the producers' refrigerators were recorded, along with where the products were stored in the refrigerator. An inventory of each producers' refrigerator was taken with expired and opened products recorded. Most producers were careful to store vaccines in refrigerators however, only one-third of the producers' refrigerators maintained the recommended temperature range of 2 to 7oC >95% of the time. Additionally, approximately one-third (32.6%) of the producers' refrigerators maintained the recommended temperature range <5% of the time. Thirty-four percent of the retailers' refrigerators were within the recommended temperature range >95% of the time, and 17.0% were in the range <5% of the time. In addition to temperature readings and refrigerator characteristics being documented, surveys of producers and retailers were also conducted. The producer surveys showed 93.8% of producers used the neck area of beef cattle for injections, 87.6% mixed modified-live vaccines as-needed and protected them from sunlight, while 93.8% kept vaccines in a cooler. The retailer survey showed 44.0% had thermometers to monitor refrigerator temperatures, and 41.0% did not monitor their refrigerators. Sixty percent of retailers trained their employees to handle animal health products and 67.0% trained their employees to answer questions about animal health products.67% of rancher refrigerators and 66% of retail refrigerators tested failed to maintain temperatures within the recommended range for vaccine storage. Hard data regarding animal health product storage and management should positively influence Idaho cattle producers to improve "on ranch" practices. Improved practices should lead to more effective use of animal health products, result in fewer disease/sickness problems, and improve beef carcass quality.

L-36-PROGRAM EVALUATION BEHAVIORS, ATTITUDES AND SKILLS OF COOPERATIVE EXTENSION AGRICULTURE AND RESOURCE MANAGEMENT PERSONNEL IN NEW JERSEY

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Cooperative Extension is facing an era of increased need to demonstrate to traditional and new funders our relevance, impact and return on investment. A survey of Rutgers NJAES Cooperative Extension's agricultural and resource management field faculty and staff was conducted to determine their program assessment and evaluation behaviors, attitudes and skills. The objective of the assessment was to identify educational training and resource needs to enhance skills and increase efficiency of conducting various types of program assessment and impact evaluation. The results indicated that during a prior 12-month period 79% conducted some level of program

evaluation. Most frequently evaluations measured "end of event" reactions and changes in knowledge, skills, attitudes or aspirations (KASA); less frequently were participants contacted to assess changes over time in KASA or long term conditions. In practice, survey respondents indicated the realities of actual program evaluation behaviors. Fifty-three percent (53%) indicated they usually drag their feet about doing program evaluations, and 30% agree or strongly agree that doing program evaluation takes time away from the "real" work of Extension. A strong majority (65%) believes Extension professional's performance assessments should include criteria related to program evaluation, and 71% believe there are consequences (personal, professional or programmatic) in not doing program evaluation. Survey recipients were asked about their confidence in conducting various levels of evaluation. Eighty-seven (87%) percent were moderately or very confident in conducting program participant reaction evaluations, 69% for KASA assessment at the end of an educational event, 51% for time delayed post-test KASA evaluation, 51% for measured changes in behaviors or practices, and only 36% for measured changes in long term conditions. The majority of respondents indicated that time prioritization issues (44%) was the greatest barrier to performing program evaluations. Nearly 90% sought information on program evaluation over the past year. Survey respondents expressed the desire to learn more based on their current skill level, and expressed that they "need a bit more skill" on 9 of 12 practices, including conducting needs assessments, writing measureable objectives, developing evaluation plans, selecting evaluation methods, developing a survey instrument, choosing sampling techniques, analyzing evaluation data, using evaluation results, and preparing evaluation reports, while expressing they "need a lot more skill" on 3 skills -- testing a survey instrument, conducting group focus groups, and getting review and approval of survey protocol through IRB. As an outcome of the assessment, training and resource materials have been developed and shared.

L-37-ONE YEAR IN THE LIFE OF A NATURAL RESOURCES BLOG IN NEW JERSEY

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In extension, there is interest in using blogs and social media to efficiently reach clientele. For a natural resources blog in New Jersey, web-based services were used to enhance and evaluate the blog, beginning in 2012. The services were employed with the following objectives: 1) extension of information; 2) accessibility for clientele; 3) clientele feedback and social media; 4) impact data; and 5) reaching new clientele. Tumblr was the blog platform used, and Google Analytics was used to provide impact data. Over an 11-month period, the blog received 2,191 page views from 924 visitors, with 698 unique visitors. The average duration of a visit was over four minutes. Visitors from New Jersey, Pennsylvania, and New York accounted for 93% of traffic. Forwarding the blog posts to a Twitter feed and to an RSS feed increased the accessibility for readers, and the Twitter feed gained 57 followers, mostly non-governmental and other organizations. Eleven percent of traffic was from search engines, and 19% was from RSS and email subscriptions. The rest of the traffic was presumably from direct links, university webpages, or social media. Together these observations suggest that readers will find or follow a blog through a variety of methods, and that social media is valuable in furthering outreach. While most of the services used in this study are free, they vary in the skill required to implement them on a blog, for example with Google Analytics requiring the insertion of code into the blog's HTML. This suggests that these services may valuable extension and outreach tools, but require an initial and ongoing investment of time.

L-38-DISEASE MANAGEMENT PROGRAMS FOR BASIL DOWNY MILDEW

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Basil is a one of the largest specialty crops in US. During the summer of 2007, a severe foliar disease was noted on basil grown in south Florida and subsequently across the US. The disease was characterized by foliar chlorosis, frequently delineated by leaf veination, with a light grey fungal growth evident on lower leaf surfaces. Initially observed in the lower canopy, the disease subsequently developed in the mid to upper canopy. Severely infected leaves frequently dehisced. The disorder displayed fungal signs associated with and was ultimately determined to be downy mildew. Crop losses in individual fields ran as high as 100%, with a number of basil shipments being rejected at delivery due to symptom development in transit. To identify prospects for chemical control of this disease, a number of field experiments were conducted during fall 2007 through spring 2008. Trials were conducted in commercial fields. The crop was direct-seeded on 20-cm raised beds in four rows set on 25-cm centers, with an in-row plant spacing of approximately 2.5-cm. The experimental design consisted of 3-4 replications of fungicide treatments arranged in randomized complete blocks. Experimental units were composed of 4 basil rows, 4 meters in length, separated by 2-m non-sprayed buffer plots. Fungicides were applied using a backpack sprayer equipped calibrated to deliver 580 l/ha at 2.1 x 105 Pa. High levels of natural inocula in the area and long dew periods created ideal conditions for downy mildew development. Disease conditions were severe and all tests were judged definitive. A number of different chemistries showed promise, among them various phosphonic compounds, mandipropamid, fenamidone, dimethomorph, propamocarb, and azoxystrobin. Tank-mixtures and/or alternations of phosphonic fungicides with the aforementioned other chemistries, provided for excellent control when applications were initiated before disease onset and were applied on a weekly basis.

L-39-CHAPARRAL SEEDHEAD SUPPRESSION OF KY 31 TALL FESCUE PASTURES FOR GRAZING COW/CALF PAIRS

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Tall fescue (*Festuca arundinacea*) is one of the most common cool season grasses in the southeastern United States. However, tall fescue is attributed with costing over $600 million in losses to the livestock industry each year by causing a syndrome known as tall fescue toxicosis. Toxicosis is caused by an endophyte present in the seedheads of mature fescue plants. Numerous management strategies have been researched and suggested to help producers deal with the effects of tall fescue toxicosis. A new strategy under research and development is suppression of the seedheads through the use of Chaparral pasture herbicide. The objectives of on farm trials and demonstrations were to conduct seedhead suppression trials to evaluate producer assessments of the pasture treatment and evaluate animal performance between those grazing treated and untreated pastures. Five farms were each treated with Chaparral at 2 ounces of product/acre applied at green up. Thirty acres were treated on each farm and cow calf pairs were grazed through the spring and summer months. Use of Chaparral reduced forage yield but

improved nutritive value. Animals on treated pasture had 0.68 pounds higher daily gain and experienced reduced fescue toxicosis symptoms over those grazing untreated pasture. Additionally, producers observed greater weed control in pastures. On farm trials conducted indicated Chaparral seedhead suppression could be a new tool to mitigate effects of fescue toxicosis.

L-40-ANALYSIS OF TWENTY-EIGHT YEARS OF LAMB CARCASS DATA

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OSU Extension-Muskingum County has conducted a lamb carcass evaluation competition since 1980 for youth enrolled in market lamb projects. Lambs were exhibited and ranked in a live show a week before the county fair and then processed at a local meat processor. Carcass data was collected by Ohio State University Meat Science graduate students with the ranked results being shared with the exhibitors and family members at the processing facility. The Muskingum County Sheep Producers Improvement Association paid premiums to exhibitors based on the respective rankings. Lambs were then either marketed to a local grocer or to the exhibitor's family for their own consumption. Carcass data for 341 market lambs in twenty-eight classes since 1980 were evaluated in this study. There were four years when the carcass evaluation activity was not conducted due to various reasons. A statistical analysis of the carcass data produced some interesting results. There were differences in the yearly averages using the Least Square Means with Standard Errors of several data measurements used in the carcass evaluation. Loineye Area (LEA) measurements showed an increase ($p < 0.0001$) starting at 2.3 ± 0.1 square inches in 1980 while the most recent measured 3.1 ± 0.1 square inches. Backfat measurements increased ($p < 0.0001$) from 0.1 ± 0.03 inches in 1980 with a measurement of 0.23 ± 0.02 inches in 2012. Hot carcass weight averages increased ($p < 0.0001$) over the years from 58 ± 3 lbs. to 71 ± 3 lbs. Dressing percentage averages increased ($p < 0.0001$) from 57 ± 2 percent to 58 ± 1 percent. One carcass measurement, Percent of Boneless Trimmed Retail Cuts (BTRC), was only calculated since 2000. BTRC decreased ($p = 0.045$) from 48.7 ± 0.71 to 47.5 ± 0.66. Review of the results showed that a number of families have had two generations of exhibitors participate in the carcass competition. The county sheep association continues as a key partner of the evaluation activity. Members conduct the live exhibition, transport lambs to the processor, provide premiums to the exhibitors and assist in the marketing of the lambs. In recent years, the top two lamb carcasses have been auctioned off at the county lamb banquet, creating more interest and enthusiasm in the competition. Participant families have indicated over the years that the carcass evaluation competition has provided important feedback in making management decisions for their sheep operation. Participants and their families have had the opportunity to observe and handle a variety of live market lambs and then view the same lambs hanging in the meat locker as a carcass. From the data collected over a thirty-three year period, carcass traits generally improved but these improvements were relatively small.

L-41-DEVELOPMENT OF A SYSTEM FOR DETERMINING RELATIVE PLANT GROWTH REGULATOR REQUIREMENTS FOR COTTON VARIETIES IN GEORGIA

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Plant growth regulator (PGR) applications are often necessary in cotton to reduce vegetative growth and maintain a manageable crop. However, PGR sensitivity varies widely among varieties and environments. Some varieties need to be monitored closely and heavily managed while some are sensitive such that overuse may negatively impact yield. Research in 2010, 2011, and 2012 investigated the response of various varieties managed with either no PGR applications or a heavy PGR regime which included multiple applications made pre-bloom and during bloom. Growth parameters and lint yield and fiber quality were used to assess the growth potential of a variety and document the impact a heavy PGR regime has on development and yield. From this data, a classification system was developed which grouped varieties in order to more adequately define relative PGR requirement of cotton varieties in Georgia. Four classifications were utilized, from varieties which may require no PGR management up to varieties which will need to be heavily managed with multiple applications. Varieties were grouped together based on similar growth patterns and response to PGR applications. After examining data from 2010 and 2011, standard varieties were identified and utilized to compare new varieties in 2012 to more easily predict their PGR requirements.

L-42-ORGANIC HEIRLOOM TOMATO VARIETY TRIAL

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Extension personnel strive to provide information the agricultural industry needs to maintain profitability. There is an increasing demand for information regarding organic crop production. Sales of organic food in the U.S. increased from $1 billion in 1990 to $26.7 billion in 2010 . There is also a trend of increasing popularity of heirloom vegetable cultivars, particularly tomatoes (Jordon, 2007). Based on this and the general small amount of scientific literature available on this topic, there is certainly a need for additional information. In particular, there is a need for practical production information for a growing industry Since 2006, Purdue University has maintained one acre of certified organic production at the Southwest Purdue Agricultural Center in Vincennes, IN. Nine heirloom tomato cultivars were evaluated for yield, plant vigor, and disease resistance. As a control, a tenth cultivar, a hybrid, was used for comparison. The

experiment was randomized complete block design with 4 replications. Data gathered includes yield, plant vigor, and disease incidence/severity. The hybrid, Martha Washington, had greater yield (117.5 lbs/plot) and total fruit number (261.8 fruit/plot) over the entire season as compared to any of the heirloom varieties (Table 1). This was an anticipated outcome as the heirloom tomato varieties are grown for their fruit quality characteristics as opposed to yield. Increased yield is frequently one benefit of using hybrids. However lower yields of heirlooms can be offset by higher prices as the current demand for them exceeds the supply in most areas (UK CES, 2009). Fruit of Martha Washington were smaller than most of the varieties in the trial (Table 1). Amongst the heirloom varieties, Rose had greater yield (69.8 lbs/plot) than five of the other eight varieties but a similar trend was not present in the total number of marketable fruit (80.8 fruit/plot) (Table 1). The lower fruit number of Rose while having high yield is likely a result of the large average fruit weight (0.85 lbs) (Table 1). Other varieties not significantly different with respect to yield as compared to Rose include: Brandywine, Pruden's Purple, and Moskvich. Although there are statistical differences amongst varieties regarding yield, it is apparent that heirloom vegetables varieties selected for cultivation are not chosen solely based on yield. In fact the fruit quality, including taste, color, and texture are more important. Having a diverse selection of tomatoes to sell as a commercial producer might be a better marketing option. If looking for both a combination of yield and for an organically produced tomato, the aforementioned varieties could be possible options.

L-43-EVALUATING CORN HYBRIDS IN A LATE PLANTING OR DOUBLE CROPPING SITUATION

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Corn prices have shown a long term upward trend due to the new federal ethanol requirement. Tattnall County corn producers also receive an average $0.70/bushel premium on locally delivered corn to Claxton Poultry, a local poultry integrator. Tattnall County has a large amount of irrigated cropland planted in Vidalia Onions that are not harvested until mid-April through May, past the traditional corn planting window. Traditionally, onions are followed by soybeans, peanuts, or cotton, but an increased interest in planting late corn has been shown by producers due to high prices. In 2011, 8 corn hybrids were planted and evaluated based on yield. The trial is was planted on May 23, 2011 in six 36" rows X 500' long plots, each variety was replicated 3 times. In 2012, 9 corn hybrids were evaluated based on yield, and *Exserohilum turcicum* (Northern Corn Leaf Blight) and *Puccinia polysora* (Southern Corn Rust) incidence. In 2011, hybrids 2023, 31P42, and 6697 were statistically better than the trial in terms of bushels/acre. In 2012, hybrids 6209, and 6469 were statistically better in terms of bushels/acre. This study suggests that variety selection is critically important for double cropping corn behind Vidalia onions. Although hybrids have variable differences in disease resistance, selection of variety shouldn't be based solely on a hybrids resistance to a disease.

L-44-YIELD RESPONSE OF WHEAT FOLLOWED BY DOUBLE-CROPPED SOYBEANS WHEN WHEAT IS FERTILIZED WITH POULTRY LITTER AND COMMERCIAL NITROGEN FERTILIZER

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Alabama farmers commonly use poultry litter pre-plant to fertilize wheat but there was no research- based information on the yield response of wheat fertilized with litter or the yield of soybeans planted behind this wheat. The objective of this 2010-2012 study was to compare the yield response of wheat followed by double cropped soybeans when wheat was fertilized with different poultry litter and commercial nitrogen fertilizer treatments. The study was conducted in north Alabama on non-irrigated plots with initially high levels of P and K. Ammonium nitrate was used as the commercial N fertilizer. Treatments were applied to the same plots for 3 consecutive years. There were 5 fertility treatments with 4 replications/treatment arranged in a RCB design. The 5 wheat fertilizer treatments were as follows with the abbreviated name for each treatment in brackets{}:(1). 2 tons litter/A pre-plant {L} (2). 2 tons litter/A pre-plant + 1.5 tons litter top-dress/A {LL} (3). 20 lbs. commercial N/A pre-plant + 80 lbs. commercial N/A topdress [C] (4). 2 tons litter/A pre-plant + 40 lbs. commercial N topdress [LC] (5). 100 lbs. commercial N pre-plant as a N rich strip [NRS]. No wheat yields were obtained in 2010 due to poor stands caused by cold weather and Hessian fly confounded wheat yield results in 2012. Wheat yields in 2012 were significantly greater in the 3 litter treatments (P>F=0.008, LSD 0.1= 7.5) (yield range = 32.6 to 37 bu/A than in the 2 commercial N treatments (yield range=14.5 to 25.5 bu/A) During 2011 the L treatment yielded significantly less (P>F=0.0027, LSD 0.1= 9.8) wheat (86.4 bu./A) than the other 4 treatments (yield range = 91.7 to 100 bu/A) . There was no significant effect on soybean yields with respect to fertility treatments in 2010 with drought conditions (P>F= 0.71) (yield range = 13.8 to 16.2 bu/A) or in 2012 with abundant rainfall (P>F=0.41) (yield range = 43.7 to 50.6 bu/A), but all 3 litter treatments had significantly greater soybean yields (P>F= 0.0027, LSD 0.1= 4.42) (yield range=33 to 35.5 bu/A) than the 2 commercial N treatments in 2011 with moderate rainfall (yield range= 23.9 to 28 bu/a). Soil samples taken in plots during June of 2011 following two applications of all treaments revealed that levels of P2O5, K2O, calcium and magnesium in all 3 litter treatments were either statistically greater or numerically greater than that in the two commercial N treatments. Also, the pH of 6 in the NRS treatment was significantly lower (P>F= 0.0052, LSD 0.1=0.18) than that in the other 4 treatments (pH range=6.3 to 6.4).

L-45-EFFECT OF COW SIZE ON EFFICIENCY

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In order for beef producers to achieve maximum profit, it is necessary for their cows to produce one calf per year and rebreed with the least amount of input. The cows need to meet a specific average percent of their body weight when compared to their calves' adjusted 205 day weight. If this percentage is too low, the cow is putting too much input into her own maintenance and not enough toward producing milk for the calf. If too high, she has difficulty re-breeding. Three

herds were randomly selected and tracked for a period of three years. Cow weights were taken the same day as the calves' 205 day weights. No creep feed was fed to calves and no supplements were fed to cows. Significant fluctuations were found in cow weights each year due to drought but it was discovered that for cows raising heifers, percent body weight needed to be. between 39% and 44% and for cows raising bulls, percent body weight should be between 44% and 49% in order to reach maximum efficiency. If cows had too high a percentage, greater than 60 percent, they did not rebreed easily and most of those were younger cows. If too low, she did not recover the cost of her production input. It takes about 5 years of additional production for a producer to recover their cost of developing a cow. If she is sold before then, for any reason, producers lose income. This information is necessary for beef producers so they can be more efficient, due to the continuing rising costs of production.

L-46-ON-FARM EVALUATION OF TWIN-ROW CORN AND SOYBEAN IN SOUTHERN MINNESOTA

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In a twin-row system, crops are planted in row pairs six to eight inches apart, while 30 inches separates the center of the row pairs. It has been theorized that planting crops in twin rows may result in higher yields since plants are spaced more equidistantly, compared to when crops are planted in 30-inch rows. This study was initiated to determine:

1. if corn *(Zea mays)* and/or soybean *(Glycine max)* yield could be increased by planting in twin-rows compared to 30-inch rows and
2. if the response to planting population differs in twin rows compared to 30-inch rows.

Replicated trials were established by Welcome (2010 to 2012) and Wilmont, MN (2010 and 2011) with two producers who had been planting crops in twin rows for a number of years. Twin rows were compared to 30-inch rows at 3 planting populations in corn (33,000, 38,000, and 43,000 live seeds/ac) and soybean (100,000, 140,000, and 180,000 live seeds/ac). Stand counts were taken after emergence in both crops and again in soybean prior to harvest to determine percent stand loss. At harvest, grain yield and moisture were recorded for both crops and stalk lodging and test weight were also recorded for corn. Results were analyzed by ANOVA and means separated by using Fisher's Protected LSD at the 0.05 significance level. Soybean yield was not affected by row spacing or the interaction between row spacing and population. Corn yield was affected by row spacing one of five site years, where the greatest yields were found in twin rows at the highest population. These results are similar to previous trials conducted in southern Minnesota in 2003 and 2004 where no clear yield advantage was observed for corn or soybeans planted in twin rows compared to 30-inch rows.

L-47-BUCKHORN PLANTAIN CONTROL IN HIGH MOUNTAIN PASTURES

Allan Sulser, Utah State University Cooperative Extension

Buckhorn plantain (*Plantago lanceolata* L.) is a weed with increasing significance in Wasatch County, Utah. It competes for soil nutrients, water, and light and crowds out desirable plant species. Reduction of desirable plants species decreases forage yield and increases management costs for livestock producers. Initial observations in 2011, using spring applications of herbicides where buckhorn plantain is listed as controlled on the label demonstrated control of 35% with chlorsulfuron, 65% control with metsulfuron, 35% control with triclopyr, 95% control with a tank mixture of 2,4-D amine and dicamba, and 90% control with 2,4-D amine. Control estimates were completed using a random sampling technique of tossing a quarter square yard quadrat, 10 times in each treated section on monthly intervals for three months following application. In 2012 a field trial was conducted to evaluate chemical control of buckhorn plantain with chlorsulfuron, metsulfuron, 2,4-D amine, dimethylamine salt of dicamba, chlorsulfuron + dicamba, metsulfuron + dicamba, chlorsulfuron + 2,4-D amine, and metsulfuron + 2,4-D amine. The experiment was designed as a randomized complete block with individual plots measuring 10 by 30 feet. Treatments were replicated four times. Herbicides were applied on May 14, 2012, when buckhorn plantain was in the early rosette stage, approximately 1-2 inches in diameter. All treatments were applied using a CO2-pressurized backpack sprayer calibrated to deliver 18 gpa at 35 psi. The objective of the trial was to determine which herbicide would be most effective in controlling buckhorn plantain and which would be most economical. Visual ratings showed metsulfuron and metsulfuron mixtures to be most effective in controlling buckhorn plantain in irrigated pasture. No significant visual symptoms were observed on the pasture grasses in this study from any treatment. Buckhorn plantain populations were reduced most significantly by metsulfuron and metsulfuron combinations. However, significant reductions in weed populations were not observed until 59 days after treatment and weed populations in treated plots were increasing by 92 days after treatment. Metsulfuron and metsulfuron mixtures were the least expensive herbicide treatments evaluated in this study. The current per acre cost for metsulfuron alone was only 33% ($5.29) of the average cost per acre ($15.36) of all herbicide treatments evaluated. Metsulfuron + dicamba cost was $9.00 per acre or 59% of the average herbicide treatment in this study.

L-48-STRONG WOMEN, HEALTHY HABITS FOR THE 21ST CENTURY

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The University of Idaho Extension developed an aerobic exercise, strength training and nutrition program that targeted women over the age of 40, when muscle mass begins to decrease. This audience can experience bone loss and heart problems at a rate much greater than men of similar age. The American College of Sports Medicine recommends that adults include strength training as part of a comprehensive physical activity program. The University of Idaho Extension addressed this situation by having certified instructors provide strength-training and aerobic exercise classes over a six-week period, with two classes being held each week. The class helped women to make healthy changes in lifestyle (physical activity, fitness, eating) habits. Participants gained skills and habit building techniques that encouraged them to take charge and become active partners in their health. Community partnerships with hospitals and local physicians was utilized to help recruit women for the classes. Women with heart and bone health problems and the desire and ability to become more active for a healthier life were enrolled. Data was collected from a pre/post survey on eating habits and physical activity. The data collected from each class included attendance numbers and a strength-training log. Each strength-training record sheet contains a list of the exercises and participants recorded the weights that they used, the number of repetitions they completed, and the exercise intensity (using a five-point scale). Results of the program are many of the participants gained or maintained bone mass, increased cardiac health with the program and established a regular and consistent time for physical activity to increase and maintain bone and heart health. The program uses a modified Strong Women resistance and heart healthy curriculum, along with the "ChooseMyPlate" dietary recommendations. Through resistance training and aerobic exercise, participants received instruction on the appropriate levels of physical activity to increase muscle strength, maintain healthy bones and heart health. Data was gathered from participant responses to a pre-post nutrition survey and physical activity inventory. Pre and post data: Eating habits: The amount and type of food consumed from the various food groups was analyzed. There were no major changes in eating habits over the 6-week period. The biggest change occurred in milk/yogurt consumption, increasing from 1.4 to 2.0 cups/day. Grain, fruit, vegetable, meat & beans intake remained constant. Physical activity habits: There were improvements in all physical activity behaviors. The increase in the number of people who enjoyed physical activity (from 33 to 41%) is reflected in the increase number of people who met the recommended 30 minutes/day of physical activity, from 2.0 to 2.9 times/week, and who participated in stretching exercises (from 1.5 to 2.9 times/week) and strength training exercises (from 0.3 to 2.3 times/week). Strength training results: There was a 78-139% increase in weights used for the arm exercises and a 405% increase in weights used for leg exercises from class 1 to class 12. Collaborating agencies: Two extension offices and a hospital were used as sites to deliver the program.

L-49-NUTRITION AND PHYSICAL ACTIVITY KNOWLEDGE OF UANN PARTICIPATING 4TH/5TH GRADE STUDENTS – A PILOT SURVEY

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In the United States, 15% of children aged 6-11 years are overweight (95th percentile of sex-specific BMI for age) and another 30% are at risk for overweight (85th percentile of sex-specific BMI for age). Energy balance is a critical component of weight management and is largely influenced by nutrition and physical activity behaviors, which are dependent on knowledge. The University of Arizona Nutrition Network (UANN) is a statewide collaboration of nutrition and physical activity professionals who work to provide nutrition and physical activity educational trainings and materials to recipients of Supplemental Nutrition Assistance Program (SNAP – formerly Food Stamps), as well as to educators in Supplemental Nutrition Assistance Program Education (SNAP-Ed) eligible schools and neighborhoods. The aim of this pilot study was to measure nutrition and physical activity knowledge in low-income 4th and 5th grade students prior to the opportunity to participate in UANN programs during the school year. We hypothesized that the majority of surveyed 4th and 5th graders (> 70%) would know the recommended amount of fruits (1.5 cups), vegetables (2 cups), and whole grains (1/2 of all grains consumed) that should be consumed, as well as the minimum amount of physical activity (60 minutes) that is recommended to meet the US Dietary Guidelines and Physical Activity Guidelines for elementary school age children. UANN programmatic teacher lists were used to randomly select 8% of 4th and 5th grade classrooms (n=46) that participate in SNAP-Ed via UANN programs in five counties (Cochise, Maricopa, Pima, Pinal, and Santa Cruz). A minimum output of two classrooms per UANN operating unit was forced into the randomization model. Descriptive statistics were computed for student demographics and the knowledge questions related to fruit, vegetable, whole grain, and physical activity questions. A one sample binomial test was used to compare accuracy of the four knowledge questions to the a priori target of 70% accuracy. Thirty three (71.7%) classrooms completed the surveys. Thirteen classrooms did not participate for one of the following reasons: nonresponse to study invitation (n=8), decline of participation (n=3), or the inclusion criteria were not met (n=2). The surveyed classrooms netted 781 students, of which 98.6% (n=770) completed the survey. When compared to USDA MyPlate recommendations, less than one in five students knew how many cups of fruits and vegetables should be consumed (19.5% and 18.5% respectively) and only 23.0% of students knew what portion of consumed grains should be whole grains. Additionally, only 36.6% knew the physical activity recommendation. In all cases, the percentage who knew the fruit, vegetable, whole grain, and physical activity recommendations was significantly different from the target 70% ($p<0.001$). The results of this pilot indicate a need for continued education in this population to increase their awareness of the current recommendations for good health. Future research will evaluate nutrition and physical activity behaviors and evaluate the relationship

between knowledge and reported behaviors in this population. Additionally, regional differences will be evaluated.

L-50-ORGANIZING A COMMUNITY 'BIGGEST LOSER' WEIGHT LOSS CHALLENGE

Kristin Jensen, University of Idaho Extension

"We know more now than we did then!" Due to technological advances in the steps used to gather information, the greater population demand current material in all areas of education. In the health and fitness field, individuals are continually searching for the "magic pill" that will help them have a better quality of life and live longer than the generation that came before them. Society relies on health professionals to an even greater extent to disseminate current researched-based education. As an Extension agent, we not only provide information and education in our field of expertise, but we are continually challenged to stay current in the latest research. Information obtained from the National Health and Nutrition Examination Survey (NHANES) showed an estimated 2/3 (68%) of American adults are overweight (Body Mass Index [BMI] ≥ 25) or obese (BMI ≥ 30), and an estimated 23 million children are either overweight or obese. A community 'Biggest Loser' weight loss challenge has been developed and implemented for the past five years in rural Idaho. This challenge addresses the lack of educational programs in the areas of healthy lifestyles, physical activity and healthy nutritional choices. Since 2009, 47 men and 541 women have participated - 32% completing the full program. During the weight loss challenge participants were evaluated through pre-post weigh-ins, body fat measurements, cardiovascular fitness, muscular strength, and muscular endurance assessments. Pre-post surveys designed by the Extension Educator were administered during educational presentations. In addition, an Internal Review Board approved a three month follow-up survey to assess the amount and types of actions/behaviors that participants had taken as a result of attending educational presentations. Survey results, community impact, and overall data will be shared with session attendees. Workshop attendees will learn how to effectively organize and administer a community weight loss challenge targeted towards rural communities. Challenge guidelines, point system, marketing tools, fitness assessment, healthy lifestyle educational topics, and food log will be discussed and examples provided for attendees.

L-51-NOURISH YOUR DIGESTIVE SYSTEM

Julie Garden-Robinson, North Dakota State University Extension Service

This poster will build the capacity of Extension professionals in the area of nutrition and health. "Nourish Your Digestive System", which is part of a "Nourish Your Body" series of lessons, is a train-the-trainer program designed for Extension agents and other community educators to deliver to adult audiences in community settings. Digestive disorders are among the most common problems in health care today. About 30 to 40 percent of adults say they experience frequent indigestion, and more than 50 million visits are made every year to health-care facilities for digestive system issues. Digestion is the process of breaking down the food we eat into smaller particles that the body can use for energy. The digestive process can be affected by a poor diet, inadequate exercise, stress, and irregular meals, among other factors. Suffering from heartburn, diarrhea, constipation and excess gas does not have to become the norm; in fact, these are all signs that the digestive system is not functioning properly. For example, a diet high in fat and protein may cause digestive upset. Foods

such as broccoli, cauliflower, carbonated beverages and baked beans may act as trigger foods for some people. Excess intake of caffeine, alcohol and strong spices may irritate the digestive tract, causing heartburn; and lack of fluids and fiber may lead to constipation. As a result of visiting this poster, participants:

1. will know the general process of digestion;
2. will know the role fiber and water play in digestive health;
3. will know the function of bacteria in the body;
4. will know natural sources and supplementation options of probiotics and prebiotics; and
5. will make plans to modify their dietary and lifestyle choices to impact digestive health.

The teaching kit includes:

1. PowerPoint slides with lay-teacher-friendly script;
2. structured, suggested activities and discussion questions;
3. three peer-reviewed consumer handouts (all available online) and user-friendly standardized recipes featuring photographs; and
4. three questionnaires to measure outcomes (participant, teacher, and follow-up telephone surveys).

Train-the-trainer sessions were held before statewide program release, and trainer input was incorporated into the print materials prior to their release. According to the preliminary evaluation results (n=49, 86% female; 31% ages 41 to 64 and 59% ages 65 and older), 100% of participants indicated they learned something new and 94% planned to share their knowledge with a family member. About 67% planned to eat more colorful fruits and vegetables, 63% planned to drink more water, 53% planned to increase their intake of whole grains, 49% planned to read food package labels more closely, 45% planned to get more physical activity, 47% planned to consume more probiotics from yogurt or similar foods, and 39% planned to eat more natural sources of prebiotics. About 94% rated their understanding of the lesson material "good" or "excellent" and 98% rated the handouts they received "good" or "excellent."

L-52-KIDS IN THE GARDEN

Julie Garden-Robinson, North Dakota State University Extension Service

Childhood obesity remains a topic of concern in the United States. The Centers for Disease Control and Prevention (CDC) reports that approximately 12.5 million children and adolescents aged 2 to19 years are obese. Research shows obese children are more likely to become obese adults, and obesity has been linked to serious long-term health consequences such as high blood pressure, type 2 diabetes and asthma. Gardening has emerged as valuable way to teach children skills, enhance their intake of fruits and vegetables and increase their fitness levels. In addition, growing produce in a home garden can be less expensive than purchasing in a supermarket and can be very rewarding. Children who help in the garden gain self-confidence, a sense of responsibility and an appreciation of growing food. Children are more likely to try new fruits and vegetable they helped grow, which helps promote the U.S. Dietary Guidelines/MyPlate messages to increase fruits and vegetables. A diet rich in fruits and vegetables has been shown to reduce the risk of obesity, heart disease, diabetes and certain types of cancer. "Kids in the Garden" is a newly developed eight-lesson curriculum highlighting the benefits of gardening and the consumption of fruits and vegetables.

This session will build the capacity of Extension professionals in the area of nutrition and health programming for children and families, with potential use in 4-H Cloverbud programming, junior master gardening programs, and work with a variety of Extension audiences, including participants in Head Start. The peer-reviewed curriculum, based on a collection of published children's books, engages preschool-aged children and their parents/caregivers in lessons about seeds, roots, leaves, stems, flowers and vegetables. The lessons feature hands-on gardening activities, art activities and preparation of simple recipes using picture-based recipes. Parents received a weekly newsletter with information about gardening, nutrition and food preparation. In the pilot project, 13 families completed the lesson series and the pre/post surveys. All (100%) of participants indicated that growing their own food was a healthier alternative to buying it, 85% stated they enjoyed gardening with their child/ren, and 69% of participants reported reading the gardening newsletter. About 92% of parents/caregivers reported that their child talked about gardening, 69% of families grew a garden or container garden at home, and 85% reported their child talked about the gardening activities. On a 1 to 6 scale (6 = highest), parents rated their agreement with the statement "gardening is economical" a score of 4.62 on the post-survey, compared to 4.13 on the pre-survey. They rated the statement, "growing food is a healthier alternative," a score of 5.38 on the post-survey, compared to 5.07 on the pre-survey. They rated the statement "I enjoy gardening with my child/ren" a score of 4.54 on the post-survey, compared to 4.2 on the pre-survey.

L-53- RECIPE FOR GROWING HEALTHY CHILDREN

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Christina Ferroli, Purdue Extension
Inger Friend, Purdue Extension
Lisa Graves, Purdue Extension
Annette Lawler, Purdue Extension
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The percentage of overweight children less than 5 years old continues to increase in Indiana. Overweight children are at greater risk of health problems including high blood pressure, high cholesterol, and Type 2 diabetes than children of a healthy weight. In Indiana, over 322,000 children under the age of six are in child care. To ensure an optimal feeding environment and the availability of healthy meals and snacks, training for the providers that feed children in child care is necessary. Purdue Extension partnered with the Indiana Department of Education to offer 19 child care culinary workshops throughout Indiana in June 2009 reaching 470 child care providers using the RECIPE for Growing Healthy Children resource materials. The resources were developed as part of a USDA Team Nutrition Training Grant. RECIPE for Growing Healthy Children introduces child care providers to six positive practices that can transform a child care program from "feeding children" to "growing healthy children". The six positive practices include: Role modeling by adults when with children during meals, Environmental elements that are influential, Creating new menus, Involving children, Partnering with parents, and Enjoying mealtimes. According to the follow-up surveys from the 2009 workshops, all of the desired outcomes were being implemented by child care providers across Indiana. 31% of participants reported implementing family-style dining and another 28% planned to do so. 77% percent of participants tried at least one new recipe after attending the workshop and 16% planned to do so within three months following the training. When participants were asked what changes they had made since attending the workshops, 35%

reported they had provided more fruits and vegetables and less juice. Whole grains options were being added to menus and high fat/fried meat options were offered less frequently. Although RECIPE for Growing Healthy Children directly engages child care providers and equips them with the knowledge to offer healthier meals and snacks in a positive mealtime environment to the children they serve, the turnover in child care staff in our state is high creating a continual need for training. Purdue Extension Educators realized the need to re-design the RECIPE materials to allow local educators the flexibility to present the information in a format that will best meet the needs of the local provider. A team of University and county-based staff secured funding to re-design the curriculum and evaluation tools, create marketing tools, and provide training for 35 Extension Educators in Indiana to meet local needs. County-based staff can design training to meet local needs using the re-designed curriculum. Local trainings can be taught as one hour RECIPE "combo" lessons or a series of one hour lessons. Online video resources were included to enhance the teaching materials. The RECIPE training is now available as a free resource online for individuals to access to develop personal knowledge or skills, for use in child care staff training, and for Extension professionals to utilize in training.

L-54- DIABETES 101

Sue Flanagan, West Virginia University Extension

An estimated 7 million people in the United States have diabetes or pre-diabetes and are undiagnosed. According to some experts, the estimated global prevalence of diabetes has risen from under 50 million in 1980 to 225 million in 2010 and predicted to climb over 300 million by 2025. Extension agents are positioned to create awareness of the disease and encourage audiences (and themselves) to make basic changes to postpone the effects of the disease as well as help those with the diagnosis to manage the disease. This condensed version of Dining with Diabetes was developed as an innovative way to present information about diabetes and food preparation in a one-time setting. It was presented to school cooks during a county in-service to increase their knowledge of diabetes, to address the needs of students in their school who have either Type 1 or Type 2 diabetes, and to recognize that altering a recipe could affect those students. Using materials from the American Diabetes Association, participants were also able to assess their risk of developing type 2 diabetes. An overwhelming number of participants (94%) agreed they learned new information and 99% felt they could use the information they learned. The PowerPoint presentation includes information about symptoms of diabetes, the difference between Type 1 and Type 2, and basic nutrition as relates to diabetes, specifically carbohydrates but also sodium and fats. Stressing the importance of portion control in meals and encouraging daily physical activity are significant parts of the presentation. For the wider audience, this course could be used in numerous settings for community classes and as recruitment for more in-depth classes, such as Dining with Diabetes. The information could be useful personally for Extension employees at high risk for developing diabetes as motivation for initiating lifestyle changes.

Targeted outcomes are:

1. an increase in knowledge of diabetes, symptoms, and possible effects
2. an increased awareness of how foods and preparation methods affect diabetes management
3. an increase in ability to read food labels for carbohydrate, sodium, fat, and fiber content and
4. an increased cognizance of the importance of physical activity in diabetes management.

Attendees can receive course outline, PowerPoint, and speaker notes, including recipes and cooking tips, upon request.

L-55- DINNER TONIGHT

Tiffany Traylor, Texas A&M AgriLife Extension Service
Carrie Brazeal, Texas A&M AgriLife Extension Service

The Competency Building/Program Development Report presentation that is being submitted for consideration at the Galaxy conference is Dinner Tonight. The Dinner Tonight concept was created in 2008 by a team who were interested in expanding outreach opportunities through technology and bringing Extension into the new era. There are 15 team members on the Dinner Tonight taping team that tape twice a year and demonstrate 2 recipes each taping. The Dinner Tonight cooking demonstrations are limited to 3 minute segments. Each Monday, a video demonstration, featuring a quick and healthy recipe, is released for the public to view with 51 being released in 2012 and 1015 followers on the Dinner Tonight Facebook page with 38,633 visits to the website; 18,049 of those were unique visitors. The Dinner Tonight Healthy Cooking Schools are a method of expanding the current Dinner Tonight Program and offer a face-to-face educational method to teach families about meal planning and healthy food preparation. While there are many groups that conduct cooking schools, we believe the Dinner Tonight Healthy Cooking School has a unique niche. Our demonstration recipes are cost effective, easy to prepare, and fit into a healthy meal plan. Agents and their volunteers will decide how to handle distribution of recipes. There is a Dinner Tonight Recipe Publication that contains 12 different weeknight meals to choose from when selecting demonstrations for the event. The target audience is busy people who still want to make time for meal preparation and feel good about what they are feeding themselves and their family. Our goals are to promote family mealtime, teach families healthy meal planning and food preparation techniques, and promote Texas agriculture. There is potential to reach 100 to 200 people through each of these cooking school events. The basic framework for the event is outlined below:

- Length – The actual cooking school will take approximately two hours.
- Social Event – The idea behind the event is to teach people in a fun and social setting.
- Demonstration Content – Agents will demonstrate two to three healthy weeknight meals.
- Celebrity Chefs – If agents choose to do so, a local celebrity chef could be asked to do a guest cooking demonstration or to demonstrate some food preparation techniques.
- Panel of Tasters – Due to the potential large audience, food safety, and food allergy concerns agents should not prepare samples of each dish.

Seven successful cooking schools were conducted in 2012, reaching 927. The events were held in rural and urban locations. Dinner Tonight Foodie Groups are a spinoff from the videos and cooking school. These volunteer-led groups meet monthly to combine their love of food and cooking while learning healthy food preparation. This concept will be presented to the audience by introducing the program and answering questions on how to implement the program in their area. Participants will be given information on how to obtain implementation guides online and a handout with basic information will be given to all in attendance.

L-56- PREVENTING EARLY CHILDHOOD OBESITY BY TEACHING HEALTHY EATING AND PHYSICAL ACTIVITY TO PRESCHOOLERS, CHILD CARE PROVIDERS, AND FAMILIES: LESSONS LEARNED FROM THE EAT HEALTHY, BE ACTIVE INITIATIVE

Diane Bales, University of Georgia Cooperative Extension
Charlotte Wallinga, University of Georgia Cooperative Extension

Childhood obesity is a global health problem with well-documented consequences, even for preschool-age children. Parents, child care providers, and Extension professionals play crucial roles in preventing obesity by shaping children's eating and physical activity habits during early childhood, when children are forming lifelong habits. This poster will highlight the Georgia Eat Healthy, Be Active initiative, designed to prevent early childhood obesity through a three-pronged approach:

1. hands-on activities to teach key concepts of nutrition and physical activity to 3- to 5-year-olds in child care settings through art, music, dramatic play, math, science, outdoor play, and children's literature;
2. support for child care professionals through in-service training taught by Family and Consumer Sciences agents and through the availability of resource kits with materials to support activity implementation; and
3. information and hands-on ideas for families to reinforce nutrition and physical activity concepts at home, including newsletters, take-home backpack activities, and family night workshops.

All components of Eat Healthy, Be Active focus on five key nutrition or physical activity concepts that are appropriate for young children: eat breakfast, eat a variety of foods from MyPlate, stop eating when full, drink water, and be physically active. Hands-on activities are organized into a three-week curriculum plan organized around these key concepts. Child care providers are encouraged to select activities that best fit the developmental abilities, needs, and interests of the children in their classroom or family child care home. Child care providers are also encouraged to involve families in childhood obesity prevention by sharing informational newsletters and tip sheets, by hosting family night workshops to introduce families to key early nutrition concepts such as healthy snacks and handling picky eaters, and by creating and sharing family backpacks with hands-on activities related to nutrition and physical activity that families and children can complete together at home to extend their learning. Extension professionals play a key role in Eat Healthy, Be Active by providing in-depth, multi-session training to prepare child care providers to implement Eat Healthy, Be Active. Extension professionals must complete in-service training to prepare them to teach the activities to child care providers. The poster will also highlight findings from an in-depth evaluation of Eat Healthy, Be Active that compared knowledge of childhood obesity, implementation of activities, and changes in provider behavior and children's knowledge of healthy eating across experimental and control groups before and after the Eat Healthy, Be Active training. Key evaluation findings include increases in child care providers' knowledge of their role in childhood obesity prevention in the experimental group; the need to expand and reorganize activities to make them easier to use in the child care setting; and the need for more in-depth training that includes hands-on practice with specific activities in order to make changes in child care providers' practices. Examples of hands-on activities and informational family newsletters will be shared.

L-57- COWBOYS GET HEALTHY, GET FIT

Barbara Tricinella, Oklahoma Cooperative Extension Service
Dina Cundith, YMCA of Greater Tulsa
Colony Fugate, Oklahoma State University Health Services
Sara Malone, Oklahoma State University Health Services

The 12 week CGFGH program was designed for overweight youth ages 10 - 16 and met weekly in the late afternoon. Potential participants were referred from area Pediatric and Family Medicine medical practices. A group of 16 participants enrolled and completed the initial pre-session fitness testing. During the 12 week program, participants were given a membership to the YMCA for additional access to facilities for exercise. Each week the program began with a family walk for 30 minutes. Following, the youth worked with YMCA fitness professionals to explore a variety of physical activities including: yoga, pilates, spinning, group games, water aerobics, circuit training, etc. While the youth exercised, the parents were involved in a healthy lifestyle program taught by a dietitian and EFNEP educator. Topics for the families included: Setting Smart Goals for your Family - 5-2-1-Almost None, 24 Hour Food Recalls, My Plate, Planning Ahead, Healthy Snacks, Food Labels, Shop-Get the Best for Less, Smart Sizing Portions, Eating Out, Food Safety, Fruits & Vegetables. Food Demonstrations were conducted for the parents. The youth also had an abbreviated nutrition topic each week. A pre and post Family Nutrition and Physical Activity Questionnaire was administered to assess changes in lifestyle habits. The 20 question tool evaluates: family meal patterns, family eating habits, food choices, beverage choices, restriction/reward, screen time behavior and monitoring, healthy environment, and family activity involvement. The greatest improvement in reported lifestyle behaviors related to the following: family eating habits, reduction and monitoring of screen time and family activity involvement. Improvement in family eating habits reflects increased use of family meals and eating without the distraction of TV. At the conclusion of the twelve weeks fitness testing was again done. Aerobic fitness levels improved in 100% of participants. Core strength using curl ups increased 100%. Flexibility using a sit and reach test increased in 88% and BMI stabilized or decreased in 88% or participants. Child activity involvement was an area of weakness. Limited financial resources for participation in extracurricular sports is a potential barrier in this population. The attendance rate ranged from 58% - 92%.

L-58- WHY BE SAD? HOW TO BEAT THE WINTER BLUES

Jane Riffe, West Virginia University Extension
Eric Murphy, West Virginia University Extension
Dave Roberts, West Virginia University Extension

Untreated and undiagnosed depression is a major health problem, with millions of Americans suffering more than necessary. According to the Centers for Disease Control, 1 in 10 American adults are suffering from depression, which negatively impacts their relationships at work and home.1 In fact, the costs of untreated depression are astronomical, totaling over $51 billion in absenteeism from work and lost productivity, according to Mental Health America.2 Given that

there are effective treatments for depression, Extension educators could make a contribution by disseminating educational information on this topic. West Virginia University Extension faculty piloted a single session program Why Be Sad? during 2012 to address the high rate of depression among WV adults and adolescents. The program focused on seasonal affective disorder, a topic more acceptable to audiences than depression. Evaluation results of adult and senior audiences (CEOS, formerly Extension Homemakers) showed participant gains in knowledge and intention to share the information with family members or friends. Class Description Every year, as the days grow shorter, many experience depressed mood and low energy. This train-the-trainer class will equip you to introduce this important topic. As a result of the session, you will be able to teach others 1) the causes of seasonal affective disorder (SAD), 2) how to recognize SAD in oneself or a family member, and 3) provide information on current science-based treatments to ease depression and lift mood. The educational package includes a PowerPoint, a depression self-assessment tool, and handouts, and links to additional web resources. The class introduces simple mindful movements and mental and physical strategies to lift mood. The class includes information on light therapy, exercise, and counseling and medication to ease seasonal depression. Workshop attendees will receive all materials necessary to replicate the class. Target audience: Adults, general community audiences Expected learner outcomes from Why Be Sad? include:

- Increased knowledge about causes of Seasonal Affective Disorder (SAD)
- Increased knowledge of evidence based treatments for SAD
- Increased confidence about teaching this information with others, and
- Increased knowledge of web resources on depression.

References:

1) Mental Health America. Depression in the Workplace. Retrieved January 14, 2013 at http://www.nmha.org/index.cfm?objectid=C7DF951E-1372-4D20-C88B7DC5A2AE586D

2) Centers for Disease Control. An Estimated 1 in 10 U.S. Adults Report Depression. Retrieved January 14, 2013 at http://www.cdc.gov/features/dsdepression/

L-59- MAKING FRESH MOZZARELLA

Julie Cascio, University of Alaska Fairbanks Cooperative Extension Service

Eating nutritious foods and living sustainably are popular concepts that are being put into practice in our communities. One of the outcomes is that individuals may keep a few goats or have shares in a cow. From this source they get more milk than their family can drink. To help individuals begin to learn some ways to use this excess milk, classes in creating products such as mozzarella cheese are offered. Individuals who are interested in eating local and making their own food are also interested in learning this technique. While making use of extra milk at home for other dairy products such as cheese was common in our agrarian past when people lived isolated from each other, this practice changed from a home process to a commercial one in the past century. This session is for those interested in learning how to teach a class on making fresh cheese for personal consumption. Concepts taught in the class include reasons to pasteurize milk, safety and sanitation issues involved when making fresh cheese from milk, the importance of using an accurate thermometer, ingredients used in making cheese such as rennet and citric acid, and techniques for making mozzarella. When participants in cheese making classes were surveyed six

months after the class, those with goats or a share in a cow who had excess milk had made cheese on a regular basis. Ten percent made cheese with their children. Sixty percent of participants had not made the cheese since class but appreciated learning the skill. An understanding of the cost in time and money of making cheese from scratch was one of the outcomes of these classes.

L-60 - BRIDGING THE GAPS IN NUTRITION EDUCATION THROUGH EXTENSION COMMUNITY PARTNERSHIPS

Ginny Hinton, University of Florida/IFAS Extension
Vickie Mullins, University of Florida/IFAS Extension

In Santa Rosa County, Florida, nutrition education and obesity prevention are accomplished through joint efforts by the UF/IFAS Extension Service, Sodexo School Food Service, the Santa Rosa County Health Department and Santa Rosa County schools. In addition to using traditional stand-alone programs, each agency participates as a part of the greater whole to broaden the scope and increase the impact of nutrition programming. Such collaboration by agencies with county-wide impact is vital to the new era of Extension programming. Objectives: One objective of the partnership is to increase student knowledge of good nutrition as measured by a pre/post test. Another is to increase knowledge and encourage behavior change in adults through family-based education. The third objective is positive environmental/policy change, measured by recognition through the Healthy US Schools Challenge (HUSSC) and the Florida Department of Agriculture's Healthy School District Award. Methods: The Extension Family & Consumer Sciences (FCS) agent coordinates with the Sodexo dietician to provide experiential, evidence-based nutrition education to first, third and fifth grade students in 14 schools. Program Assistants from both agencies work to coordinate, implement and evaluate nutrition programs and 4-H offers after-school nutrition education classes. Family education is provided through nutrition newsletters and parent-night events, where families participate in interactive nutrition stations provided by 4-H, FCS, Sodexo and the health department. Each partner agency works with the schools to implement policies that promote healthy lifestyles. Agencies share their efforts through the School Health Advisory Council in order to reinforce gains and avoid duplication. Results: Students who received nutrition education showed increased knowledge on post-tests and scored higher on pre-tests than students who did not receive the education the previous year. Parents who attended events indicated knowledge gain and a majority indicated that they planned to change behavior. Santa Rosa was recognized by the Florida Commissioner of Agriculture for having 14 schools out of 47 statewide to receive HUSSC awards. In 2012, more Santa Rosa County schools received the HUSSC Gold Award of Excellence than any other county in the state of Florida. Conclusions: Interagency partnerships facilitate the combination of resources, avoid duplication, and increase the scope and impact of nutrition education.

L-61- PASCO HEALTHIER US SCHOOL CHALLENGE - IT TAKES A VILLAGE!

Betsy Crisp, University of Florida/IFAS Extension

Pasco Healthier US School Challenge - It takes a Village!(Developing Community Coalitions)Intro: Nation-wide, childhood obesity has tripled over the past thirty years. As of 2008, more than one third of children and adolescents were overweight or obese. Southern states have a higher incidence. Overweight and obesity are the result of "caloric imbalance"—too few calories expended for the amount of calories consumed—and are affected by various genetic, behavioral, and environmental factors. If action is not taken, this condition carries over into adulthood.

Objectives: To build a strong team to work to reduce childhood obesity in Pasco County, FL. To improve the health of elementary students in five Pasco schools through nutrition education and increased physical activity.

Methods: A strong team of community agencies/organizations was formed that included Extension Family & Consumer Sciences Agent-coordinator, three program assistants from UF Family Nutrition Program who provided nutrition education lessons, three Culinary Chefs Association chefs who held taste-tests of Florida commodities featured in UF/FDACS Fresh 2U posters, UF Master Gardeners established school gardens with sponsorships from several community groups (parent groups, VFW, American Legion, etc.)

Results: Five schools in applied for mini-grants from the Florida Department of Agriculture and received $7,000 each to kick-start efforts to take on the Healthier Us School Challenge. A strong collaboration was created in to take on this challenge. Pre-tests were administered in September 2012. School assemblies featuring MyPlate-Organ Wise Guys Style started the new school year and put students on the road to good health. Post-tests will be done in April 2013 after students have completed a minimum of six lessons (and results available for Galaxy). Applications for HUSSC certifications will be completed by June 1st and determined by September 1st.

Summary: The Healthier US School Challenge (HUSSC) in Pasco has provided an opportunity to build a strong team dedicated to reducing childhood obesity. The Florida Department of Agriculture and Consumer Services (FDACS), District School Board, Cooperative Extension (Family & Consumer Sciences, Family Nutrition Program, Master Gardeners), and the Chefs Move to Schools program teamed-up to make a healthy difference in the lives of Pasco children.

L-62- ENJOYING OUR HEALTHY HARVEST

Glenda Hyde, Oregon State University Extension Service

Enjoying Our Healthy Harvest – Nutrition Education Curriculum for 4th graders, from garden to the table. Free. http://extension.oregonstate.edu/deschutes/enjoying-our-healthy-harvest Few family members know how to shop and cook from scratch in today's society. Through classes at high-need schools participants learn how to make better food choices, stretch their food dollars and to handle food safely. The curriculum, Enjoying Our Healthy Harvest was developed to teach proper selection, cleaning and food preparation safety of fresh produce from the farm, farmer's market or grocery

store to the table for classes of mostly low-income youth. Enjoying Our Healthy Harvest suggests using six lessons. The first lesson teaches proper hand washing technique, High-Speed Hand Washing: 28 students can clean hands in 5 minutes or less. The next five lessons focus on one fruit or vegetable each week. A template is included so that additional fruit or vegetable lessons can be added. These additional lessons may be driven by personal preference or regional or local availability. In each of the fruit or veggie lessons participants learn how to select the fresh produce, discover the nutrient-rich properties, clean the produce and do a simple preparation or have a sampling of the varieties of that produce. Additionally, the Grown in Oregon map and activities from Ag in the Classroom Foundation are used to help youth learn about local produce. Curriculum can be adapted to other states. Participants receive a Produce Wheel from the Produce for Better Health Foundation and several nutrition reinforcements. This curriculum is targeted at beginning cooks and students in the 4th grade studying their home states in their social studies curriculum. It also supports some of their writing, math, geography and science standards. Enjoying Our Healthy Harvest can easily be adapted for beginning cooks that are older youth and adults. Delivery methods we used were based on Control Theory by Dr. William Glasser. Control Theory is adapted for educational settings from the Total Quality Management (TQM) concept developed by Edward Deming. Part of Control Theory is that participants experience Quality Learning – an experience that consistently satisfies one or more basic human needs: love, power, freedom, fun and survival. Quality Schoolwork, an application of Control Theory and Quality Learning, meets these six conditions:

1. there must be a warm supportive classroom environment;
2. students should be asked to do only useful work;
3. students are always asked to do the best they can do;
4. students are asked to evaluate their own work and improve it;
5. quality work always feels good and
6. quality work is never destructive.

Using this theory participants learn how to select one fruit or vegetable at each lesson, learn how to clean it, do a simple preparation, and then sample it. Participants can make connections with local garden produce, cooking from scratch, and healthy living with good choices for everyday. Post- then Pre-survey has been developed using knowledge- and behavior-focused questions. Our surveys show that 78% of youth are making at least one positive behavior change in 2012. N=964

L-63- BETTER BITES TO BETTER HEALTH

Diana Doggett, Kentucky Cooperative Extension Service

Obese children are more likely to be at greater risk developing chronic diseases. 35.7% of children in Kentucky consumed at least one sugar-sweetened beverage a day and only 16.7% of school-age students consumed fruits and vegetables five or more times per day. According to **Accelerating Progress in Obesity Prevention,** an Institute of Medicine report, increasing access to healthy food is identified as a key strategy for reducing obesity. The Better Bites project offers promising strategies to combat the obesity epidemic and to make healthy food more accessible and unhealthy food less so in activity centered venues. Fayette Cooperative Extension continues to develop and participate in effective programs and bring diverse partners to the table. The Tweens Nutrition and Fitness coalition is a community based partnership focused upon the health of children 10-13 years

of age utilizing evidence-based areas of intervention to reduce obesity and ensure that students have appealing, healthy choices in foods and beverages. In 2011, Lexington Parks and Recreation partnered to offer Better Bites, a healthier line of concession stand food, at two public pools. Fayette FCS Extension serves as an educator and facilitator providing support services relative to food safety, preparation, pricing, sampling and marketing. The 2011 pilot demonstrated promising results. In 2012, Parks significantly expanded the Better Bites menu at the pilot pools and offered an exclusively healthy Better Bites menu at two pools that have not had concession stands in recent years. The findings from an analysis of Better Bites sales data, observational reports and 154 one-on-one interviews include: In 2010, 17 menu items were sold with water as the only healthful snack. In 2012, 19 out of 31 (63%) items qualified as Better Bites menu items, i.e. fresh fruit, veggie dipper, grilled chicken wrap, yogurt parfait, string cheese, cheese quesadilla, etc. Better Bites sales *more than doubled* from 2011 to 2012, increasing from 9% to 19% of total sales. Candy sales were 23% lower and 67% of youth and 57% of adults have purchased items from the Better Bites Menu. Overall comments about Better Bites from pool patrons, staff, and managers: "Better Bites makes healthy eating convenient, especially for kids." "Better Bites is the beginning of a trend so that people will associate recreational facilities with healthy eating." The Better Bites initiative is expanding to restaurants, schools, and neighborhoods with little or no access to healthy food choices.

NEW COMMUNICATION TOOLS & TECHNOLOGIES

L-64- WHO WANTS TO BE A VEGGIE-NAIRE? AND OTHER GAMES

Mary Keith, University of Florida/IFAS Extension

Eating well leads to better health. The wider variety of produce we eat leads to more benefits. But introducing new fruits, vegetables and whole grains to children can be frustrating, especially if the parents are not able or willing to prepare them. Purchased activities can be expensive and may not exactly fit with the goals or audience of a specific program. Developing games to fit the needs of your audience and your objectives is one way to bridge the gap between 'weird' and 'I like it!' Agents can develop food and nutrition games based on TV shows, modify them from other games, or invent them completely. Games that get children up and moving, rather than sitting in front of an electronic screen, encourage physical activity and are preferable in many situations. Examples of games and activities this Agent has developed and used successfully with preschoolers to 5th graders will be presented, along with the materials lists for classes. The link to an archive of newsletters for parents of preschool children, with food activities to do with them, will be shared. A vegetable identification game based on 'Who Wants to Be a Millionaire?' will be demonstrated. Students chose to take all the leftover samples of raw vegetables home at the end of this game! Activity sheets using produce stickers to Move Along the Path to Health will be shared. After a 26 week program using many of these activities, although pre- to post-class differences in diet histories were not statistically significant, students did self-report eating more fruits and vegetables. They reported trying and now enjoying vegetables they previously did not like. Parents told the Agent things such as "Now the kid is telling me I ought to cook more vegetables." and asked for suggestions for how to prepare healthier meals. Audience participation will be encouraged for others to share their game ideas and discuss how they developed them. Any Extension Agents, FCS or Youth, who teach nutrition and health will go home with new ideas and skills for introducing new foods to children and their parents. Using games is one way to bring new foods to children in a fun and non-threatening format and can excite them into passing their enthusiasm along to their parents.

L-65-GENERATIONS UNITED

Nancy Kershaw, Oregon State University Extension Service

Gen X? Millennial? Boomer? Silent? There are four adult generational groups living, working and volunteering in the United States today, defined by year of birth. Which are you and how is your generation the same or different from the others? Each generational group is a product of the time in which they matured. Influences that shaped each include economic, social and demographic factors. A generation's defining moments include events that capture their attention and emotions at a formative life stage – childhood, adolescence or young adulthood. An old adage is "people resemble their times more than they resemble their parents." Because a generational group shares a place in history and events, images and experiences in common, each develops its own unique personality. We interact with people of different generations/ages regularly through work, in civic/community groups, through volunteer activities, and in families. The more you learn about

each generation and understand their point of view and events that shaped their lives, the better able you are to interact positively. Professionals who understand their own generational traits and those of others with whom they interact are better able to develop programs that are welcoming and comfortable for participants of all ages. Programs developed keeping generational traits in mind better meet the needs of staff, volunteers and participants in each generation. This program introduces participants to the four adult generations and their traits. Participants will understand better why each generation developed a different outlook and traits and tips for communicating and working with each generational group. Participants will be able to: better understand the historical perspective of each generation; better understand the values and communication preferences of each generation; and identify strategies for more effective communication with those in different generations. This understanding will allow participants to tailor their communication style and programs to reach adults of all ages. The program has been used with Extension volunteers and staff; civic and community organizations; professional and business groups; church groups and Family and Community Education (FCE) study groups. The program includes a PowerPoint, teaching/discussion guide, handouts, and IRB approved evaluation.

R-1-SOCIAL MEDIA AS A STUDENT LEARNING ACTIVITY: RESULTS OF A PILOT STUDY

Barbara O'Neill, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

This poster will provide a description of the methodology for this research.

- First, participating teachers were recruited to participate in this project by widely circulating a flyer describing the social media project goals and participation requirements.
- Second, a 3-hour training was provided that covered the project methodology, the content of a personal finance curriculum to be taught to students, and the process of creating Twitter and Facebook messages.
- Third, pre-tests were administered to over 200 students by the participating teachers before instruction began with the curriculum. All of the participating teachers taught personal finance at the high school level. After administering the pre-test, the participating teachers had three to five months to teach the curriculum, have their students create social media messages, and administer a post-test on the curriculum content.
- Fourth, the social media messages were reviewed for content accuracy, grammar edits, and usefulness in financial education [If this workshop is selected, free CDs containing the messages will be distributed to the attendees].
- Fifth, differences between pre- and post-test scores were compared and analyzed to determine the effectiveness of the student-based activity in teaching financial education concepts.

Impact evaluation results will them be shared. All of the participating teachers saw increases in average scores from the pre-test to the post-test and in the percentage of students receiving a passing grade. Quantitative data will be presented. At the same time that the social media messages and post-tests were submitted, participating teachers were sent a follow-up evaluation via e-mail to determine the effectiveness of the project from their standpoint as participants. Below are some comments about the use of social media.

- My seniors created a Twitter account where they posted some of their messages. My freshman and my seniors created a commercial for the school to advertise their site and provide information about financial literacy.
- Grouping students who were familiar with Twitter with those who were not as familiar created a good team dynamic and fostered student learning, not only of personal finance topics, but of teamwork and Twitter.

Access is also provided to two student-created YouTube videos that were used as a capstone assignment in an undergraduate course taught by the presenter.

R-2-NEAFCS EDUCATOR OF THE YEAR - T4: TEN TERRIFIC TECHNOLOGY TOOLS TO INCREASE PRODUCTIVITY AND EXPAND PROGRAM OUTREACH

Barbara O'Neill, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

This poster will provide ten very different technology tools that can significantly increase Extension educators' productivity and enhance their program outreach. Extension personnel in any assigned area of responsibility (county agent, specialist, or administrator) and working in any program area (e.g., agriculture, 4-H, or family and consumer sciences) can benefit. The following ten technology tools will be discussed and demonstrated by the presenter:

- Dual Computer Monitors- An entire day of work a year can be saved by using two monitors: one to access the Internet and the other for e-mail and documents (e.g., Word, PowerPoint). Two monitors eliminate the need to repeatedly minimize files and enables efficient multi-tasking (e.g., creating PowerPoint slides while listening to a webinar).
- Xtranormal Videos- Xtranormal is a Web site where users create short videos involving one or two avatar-like characters. Content developers select characters, voices, gestures, settings, sounds, and camera angles and type the text that characters say.
- eXtension- eXtension features such as frequently asked questions (FAQs), Ask an Expert, learning lessons, and archived webinars are a source of professional development for Extension educators and resources for content users.
- Twitter Messages- Twitter can be used as both a professional development and program outreach tool. With just 15-20 minutes of use per day, it is possible to reach hundreds, even thousands, of people, receive real-time subject matter updates, and use metrics exist to evaluate effectiveness.
- YouTube Video Resource Guides- Extension clientele appreciate easy to use and understand resource links. Extension educators add value by reviewing videos and compiling a resource list of quality content. These links can also be inserted into PowerPoint presentations and social media.
- Online Class Archives- The audience for face-to-face Extension programs can be expanded worldwide by videotaping speaker presentations, interviewing program participants, and creating a Web site that houses the videos and program materials.
- Templates- Any document likely be needed again should be saved as a template file and updated as needed. Examples include bios (various lengths), travel reimbursement Excel spreadsheets, "boilerplate" letters, and organizational mission statements for grants.
- Google + Hangouts- Google+ Hangouts enable up to nine people to video chat together face to face. They are an excellent venue for small classes, committee meetings, long-distance search committee interviews, and other times when people in distant locations come together. Hangouts are free to use and more personal than a conference call.
- PowerPoint Games- The presenter will describe how to create and use PowerPoint games based on the Who Wants to be a Millionaire? and Jeopardy! television game shows. Games can be created by Extension educators or their students as a learning activity.
- GotoWebinar Presentations- For Extension educators who lack access to Adobe Connect or Elluminate through their academic institution, GotoWebinar provides an affordable

alternative with attractive features such as automated “reminder” e-mails for registered participants and presenters.

R-3-NEAFCS EXTENSION HOUSING OUTREACH AWARD

Donna Shanklin, Alabama Cooperative Extension System

Housing Education -- From Home Safety to Home Pesticide Use: Housing education runs the gamut from home safety to pesticide safety. Different audiences have different informational needs that need to be provided in different formats for impacts to be made.

R-4-NEAFCS ENVIRONMENTAL EDUCATION AWARD

Vanessa Starr SPero-Swingle, University of Florida/IFAS Extension
Elizabeth Shephard, University of Florida/IFAS Extension

Budding Gardener Nutritional Camp: The Budding Gardening Nutritional Camp is a great way to mix Environmental Education with Nutrition and Healthy Eating and Healthy Lifestyles.

L-22- 4-H RECIPE RALLY

Courtney Dodd, Texas A&M AgriLife Extension Service

The 4-H Recipe Rally was created by the Texas 4-H Healthy Lifestyles Advisory Board, made up of youth and volunteers. It gives youth the opportunity to showcase their knowledge and skills gained through the foods & nutrition project while participating in a 4-H program experience via technology. In the 4-H Recipe Rally, intermediate and senior 4-H members are given the opportunity to produce their own "cooking show" and submit it as an entry in the contest. Youth may select (and alter, if needed) or create a recipe according to the designated contest theme and submit a video of them demonstrating the preparation of the recipe. The "cooking shows" are then judged by a panel based upon the 4-H member's nutritional knowledge, food safety practices, serving size and cost analysis, as well as presentation skills. The cooking shows are then posted online to be voted upon by 4-H members, volunteers and friends of 4-H via the web. Finalists from each age division are selected and invited to participate in the annual Texas 4-H Roundup to give a live cooking demonstration. The 4-H Recipe Rally has proven to spark interest in the 4-H foods and nutrition project, given 4-H members the ability to participate in an event without requiring travel expenses, and built confidence in youth new to 4-H and the foods & nutrition project!

R-5-4-H VET TECH CREW

Vanessa Starr SPero-Swingle, University of Florida/IFAS Extension

As 4-H encompasses life skill development, it is apparent that graduating 4-H'ers are embarking on a further skill set that must be obtained; career development. Youth "need to learn to think about the future; recognize their responsibility for educational planning; broaden their aspirations; develop and maintain self-esteem and develop cognitive complexity (Kerka, 1994)." Studies have found that 4-H alumni report career awareness in recognizing their interests, knowledge of careers, career considerations, and the need to make career choices as a result of their 4-H membership (Matulis et al., 1988). Workshops are only one opportunity for career development, career courses are a second. Courses "provide opportunities for in-depth study and hands-on career experiences, such as role playing and job shadowing (Hughes & Karp, 2004)." In 2010 Brevard County 4-H launched a new animal science career seminar series called the 4-H Vet Tech Crew to address the need for career courses for high school age youth. This program began through a partnership between the Brevard Community College (BCC) Veterinary Technology Program, 4-H, and local veterinarian practices. The 4-H Vet Tech Crew program consists of four seminar series and field trips for 14-18 year old high school students, as well as shadowing opportunities for high school juniors and seniors. The original idea behind the program and successful partnership was threefold: 1) to give youth a hands-on career opportunity in the world of veterinary science and help them determine if this was their true career passion 2) to expose and recruit youth for the local BCC Veterinary Technology Program and give them background knowledge of the career field 3) to give youth an opportunity to secure volunteer hours to help them apply to college, veterinary school, and veterinary technology programs while experiencing veterinary science first hand. Upon the conclusion of the second seminar series, youth responded (n=19) to a follow up

survey regarding their perceived knowledge gain and experiences in the program. All enjoyed the seminar series. 89% of the youth (n=19) responded that they were still interested in veterinary science as a career choice with two youth saying they were no longer interested in this field of study. Comments included youth being more equipped to enter into this career field after the seminar series, as well as finding out more about the different veterinary fields. By teaming up with a local resource, BCC and veterinarians, this program was able to create a community connection and get youth thinking about their college careers and career choices.

R-6- 4-H RENDEZVOUS AT THE RANCH: BRIDGING YOUTH TO OUT-OF -COUNTY 4-H OPPORTUNITIES

Jamie Davis, Oregon State University Extension Service
Jed Smith, Oregon State University Extension Service

The 4-H program is full of amazing out of county, regional, state and national opportunities for older 4-H members. However, it is often difficult to showcase and advertise these experiences through printed marketing materials alone. To better acquaint older youth 4-H members with out of county 4-H opportunities, a biannual overnight retreat, titled 4-H Rendezvous at the Ranch, has been incorporated into two rural counties. This overnight retreat, utilizes highly engaging and interactive presentations to showcase out-of-county 4-H opportunities. This unique approach utilizes collegiate 4-H members, who have personally attended and benefited from these opportunities, as the main presenters. The 4-H Rendezvous at the Ranch targets intermediate and senior 4-H members who are interested in attending out of county 4-H events, but have been hesitant to participate at these events due in part to the "fear of the unknown." Therefore the short term outcome of this retreat is to increase awareness of regional, statewide and national 4-H opportunities. An IRB approved, end of retreat retrospective survey measured knowledge gained on each showcased 4-H opportunity. The results of this survey reveal the short term objectives were met. The medium term outcome of this retreat is for youth to seek statewide and national 4-H opportunities that support their personal goals. Over fifty percent of the retreat attendees sought an out-of-county event after attending the 4-H Rendezvous at the Ranch. A large body of research supports the importance of youth attending residential 4-H programs (camps, retreats and conferences) in the development of life skills towards positive youth development (Garst, et al., 2011). According to Garst and Jonson (2005) it is important for youth to seek opportunities outside of their home communities where they are more likely to "be themselves". Rendezvous at the Ranch serves as a stepping stone for youth to seek out-of-county opportunities which allow them to develop life skills while being exposed to unique learning environments without the social constraints which may be present in their school and home communities. This poster will share unique approaches on how to showcase and advertise out of county 4-H opportunities with older youth 4-H members in your county. Poster viewers will be provided access to marketing materials, the retreat schedule and sample evaluations. This retreat can be modified in length, mode of delivery, and use of staff and volunteers to meet the needs of any application.

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R-7- CLICK AND PRINT LESSONS FOR 4-H CLOVERBUD VOLUNTEERS

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Cloverbud volunteers working with 5-8 year-old children can access over 30 on-line, printable lessons that are fun and challenging for Cloverbud members. Click it, Print it, Do it! – was developed in response to volunteer requests for more information and support in working with young 4-H'ers. Topics range from recycling and community service to exercise and gardening. Click it, Print it, Do it! is part of a research based curriculum, The 4-H Cloverbud Connections Newsletter, for volunteers teaching five-to-eight year olds. After pilot testing the curriculum, it was initially distributed in hard copy to help Extension professionals equip volunteers. The curriculum quickly established a presence on the Internet (www.cloverbudconnections.osu.edu) and received national award recognition from peers. Based upon research findings, the authors developed more activities to use with kindergarten-second grade audiences. Click it, Print it, Do it! (printable lessons) were added as an on-line resource where educational lessons are developed and posted quarterly. Based upon web tracking data, it is now one of the most popular features. The on-line lesson plan section, Click it, Print it, Do it! continues to remain one of the top pages viewed and accessed by users. According to Urchin, a web-based tracking program, the newsletter in 2012 attracted 190,292 valid hits, 142,966 page views and 27,975 visits which average 76 per day. For example, in 2012 the Listening and Coloring lesson garnered 12,715 visits and 86,279 page views, whereas, the 4-H Pledge Activity attracted 1,160 visits and 6,614 page views. The authors have focused on pre-adolescent education for over 15 years through the development of educational materials, research and curriculum. Their work has been shared with national audiences via the Internet, journal articles, and national conferences. The authors will share examples of the on-line, printable lessons and how to access them after the conference.

R-8- YOUTH VOICE THROUGH TEXAS 4-H COUNCIL

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Youth voice is essential for Texas 4-H programmers. With nearly 60,000 youth enrolled in 4-H Programs Texas 4-H Council serves as the voice of their peers from around the state. Texas 4-H Council consists of 33 senior 4-H members (ages 12-18) who have been elected by their peers at the county and district level. This group acts as an essential component of the planning and leading of state-wide 4-H activities. Members of State 4-H Council work with advisers year around to hone

their leadership skills and promote 4-H across the state. Council members also bring issues and ideas from their peers from across the state in order to find solutions and programmatic ideas. As with many youth organizations, it is important to encourage goal setting and proper leadership. In order to successfully teach these important life skills to a group of leaders, certain tactics are used. In organizations such as 4-H, leadership teams such as State 4-H Council serve as youth role models. This group has a great deal of importance in younger 4-H'ers lives because they represent all of the opportunities that can be experienced within the organization. By empowering State 4-H Council members to become a part of the planning process for statewide events, this group learns responsibility and is allowed to give a great deal of input to various aspects of these major events. This empowerment is beneficial as it not only allows Council members to voice their opinions, but allows them to take part in the planning and implementation process. This then translates into valuable examples of what being a leader in the origination can be. As a result, State 4-H Council members serve as role models for younger 4-H'ers who often aspire to become a 4-H State Council member in the future. To achieve these lofty goals with State 4-H Council in Texas advisors are assigned to lead them through a series of rigorous leadership trainings. These training equip Council with a number of important leadership skills that include: public speaking, responsibility, networking, decision-making, critical thinking, and many more. In addition, advisers challenge them to "dress the part" when representing 4-H in their counties and their districts, a task that is becoming more and more difficult with youth today. Texas 4-H Council is an excellent opportunity for youth from across Texas to learn invaluable leadership skills, while having a voice among their peers. It also provides them an excellent opportunity to provide input for some of the largest events and program Texas 4-H has to offer.

R-9-BOUNDARIES

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Dena Kemmet, North Dakota State University Extension Service

Situation: Although they aren't children anymore, teenagers often lack the maturity to make good decisions on their own. Teenagers require firm guidance from parents to successfully reach adulthood. Setting boundaries within a family is an essential part of parenting. Parents should explore effective ways to use boundary-setting to avoid conflicts with teens, encourage responsibility and self-management, resolve problems, prevent pointless and frustrating, no-win power struggles, and establish a foundation of mutual trust, consideration and respect. Extension Response The Beulah Ministerial Association recognized a need in the community to offer programming for parents and 7th through 12th grade students related to rule setting or boundaries. When they realized they didn't have a program available, they sought assistance from the Mercer County Youth Bureau. This brought these two entities to the Extension office where the collaboration was born. Because NDSU Extension didn't currently have a program specific to this topic, specialist Sharon Query began working with a graduate student to produce Boundaries. The Boundaries program was developed by NDSU Extension Service under the guidance of the local committee. The interactive program includes videos, homework, and hands-on activities to encourage learning.

Objectives of the program include:

- Participants will recognize why boundaries are important

- Participants will understand how boundaries reflect personal values
- Participants will identify negotiable and non-negotiable rules in their lives
- Participants will respectfully work through disagreements with authority figures.

Committee members, along with the Extension Agent, have become the core facilitators of the program. Each committee members has an educational background related to youth and families. As a committee member/facilitator each person is responsible for taking the lead for a weekly session.

Impacts: To date, 60 individuals have participated in the five-week program and completed surveys. On the retrospective evaluation, student participants showed a 50% improvement on knowing how to respectfully work through disagreements with authority figures. There was a 71% improvement reported by parents in understanding that while their parenting style is somewhat learned, it is also a choice.

Feedback Students said:

- "you need to set boundaries young"
- "who you're around affects how you act and are seen"
- "have reasons and a plan before negotiating"
- "be respectful about what you're asking for"

Parents said:

- "an effective parent might not be their child's buddy"
- "classes should be longer"
- "it's wonderful that clergy is involved"

R-10- MXC: TEENS CROSS THE BRIDGE INTO A NEW ERA OF CAMPING

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Erin Dailey, Ohio State University Extension
Hannah Epley, Ohio State University Extension
Nadine Fogt, Ohio State University Extension
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MXC helps teens cross the bridge into a new era of camping. MXC, the 2012 NAE4-HA Excellence in Camping Team national award winning program, brings together veteran and inexperienced 4-H camp counselors to provide a weekend training conducted and taught by Extension professionals and camping specialists. MXC, Making eXtreme Counselors, provides opportunities to share ideas between 4-H counselors from across Ohio. The program, developed by a team of 4-H Youth Development professionals four years ago, continues to lead to improved and consistent counselor

training around the state thus making the Ohio 4-H camping program stronger by improving the counseling skills of hundreds of 4-H camp counselors. By attending five sessions at MXC, teens develop and strengthen their skills needed to have a successful counseling experience. Secondly, they gain skills needed to teach at their county camping program including a STEM workshop. Third, attendees acquire workforce development skills needed for their future. MXC strives to Make eXtreme Counselors! During the four years the program has been offered, the number of counselors attending has continued to grow from the first year of around 60 attendees to 152 counselors in 2012. Sessions are taught by 4-H professionals, camp staff and volunteers. The last two years, the team has brought in a national camping professional offer new ideas and perspectives to the youth. The camp evaluation uses a 5-point Likert Scale to have counselors rate the effectiveness of the sessions they attended. It also uses Yes/No questions and Open-ended questions to get a true feel of what the counselors are taking away from the event. Over the last three years the camp has had a 4.56 rating average on the 5-point scale. Counselors stated they learned how to improve their leadership skills and teamwork. They enjoyed dances, games, singing and campfire activities most. In 2011, 91 percent of the participants indicated they learned skills that will make them better camp counselors. Additionally, 93 percent of the 2011 participants indicated they learned skills that would help them get a job in the future. In 2012, 98 percent of the youth who completed surveys indicated that MXC provided them with skills that will make them better camp counselors. Leadership, teamwork, communication skills, new games and dances were listed as the top skills they improved while at MXC. The team has used the program evaluations to help shape the sessions and direction of the next year's camp. The camps have received funding from the Ohio 4-H Foundation. Replication would be easy to achieve and resources would gladly be shared.

R-11- A COMPARATIVE ANALYSIS OF EFFECTIVENESS OF 4-H PROGRAM AS PERCEIVED BY 4-H VOLUNTEER LEADERS AND PARENTS OF 4-H PARTICIPANTS

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Successful 4-H youth programs greatly depend upon contributions volunteer leaders and parents of 4-H participants make to the 4-H program. A number of studies have examined volunteer leader and parent perceptions of effectiveness of 4-H program (Boleman, Cummings, & Briers, 2004; Gregoire, 2004; Ferrari, Hogue, & Scheer, 2004; Gill, Ewing, & Bruce, 2010; and Singletary, Smith, & Evans, 2006). Consensus from these studies suggests that volunteer leaders and parents have a lot of positive things to say about 4-H programs. In addition, both the groups believe that 4-H programs are effective in helping youth become responsible citizens. The purpose of this study was to compare the effectiveness of 4-H program as perceived by volunteer leaders and parents of 4-H participants. A secondary purpose was to examine the extent to which they are good at teaching 6 Cs of positive Youth Development (PYD) and determine training needs of leaders and parents to further assist in the 4-H program. Descriptive research methodology was used to collect data for the study. The population for the study consisted of all 4-H volunteer leaders and parents of 4-H participants in the [state]. A random sample of 367 leaders and 368 parents was selected. A four-section instrument was developed based on the earlier study of Singleton, Smith and Evans, 2006. The statements and questions on the instrument were measured using Likert and nominal scales. Content and face validity of the instrument was validated using a panel of experts. Data was collected through a mail survey following Dillman's (2000) total design method. Slightly less than

40% of leaders and parents responded to the survey. Early, late and non-respondents were compared to control non-response error. A post-hoc reliability analysis indicated acceptable reliability range (.84 to .92). Data were analyzed using descriptive and inferential statistics. Most respondents in both the groups were female. Volunteer leaders were slightly older than parents. A majority of respondents in both groups reported education levels of high school or more. Most lived in rural areas and were 4-H members when they were young. Overall, both groups perceived that 4-H program is effective in providing a safe place for learning and growing, positively influencing family life, involving youth in community, etc. The mean scores ranged from a low of 3.45 (attracting children from diverse cultures and ethnic backgrounds) to a high of 4.44 (providing a safe place for youth to learn and grow). Both leaders and parents perceived that youth learn a number of life skills in 4-H such as self-confidence (M=4.25), project involvement (M =4.33) self-esteem (M =4.25), responsibility (M =4.20), communications skills (M =4.15), and relationship building skills (M =4.11). Further, both groups indicated that they are good at teaching youth four of the 6 Cs of PYD—safety, belonging, relationship, and mattering. However, both groups indicated that they need additional knowledge and skills relative to skills and structure components of the 6 Cs. Based on the findings of this study, implications are suggested for: 4-H programming, Extension administration, and further research.

R-12- EFFECTIVENESS OF YOUTH EXTENSION PARAPROFESSIONAL TRAINING PROGRAM TO REDUCE CHILDHOOD OBESITY

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In the last 30 years obesity rates has doubled for preschool children and adolescents (Raynor & Maier, 2006). The increasing prevalence of overweight among young children, especially in underserved communities constitutes a serious health concern. There is a great need to reduce and/or prevent this epidemic. Engaging and training volunteers will assist in reaching their peers and families with effective obesity prevention information. Youth volunteers need increased knowledge and skills in civic engagement, health, nutrition, diet, and physical activity to prevent childhood obesity.

Introduction: The purpose of this study was to develop, deliver and evaluate a program designed to increase the capacity of youth Extension paraprofessionals regarding childhood obesity. Specific objectives included:

1. solicit and access strategies for preventing childhood obesity,
2. train Youth Extension Paraprofessionals (YEP) to enhance the delivery of childhood obesity prevention programs, and
3. implement and evaluate childhood obesity prevention program delivered to youth in selected 12 Black Belt counties in [state].

Methodology: Forty-six 7th through 9th graders in 12 Black Belt counties of [state] participated in the program. These youth were recruited through their schools, churches and other community organizations. Training materials for the program were adopted from Lerner, et al. (2005) first

wave of 4-H PYD study and Flanagan, et al. (2007) study on adolescents' civic engagement. Information on volunteerism, food, nutrition and diet were also included. Using an experiential learning approach, participants were trained in essential life skills in a continuous teaching and learning environment, including a week-long survivor training camp. Trainees developed volunteerism skills, learned about the essential elements of PYD, civic engagement, diet, nutrition and physical activity. Pre and post training surveys (taken before and six month after the survivor camp) measured participant's skills relative to core elements of PYD (caring, critical thinking, decision making, self-efficacy), and personal values, social conscious, civic engagement, healthy eating, and physical activity. Descriptive statistics and paired t-tests were used to analyze the data. Only those who provided both pre and post assessments were included in the analysis.

Findings: Sixty-five percent of youth were female and 35% male. Approximately, 70% were in 8th and 9th grades, followed by seventh (15%). Most youth (60%) had participated in either 4-H or other out-of-school programs. Paired t-test analysis showed statistically significant ($p < .001$) gains in critical thinking, decision-making, and social conscience skills and healthy eating habits. Although, increased scores in pre and post assessments were evident for caring and civic engagement skills, but were not significant. Youth participating in the program continue to involve in many community activities to create awareness and deliver obesity prevention programs. For example, two youths presented information on obesity to their peers at a Youth Empowerment Summit. Forty-seven percent attended a one-day refresher follow-up training to stay current or to update their skills. Based on the findings and lessons learned, several next steps are being planned and/or implemented. These include:

1. introducing a comprehensive nutrition curriculum,
2. expanding training and program offerings, and
3. recruiting and training new applicants in other counties of [state].

R-13- 4-H JUNK DRAWER ROBOTICS CURRICULUM

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Robotics education has been shown to be an effective cross-disciplinary content area for science, engineering, and technology education (Barker et al., 2012) and may improve science and mathematics learning (NRC, 2009). The new National 4-H curriculum, "4-H Robotics: Engineering for Today and Tomorrow" was developed and published to strengthen 4-H science, engineering, and technology education efforts. One of three tracks, Junk Drawer Robotics (JDR) (Mahacek, Worker, & Mahacek, 2011), engages middle school youth in understanding scientific concepts and processes, the engineering design process cycle, and technology creation and building. JDR provides youth these experiences by working with household items to complete simple design challenges. These robotics activities emphasize science, engineering and technology process skills, cross-age instruction (teens-as-teachers), the experiential learning cycle, and small group learning. Activities are designed to be led by an adult or teen facilitator. The organization of content within each module intentionally scaffolds education in three phases: To Learn (Science) activities emphasize exploration and form the foundation upon which youth build conceptual understanding; To Do (Engineering) activities build upon the knowledge gained in the exploration phase related to the concepts in the module. Youth are presented with a design problem and work together in small groups to design and plan a solution; and To Make (Technology) activities allow youth to build and

test their design while solidifying their understanding of the concepts. JDR central themes in each of three levels are:

1. Robot arms and hands;
2. Robot movement; and
3. Synergy when mechanical, electronic, and feedback systems are merged.

Youth evaluation demonstrated increased interest in science and engineering and deeper conceptual understanding in science, engineering, and robotics (Mahacek & Worker, 2012). The poster will share California 4-H experience establishing a statewide network of 4-H JDR projects from 2011-2013. This poster will help improve educators' understanding of the role of robotics education in improving science, engineering, and technological literacy and increase awareness of the 4-H program's role in promoting positive youth development in science, engineering, technology.

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R-14- ROCKETS & ROBOTS-ASHTABULA COUNTY'S SUMMER SCIENCE ACADEMY

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OSU Extension in Ashtabula County allowed students to explore the world of rockets and robots during the summer of 2012. Using the resources from a $10,000 private foundation grant, OSU Extension introduced science principles at two weeks of mini-library sessions, two intensive all-day science days and at a week-long 4-H resident camp. Each of these events included hands-on experiments to teach the concepts of science of motion and robotics to youth 8-13 years of age. Some of the experiments which the students completed included: mousetrap marshmallow catapults, alka-seltzer reactions,mentos diet coke rockets, pop bottle rockets, life-size catapults, Estes Gnome rockets, brushbots, and colorbots. The students were also able to use Ohio's new 4-H project on Robotics: Next Technology. Participants learned what a robot is, how to build one using LEGO®, and how to program a LEGO® robot to interact with its environment via touch, sound, light, and ultrasonic sensors. One-hundred ninety-four youth participated in the introductory classes on science of motion and robotics workshops at the area libraries. Thirty-five youth participate in the Day Long Science in Motion program and an additional 32 youth participate in the day long Robotics workshop. An additional 186 youth participated in the science curriculumn during Ashtabula County's 4-H Camp at the end of June. 100% of the 32 youth in attendance at the

all-day Robotics session and 82.3% of the 18 youth at the intensive Science of Motion session felt they learned something new. One mother commented how excited her son was about science after the first library session, the first thing she did when she got home was to sign up for the rest of the sessions. 78.1% (n=32) of the attendees of the intensive one-day robotics workshop indicated they would like to join a 4-H Robotics club. This club will be started in 2013. For the 186 youth who attended the week long camp, they indicated their overall camp experience to be exceptional with a mean score 9.27 (s.d. 1.17) on a 10 point scale (1=worse experience and 10 the best experience). The campers rated the science of motion activities as their favorite evening activities (3.76/4.00). The campers reported a mean gain for robotics of 1.60 and a 1.04 gain for science of motion activities (4.00 scale). The success of this Summer Science Academy has led to another grant which will increase our robotics supply so that this science academy can be continued during the summer of 2013 and can be integrated into our 4-H School enrichment programs during the academic school year.

R-15- THE ART OF SCIENCE

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Gregg Switzer, Montana State University Extension

How do art, science and technology interface to help students learn in a community setting? Using video and robotics technology, university students and staff, science teachers and community members teach youth about science and how to communicate their knowledge through films, photographs and robots. The Montana Sustainable Communities Project (SCP) uses filmmaking and robotics as tools to teach science and engineering skills to elementary and middle school youth in two Montana towns. It is both an art-and science-based program that helps children explore science, engineering, and technology through the art of film-making and the technology of robotics. Using a hands-on, experiential learning process, SCP helps youth improve their awareness of science and technology while also having fun. Youth learn how to plan, produce, and edit an original 3-5 minute movie on a science or nature topic of concern or importance to the local community. They also learn how to build robots, incorporating math and engineering skills into the programming as well as science topics such as water quality. Outcomes focus on the improvement of life skills (communication, problem-solving, decision-making, critical thinking), becoming engaged in local issues, increasing knowledge of scientific inquiry skills and technology literacy, and demonstrating the ability to use technology applications. The Montana SCP project was named a 2012 “Promising 4-H Science Program” by National 4-H Council and uses research from National Science Education Standards and National Educational Technology Standards to support the project’s design. Research indicates that science and technology education need to be merged intentionally and that teachers need to better understand how these concepts interact. This program development report will show how the project was developed over time, how to develop effective partnerships between University professionals and schools, how to train teachers and other volunteers for a sustainable program, and how culture is effectively incorporated into a project. Participants will view a short film that demonstrates how the project was implemented over time in one Native American school in Montana.

R-16- BAZINGA! EXPLORING STEM AT CAMP

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Kathy Bruynis, Ohio State University Extension
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Science. It's one of three National 4-H mission mandates. For the past five years, 4-H has worked to reach a bold goal of engaging one million new young people in science programs. "Bazinga! Exploring STEM at Camp" is contributing towards that goal, and also serves as a support beam on the bridge leading rural Ohio Appalachian youth towards post-secondary STEM focused education and training, STEM related careers, and well-paying jobs. The camp's approach is comprehensive and holistic—from agriculture to engineering to food science—helping campers learn about relevant complex systems and issues that will ensure their contributions to their communities today and their success as global leaders tomorrow. The three-day, two-night camp targets youth completing 5th through 7th grades. Participants:

1. Engage in hands-on in-depth exploration of STEM as it relates to one or more of the following: robotics, animal science, rocket science, natural sciences, alternative energy, food science, and medicine;
2. Learn about related careers and educational requirements from professionals in each area they explore;
3. Grow both as individuals and as team members as they work to complete engineering and other group challenges;
4. Explore how STEM is a component of nearly every 4-H project;
5. Develop and practice communications skills as they create a STEM presentation for parents and guests at the close of camp;
6. Learn how STEM applies in the real world as they participate in a field trip to a food processing facility; and
7. Have fun as they participate in traditional camp activities with an added STEM twist.

Participants are recruited from an 11 county region in southern Ohio. Teen counselors with an interest in STEM are recruited from these same 11 counties. Recruitment efforts emphasize the camp theme, Bazinga!, from the popular television show, Big Bang Theory. At camp, Extension staff team with professionals in each of the targeted STEM career fields to develop and present three-hour, hands-on, in-depth explorations of the field. In addition, campers participate in a field trip to a nearby food processing plant, learning from a variety of professionals about many different STEM careers in the real world setting. Funding to offset registration fees, as well as to purchase programming supplies and provide the field trip experience was sought and received for the 2013 camp from the Ohio 4-H Foundation and the South Central Region Endowment Fund. The Galaxy Conference poster session will share camp content, evaluation data, and best practices. Participants in the session will receive access to resources enabling them to replicate the program.

R-17- 4-H'ERS ON THE ROAD TO HISTORY AND GOVERNMENT – PRESIDENTIAL INAUGURATION IN WASHINGTON DC

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Carolyn Belczyk, Ohio State University Extension
Robin Stone, Ohio State University Extension

An exciting time comes every four years when the President is sworn into office. The Inauguration is a perfect time to spark a youth's interest in government, and the event successfully bridges the gap between current events and the nation's history. In January 2013, nearly 100 Ohio 4-H members and adults were delivered by chartered buses to the National 4-H Youth Conference Center for a four-day stay to take part in the 57th Presidential Inauguration. 4-Hers were engaged in educational programs focusing on government and history, had the opportunity to tour museums and national memorials and monuments, including the Martin Luther King, Jr. Memorial, witnessed the Inauguration from the Mall, and were involved in service projects as part of the Martin Luther King Jr National Day of Service. Three Extension professionals and a graduate student, a former CWF Program Assistant, took the leadership in coordinating the trip, which had the following objectives:

1. to provide an opportunity for 4-Hers to experience one of the nation's most historic events by attending the 2013 Presidential Inauguration;
2. to encourage an appreciation of government and history by providing members with opportunities to learn about them first hand;
3. to have youth participate in our nation's celebration of democracy;
4. to provide a platform for our participants to see some of our nation's memorials and understand their historical significance;
5. to introduce 4-Hers to diversity as they find themselves in the midst of thousands from all over the world;
6. to encourage youth to become involved in public service at the local, state, and/or national levels;
7. to heighten their civic awareness, encourage them to practice their civic duty of voting, and encourage their involvement in the political process on some level; and
8. to facilitate their engagement in a service project to improve the quality of people's lives and to recognize the Martin Luther King Jr National Day of Service.

Donations and a grant from the Ohio 4-H Foundation helped offset the cost of the trip for participants. Post-trip evaluations indicated that 100% of participants had a positive experience and were able share with others one or more interesting facts about the federal government. All had a greater appreciation for the historic traditions of the Presidential Inauguration, and all had greater insight into and appreciation for diversity. Several pledged to continue service efforts at home, and others reported a new or increased interest in future public service at some level. The Galaxy poster session will provide other Extension professionals with information needed to replicate this educational program in January 2017, just in time for the 58th Presidential Inauguration! It will feature program goals and objectives, highlights of the experience, best practices, and evaluation results. What better way to learn about government and history than to take a road trip and live it?

R-18- UTILIZING FEDERAL GRANTS TO BUILD 4-H CAPACITY IN COMMUNITIES

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Jeffrey Buckley, University of Georgia Cooperative Extension
Michelle M. Gonzalez, University of Georgia Cooperative Extension

Poverty is negatively affecting the lives of Georgia's youth. Low high school graduation and education rates, high teen pregnancy, high crime rates, few outreaches to military youth, and several other socioeconomic indicators lead us to understand that action must be taken to reverse these trends. Areas of Georgia are representative of persistent poverty in America and have been home to widespread poverty for 25 years or more inciting a culture of marginalized and vulnerable youth that is not easily broken. Georgia 4-H Extension Agents are responsible for delivering research-based youth development programs designed to assist youth in acquiring knowledge, developing life skills and forming attitudes that will help them become positive, caring and contributing members of society. 4-H professionals are charged with developing and implementing a variety of educational programs. Shrinking budgets have resulted in fewer staff and increased need to market the positive outcomes that 4-H programs produce. Georgia 4-H needs staff devoted to building capacity for 4-H on both the county and state levels. Currently, two federally-funded programs are coordinated by Georgia 4-H that employ 25 full time employees. The AmeriCorps State Grant and AmeriCorps VISTA Grant both work to build capacity and make a positive impact on youth from impoverished communities. The goal of each grant program is to increase the capacity of Georgia 4-H to engage youth in beneficial youth programming and reduce the incidence of low educational attainment and negative lifestyle choices. The AmeriCorps VISTA program employs nine individuals throughout the state that serve in support of marketing, fund development, grant writing, and volunteer recruitment. VISTAs build capacity within the 4-H program to reach marginalized and vulnerable youth via positive youth development experiences reversing negative statistical trends. Through this process youth affected by the 4-H program will be more likely to graduate high school, not become pregnant, attend postsecondary education, and become positive contributing citizens. In two and a half years, the VISTA program has helped raised over $500,000 in cash and in/kind donations, created 695 marketing pieces and helped to recruit and manage 353 4-H volunteers.

The AmeriCorps State Program employs 16 Community Service Specialists throughout the state. These specialists serve full-time in an effort to enhance the current 4-H programs that exist in these counties. Each specialist works toward four program areas including, Project Achievement, In-School Club Meetings, Healthy Lifestyles, and Military Families. The work of these community service specialists will lead to youth experiencing positive relationships with caring adults, engaging with a group of peers, building life skills, and interacting with mentors/mentees. In six months of operation, the AmeriCorps State Program has provided over 6, 200 hours of service to Georgia 4-H. This presentation will work to delineate each federally-funded opportunity. Audience members will leave with a better understanding of these two potential capacity building prospects. The presenters will discuss the mission overlap of the organizations and compare and contrast them so that attendees will understand which opportunity is better suited for their state.

R-19- PRIMING THE PIPELINE: LESSONS FROM PROMISING 4-H SCIENCE PROGRAMS

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Jessica Bauman, University of Nebraska - Lincoln Extension
Suzanne Le Menestrel, 4-H National Headquarters, NIFA, USDA

Understanding the role of science, engineering, technology and applied math is even more critical as the needs of our society and its workforce change. Youth Development is embarking on a new era of intentionally targeting science related outcomes with the goal of generating a more science literate society and encouraging more young people to explore science, technology, engineering and math career opportunities. To better prepare the field of 4-H Youth Development to respond to this challenge, the National 4-H Science Promising Practices Case Study describes the challenges met and practical strategies employed in eight 4-H Science programs. Selected through a structured process of nominations and vetting, the programs studied for this report reflect a variety of program delivery modes, content areas, geographic regions, and youth served. Program sites were engaged in site-observations and interviews with staff and volunteers both during the vetting and data collection phases. This session will examine lessons learned in implementing 4-H Science programs and discuss how promising practice programs have tackled problems of recruitment, staffing, programming, partnerships, and sustainability. The program practices discussed include: youth outreach and recruitment; staff and science volunteers; professional development; science curricula and pedagogy; youth development and attitudes toward science; partner organizations and resource support; program evaluation; and program sustainability and scale-up. The findings present unique insight into programs which target shared science related outcomes through a variety of delivery modes and methods. The report illustrates practices that may be replicated or applied to other 4-H Science programs. A full report is available at http://www.4-h.org/about/youth-development-research/science-program-research/

R-20- PENNSYLVANIA 4-H GROWING SCIENCE

Toni Stuetz, Penn State Extension

Growing 4-H Science "America faces a future of intense global competition with a startling shortage of scientists. In fact, only 18 percent of U.S. high school seniors are proficient in science (NAEP 2005) and a mere 5 percent of current U.S. college graduates earn science, engineering, or technology degrees compared to 66 percent in Japan and 59 percent in China." (www.4-h.org/youth-development-programs/4-h-science-programs) Pennsylvania, like many states is looking at creative ways to help engage our young people in science and technology programs. For the past century the 4-H program has engaged youth in agricultural science. The Extension program has kept pace with the times and continues to promote agricultural science but has broadened their scope to engage youth in environmental engineering and mechanical sciences. Technology is being taught and incorporated into our curricula and delivery. We are bridging our past and forging ahead into a new era for Extension. SET programs are being delivered utilizing traditional and non-traditional 4-H delivery methods. The Pennsylvania 4-H program will share their National 4-H Council funded science initiative. The Growing Science program is expected to reach 300 middle-school age youth this year. The program focuses on

teaching youth to think like a scientist. Inquiry based learning is emphasized. The National 4-H Science Competencies, which have been identifies as integral for facilitating high quality learning environments with meaningful educational outcomes, are followed. The YEAK survey will be employed as a post program evaluation. The poster will highlight traditional club development, afterschool programming, day camp programs and our Science Saturday programs. Evaluation data and strategies for program replication will be shared.

R-21- NUTRITION EDITION MANUAL

Sarah Schleser, University of Florida/IFAS Extension
Suzi Bamber, University of Florida/IFAS Extension
Christine Chen-Luke, University of Florida/IFAS Extension
Elizabeth Shephard, University of Florida/IFAS Extension
Vanessa Spero-Swingle, University of Florida/IFAS Extension

Over the past 40 years Americans have gotten heavier and even obese, and this leads to many related health risks such as diabetes, high blood pressure and heart disease. At one time these health risks were only associated with adults, but now their prevalence in children and youth is staggering. Since the 1970s the percentage of overweight children and youth ages 2-19 has tripled. Studies show that youth who are obese at the age of 5 are more likely to be obese adults. According to Dr. David Satcher, former U.S. Surgeon General, "This is the first generation of children whose life expectancies will be less than that of their parents". According to the CDC, Diabetes Public Health Resources 2010, only 2% of children meet the Daily My Pyramid (My Plate) recommendations and children are not getting the number of servings of fruits and vegetables needed each day. In order to address the needs of Brevard County youth, nutrition and healthy lifestyle education must be taught. Youth need to understand the importance of making better choices when it comes to their physical activity and dietary choices. Through funding from a UnitedHealthcare grant and cooperation among multiple extension professionals, Brevard County Extension Service created a curriculum to teach nutritional information in a fun way through activities intended to promote physical activity. 4-H collaborated with Family and Consumer Science and the Family Nutrition Program to create the Nutrition Edition Manual, which is divided up into the following topics: Germs, Think Your Drink, Where Does It Come From?, My Plate, Heart, Fruits and Vegetables, Dairy, Breakfast, and Grains. Each lesson provides a sample script to introduce the topic, which can be modified for different age groups, and is followed by a variety of corresponding games and activities that the educator can choose among. Educators using the curriculum included youth participating in the Youth Voice: Youth Choice program to help spread the message, as studies have found that youth teaching youth is effective in improving knowledge in both groups and can be an efficient and easy way to implement and promote healthy lifestyles (Stock, S. et al). The curriculumprovides detailed instructions for how to create the necessary supplies and includes a CD containing the graphics. Preliminary surveys captured that youth who participated in programs utilizing the curriculum were engaged in the lessons, learned something new related to nutrition and health, and had the lessons reinforced through hands on games and activities. Youth specifically reported learning the following: the food groups, what foods are healthy, that it is good to try new things, that you can kill germs with soap and hot water, that you should drink water before, during, and after playing outside, and how to keep your heart healthy, to name a few. Other survey responses indicated that the sessions were

interesting and fun. With over 15,000 youth reached, the program has been successful in teaching healthy eating habits, physical activity, and nutrition. Attendees will receive a copy of all materials on CD.

R-22- YOUTH IN GOVERNANCE BRIDGE TO BEST PRACTICES SHOWCASE

Gregory Yost, Ohio State University Extension
Kelly Allison, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension
Barbara Baker, University of Maine Cooperative Extension
Brian Luckey, University of Idaho Extension
Debra Stocker, University of Illinois Extension

As fully engaged participants, leaders, and decision-makers, youth have immediate and lasting impacts on their organizations and communities. They are stakeholders in the decisions that affect their lives. So the investment of their time and experience is not just to prepare them to be tomorrow's leaders. Significant youth participation should be brought to the table to strengthen outcomes, build community, and promote the democratic ideal of civic participation. 4-H youth development professionals must be intentional when working with youth and encourage them to use their knowledge and skills to perpetuate stronger clubs, communities and organizations. Partnerships between youth and adults can expand the resources available to create lasting change. This poster session celebrates the NAE4-HA national and regional winners of two awards. The NAE4-HA Power of Youth Award (sponsored by National 4-H Council and created in 2001) recognizes outstanding programs that engage and empower youth to take active decision-making roles in issues that can affect youth, adults or their community. Initiated in 2003, the Beyond Youth Leadership Award (one $1,000 award sponsored by National 4-H Council) is given to an individual or team as a capacity building grant for the study, development or expansion of a program that both exemplifies youth and adult partnerships and engages young people in the decisions that impact their club, community, country or world. Best practice details and resources will be provided to assist future program development and award submissions. Organized by the Youth in Governance Task Force of the NAE4-HA Programs Committee, this poster session:

- Celebrates the success of the 2013 Power of Youth Award national and regional winners who have exemplified the involvement of youth in organizational and community decision-making;
- Recognizes the 2013 Beyond Youth Leadership Award winner and regional nominees for taking the initiative to involve youth in significant decision-making roles;
- Shares models of successful youth-led programs and youth/adult partnerships;
- Provides resources to encourage youth decision making at all levels;
- Encourages NAE4-HA membership and partners to apply for the Power of Youth and Beyond Youth Leadership Awards;
- Promotes involvement in the national 4-H Youth in Governance and Citizenship initiatives.

Research Base and Program Evaluation: Highlighted in this poster session are the award winners chosen by the NAE4-HA Member Recognition Committee for the Power of Youth Award and Beyond Youth Leadership Award. Resources provided or suggested at this poster have all been screened by the NAE4-HA Programs Committee Youth in Governance Task Force. Contained within

each winner's nomination form are evaluation results; these results are summarized and shared in the poster.

Program Replication Requirements: Summaries of each national and regional winner and nominee include general details about the exemplary programs. A contact is provided for each program to encourage replication.

R-23- 4-H SCIENCE AFTERSCHOOL ADVENTURES

Erin Dailey, Ohio State University Extension

Afterschool programs involve a large portion of the youth in rural Jackson County and throughout the state of Ohio. This is a growing trend that can be seen all across the country. In our local Educational Service Center area alone, 3700 students per evening are getting Afterschool programming. 4-H has recently become an active partner in our Afterschool programs in Jackson County and the 4-H Educator has contracted to provide programming on a regular basis with one of the programs. Science is one of three National 4-H mission mandates and this gets the attention of educators and school administrators. This provides cost recovery dollars for the local Extension office and provided the mandated science programing to take part through the afterschool programs. 4-H has strived to engage one million new youth in science programs and this programming is in line with this goal. Students are in 4-H Afterschool Science Programs for one and a half hours each day four days per week. From ice cream to robots, these young people are gaining new interest in technology while learning that there is more to offer through 4-H than livestock and cooking projects. Youth are able to learn about STEM content as it exists in everyday life and how they can further explore these concepts through 4-H projects. 4-H Afterschool Programs provide an excellent opportunity for students to learn science, math and language skills through hands-on activities, and these educational opportunities are not limited to the classroom. Afterschool programming provides opportunities for less formal activities and hands-on learning to take place. Many of these programs can also be used in a camp setting through both summer 4-H camping programs and outdoor education programs for schools and other youth groups. We are striving for increased awareness of the value of "4-H Afterschool Science" programs by marketing these programs to school administrators, getting news releases published in the paper and continued promotion through our newsletters and publications. Many people do not associate 4-H with Science and this is a great way to show that 4-H has more to offer than just traditional programs. Once students are involved in our "4-H Afterschool Science" programs, we would like to make an effort to increase their awareness of 4-H so that they realize that they are a vital part of the 4-H program. By being involved in one or two month program, students are able to get a more meaningful 4-H experience by gaining important life skills, a relationship with a caring adult, engagement in learning and an opportunity to see oneself as an active participant in the future. This 4-H Afterschool Science teaches students necessary skills to help pass the proficiency tests, engages students in active hands-on learning and creates an atmosphere where students feel they are a part of the overall 4-H program. This program has not only been a great asset to schools, but has also been a necessary cost recovery program for a county with an extremely limited budget.

R-24- AGRICULTURE REALITY

Kathy Bruynis, Ohio State University Extension
David Dugan, Ohio State University Extension
Carolyn Belzcyk, Ohio State University Extension
Rebecca Cropper, Ohio State University Extension
Nicola Eyre, Ohio State University Extension
John Grimes, Ohio State University Extension
Kathy Jelley, Ohio State University Extension

Agricultural Reality is a program designed to provide an experiential learning activity to eleventh grade agriculture students from three counties in Ohio. The primary educational objective is to increase the participant's awareness of the economic ideologies involved in operating a farm and to increase student's knowledge of agricultural careers.

Data from the 2010 United States Census shows that less than one percent of the country's population is employed as a farmer or farm manager. Although fewer young adults are entering the work force directly involved with production agriculture, there are numerous jobs available that support agriculture. For agriculture in the United States to remain an efficient and sustainable industry there must be strong support comprised of a capable work force. Reality Store/Real World, Real Money (RMRW) is an educational program for youth that has been offered in Ohio by 4-H Extension Educators for many years. RMRW has an education emphasis is to provide youth with a better perspective to help enhance the decision-making skills that can impact their financial well-being as well as career choices available to them. Agricultural Reality was a natural development of this concept; it is designed to provide an experiential learning activity to eleventh grade vocational agriculture students from seven school districts in three Appalachian counties of Southern Ohio. The primary educational objectives of this program are to increase the participant's awareness of the economic ideologies involved in operating a farm and to increase student's knowledge of agricultural careers. Prior to an all-day simulation, students are presented with information at their respective schools on the importance of proper record keeping, record keeping techniques and their importance in managing an agricultural enterprise. The simulation activity is an activity where students are assigned a 300 acre farm to manage, purchase equipment, livestock and chattels. The students are awarded start-up capital based upon their grade point averages. During the simulation, students interact with local agricultural business representatives to help them better understand actual costs and what decisions are required to have a profitable operation. To make the simulation realistic and educational, students are able to interact with local business such as: implement dealerships, stockyards, Soil and Water Conversation Districts, insurance companies, local banks, county Auditors, auto dealerships, seeds dealers, USDA/FSA, USDA/NRCS, Farm Credit Services Agencies, Southern Ohio Agricultural Community & Development Foundation, 4-H Youth Development Extension Educators from Adams, Brown, and Highland Counties, the ANR Extension Educator from Adams, Brown, and Highland County, and an Extension Educator Emeritus. Over 500 youth participated in Agricultural Reality since its inception in 2005. Evaluations are completed at the end of the simulation prior to student returning back to their respective schools. Evaluations indicate very favorable responses to the program. Results from 2012 indicate that 96% of the respondents increased their knowledge of accepted business practices involved with production agriculture. Eighty-five percent of the respondents felt an increase in their knowledge relating to agricultural careers and 64% of the respondents felt they would be involved in agricultural production in the future based on their experience in Agricultural Reality. Students responding to the evaluation gave the program a rating of 4.75% on a 5-point scale (1= poor, 5 = excellent). Numerous positive comments

were noted throughout the program and documented on the evaluation. The program will be expanded into two other counties during 2013.

L-17- GREENING THE FUTURE - TEACHERS' INSTITUTE IN ENVIRONMENTAL SCIENCE PROGRAM

Sharon Kinsey, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

The Camden County 4-H Youth Development Program conducted a five-day Teachers' Institute in Environmental Science (TIES) at the Camden County Environmental Center in Cherry Hill, NJ. Seventeen (17) K-5 teachers who teach in Camden's elementary schools participated in the institute in an effort to gain a greater understanding of environmental issues, as well as gain insight into potential solutions that their school or community could engage in through service learning projects. The rationale for selecting this population was fourfold: professional development in the sciences is needed for teachers in K-5 who may possess a variety of expertise other than science; opportunities for professional development are decreasing due to continued budget cuts; students in Camden will benefit from teachers who have an increased knowledge of science; and teachers who engage students in environmental science lessons and align the curriculum with a service learning project or activity will enable students to contribute to the overall school community and become more civically engaged.Program goals included: Provide Teacher Professional Development: K-5 teachers will be armed with new teaching skills by presenting science in an exciting, hands-on approach through experiential education; Improve Student Achievement: Teaching was geared to the New Jersey Core Curriculum Content Standards, and in turn, this training will help teachers better prepare students for state proficiency tests; Increase Service Learning and Civic Engagement: Teachers could turnkey their new skills at their respective school sites, as well as introduce a service learning project that unites students, teachers, and the local school community. The goal was to supply elementary teachers with knowledge, skills, curriculum, and materials to implement high quality environmental and climate science educational curriculum during the 2012-13 school year. Environmental education, and climate change in particular, is an ideal interdisciplinary, integrating theme for education. Focusing on the simple concepts and observations of climate science and the issues related specifically to urban, at-risk communities, the program addressed: 1) increase in temperatures in urban areas; 2) increase in flooding and storm effects; and 3) impact on human health. Having teachers explore climate/environmental issues enabled them to engage students in the classroom to develop solutions to local climate, environmental, and energy problems that ensure the right of all people to live and work in safe, healthy, clean environments. A different "expert" presented each day in the areas of weather, energy, environment, and service learning lesson planning. Specific topics that were addressed include: an introduction to climate science, the heat island effect, atmospheric gases, the carbon cycle and water cycle, ice cores and tree rings, carbon footprint, as well as the relationship between animals, climate and people. Six competitive mini-grants were awarded to participants who planned and conducted a student-led environmental awareness event at their school during the 2012-13 school year. Lessons and activities will be shared, along with lessons learned.

R-25- TEACHING YOUTH WITH "HANDS-ON" NUTRITION SKILLATHON KITS

Kathy Bruynis, Ohio State University Extension
Amy Habig, Ohio State University Extension

Nutrition Skillathon kits introduce youth to nutrition in a fun interactive way and help educate them on health decisions. Obesity now affects 17% of all children and adolescents in the United States which is triple the rate from just one generation ago. Obesity can lead to heart disease and Type 2 diabetes. Youth consuming at least 3 family meals per week are 12% less likely to be overweight than youth who have fewer family meals. Highland assembled two nutrition Skillathon kits for youth to use as an educational study tools for the county-wide nutrition Skillathon. These kits provide the youth with the hand-on educational items they need to adequately prepare to participate in this event. The Skillathon is mirrored after the livestock kits but focuses on the Family and Consumer Science (FCS) projects with emphasizes on nutrition. The nutrition Skillathon kit can be borrowed by individuals who wish to study the components needed to complete for the competitive Nutrition Skillathon. Many counties have experience lower enrollment in FCS projects in recent year. This is sometimes a result of youth having less support at home because family, friends, or club advisors are not familiar with nutrition concepts. The Nutrition Skillathon Kit equips youth with the skills and knowledge needed to successfully complete the Nutrition Skillathon and/or nutrition-related 4-H activities in the county. Activities/components of the kits are based off content in 4-H Food and Nutrition project books and the Highland County Skillathon test. The kit consists of eight activity areas including:

1. measuring ingredients,
2. food selection/MyPlate,
3. table/place setting,
4. menu writing,
5. cost comparison,
6. reading food labels,
7. kitchen gadget identification and nutrients.

The selected activity areas enhance youths' understanding of nutrients and nutritious foods, using cost comparison strategies, preparing menus, appropriate place settings, correct techniques for measuring dry and wet ingredients, and uses of common kitchen gadgets. The goal of the Nutrition Skillathon kits are to increase knowledge and skills pertaining to pertinent nutrition topics among youth interested in participation in the Nutrition Skillathon activity in Highland County, Ohio. After borrowing the kit at-least 75% of the youth indicated that they learned at least 3 new pieces of information as a result of using the kit (as measured through retrospective post-tests). Youth who borrowed the kit received at least 5% higher score than those who didn't utilize the kit. Content from the Nutrition Skillathon kit is also applicable to other related FCS activities for youth in Highland County (Ohio), such as project judging, the nutrition quiz bowl, and the baking contest. Youth participating in these activities can also borrow the Skillathon kit to prepare for these events.

R-26- COLLEGE READINESS FOR RURAL YOUTH

Jason Hedrick, Ohio State University Extension
Mark Light, Ohio State University Extension
Jeff Dick, Ohio State University Extension

The College Readiness for Rural Youth curriculum is bridged with the OSU Extension program entitled: Real Money – Real World (RMRW). The approach capitalizes on the Extension/local school partnerships to integrate the College Readiness for Rural Youth initiative. An expanded series of activity-based lessons were developed that included topics covering college transition. These lessons helped students identify what steps need to be taken, educationally and financially, to attain their career goals. After youth participated in RMRW, they were then engaged in follow-up activities about how to choose a school, what types of programs to explore, how to finance schooling, and how to begin the process of admissions. Students also gained insight as to why good ACT scores, high GPA's and college prep course work was critical in high school. The overall program has aligned with the Ohio Department of Education Personal Finance Curriculum, thus helping schools partially fulfill their requirement to teach Financial Literacy (part of Amended SB 311). 4-H Professionals in three individual Extension offices were designated to lead other counties in the region to cover the broad area of Northwest Ohio in the execution of this curriculum. Each of these designated counties represented strategic locations within the region to service the southern, central and northern areas respectively. In addition, the college-readiness curriculum has been implemented through the region in collaboration with partnerships developed with local post-secondary institutions including: Owens Community College, Rhodes State College, Ohio State University Lima, Bowling Green University and University of Northwest Ohio. Each of these partners hosted a College Readiness for Rural Youth NW Ohio event. Presenters will outline the curriculum, evaluation findings and tips for curriculum integration.

R-27- FRAGILE: HANDLE WITH CARE - DRUG AND ALCOHOL PREVENTION PROGRAM

Joan Gray-Soria, Texas A&M AgriLife Extension Service
Brandon McGinty, Texas A&M AgriLife Extension Service

Underage drinking is strongly associated with many health and social problems among youth including alcohol-impaired driving, physical fighting, poor school performance, sexual activity, and smoking. The critical period of vulnerability for alcohol experimentation is between ages 10-17. The Texas A&M AgriLife Extension Service - Gray County Youth Board members (Youth Board) identified that alcohol consumption on their high school campuses was a major concern. According to the Texas Student Survey, 68% of Pampa ISD Students reported consuming alcohol at least once during their lifetime compared to 66% statewide. The Youth Board adopted youth alcohol programming and has developed and offered, along with adult partners, the Fragile: Handle with Care program (Fragile) each May from 2009-12 to the target audience of 6th grade students in Gray County. After identifying the problem, youth members identified potential collaborators for the program. School superintendents granted permission to address the consequences of alcohol and drug use, and teach skills to avoid risky behavior. Texas Department of Public Safety Troopers were asked to teach the legal consequences lesson. Texas Department of State Health Services,

provided a peddle car and other resources. The Commissioner's Court provides $1000 each year to the program. A Train-the-Trainer workshop was developed by the Gray County Extension Agents. Agents taught the youth members how to teach the curriculum. Youth Board members were divided into teaching teams and in turn taught the lessons at the schools. The Board members taught 4 out of 5 days with law enforcement teaching the fifth day. The curriculum not only used lecture style lessons, activities were used to imitate the impairment of vision and coordination while under the influence of alcohol. The students were given the opportunity to "walk the line"; drive Remote Control cars through an obstacle course; complete basketball skills; and practice bowling while wearing the "drunk" goggles. Along with Fragile, in 2012 the Agents partnered with Pampa High School SADD and Pampa Junior High Student Council to develop a Fractured Futures program in conjunction with the Shattered Dreams program at the high school. The Fractured Futures targeted the 7th and 8th grade students. Four concurrent sessions: Visual Impairment, Health Risks, Shattered Dreams Film, and a SADD Presentation were offered over a two day period. Since implementing the Fragile program 1,228 students have completed the five day Fragile: Handle with Care program; and 478 youth complete the Fractured Futures program. Results of the program show the largest increase in knowledge was that peer pressure and the influence of your friends can influence your choice to drink alcohol. Youth also learned when a teen makes the decision to drink, the effects go beyond momentary intoxication. Youth also reported increased knowledge in using alcohol can negatively impact a person's ability to achieve goals. The Fragile: Handle With Care is a valuable program that uses teen instructors as role models for younger students. Each year brings a new group of 6th graders than need the education about the effects alcohol and drugs have on the developing teenage brain.

R-28- YOUTH ADVOCATES FOR HEALTH (YA4-H!): A REVIEW OF THREE YOUTH-LED COMMUNITY ENGAGEMENT PROJECTS

Lynette Black, Oregon State University Extension Service
Elissa Wells, Oregon State University Extension Service

A new era in youth development: youth advocating for healthy communities. Youth Advocates for Health (YA4-H!) engages teens as researchers, teachers and health advocates to define, assess, and address health related issues in their communities. YA4-H! prepares youth to conduct community based research with a health focus and to use the results to educate others about and advocate for solutions to health related concerns at the community level. This youth/adult partnership program guides youth through the process of assessing health-related needs in their community, then developing and implementing a project to address those needs. The short-term learning outcomes for youth who participate in Youth Advocates for Health (YA4-H!) include: increased understanding of nutrition and diet, development of self-efficacy, self-esteem and empowerment, development of critical thinking skills, increased community awareness, and increased health concern knowledge, understanding and awareness. This poster will highlight projects from 3 Oregon counties that participated in Oregon's YA4-H! Statewide Project. Each county's YA4-H! program focused on a different aspect of health. We will discuss best practices for community capacity building and engagement and share our short-term learning outcomes as reported by youth participants. A replication of a healthy snack from this project will be provided during the poster viewing session!

R-29- FOCUSING ON SCIENCE IN 4-H PROJECT AREAS: SCIENCE INQUIRY FOR ALL 4-H PROJECTS!

Lynette Black, Oregon State University Extension Service
Virginia Bourdeau, Oregon State University Extension Service
Jeremy Green, Oregon State University Extension Service
Patrick Willis

Science inquiry; a shift in paradigm for 4-H professionals and volunteers. Oregon 4-H has embraced the new focus and paired it with tried and true, traditional 4-H programming; successfully bringing our agents and volunteers across the bridge to the new era of practice . Oregon 4-H has developed a series of resources designed to teach science inquiry, a proven method for learning science. These resources include a video series showing inquiry in action, accompanying teacher/leader activity handouts, and Science Rich Handbooks to accompany a variety of 4-H project areas from horse to clothing and textiles. These professional development handbooks include science inquiry training for club leaders and suggested activities for club meetings. This poster session will share these resources and discuss best practices for adding science inquiry to traditional 4-H programming. Poster session attendee will receive a CD containing the developed resources and related information.

R-30-IRESPECT

Susan England-Lord, West Virginia University Extension
Rhonda Coleman, West Virginia University Extension
David Hartley, West Virginia University Extension
Donald Reed, West Virginia University Extension
Mark Whitt, West Virginia University Extension

iRESPECT is an educational campaign targeting students, parents, and educators. Each of these groups is impacted by cyberbullying in a different way. Students obviously suffer the greatest threat of harm, but parents and educators who work with students daily also share in the harm cyberbullying causes. Parents need to learn how to recognize when a child is experiencing cyberbullying or online harassment, and educators need to know how best to handle the disruption this activity often has on a learning environment. WVU Extension with assistance from the West Virginia legislature developed curriculum with elements designed to specifically address the needs of students, parents, and teachers. The core of this curriculum focuses on raising awareness of the problems associated with cyberbullying and online harassment. Beyond the core content, each prong focuses on strategies to deal with, prevent, or minimize the effects of cyberbullying and online harassment.

R-31- INCREASING FAMILY INVOLVEMENT WITH PARENT PROGRESS REPORTS

Kim Catchpole, Ohio State University Extension
Nate Arnett, Ohio State University Extension

A common concern for youth service providers is effectively engaging adequate parental support. Provider's cite challenges communicating parent expectations and having parents demonstrate success in fulfilling those expectations. At the same time, providers recognize involving families in children's learning is key to academic achievement and overall healthy development (Epstein 1991; Fan and Chen 2001; Gettinger and Guetschow 1998; Hara and Burke 1998; Jeynes 2005) and as such, parent engagement in youth programs is essential. In fact, research shows that parent involvement in afterschool programs provides the same benefits to children, families, and programs as parent involvement in the regular school day (Perkins er.al. 2004). However, youth programs continue to struggle with how to attain and sustain family involvement. Adventure Central, a partnership for positive youth development between Five Rivers MetroParks, Ohio State University Extension, and 4-H has developed a strategy to involve families in their afterschool program (a National 4-H Program of Distinction) and has seen growing success over two years of implementation. In 2011, Adventure Central introduced a Parent Progress Report. This semi-annual report provides families with feedback in the areas of communication, youth attendance, submitting copies of youth report cards, parent volunteerism, and attendance at family programs. Families are given an overall score (1-100) and those with exemplary scores are publicly recognized for their commitment. Families with a score below 60 are encouraged to set up a one-on-one meeting with staff and are not eligible for preferred enrollment in future Adventure Central Programs. Extenuating circumstances are taken into consideration and families have opportunities to earn bonus points (by attended Extension sponsored programs or other educational or family-oriented programs in the community). Overall, the Parent Progress Report has proven to be an effective method of clearly communicating program expectations with families, holding families accountable for these expectations, and increasing the positive program support available to youth. In the 2010-2011 afterschool program year, Adventure Central had a total of 54 parent/ guardian volunteer hours. After implementing the Parent Progress Report in 2011-2012 there was an increase to 247 volunteer hours – that's four times the parent volunteer hours! Attendance at parent and family engagement programs (i.e. family ice skating, science fair expo, and end of year picnic) increased, doubling from 263 attendees in 2010-2011 to 486 in 2011-2012. In addition to these quantitative measures, staff reported an overall increase in parent communication and a decrease in youth behavior problems. While Adventure Central used the Parent Progress Report for its Afterschool Program, this tool for increasing parent involvement could be modified and replicated for use in any youth program. This poster presentation will be an opportunity to share our findings with the Extension Community. The full-color poster will include a description of the Parent Progress Report, success indicators displayed in graph format, and lessons learned. Hand-outs with sample Parent Progress Reports will be provided.

R-32- 4-H ALUMNI CAREER & CIVIC ENGAGEMENT SURVEY

Joy Jones, Oregon State University Extension Service
Nancy Kershaw, Oregon State University Extension Service

County 4-H faculty observed that a significant number of 4-H alums returned to the county and serve in professional/semi-professional positions. They wanted to determine whether alums credited their prior 4-H experience in influencing their career decisions and civic engagement. This research/evaluation report describes a 4-H alumni survey that was developed by county faculty. The survey and research/evaluation protocol was submitted to the university Institutional Review Board and received approval to proceed, utilizing a hard copy and an online version. Questions included: Information about the 4-H experience of alums (including: longevity; project participation; participation in county, regional, state and national 4-H events & activities; and their perceived level of 4-H involvement); Current educational attainment,employment status, and perception of 4-H influence in career choice; Perception of how 4-H helped them prepare for adult life; Level of volunteer participation; and Suggestions to maintain/strengthen the 4-H program. Hard copies of the survey were mailed to the last known address for 341 4-H alumni who had graduated from 2001 to 2012. Hard copies of the survey were made available at the County Fair and the Extension Office. An online version was posted on the County 4-H webpage. An appeal for 4-H alums to participate was made through 4-H newsletters, the 4-H Facebook page, e-mails to current 4-H families, and local media. The majority of respondents had participated in 4-H for 7 or more years and ranked their level of 4-H involvement at "moderately high" to "high." The survey asked a series of questions about the perceived effect of participation in 4-H on the respondents career choice and preparation. Participants responded to statements using a scale of 1= strongly disagree to 5=strongly agree. They indicated that participation in 4-H helped them to choose a career (3.93); be selected for a job (3.93); be successful in their job (4.22); and to acquire scholarships for education (3.84). Respondents were also asked to indicate (using a scale of 1= never to 4=often) whether knowledge/skills that they learned in 4-H helped them with their adult life: Respondents indicated they "often used" the following: Leadership (3.46); Community Service (3.36); Public Speaking (3.11); and Ability to Actively Participate on Committees (3.11). In addition 60% of respondents indicated that they volunteered in their community as adults and 82% plan to volunteer for the 4-H program in the future. The final question asked, "What should the current 4-H program do to help young people prepare for their future?" Responses varied with common themes including: more science and technology; keep doing what you are doing; and one person wrote, "The focus on citizenship, leadership and self-efficacy and working effectively with others are particularly important. I also appreciate that the 4-H program values diversity, while some other activities for youth may not be as welcoming to certain minority groups. Learning to work more effectively with people who are different from you is very important, especially in an increasingly global society." The results of the survey were shared with local decision-makers and other youth development professionals.

R-33- FROM MARKET ANIMAL TO FOOD ON THE TABLE – THE SCIENCE BEHIND RAISING A QUALITY PRODUCT

Joy Jones, Oregon State University Extension Service

Each year thousands of 4-H members produce and sell market animals through youth livestock auctions. Agents have often struggled with the task of increasing the educational value of this popular program. The market animal program has been criticized in the past for its focus on $$$ and not enough emphasis on education. It has also been criticized for not teaching real-life market animal production skills when youth produce animals that do not fit current industry

standards. How can this traditionally strong program be enhanced to teach appropriate real-life market animal production skills? One way is to increase the focus on the science behind meat animal production and to implement a carcass evaluation educational program for 4-H members, their parents, and leaders. An educational program can address more than just grading carcasses. It can be an ideal format for addressing the issue of humane and ethical treatment of animals; teaching the members how selection, feeding and management affect the final quality of their project; and instruction about laws regarding drug use and required drug withdrawal intervals. In addition to learning about meat quality and the USDA grading system, and what the packing industry and the consumer wants, 4-H members can learn how the choices they make will affect their animal and ultimately the food they are producing. Unfortunately in many areas there has been a loss of carcass evaluation programs as it has become increasingly difficult to collect the carcasses data when the animals are processed. This can be addressed in some cases by utilizing other scientific methods of collecting data, such as ultrasound technology. While sharing information from the participant's actual animals is most effective, an educational program can still be an important teaching opportunity without having actual data, provided appropriate examples are used. A carcass evaluation educational program has been conducted for 17 years in a small rural county that had a prior history of producing a high percentage of undesirable market animals. Since the Carcass Evaluation Educational program was instituted the number of undesirable carcass animals has been significantly reduced and the overall quality of all of the animals has improved. Participants in the educational program have completed evaluations. Through these evaluations and personal statements they have credited the program with teaching them the importance of: producing animals that meet acceptable grades for consumers; feeding animals so they produce a desirable carcass that is free from illegal chemical residues; and handling their livestock in safe and humane ways to produce healthy animals. Participants also indicate significant improvement in their understanding of the meat production and grading system in the US. The 4-H Market animal project is a viable tool for learning many life skills if the focus is expanded to include education and developing skills such as decision making, responsibility, record keeping, and real-world meat animal production.

R-34- LEADERSHIP OPPORTUNITIES FOR SENIOR 4-H MEMBERS

Amy Parrott, Arizona Cooperative Extension

For nearly 20 years, a leadership opportunity has been available to 4-H members who meet minimum requirements and seek additional opportunities for 4-H involvement. The goal of 4-H Ambassador Team has always been to provide a leadership opportunity for senior 4-H members through the participation in numerous community service projects, many patriotic presentations, welcoming and greeting dignitaries to Yuma, and many other activities to promote the 4-H Program, not only in Yuma County, but across the State of Arizona. While it started out looking a little different than it may look now, the goals have remained the same. One Ambassador is selected for every 100 enrolled 4-H members, ensuring that there is ample representation of its current membership. A written survey, with both multiple choice as well as open ended questions, was mailed to all former 4-H Ambassadors that contained approximately 100 questions. The purpose of the survey was to see if the program is making the impacts we tout. We evaluated the experience of Ambassadors as well as the impact of the Ambassador program in developing critical life skills. The intended outcomes are:

- Members who were Ambassadors were also actively involved in other organizations/teams/clubs.
- Those 4-H members that served as Ambassadors also served in leadership positions in other organizations or groups in which they belong and that there is a correlation with their desire to seek out leadership opportunities.
- Their peer group has the largest impact on whether or not they chose to serve as Ambassadors.
- Having served as an Ambassador, they felt prepared going into their year, but after serving, there are preparations they would have liked to have had prior to their involvement.
- Members would report that the time required to be a good Ambassador was more than they originally thought.
- Being an Ambassador was more responsibility than they originally thought, but not more than they were capable of doing.
- Serving as a part of a group increase their desire to stay in school.
- Former Ambassadors will conclude that the Ambassador program is a "very valuable" program in the community.
- Their involvement in the Ambassador team was a "high value" to them personally.

R-35- ENCOURAGING AND ENGAGING YOUTH THROUGH TECHNOLOGY: UTILIZING TURNING POINT TECHNOLOGIES FOR ANIMAL SKILL-A-THONS

Xiomara Diaz, University of Florida/IFAS Extension
John Mark Shuffitt, University of Florida/IFAS Extension

Marion County 2012 Youth Fair had over 1,000 non-duplicated animal exhibitors; thirty percent participated in species skill-a-thons. By employing Turning Point Technologies, agents can modify traditional skill-a-thons into an efficient and entertaining PowerPoint format appealing to youth. Objectives:

1. Implement an efficient method for evaluation of participants' knowledge gain.
2. Incorporate new technology to increase participation.
3. Reduce amount of time required for coordination, implementation and evaluation.

Methods: By utilizing Turning Technologies, agents designed specific questions and diagrams adapted to rabbits, lambs and poultry for three age divisions. Skill-a-thons measured and evaluated knowledge acquired in these project areas. This tool was designed to gather and tabulate answers automatically, reducing the number of staff and time required for calculation. Participants were given transponders for recording answers electronically allowing them to have an interactive experience when compared to traditional tests. Results: Extension agents and Show Coordinators who have used this evaluation method responded positively to Turning Point Technologies applicability to skill-a-thons for all species. Ninety percent of youth (n=108) reported competing in this contest was enjoyable and reduced the "testing" tension of the competition. They also agreed they would encourage others to register for these types of skill-a-thons next year. Additionally, other Show Coordinators requested this type of skill-a-thon for their specific species including: swine, goats and steers for 2013. Conclusions: In addition to motivating more animal exhibitors to participate in skill-a-thons, Turning Point Technologies is not only an innovative way to evaluate

skill-a-thon tests, but also an effective method to minimize the number of volunteers needed and time required to complete the contests in a timely manner.

R-36- USING VIDEOS TO HELP YOUR VOLUNTEERS TEACH WITHIN THE CLUB

Travis West, Ohio State University Extension
Teresa Johnson, Ohio State University Extension
Bonnie Malone, Ohio State University Extension
Vicki Reed, Ohio State University Extension
Joy Sharp, Ohio State University Extension
Bruce Zimmer, Ohio State University Extension

The Ohio 4-H Community Clubs design team has developed three modules that can be used by club volunteers or 4-H professionals to educate youth about parliamentary procedure, demonstrations and project interviews. Each module includes videos, a facilitator's guide and an activity to reinforce the learning about each topic. Preparing youth with presentation and life skills are what 4-H is all about, but many times we depend on volunteers to teach youth in their clubs without arming the volunteers with teaching materials or background information. Volunteers bring many talents and abilities to our programs but teaching parliamentary procedure might not be something they can teach to club members. A CD will be distributed during the session that allows professionals to replicate the teaching materials and videos for their program.

R-37- E-BASICS ONLINE

Ben Silliman, North Carolina Cooperative Extension

This competency-building workshop features an overview and sample exercises for a forthcoming 10-hour Evaluation Basics (E-Basics) online training certification offered through National 4-H Council Science Initiative. Since Extension's inception, staff practiced program development and evaluation processes, but recent trends toward greater accountability and quality improvement highlight the importance of planning, design, methods, data collection and analysis, and reporting skills for 21st century Extension programs. Moreover, thinking about evaluation can also enhance program marketing, training, implementation, and interpretation of needs and results to stakeholders. However, some Extension professionals have relatively little training in evaluation or research methods and many with training have difficulty translating concepts to practice. A recent survey of state 4-H Science teams identified a high need for training in all phases of program evaluation, especially if delivered in brief units with relevant examples and related practical tools. E-Basics Online was designed to address those priorities, using the National 4-H Evaluation-for-Impact Training Framework, with emphasis on Stage 1 (Novice) and Stage 2 (Advanced Beginner) Skills. The target audience for E-Basics Online includes Extension professionals from any discipline and position. Those in supervisory or support roles may be interested in E-Basics Online as a professional development option for staff. Extension professionals with programming (and evaluation) roles—especially those with limited experience in evaluation--will gain hands-on experience with practical tools for assessment, as well as an introduction to the 6-module, 10-hour online PowerPoint/Video professional development package. Elements of E-Basics have been well-received by state-level training and mentoring groups, a NAE4-HA workshop, and online webinars with state 4-H Science teams. Additional elements in the online version will include a glossary, reflection and application exercises, content tests, and links to additional evaluation resources. Although vignettes and tools were developed to support the 4-H Science Initiative, those working in other programs will likely find practices such as “backward engineering” (reflecting back from desired outcomes for logic models), “embedded assessment” (integrating program delivery with monitoring process and outcome indicators), data frames (protocols to manage reporting and analysis), and utilization-based strategies (program improvement and sharing with stakeholders) helpful in their own programs. E-Basics is designed as a primer on evaluation skills and concepts to prepare Extension professionals for more in-depth mentoring and collaboration applied to community-based programs. The workshop is primarily designed to preview the E-Basics syllabus and practice a few E-Basics strategies, but presenters will also provide opportunities for questions and discussion during the session. Participants will receive handouts summarizing E-Basics content and information on how to access resources online as well as print samples of tools used in hands-on exercises. Participants can expect to gain an overview of critical skills for program evaluation together with awareness of where and how to cultivate evaluation insight and skill, a bit of practical experience with related tools, and ideas on how to build evaluation capacity in Extension program teams.

R-38- STEAM GARDENS, CULTIVATING THE FUTURE

Marissa Blodnik, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension
Rebecca Kalenak, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension

School gardens are often works of pride in communities around the country. This presentation will offer lessons and a program plan that volunteers and professionals can utilize in a classroom or club setting to teach Science, Technology, Engineering, Art, and Mathematics (STEAM) through the creation and maintenance of a school or community garden. Utilizing youth and adults of all ages, school and community gardens have been developed in and around Newark, New Jersey, which highlight math and science skills. Working with STEAM curriculum, collections of successful lessons are being utilized and linked to standards and essential life skills that teach youth in the garden. Working with raised garden beds, compost piles, and rain barrels, youth practice a wide variety of skills essential to their success in school and in real-life situations. Lessons and ideas will be shared that have been utilized by classroom teachers, after school programs, and volunteer leaders in community based youth development clubs. By linking gardening and standards together, professionals are able to maintain a real-life connection and prepare youth for their futures while addressing essential standards required for youth to be successful.

R-39- BUG AND WILDLIFE CAMP

Jim Davis, University of Florida/IFAS Extension

Objectives: Florida is widely renowned for its wildlife diversity and its vast array of natural habitats. Teaching the next generation is a vital step in sustaining and preserving Florida's natural resources. “Bug and Wildlife Camp” is a program that was developed to increase the knowledge and importance of wildlife and common arthropods found in Florida’s environment to Sumter County youth. Activities introduced include the scientific method, lab skills and writing skills being delivered in a fun, interactive, non-formal environment. Skills such as these will help students adapt and succeed in higher education levels. Methods: The camp is a 3-day event, ages ranging from 7 to 13 years. Youth learn collecting methods, insect classification, internal and external morphology, pinning and dissecting of arthropods. Youth learn the value and role of insects and wildlife in Florida's natural resources. Wildlife activities include the identification of Florida's native and non-native anoles and dissecting owl pellets. Dr. Steve Johnson from the University of Florida's department of Urban and Wildlife Ecology was invited to present a one hour workshop on native and non-native amphibians, reptiles and non-native mammals to the camp participants. Camp participants also visited the Butterfly Rainforest in Gainesville, Florida's Museum of Natural History and the Urban Entomology Lab on campus at the University of Florida. During these field trips, students learned the natural history of butterflies from around the world, importance of habitats, wildlife found in Florida, invasive insects and native arthropods. Results: Based on a post evaluation of participants, 100% of the students correctly identified the native anole from the invasive Cuban anole, 100% of the students were able to identify the prey found in owl pellets, 100% of the students correctly identified external and internal body parts of insects, 100% of the students increased their knowledge by learning the invasive amphibians and reptiles in Florida and 100% of the students correctly identified beneficial insects from pest insects. Conclusions: The original concept of Bug Camp has been established in Sumter County for seven years. The addition

of “Bug and Wildlife Camp” has been an overwhelming success, based on the return of our original students and the knowledge they have gained. Many of the activities in "Bug and Wildlife Camp" require youth to work together as teams and form partnerships. The life skills and science based knowledge learned in day camps can help youth succeed in higher grade levels and will hopefully encourage youth to be stewards of the land throughout their lives. We will continue to add new and challenging activities and camp days so that youth in Sumter County learn and appreciate the natural wildlife, insects and flora that surround them on a daily basis.

R-40- DEVELOPING TOMORROWS LEADERS TODAY

Jessica Street, University of Arkansas Cooperative Extension Service
Janice Shofner, University of Arkansas Cooperative Extension Service

Leadership is a life skill that is hard for everyone to learn in school. Many young people do not see themselves capable of being a leader due to shyness, lack of self confidence, or just by not being in the "right crowd." Tufts University Research Study shows that 4-H youth are 2 times more likely to actively contribute to their communities. The Benton County 4-H Teen Leader Program was developed by a committee of adult volunteer leaders over 30 years ago. We have an extensive application process each year which includes a journal, an application, recommendation letters, and an interview. The interview is conducted by a County 4-H Foundation member, 4-H Leader, and 4-H alumni. The Benton County 4-H Teen Leader Program is an active growing program. This program targets teen 4-H’ers who has been enrolled in a 4-H club for at least 1 year. To be selected as a Teen Leader, a 4-H’er must go through an extensive application process each year which includes journal, application, recommendation letters and an interview. The Intermediate Teen Leaders (ages 13-14) plan and conduct two County Cloverbud Day Camps each summer and the Advanced Teen Leaders (ages 15-19) plan and conduct a three day overnight County Camp. Teen Leaders are also utilized by County Extension Agents when planning and carrying out all major 4-H functions. The teens learn about job skills, communication and leadership skills through workshops, guest speakers, and presentations. The Intermediate Teen Leaders plan and conduct our two County Cloverbud Day Camps each summer and the Advanced Teen Leaders plan and conduct a three day overnight County Camp. During the year, members plan, conduct and evaluate summer county camps, teach workshops, preside at county 4-H functions, and attend leadership trainings. 20 Teen Leader meetings were conducted to teach leadership skills. Teen Leaders planned conducted, and evaluated 3 camps for 155 youth. and 35 Teen Leaders taught 27 project workshops to 109 youth. To evaluate the program we have used member feedback and surveymonkey.com tool that members filled out. A 72.5% feedback showed that members learned skills such as planning, conducting and evaluating an activity or event, how to interact with adults, working as a group and the importance of community service. Three Teen Leaders served as 2011-12 State Officers, including State President, one was elected 2012-13 State Officer. At least 1 Benton County Teen Leader has held a State 4-H Office for the past 8 years. 10 Teen Leaders volunteered to be State Camp Counselors. Out of the 7 graduating senior Teen Leaders, all 7 received scholarships and attended college. They were all involved in school sponsored organizations during their freshman year of college and 6 of those were holding at least one leadership role in student organizations and/or student government their very first semester. To replicate this program you need willing adult leaders and agents, application criteria and meeting plans. The Benton County 4-H Teen Leader Club has been recognized consistently for their leadership and community service work.

R-42- TECHXCITE: DISCOVER ENGINEERING

Sheila Smith, Michigan State University Extension
Rodger Dalton, Duke University
Jacob Dedecker, Michigan State University Extension
Kristy Oosterhouse, Michigan State University Extension

Science, technology, engineering and math (STEM) are fundamental competencies for youth today and in the future. STEM related careers are among the fastest growing job markets in the world. TechXcite: Discover Engineering http://techxcite.pratt.duke.edu/ is an innovative, hands-on curriculum for 4-H youth development professionals and volunteers. Developed by Duke University with National Science Foundation (NSF) funding the curriculum utilizes eight different modules (with more in development) to increase interest among middle school youth in engineering. Content themes include Bio-Med; Green Architecture; and Alternative Transportation. Example of module activities range from building a bionic arm; to exploring rainwater harvesting potential, to experimenting with solar technology, all modules are highly experiential and fun! Discover too the opportunity to build on these themes through local partnerships. Expanding to include activities and experiences related to career and workforce preparation. The curriculum continues to expand and through a partnership with the National 4-H Council. TechXcite has been piloted in multiple states, including North Carolina, California, Oklahoma, Missouri, and Michigan. The results from the pilots have indicated that the curriculum is easily adaptable to many different afterschool and club settings as well as different populations and ages of youth. This session will introduce participants to the TechXcite curriculum and model for STEM programming. Lessons learned and future applications will be emphasized with findings from the NSF pilot project. Additionally, outcomes from the pilot project with 4-H afterschool programs will be shared. The TechXcite network of colleagues will share implementation strategies.

R-43- INTERVIEWS OF COMMUNITY BUSINESS OWNERS AS CAREER EXPLORATION TOOL FOR YOUTH

Debra Kantor, University of Maine Cooperative Extension

Question: Is the use of interviews an effective strategy to assist youth in exploring a variety of career options?

Methodology: This project utilized a scholarship of discovery approach (Boyer 1990) based on primary empirical observations to determine the effectiveness of this strategy. As preparation for the interviews youth:

- Learned about different types of entrepreneurs.
- Identified personal traits/skills that could be strengths and challenges as entrepreneurs.
- Identified local businesses related to their interests, and observed how they market themselves to their targeted audiences.
- Received training on how to conduct an interview.

- Youth conducted ten semi-structured interviews of community business owners in areas where they expressed interest.

At the completion of the project, youth completed a written evaluation with open-ended questions that asked about: the most important thing learned; possible uses of what was learned; most valuable thing learned about how to conduct an interview, using recording equipment and editing; the challenges and satisfaction of being an entrepreneur; likely influence on their career choice. I completed data analysis of the narrative data collected as a result of post-interview discussions, written evaluations and group observations.

Research Sample: Through purposeful sampling 12 study participants (4 males and 8 females) were identified ranging in age from 14-19 years old.

Summary of Findings: Upon completion of data analysis I discovered: That the use of personal interviews with successful business entrepreneurs was effective in developing the capacities for future entrepreneurial success. Youth increased their awareness of community resources by collecting information about existing businesses and selecting those where interviews would be conducted. Youth learned firsthand the knowledge, social and technical skills used by local business owners.

Contributions to Program Development: Two DVDs of the interviews were created containing: a composite of interview responses to specific questions and each individual interview in its entirety. The youth also designed the case cover and DVD labels. This methodology has been shared with other Extension staff around the state as a resource to promote youth aspirations by increasing their awareness of their community's economic opportunities and challenges. Partnering with UMaine Extension's distance learning specialist, a webinar is being developed to share the results of this project with high school/vocational educators and volunteers in other Maine counties. The educational videos created can be accessed on the Maine 4-H website and are currently available to the general public for downloading.

Conclusion: Many communities are searching for ways to help youth identify successful career options that will allow them to achieve their financial goals and strengthen the local economy. This requires youth exploring the types of businesses and services the community supports. This project's methods are an effective way of achieving this goal.

R-44- ADDRESSING WORLD HUNGER THROUGH PARTICIPATION IN THE GLOBAL YOUTH INSTITUTE

Patty Keating, Purdue Extension
Renee Applegate, Michigan State University Extension

Each year, more than 100 exceptional high school students from across the United States and other countries are selected to participate in the three-day Global Youth Institute hosted by the World Food Prize Foundation. Selected students and their teacher mentors travel to Des Moines, Iowa, in mid-October to attend this exciting three-day event at which they interact with Nobel and World Food Prize Laureates and discuss pressing food security and agricultural issues with international

experts. At the Global Youth Institute, student delegates present and discuss their findings with international experts and their peers, connect with other students from around the world, tour cutting-edge industrial and research facilities, and take part in symposium discussions with global leaders in science, industry and policy. Teacher mentors register their student(s) to participate in a qualifying State Youth Institute (if the student resides in Indiana, Iowa, Minnesota, Nebraska, New York, Ohio and Texas) or apply for an at-large delegate seat at the Global Youth Institute (if the student resides in another state). The students then research and write a short essay on a critical food security issue under the direction of their teacher mentor. At the Global Youth Institute, student delegates present papers they have researched and written on a critical aspect of food security, and discuss their findings with international experts and their peers in roundtable discussions. Each discussion group of seven to nine students is led by three distinguished global leaders in science, industry and policy. Student papers are subsequently published in the Global Youth Institute Proceedings and are available online. Delegates have a unique opportunity to connect with other student leaders from across the United States and around the world to discuss global challenges, share ideas, and identify solutions to these problems and build lasting friendships. In 2012, 150 students from 27 U.S. states and territories – as well as Brazil, Indonesia, Mexico, Nigeria, and Tanzania – participated in the Global Youth Institute. Throughout the three-day program, student and teacher delegates participate in the Borlaug Dialogue, a "davos-style" dialogue which brings together over 1,000 international experts and policy leaders from 65 countries to address cutting-edge challenges in food security and international development. By participating in the Global Youth Institute held in Iowa, students are eligible to apply for a prestigious Borlaug-Ruan International Internship, an all-expenses-paid, eight-week hands-on experience, working with world-renowned scientists and policymakers at leading research centers in Africa, Asia, Latin America and the Middle East. This session is designed for educators in all program areas since the improvement of food security encompasses agriculture, economics, food safety and nutrition, government, climate, culture, and much more. Attendees will learn what is needed to mentor youth and receive materials to implement a state institute, if desired. Both presenters have mentored students, attended the Global Youth Institute in Iowa, and believe that participation in the Global Youth Institute is a great way to prepare youth to meet the challenges of addressing world hunger.

R-45- UTILIZING TEENS IN COMMUNITY CHANGE

JoAnne Leaatherman, National 4-H Council
Christopher Anderson, University of Maryland Extension
Barbara Baker, University of Maine Cooperative Extension
Jeffrey Buckley, University of Georgia Cooperative Extension
Steve Henness, University of Missouri Extension
Karen Johnston, University of Delaware Cooperative Extension
Jenny Jordan, University of Georgia Cooperative Extension
Jan Klein, Washington State University Extension
Dale Larson, Washington State University Extension
Sally Miske, National 4-H Council

Extension programming often overlooks the energy, enthusiasm and new perspectives youth bring to solving community problems. Engaging Youth, Serving Community (EYSC) is a proven civic

engagement model focused on using community-based discussions to identify critical issues and carry out action plans leading to positive community impacts. The model has been evaluated for the development of leadership skills in youth and adults, community responsiveness to youth taking on leadership positions, and ultimately positive impacts on community residents and economies. Funded through the USDA/NIFA Rural Youth Development Grant Program, EYSC focuses on youth-adult partnerships where teams of trained youth and adults convene community-wide meetings to discover and discuss needs and then engage community residents in development and implementation of action plans to address those needs. A key element is using a service-learning model for action projects. Issues addressed are broad, long-term and of significance to the communities such as obesity, water quality, violence, land use, workforce development, etc. Participating communities are underserved and include tribal reservations and other rural disadvantaged, sometimes ethnic, populations. The cornerstone of this model is the youth-facilitated public issues forum/town hall meeting within each community where residents (youth and adults) provide input into the identification and prioritization of community problems and collaborations start forming with community partners providing project sustainability. Impact evaluation begins with identification of baseline data and indicators to show community improvement. Community impact is framed within the Community Capitals model developed by the North Central Center for Rural Development - human, social, civic, cultural, natural, financial, and built (infrastructure). Other indications of success are changes in attitudes towards the role of youth as leaders and change agents within their communities, as articulated by a cross section of youth and adult stakeholders surveyed within each community using a standard evaluation instrument. Youth are being seen as valuable resources within their communities now rather than a future asset. With 7 years of implementation and evaluation data in 22 states (110 communities), both youth and adults on the local leadership teams show progressive acquisition of leadership and life skills using 16 constructs. Impact is also assessed at both the community and beneficiary levels. Longitudinal data shows community change as the program was implemented for 5 years in the same communities. Projects are encouraged to increase in size and scope each year with adjustments in action plans as impact develops. Grant funding helpful but not required; in-kind and cash resources from collaborations and outside funding has supported expenses beyond the mini-grants provided through the program. While based in rural communities of less than 10,000 population, the model is readily adaptable to urban and suburban settings as well. Learn about community impacts on diverse issues, resources and how to replicate results in your program.

R-46- A REAL-WORLD REALITY CHECK: FINANCIAL LITERACY TRAINING FOR TEENS

Samantha Ephgrave, Oklahoma Cooperative Extension Service
Lindsey Miner, Oklahoma Cooperative Extension Service

Financial challenges such as fiscal budget constraints, poor economy, and commodity price increases face families and directly affect youth each day (Oklahoma Cooperative Extension Service, 2012). To combat the cycle of financial stress, it is imperative to teach today's teens applied financial literacy skills in an experiential format. The Reality Check program was created to provide a real-world experience in handling daily finances while introducing the concept of financial management to high school freshmen students. Through random career assignment, teens are given an income and must keep a balanced account while they travel from "office" to "office" paying

taxes, insurance, medical bills, car loans, rent/mortgages, and phone bills. A randomized family size is assigned and the teens must provide for up to three children by purchasing groceries and clothing for their new family. If their daily cost of living goes over the income level of their assigned job, teens must visit the employment office for a second job and figure out what luxuries must be cut from their budget. Also included is a requirement for charitable giving based upon their income level. At the end of the session, teens must turn in a balanced account sheet in the black to receive a Payday candy bar or receive a Zero candy bar for an account in the negative. Youth evaluations from administration of the program in four counties were evaluated against data from the national Gallup poll on youth development with results showing a positive knowledge gain through participation in Reality Check. As more teens learn basic budgeting skills and plan for their financial futures, the asset-building process will accelerate and aid in decreasing future numbers of people requiring public assistance (OCES, 2012). The ultimate goal is for students to make realistic educated choices, which will provide for the future they anticipate for themselves and their families. This program has been piloted with evaluation data included in presentation with media from the program. Digital materials available to replicate program with website support.

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R-47- PROJECT-BASED LEARNING MODELS: AN EVALUATION OF THE EXTERNSHIPS IN SUSTAINABILITY PROGRAM

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Kerry Schwartz, Arizona Cooperative Extension
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Project-based learning (PBL) models are student-centered,p rocess-based, and use group-learning to solve problems (Hmelo-Siver, 2004; Raisch, Holdsworth, Mann, &Kabat, 1995). This approach provides authentic learning opportunities with real-life situations, which enables participating youth to set their own learning goals and forge their own relationships (Barab, et al., 2001). The results can be increased critical thinking, problem-solving, collaborative skills, content knowledge, and an escalation in motivation and engagement (Brush,&Saye, 2008). The overall purpose of the Externships in Sustainability Program was to create opportunities for university students to bring their experience, skills, and enthusiasm to their communities through innovative sustainability projects. Externs applied their own knowledge, organizational and problem-solving skills to bring a local project to fruition. The key distinction between a typical internship and an "externship" is that students bring passion and particular skills which are applied in service to their communities. This project represents the mutual benefits of collaborative efforts between academic units and Extension. To better understand what impact the externship had on the students and participating

supervisors, in-depth interviews were conducted with key informants and a protocol for analyzing the data was established based on the recommendations of Taylor-Powell& Renner (2003). This poster will focus on the "personal impact" theme and the six sub-themes that emerged from the interviews: Self-reliance and Responsibility; Mutual Relationships; The Value of Hands-on Relevant Learning; External Recognition of Expertise; Change in Identity; and Raising Awareness of Sustainability. These emerging themes aligned well with project-based learning elements including self-reliance, responsibility, mutual relationships, multigenerational involvement, hands-on relevance, ownership, and real-world action.

R-48- A NEW ERA FOR THE OHIO 4-H TEEN CONFERENCE

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Allen Auck, Ohio State University Extension
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The Ohio 4-H Teen Conference was born shortly after the turn of the 21st century, as a new means of bridging the gap left from the discontinued Ohio 4-H Expo. The previous event, a version of which was initiated in 1920, had run its course. Funding, time, and space were at a premium for a week-long overnight event. A committee of staff, volunteers, and teens began working together to create a 1-day conference that would: 1) Offer opportunities for teens from across Ohio to come together to engage in educational programs applicable to their lives; 2) promote positive adult/teen partnerships through the planning, implementation, and evaluation stages; 3) include interactive and hands-on educational sessions, displays, and programs; 4) feature nationally known speakers, university faculty, staff and students, community members, and 4-H members as presenters; 5) encourage county delegations or teams to participate through an open registration process, and 6) promote and recognize successful 4-H programs and activities conducted on the local, state, and national levels. The 1st Annual Ohio 4-H Teen Conference occurred in February 2005. Throughout the past 8 years, the overall goal has remained true to best practices - to provide teens with the Eight Essential Elements of a positive 4-H Experience. In 2011, with 4-H and our families facing challenging times, another change occurred. To continue meeting the objectives above, the Ohio 4-H Teen Conference was moved to the same day as the Ohio 4-H Volunteer Conference. This change brought together multiple generations of 4-H'ers and created the largest 1-day gathering of 4-H volunteers (teen and adult) in the country. 2013 will mark the third year for the combined event. During the Ohio 4-H Teen Conference, Ohio teens experience intensive professional workshops focused on leadership, citizenship, community service, personal development and effective communication. As a result, our youth gain knowledge and skills that they can use while working toward positive change in their communities. The conference features over 75 break-out sessions grouped into tracks. The tracks feature a wide variety of topics and several project areas also receive special emphasis, such as animal science; clothing and fashion; companion animals; food and nutrition; science, technology, engineering, and math (STEM); public communication; shooting sports; and camping. This day-long event includes team building activities, hands-on educational workshops, poster displays, guest speakers and a luncheon with recognition of outstanding teen leaders. A conference-wide community service project is also featured. Educational content focuses on project knowledge and skills as well as current societal issues facing young people. End-of-event evaluations from 2012 found the following: (with 1=poor, 5=excellent) 4.28 Variety of sessions/workshops offered; 4.06 Sessions met my expectations, 4.31 Overall quality of conference. Over ½ of respondents were first time participants and 89% plan to participate again in 2013. Event replication requires committed staff and teen volunteers, financial backing (from sponsors and registration fees), space-appropriate location, speakers/presenters, an RFP process, and an evaluation system.

R-49- TRIPLE "A"

Tanya Wehage, Oregon State University Extension Service

Triple "A" is a program to help at risk kids finish High School. Students are selected by performance in eighth and ninth grade. Research has shown that students that are not successful in the start of their ninth grade year, have a high risk of failure to graduate. With a 1:1 teacher student ratio, youth experience a first time positive learning environment..Students are flagged by current school instructors and information is sent home to parents on how they can help their youth be successful in their education. Balanced lunches and hands on SET program is worked into the intese learning environment. The academic focus is language arts and math skills. All activities are fluid and youth are actively involved. Instructors for the program are grad students in teaching. Allowing them hands on student teaching experience. For this is first year, they brought innovative fresh ideas to the program. The program is being expanded to allow past successful participants come back an be a peer coach. This is valuable life skill that many of these at-risk teens would never be exposed too. The outcome of the Triple A summer program: identify incoming frosh that have struggled in reading and math, provide a short, intense summer intervention focused on improving their math and reading skills, with the goal of helping these students be better prepared as freshmen for the challenges of high school. Of the nearly 20 freshmen students that participated last summer, 80% passed their first trimester Language Arts class, and 90% passed their first trimester math class.

R-50- CONNECTING KIDS TO TECHNOLOGY: THE OHIO 4-H CLOVERBOT CHALLENGE

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The Ohio 4-H Cloverbot Challenge introduced basic engineering, design and research skills to 4-H members ages 5-8 through a LEGO-based building process. Using the theme, “Snack Attack Challenge,” children took a hands-on approach to this topic by exploring how proper food preparation and storage keeps us healthy. They selected and researched a food product, then investigated how it was produced, prepared and safely stored before consumption. Teams learned about simple machines as they used LEGO bricks with a motorized part to build a model representing their findings. They also created a poster to offer additional information about their project. Finally, all teams gathered at the Ohio 4-H Center for the “Ohio 4-H Cloverbot Challenge”. Each team presented their project to reviewers and was recognized in a closing celebration. Volunteer training was also integrated into this program. Volunteers received instruction on inquiry-based learning and experiential education, in addition to details about implementing the program. Two years of evaluation data indicate this is a relevant and highly-successful program for stimulating an interest in young children to learn more about science and technology. It also fosters cooperative, experiential learning and allows children to showcase their acquired knowledge in a supportive setting. Targeted outcomes were to: offer a non-competitive outlet for youth to showcase their knowledge in a safe, supportive environment; utilize adult volunteers to guide children through the inquiry based science exploration process; foster cooperative learning in an experiential manner; stimulate an interest in young children in learning about science and technology; and educate volunteers about technology, youth and program delivery so that they are

more comfortable with offering STEM activities in their 4-H programs. The following activities and products were created through this program: A promotional presentation was developed outlining the Cloverbot program that included information about how the program was conceived, where the funding came from, how the program worked, and details of how to apply for the Cloverbot mini-grant. An online mini-grant application website was also designed to collect team information. During the volunteer training, inquiry based learning was introduced utilizing a hands-on lesson on engineering design and scientific process. During the Cloverbot Challenge, opening and closing ceremonies were created and held to honor and recognize all participants. In addition, individual award medals were given to all participants and team trophies were given to each team. Evaluations were given to volunteer advisors. An online pre-survey was developed to capture team coach comfort level with inquiry-based education and experience with science/technology curriculum. An online post-survey was also created to evaluate the team coach's reaction to the program and to measure growth in their comfort level with inquiry based programming and science/technology activities. Session participants will receive detailed materials for program replication including timelines, volunteer training handouts and evaluation tools and outcomes.. The Ohio 4-H Cloverbot Challenge has proven to be an effective tool for fostering science and technology programming in our 4-H clubs. It is proof that Extension can be the bridge connecting young minds to future success.

R-51- 4-H HEALTH WIZARDS - CHANGING THE FUTURE FOR OUR YOUTH ONE CLOVER AT A TIME

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Childhood obesity has increased dramatically in recent decades, making this one of our nation's most serious public health threats (IOM, 2005). This problem is especially severe in rural parts of the country, where rates of obesity and overweight children and adolescents are 25% higher than urban rates even after controlling for income, race, and other known risk factors (Lutfiyya et al., 2007). 4-H Health Wizards addresses this serious issue by providing vital health education for our youth while bridging 4-H and FCH programming. Health Wizards was developed to begin changing the unhealthy food choices of young children. By understanding how their bodies work and the importance of good nutrition on body function, children will make healthier food choices. Target audience: 4th & 5th graders at a school in rural eastern Oregon.

Methods: Using a field trip format, 84 students and 14 adults from Island City Elementary school traveled to the local fairgrounds to visit the "Health Wizards" (4-H/FCH faculty) for a day. The four H's of the 4-H clover (Head, Heart, Hands & Health) were used as station topics and a model for designing each lesson. As students rotated through stations they learned about different body parts and nutrition. They also participated in group exercise activities that emphasized the body systems/parts. A fun theme of "wizards" provided excitement to the lessons and activities. All

instructors dressed up in wizard costumes and were introduced to students as the wizard of their body system/part.

Evaluation: Feedback was collected from students through a verbal debriefing circle at the end of the day. Students passed the magic Wizard Wand giving them the "power" to share one thing they learned, and something they would take home to share with their families. Teachers checked knowledge retention two weeks later by having students draw a picture of their favorite station and writing down two things they remembered learning. A few of the most common responses were: "the skin is the largest organ in our bodies"; "a part of skin that is the size of a quarter has about 3,000,000 cells"; "you get calluses because you use your skin too much"; "If you think that something is flavored your mind thinks that it's that flavor"; "involuntary muscles are muscles that work on their own"; "voluntary muscles do not work alone". Outcomes: Students learned body systems and nutritious foods and exercise to keep their bodies strong and healthy. "Wizards" helped teachers meet two required Oregon Department of Education Health standards – "Promotion of Healthy Eating and Promotion of Physical Activity". The poster explains the program background, methods used, results found and conclusions made. A curriculum packet is available for easy adoption by others.

R-52- NATURAL SCIENCE ACTIVITIES TO INSPIRE A REUNION WITH NATURE IN 4-H PARTICIPANTS

Christy Millhouse, Ohio State University Extension

Video games, I-pods, I-Pads, cell phones, laptops... Today's young people have access to technology like no other generation ever has. According to a Kaiser Family Foundation study, "American kids ages 8 to 18 average 44.5 hours per week in front of some kind of screen. The only thing that they do more is sleep." With this increasing connection to technology, young people are losing their connection to nature. There is even a name for this disconnect – nature deficit disorder. Howard Frumkin, MD, and Richard Louv, author of Last Child in the Woods, write that "evidence suggests that children and adults benefit so much from contact with nature that land conservation can now be viewed as a public health strategy." In his book, Richard Louv connects the lack of nature in the lives of today's children to childhood trends that are of great concern, such as obesity, Attention Deficit Disorder (ADD), and depression. He suggests that "environment-based education dramatically improves standardized test scores and grade point averages and develops skills in problem solving, critical thinking, and decision making. Even creativity is stimulated by childhood experiences in nature." Where does the 4-H program fit into the movement to reconnect children with nature? 4-H events and activities lend themselves perfectly to providing opportunities for young people to explore nature both in a classroom-type setting and outside. Whether in a community club, 4-H camp, or short term experience, nature activities can easily add to the educational component of 4-H programming. Natural science is a part of the bigger emphasis on science based programming promoted by the National 4-H Council and practiced across the country. This session will help participants understand how nature activities can enhance a young person's 4-H experience and why we should include these types of activities. The presenter will share tested activities that can be replicated by participants. Activities shared have been used at both overnight and day camps, after school programs and workshops. Detailed supply lists and instructions will allow learning kits to be developed by participants. 4-H professionals will practice

hand-on activities that can be taught to young people. Information about free or low cost resources that can be found will be shared. At the conclusion of the session, participants will be able to identify reasons why nature education is important. They will be able to replicate activities shared during the session upon returning home by hand-on experimentation during the conference and through detailed handouts that will be shared. The 4-H program talks about a Revolution of Responsibility that is spreading from state to state. With nature activities, we can begin to build bridges to connect our 4-H participants of today with a natural world through which past generations have explored and learned. By encouraging youth to unplug from their electronics and plug into hands-on nature activities, we can start a Reunion with Nature that can spread across the nation.

R-53-GRAB-AND-GO IDEAS FOR USING THE 4-H BRAND

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Effective program marketing is essential for any successful 4-H program. It is one piece of the puzzle towards developing and implementing high quality educational programs. The fact that many county 4-H programs are constrained by limited financial resources; marketing efforts must be strategic and purposeful (Lockard, et al, 2010). Given the rise in social media over the past ten years, the means through which to market a 4-H program has increased. Many states have 4-H marketing resources that target youth, volunteers, parents, and donors but it is often a challenge to effectively disseminate marketing resources from one state to the next. The purpose of this presentation is to examine 4-H marketing resources available at local, state, and national levels that are used to effectively market 4-H programs across the country. Members of the NAE4-HA Publicity Committee will present resources tailored to: recruit different audiences such as youth, parents, and volunteers; market specific programs that align with the 4-H Mission Mandates (Citizenship, Health Living, and Science); increase the presence of 4-H through such mediums as county and state websites, Facebook, Twitter, etc; advertise 4-H at festivals, centennial celebrations, or county fairs; and promote National 4-H Week. Audience members will also be encouraged to share resources from their county and state programs that have been effective in marketing their 4-H program. Competency building skills presented are program development and equity, access and opportunity.

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R-54- TRAUMATIC BRAIN INJURY: BRIDGING GAPS IN KNOWLEDGE THROUGH EXPANSION INTO A NEW AREA OF EDUCATIONAL PROGRAMMING

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Traumatic brain injury (TBI) affects more than 1.7 million Americans every year (Faul, Xu, Wald, & Coronado, 2010), and has gained recent national attention due in part to consequences of the conflicts in Iraq and Afghanistan and heightened awareness of the seriousness of sports-related concussions. TBI is also an emerging older adult issue, as those 65 years of age and older have the highest rates of TBI-related hospitalizations (Faul, Xu, Wald, & Coronado, 2010; Coronado, Thomas, Sattin, & Johnson, 2005). Although the Cooperative Extension Service has a solid record of providing educational instruction related to specific diseases and conditions, such as arthritis, diabetes, and Alzheimer's disease, it has minimal educational programming related to the topic of TBI. Now, in 2013, Extension has an opportunity to use its rich history of delivering research-based education to advance knowledge of this timely, health-related, lifespan issue with serious implications for individuals and communities. TBIoptions: Promoting Knowledge was developed through a grant from the Rural Health and Safety Education Competitive Program of the USDA Cooperative State Research, Education and Extension Service, grant number 2010-46100-21790, and represents a collaborative effort among professionals with varied expertise. It consists of a community-based, leader-led curriculum and an online, self-directed adaptation. The overall goal is to increase the public's understanding of TBI and the importance of the community in enhancing the health of survivors of TBI and their families. Educational methods used include lectures, reflective questions, handouts, and videos from survivors, families, and friends to consolidate learning objectives. Results of a research study demonstrated significant changes in participants' perceptions of knowledge gained and also demonstrated no statistically significant differences between the in-person and online versions of the program. Both are currently available to the public. Individuals who would like to implement the program in their communities in person are asked to purchase the curriculum and attend a web-based training. Alternatively, individuals can access the program online to increase their own learning at no cost at http://www.TBIoptions.ksu.edu/Knowledge This session is designed for Extension professionals interested in learning about this topic and unique strategies for educational delivery through use of an evaluated program. Visitors will understand the structure and content of TBIoptions: Promoting Knowledge, learn about the results of the research study, appreciate possible delivery methods, and receive sample materials.

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R-55- EQUINE INDUSTRY'S BEST MANAGEMENT PRACTICES AND ENVIRONMENTAL IMPACT IN PENNSYLVANIA

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Dan Kniffen, Penn State Extension
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Horse farms are being regulated. Objective of this survey is to quantify equine industry's BMPs in pasture management, erosion control & examine impacts. A survey was sent to 1817 horse farms. 82.6% housed horses at a self-owned facility, 13% boarded. 74% were women & 26% men. Use of horse farms was recreational 62%, boarding 14%, breeding 6.8%, training 5.6%, rescue 5% & lessons 3%. Only 34% were businesses. Farms averaged 8.1 horses on 21.3 ha of pasture. 1.5 ha were used for heavy use areas. 65% reported that they use a rotational pasture system, 39% has a pasture management plan and 25% continuously grazed horses. 24% allowed pasture to recover to a recommended height and 45% reported sometimes resting pastures. Most respondents (75.4%) assessed their pasture vegetative cover at 80% or better, 5% reported poor vegetative cover, and 1.9% reported utilizing bare ground. Most 54% reported not using sacrifice lots on the property. The remainder used sacrifice lots for confinement during inclement weather or drought 68%, to control horse's consumption of grass 61%, grain feeding 31% and to control horses' exercise 33. Half of operators 50% indicated they have never performed soil fertility tests, with 25% testing soil every 1-3yr and 24.8% allowing more than 3 yr between tests. Most 36% farms never apply lime to pastures, 17.3% applied lime according to soil test results and the 46% sometimes applied lime with or without test results. Farm operators reported regularly applying seed to pastures 28%, applied seed when it needed 47% and never applied seed 24%. Most farms 96% mowed pasture to control weeds. When asked about the use of herbicide; 8% regularly used, 25% sometimes used, and 62% never used. Methods used to manage manure were composting and the use of compost on the farm 34%, hauled off the farm fresh 11%, spread fresh on crop/pasture fields daily 10%, composted and hauled off farm 8%, horses pastured 24 hrs/day with manure harrowed or removed 16%, horses pastured 24 hrs/day with manure never managed 7%, manure collected and stored 6%, commercial contractor removes manure 2%. Manure within sacrifice areas was removed on a daily or weekly basis 56%, occasionally removed 33% or never removed 11%. Horse owners (52.3%) reported storing manure on unprepared sites and 36% stored manure on a hard packed, paved surface. Only 4.3% of horse owners stored manure in a covered compost facility and 7% covered stored piles. Manure storage sites 85% were greater than 45.7m from surface water, 2.2% were less than 15 m. Respondents 93% reported having pasture & nutrient management questions. Resources participants used for information included books, magazines, publications (79.4%), internet resources (79%), acquaintances 65%, agencies 60%, multi-media 28%, private businesses 15% and 2% reported using none. Limitation to altering current management practices was finances (75%), knowledge(37%), regulations (13%), and an inability to obtain services (2%). Data shows farms are utilizing BMPs to reduce environmental impact. Educational programming and cost share funding is needed to target specific BMPs underutilized by this industry.

R-56-A COMPETENCY-BASED APPROACH TO GUIDE EXTENSION EDUCATOR TRAINING

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To remain relevant in the coming decades, it is critical that Extension educators continue to be highly competent teachers and experts in their respective disciplines. Competency has been defined as the necessary knowledge, skills, abilities and characteristics required for an employee to be successful (Stone & Bieber, 1997). New Extension educators are expected to have a broad knowledge base across diverse subjects but many have specialized degrees in a specific area such as nutrition. Furthermore, new hires often do not have training in teaching methods and program delivery. Tightening budgets can limit the amount of professional development activities for employees emphasizing the need for relevant and useful training that meets the needs of each individual. For these reasons, it is important to have a process that promotes a competency-based approach for training Extension educators that includes: identifying essential competencies and skills needed to be successful, a method of assessment to determine level of competency, and the application of this process to guide training opportunities. The approach presented here was developed by The University of Tennessee Extension Family and Consumer Sciences (FCS) faculty. As a framework for this process, UT Extension FCS faculty reviewed competencies developed by the Cooperative Extension Curriculum Project. In Tennessee, FCS county agents are expected to deliver programs in several subject areas including family economics, community health, housing and environmental safety, human development, and nutrition and food safety. FCS faculty identified important concepts related to each of these knowledge areas as well as concepts related to professional and interpersonal skills such as communication, knowledge of Extension, and team-building. Three levels of competency were determined for each knowledge area ranging from a basic understanding to being an expert. Faculty worked with FCS county agents to review and revise these competencies. It was expected that new Extension educators would be proficient at the basic knowledge level in all subject matter and skill areas. The next step was to develop an assessment tool to measure level of proficiency. FCS faculty developed over 500 questions to be tested and questions were reviewed for face validity. To determine reliability, preliminary data was collected on a subset of questions from over 240 FCS professionals at a national conference. Most respondents were women (98%) and most had a master's degree (79%). Classical test theory concepts were used to determine item difficulty and item discrimination for each question to help guide the development of a comprehensive and accurate assessment tool. This competency-based approach effectively helps target areas where new Extension educators need more training and professional development. This presentation will review this process including a discussion of how it is relevant for all areas of Extension including agriculture, 4-H, and FCS. Discussion will also include findings from preliminary testing, the advantages and challenges of developing an assessment tool, and the implications of this process for hiring and retaining new educators.

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R-57-A NEW ERA OF GREAT TEACHING: TIPS FOR EFFECTIVE EXTENSION TEACHING

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You have had many learning experiences that have led you to your current position in Extension. Undoubtedly these experiences have been on a range from not so good to excellent. Recall an experience you would describe as excellent, what did the instructors in those situations do to make the experience excellent? Extension professionals know that teaching and learning is a dynamic, two-way process or communication, not simply a one-way process of the teacher giving the student information. Teaching and learning processes have to have synergism for our Extension teaching to have the most impact. Knowing about ourselves as teachers, about our clientele, and about how we can apply what is known about good teaching to work as an Extension professional is important. Extension programs are delivered in a variety of settings with many different clientele. There are many aspects of effective teaching. In this seminar we will discuss your learning style as an teacher, learning styles of participants, and how that applies to teaching. Principles of Teaching and Learning will also be covered. Key Principles can be applied to planning, delivering, and evaluating instruction and lead to better outcomes. Finally, there is a common set of behaviors great teacher's exhibit. The Rosenshine and Furst variables include key behaviors that can help teaching go from good to great. Research has shown that these variables, including enthusiasm, clarity, variability, task oriented and opportunity to learn, contribute to better learning outcomes. Using these variables along with some proven principles and techniques, one can become a more effective teacher. This will be an interactive seminar for Extension professionals looking for ways to improve their teaching. The seminar will focus on principles of teaching and learning, the Rosenshine and Furst variables, and learning styles. We will provide strategies and tools to use to become more effective teachers. We will also include time to discuss individuals' own weaknesses and strengths of teaching and strategies to improve them. Participants will take home a collection of resources containing information about teaching techniques and strategies as well as learning styles. The resources will have some helpful reminders and tips to use in everyday teaching.

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R-58- BRIDGING THE GENERATIONAL GAP TO EXTENSION VOLUNTEERS

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Volunteers are a vital part of the Extension system. In today's volunteer pool there are at least four different generations that your volunteers could come from. The four generations are the Veterans or War Babies (1932-1944), Baby Boomers (1945-1963), Generation X (1964-1981), and Millenials (1982-2001). Each of these generations bring different knowledge and skill sets to the volunteer pool. Each generation also must be recruited differently. These are important factors for Extension professionals to be aware of when recruiting volunteers. The recruitment practices should be tailored to attract the generation they wish to have as volunteers. Each of the four generations available in the volunteer pool have different reasons for volunteering. The way in which Extension professionals communicate to each generation about volunteering should be different. Different desires drive each generation so the types of volunteering opportunities that they will seek out are different. Baby Boomers for example will find volunteer opportunities that make a meaningful contribution to the organization. Other generations seek out volunteer opportunities to keep busy, be social, work obligations, among many other things. Incentives that attract volunteers of different generations are varied also. Using Baby Boomers as an example again, they will respond to either tangible or intangible incentives. Tangible incentives could be discounts, frequent flier miles or many other things. Intangible incentives could include memberships or companionship. Each different generation has their own wants, needs and desires. Extension professions should make themselves aware of these and use them in their recruitment strategies for volunteers. Most professionals are aware and understand that different generations work and respond to things differently. This poster will address the four different generations; Veterans or War Babies (1932-1944), Baby Boomers (1945-1963), Generation X (1964-1981), and Millenials (1982-2001). The certain characteristics or events that describe or define each generation will be included. Included in the poster will also be the motivating forces for each different generation to volunteer. The poster will also cover recruitment strategies and examples of recruitment techniques. Each different generation finds satisfaction in different types of recognition and a summary of these findings will also be included on the poster. Knowing all of this information can help Extension professionals to be more effective in recruiting, utilizing, and recognizing a multi-generational volunteer base.

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R-59- TEAM HORSE POWER: LEARNING TO LEAD; REACHING NEW AUDIENCES

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Patricia Comerford, Penn State Extension
Donna Grey, Penn State Extension
Andrea Kocher, Penn State Extension
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Team Horse Power is a 4-H leadership program that empowers teens to develop their horsemanship, leadership, and teaching skills, and in turn teach skills and mentor 4-H Horse Program youth at the county, regional, and state levels. Teens use horse activities and technology tools to interact, prepare teaching and promotional materials, and assist with or deliver programs. Team Horse Power is a leadership program that effectively engages teen 4-H Horse Program members. In an era when Extension is facing changes in the availability of resources, the Team Horse Power program is also a model for the way in which recruiting and training teen or adult master volunteers can extend the reach of Extension programs. Teens are recruited by 4-H Educators on the basis of leadership potential and horsemanship ability. Each teen must have passed Levels One and Two of the Pennsylvania 4-H Horsemanship Skills Program—a process that involves mastering a series of progressively more challenging horse handling and riding skills and demonstrating them to a team of trained master volunteers and/or Extension educators. The selection process consists of an application and recommendations, interviews and evaluation by Extension educators and trained volunteers, and formal training sessions (many of which take place during the annual Team Horse Power selection and training weekend). After training, Team Horse Power members use the 4-H Horsemanship Skills Program to promote safety, horsemanship, education, and life skills development. They teach workshops at local, county, and regional levels, and frequently assist with programming at a state level. In 2012, Team Horse Power members interacted with the public at Pennsylvania Horse World Expo, where the 4-H Horse Program launched a new promotional effort. They also delivered a series of clinics at the State 4-H Horse Show. Teens traveled to the 2012 American Youth Horse Council National Youth Horse Leaders Symposium, where they partnered with Penn State Equine Extension Associates and educators to deliver a presentation on Team Horse Power. Throughout each year, Team Horse Power members work closely with one of two Equine Extension Associates. They report their teaching time and educational contacts, ask questions and seek support, and periodically conduct programming under the direct supervision of an Extension associate. Teens also maintain a blog and a Facebook page where they relate and reflect on their teaching experiences. Year-end evaluation of each teen's achievements, participation, and leadership development is conducted in conjunction with the training weekend in order to determine which teens are ready for additional leadership roles,

which need additional mentoring, and which should continue as team members. Team Horse Power teens extend the reach of Penn State Extension programs: From 2010 to 2012, trained teen participants provided more than 698 hours of face-to-face educational programming, reaching 2,838 youth and adults throughout Pennsylvania. Team Horse Power is not only an example of a leadership program designed to engage 4-H Horse Program teens; it also provides a model for recruiting, training, and mentoring teen program participants as they extend the reach of Extension by conducting educational programs.

R-60- INVESTIGATING LESSON STUDY AS A PROFESSIONAL DEVELOPMENT MODEL FOR 4-H VOLUNTEERS

Martin Smith, University of California Cooperative Extension

There is a need to improve scientific literacy among K-12 youth in the United States. Nonformal education programs like 4-H can help address this need through opportunities for youth to learn science in out-of-school settings. However, effective science programs require effective teaching, and sources indicate a need to address the design of professional development opportunities for adult volunteers who serve as 4-H educators. Lesson study, a constructivist-based professional development model, is a potential strategy to help meet this need. Lesson study engages educators in developing an inquiry stance on their practice through active reflection, is situated in authentic contexts, and occurs incrementally over time. A sequential explanatory mixed methods design was used to investigate the influence of lesson study on 4-H volunteers from three county programs in California. 4-H volunteers (n=16) formed three lesson study groups that planned, implemented, and revised curriculum activities from the Youth Development in Veterinary Science curriculum series as part of this inquiry. Each group was trained in the lesson study process and received necessary support materials. Recurring lesson study group meetings were organized and executed by lesson study group members in each county. Curriculum materials were implemented with youth in club-based settings on a regular basis. Specifically, the investigation focused on changes in volunteers' understanding and use of inquiry methods and veterinary science content knowledge. Quantitative data were collected from study participants in the form of two retrospective surveys, one for each construct, that were administered at the completion of the investigation. Retrospective surveys were utilized in an effort to minimize the potential for response-shift bias. Survey data were analyzed using a repeated measures general linear model (GLM) which showed a significant effect of time with respect to both constructs. Thus, involvement in lesson study improved subjects' teaching practice and subject matter knowledge. Focus group interview data were collected to expand upon quantitative outcomes. Themes from qualitative data were identified and categorized using the long-table approach. Data were analyzed inductively using the constant comparison method. For the purpose of data integration, the interpretation of focus group interview data placed an emphasis on how frequently themes were expressed by research participants Qualitative outcomes elaborated on participants' understanding and use of inquiry processes, including questioning strategies, learner-centered explorations, and knowledge application. Prior literature does not describe the use of lesson study in nonformal settings. Results from this investigation could benefit 4-H volunteers, other nonformal educators, and researchers. Implications for social change from this inquiry are potential improvements in the pedagogical skills and content knowledge of educators in nonformal settings. In turn, these educators could help improve science achievement among school-aged youth. However, the size and scope of this investigation were

limited. Thus, the research outcomes were not generalized beyond the population and setting in this study, and future investigations of the use of lesson study with nonformal educators are recommended.

R-61- A NEW ERA IN EXTENSION: THE FUTURE OF ONLINE VOLUNTEER TRAINING

Jamie McConnell, Ohio State University Extension

Because Cooperative Extension is a volunteer-driven organization, management of volunteers is vital to the success of our programs (Sinasky & Bruce, 2007). As a result, one of the most important tasks of many Extension professionals is training volunteers to have the skills and knowledge they need to be effective in their roles. Extension professionals recognize the important role technology plays in our future success and the need for Extension to embrace it to remain relevant as we bridge the centuries into a new era. While traditional face-to-face training programs are valuable and should not be eliminated (Kaslon, Lodl, & Greve, 2005; Seger, 2011), online education of volunteers can expand the learning opportunities available to volunteers (Kaslon, Lodl, & Greve, 2005) and provide valued flexibility in when, where, and how such programs are accessed (Scheer, Cochran, & Baker, 2011). These programs can also help us meet our clientele's growing expectation to find information and educational opportunities on the web (Diem, Hino, Martin, & Meisenbach, 2011) and help our organization be more time and cost effective (Scheer, Cochran, and Baker, 2011). This knowledge served as the catalyst to explore the status of online 4-H club volunteer training in Ohio and the North Central Cooperative Extension Association through a master's project completed at The Ohio State University in late 2012. The project provided the foundation for a strategic and organized approach to online volunteer education in Ohio 4-H by inventorying materials currently utilized in Ohio and the North Central region via LimeSurvey; assessing the overall strengths and weaknesses of these resources based on the Volunteer Research Knowledge Competency (VRKC) Taxonomy and the continuum of blended learning (Jones, 2006); and through recommendations presented to Ohio 4-H leadership, the Volunteer Design Team, and other 4-H professionals in the state. Survey results show that online volunteer education is not widely used in Ohio; furthermore, Ohio 4-H professionals did not indicate high levels of awareness of online training materials that are available. While North Central Region 4-H Volunteer Specialists reported higher levels of usage, most materials utilized were produced in their own state—suggesting there is an opportunity to share materials across our borders. The first recommendation from the project to be implemented is the promotion of resources to 4-H professionals and volunteers via the Ohio 4-H Youth Development website. Other recommendations being considered by Ohio 4-H could be implemented by Extension professionals across the country in 4-H and other program areas, lead to new partnerships, and promote the development of shared resources. These recommendations include:

- developing a common definition of online volunteering training among Extension professionals;
- providing related professional development opportunities;
- using foundational tools for the development of curriculum, including the Volunteer Research and Knowledge Competency (VRKC), Taxonomy, continuum of blended learning, and technology currently available in Extension;
- developing standards and best practices for online learning;

- defining the role of Ohio 4-H's Volunteer Design Team; and
- continuing involvement in a partnership with North Central region states to share ideas, resources, and development responsibilities.

R-62- SUCCESSES AND CHALLENGES IN RECRUITMENT AND RETENTION OF URBAN YOUTH DEVELOPMENT VOLUNTEERS

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Youth development programs in urban areas face a variety of challenges when recruiting and retaining quality volunteers. Large numbers of organizations competing for the same volunteers, youth with complex schedules and inabilities to commit, and an over abundance of single family homes and parents working multiple jobs all present challenges to youth development programs recruiting and retaining traditional long-term volunteers. Join 4-H professionals from Newark and New Brunswick, New Jersey to learn about the successful partnerships and community building projects that have led to the recruitment and retention of volunteers in urban communities.

Through Ninos Fuertes, Communidades Mas Fuertes funded by a Children Youth and Families at Risk Grant, Essex and Middlesex County 4-H Youth Development Programs have had the opportunity to work exclusively with Latino, urban communities to develop strong youth development programs. Program materials that are vital to training and guiding volunteers working with youth have been translated to Spanish to provide new recruitment and retention tools in communities lacking community based youth development programs. Focus has been placed on implementation of modified club structure that works for both volunteers and youth in the community. One of the primary challenges of volunteer recruitment has been retaining long-term dependable volunteers to lead clubs, hands-on activities and demonstrations will be shared that keep volunteers engaged and organized while working with their clubs. Strategies to engage community members other than the volunteer club leader will also be presented.

R-63- READY TO GO: BUILDING VOLUNTEER SKILLS THROUGH CUSTOMIZED TRAINING

Lisa Bottomley, Michigan State University Extension

Volunteers are essential to the success of many Extension programs. As volunteers take on different tasks on behalf of our organization, we must provide them with training to build the necessary skills while being mindful of their limited time. Extension staff need to rely more and more on volunteers, but when volunteers do not have the necessary skills, we put our organization and those we serve at risk. This session will provide an overview of the Ready to Go curriculum (which can be purchased online and downloaded). A free follow-up webinar will be planned for those who would like additional assistance designing a training using these materials. These materials have been shared at the NAE4-HA 2012 conference (focusing on the boundaries module), several

statewide Train the Trainer workshops in Michigan, the National Mentoring Program 2013 staff training, numerous county volunteer training workshops, and will be presented at the 2013 National Extension Conference on Volunteerism (focusing on boundaries and cultural competency).

Michigan 4-H Youth Development published Ready to Go: Mentor Training Toolkit to provide programs with a research-based training curriculum that can be customized based on the needs of the program. While initially designed to train youth mentors, the curriculum has been embraced by volunteer coordinators working with a variety of audiences. The curriculum includes 56 activities that can be combined or stand alone and covers the following broad topic areas: Mentoring Relationships, Setting Boundaries, Communication, Youth Development and Cultural Competency. Activities are appropriate for both pre-service and in-service training workshops. The curriculum underwent a lengthy peer review and pilot process as well as an expert panel evaluation. Presenters will utilize a brief PowerPoint presentation, large group discussion and an activity during the session. In addition to the five activities, participants will leave with access to a free download of the curriculum introduction section which includes tools for planning a volunteer training and promotional giveaways.

R-64- CREATE ON-LINE VOLUNTEER DEVELOPMENT COURSES WITH MOODLE THROUGH EXTENSION CAMPUS

Angela Holmes, Ohio State University Extension

Volunteers have been and continue to be vital to the success of Extension. As we enter a new era, we must look for ways to continue to train and develop our volunteers. Many of those volunteers are very busy and have limited time available to attend training and development opportunities. One way to be available to our volunteers twenty-four hours a day, seven days a week and when it is convenient for them is by utilizing e-learning based delivery methods. Did you know eXtension Campus makes resources available to you to create and utilize on-line courses free of charge? To do so, extension utilizes Moodle. According to Moodle, it is "an Open Source Course Management System or a Learning Management System. It has become very popular among educators around the world as a tool for creating online dynamic websites for their students." The eXtension professionals make it very easy for you to create and publish your Moodle learning module to the eXtension Campus website. Plus, it is a simple process for all your "students" to create a profile and begin accessing courses. Three years ago, I was just learning about Moodle. Since then, I've been able to create volunteer development opportunities utilizing Moodle through eXtension Campus. This session will introduce participants to eXtension Campus and the resources available, show participants how simple it is to create a user profile, and how to begin developing online courses. Participants will receive an instruction sheet for creating a profile and learn how to access all the course listings on eXtension Campus. Participants will be introduced to some of the many features and options that are available: activity logs that track each students time and progress in the course; options for quizzes; chat boards; and restricting access to your course. Join me in this new Era for Extension, as we explore what's available to you through eXtension Campus and Moodle. We will look specifically at the Ohio Cloverbud Volunteer Training course that I co-created materials for and then built the course. We will also look at other courses to get an idea of what has been done and all the possibilities there are through this tool for teaching.