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utah state university cooperative extension

annual review
— 2008 —

year of the **specialist**

UtahState
UNIVERSITY

COOPERATIVE
extension

utah state university **vision**

Utah State University, as a state-wide multi-campus system, will be internationally recognized for its exceptional learning opportunities and world-class research.

We will achieve the highest level of excellence in learning, discovery, and engagement in an environment of trust and respect.

We will expand educational access to a diverse community.

We will enhance the quality of life for individuals and communities by promoting arts and cultural programming, environmental sustainability, and by developing the technologies of tomorrow to drive economic development in Utah and in the global marketplace.

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message from the **vice president**



Noelle E. Cockett

Greetings,

We have designated 2008 as the "Year of the Specialist" for Utah State University Extension. To that end, this publication will give you a better picture of the breadth and depth of our Extension faculty. Many of our specialists are part of academic departments and have ongoing research programs; therefore, they provide county agents around the state with the most current research-based solutions. This network of teaching, research and public service allows Cooperative Extension to respond quickly to critical and emerging issues.

Extension is unique in structure and function. Because of its partnership with federal, state and local governments and its network of county offices and state universities, Cooperative Extension can efficiently deliver educational programs at the grassroots level throughout

the state and nation. Clearly, this structure is important for Utah. The talented people highlighted in this publication help extend the university to Utah's citizens.

In addition to the on-campus faculty, Utah State University Extension also has county agents who, with Extension assignments, live and work in the communities they serve. Our faculty and staff support economic development, land use planning, home-based businesses, community leadership and sustainable practices, all of which contribute to maintaining Utah's high quality of life. Utah State Extension provides the tools and expertise communities need to shape their futures.

Please take a few minutes to read about some of the great people who are working for you in Extension.

Noelle E. Cockett, Vice President and Dean for Extension and Agriculture

2008: year of the **specialist**

By Scott McKendrick, USU Extension Specialists Association President and Coordinator, Statewide Equine and Small Acreage Programs



Scott McKendrick

As president of the Utah State University Extension Specialists Association, it is my pleasure to join Extension Vice President and Dean Noelle E. Cockett in announcing and supporting 2008 as the "Year of the Specialist."

We believe this is a great opportunity to recognize the tremendous value that Extension specialists, both individually and as members of core "issue teams," contribute to the state of Utah and to their co-workers at both the University and in Extension field offices. Specialists are represented in every college at Utah State University. This model helps Extension respond rapidly to emerging issues such as the drought and wildfires of last summer.

Extension specialists give of themselves tirelessly through both their research efforts and their educational programming as they take information from the University to the people of the state. This land-grant mission of taking education to the masses would not be possible without the tremendous contributions of time and expertise of these Extension specialists.

I join in saluting my fellow Extension specialists and specialty resource personnel as we celebrate the "Year of the Specialist" in 2008 at Utah State University.



4-H, Families, Youth and Communities



Food, Nutrition, Finance and Economics



Agriculture and Horticulture



Natural Resources

rural development: beyond keeping them **down on the farm**

By Marion Bentley, USU Extension Community and Economic Development Specialist

Rural Utah can support local and regional economic development by fostering an environment that promotes entrepreneurship. The first step is for communities to develop a strategy to provide new opportunities for community members that builds on existing strengths.

In order to develop an "entrepreneurial community," three critical elements must be integrated into the plan. These elements are to increase the supply of entrepreneurs, build entrepreneurial networks and reward entrepreneurial behavior.

According to the USDA Economic Research Service, rural Utah only holds 13 percent of the population. Because of this, finding entrepreneurs can be seen as difficult. But the Center for Rural Entrepreneurship has identified three sources of entrepreneurs in most rural communities: aspiring, start-up and growth oriented. Aspiring entrepreneurs have little or no previous experience with business, but the start-up entrepreneur has had some. Growth-oriented entrepreneurs have enough experience to be coined "serial entrepreneurs." Each of these entrepreneur types have unique wants and needs that the community should provide, such as training for the aspiring entrepreneur and financing for the start-up or growth-oriented entrepreneur.

Networking opportunities, however, are important for all types of entrepreneurs. The National Commission on Entrepreneurship suggests that communities talk to entrepreneurs, develop services based on local needs, teach networking skills, build strategic alliances and replicate the good.

The best and most effective networks emerge naturally as local entrepreneurs see the benefits of collaboration and partnerships. However, the local community may need to "prime the networking pump," especially in rural areas where distance, scale and lack of business services make the natural and spontaneous development of networks less likely.

Communities that work to expand networking benefit both the entrepreneurs and the service providers. In addition to networking, rewarding entrepreneurship with praises and awards will encourage improvement and increase the number of entrepreneurs. The adage that "we get what we reward and not what we ask for," rings true.



digging for data with a **survey shovel**

By Stan Guy, USU Extension Associate Professor, Community Development

Surveys are an excellent way to obtain information from the public so that informed decisions can be made. An alternative to hiring expensive survey firms is to develop and implement a survey using the local Extension service and community volunteers. When a survey is properly designed, it emerges as a powerful tool for community-centered research. A number of principles should be followed when conducting a community survey.

- Survey objectives should be specific and clear-cut. The survey should include all members of the population being studied. Respondents should be scientifically chosen so that each person in the population has an equal chance of selection, not just those who volunteer to participate.
- Information should be collected by standardized procedures so that every individual is asked the same questions in the same way.
- Be aware of these factors when creating survey questions:
 - Response categories should include all answers that might be expected of those completing the survey.
 - Respondents should not feel compelled to select more than one answer.
 - When ranking questions are used, the items to be ranked should be limited.
 - Open-ended questions are used to understand why people feel the way they do. They are used so people can respond if they have additional answers not addressed by the researcher.
- Questionnaire items should be precise so the respondent knows exactly what is being asked.
- Surveys should include instructions, be logically organized and be consistent in wording and scales.
- The first question in a survey should be easily answered by all and should clearly pertain to the objective. This will increase the respondent's comfort level in filling out the survey. Place demographic questions at the end of the survey.
- Avoid double-barreled questions. The word "and" often indicates this and can cause confusion.
- Use short, relevant questions. Respondents generally read items quickly and give quick answers. Avoid the word "not." It makes interpreting responses confusing, and many respondents will read over the word.
- Have people not involved in designing the survey review it and/or complete it prior to distributing it. Get their feedback.
- Researchers should provide confidentiality to survey respondents and should not give out their names and addresses. They should use broad enough categories that individual respondents cannot be singled out.



4-H a turning point for **miss utah usa '07**

Heather Anderson has spread her drug abuse prevention message throughout the state as Miss Utah USA 2007. She works extensively with the Utah Council for Crime Prevention as a board member and is a spokesperson for DARE. She is also on the National McGruff Board.

In her younger years, Anderson was active in 4-H, raising pigs for the Salt Lake County Fair and serving as a Salt Lake County Teen Ambassador. She won state in the talent and public speaking categories. She graduated from Alta High School where she participated in plays and musicals, ran track and played basketball. Anderson attributes much of her success to the things she learned in 4-H as a youth.

"For me, 4-H was a turning point," she said. "It was the first time I stood out and was recognized. It gave me the confidence to achieve my dreams. With that determination, I was able to use the title of Miss Utah USA as a tool to speak out against something I am truly passionate about — drug abuse prevention."

Anderson said 2007 was the most fulfilling year of her life.

"My desire to become Miss Utah USA had nothing to do with the crown and everything to do with sharing the story of my little brother, Brad. We both grew up playing sports, raising pigs with 4-H and having parents and brothers who loved us more than anything. In fact, the only real difference between me serving as Miss Utah USA and my little brother lying dead in a cemetery is that I said NO to drugs and alcohol every time, and he didn't."

Anderson has spoken to male and female inmates at the Utah State Prison, church groups, at DARE graduations and has given anti-drug assemblies throughout the state.



photo: marc reynolds

Heather Anderson

"If even one child remembers my brother's story and says NO to drugs, then my year of service was worth it," she said. "Those youth are my heroes."

Anderson currently attends Utah State University where she is majoring in social science with an emphasis in psychology. She has served on the Academic Council, LDS Institute Council, as public relations chair for the Science Council and as president of the Asian American Student Council. She has been volunteer director for Special Olympics and a member of the Competition Latin and Standard Ballroom Dance teams. She performed in *Romeo and Juliette* and *A Funny Thing Happened on the Way to the Forum*. She is a runway model and has worked for Diesel, Louis Vuitton and others.



women entrepreneurs mean **business**

Extension co-sponsored the Women Entrepreneurs (WE) Workshop titled "WE Can Do It!" in September at the Ogden Eccles Conference Center.

The workshop was designed for business and industry professionals who want help in running a successful small business. Participants were presented with ideas and suggestions to help them manage their business, learn the steps they need to take for their business, network with other women entrepreneurs and receive information from business professionals.

Teresa Hunsaker, USU Extension family and consumer science educator and conference organizer, along with Karen Biers, Extension entrepreneurship specialist and Ruby Ward, Extension agribusiness specialist, said the workshop gave



participants a well-rounded view of owning and operating their own businesses.

Additional co-sponsors included the Governor's Office of Economic Development, the Utah Small Business Development Center, the Bank of Utah, Box Elder County Economic Development, Bear River Valley Chamber of Commerce, Standard-Examiner and Ogden/Weber Chamber of Commerce.

restoring the west focuses on **sagebrush**



Mike Styler, executive director for the Utah Department of Natural Resources

The Restoring the West Conference continues a successful series of meetings developed by Mike Kuhns, Extension forestry specialist. Last year's conference focused on sagebrush restoration. The patchwork of private, tribal and public land managed by various state and federal agencies in the West requires extensive coordination. Extension was able to work cooperatively with these groups to attract 220 land owners, agency professionals and students to address the rapid decline of sagebrush-steppe land.

To the untrained eye it might seem as though sagebrush is thriving, but scientists estimate the survival of only half the sagebrush-steppe land that existed at the time of European-American settlement and the rate of disappearance is increasing. Sagebrush-steppe is an important component for wildlife habitat, forage for livestock grazing and watersheds.

The conference included current research on sagebrush-steppe and a field trip that allowed participants to see examples of habitat decline and efforts at restoration.

The conference was organized and sponsored by the USU Department of Wildland Resources, the College of Natural Resources, USU Extension forestry and the U.S. Geological Survey Utah Cooperative Fish and Wildlife Research Unit. Sponsors also included USDA Natural Resources Conservation Service, Utah Agricultural Experiment Station, the USU Ecology Center, USDA Agriculture Research Service Forage and Range Research Lab, USDA Forest Service State and Private Forestry and USDA Forest Service Rocky Mountain Research Station.

friends with feed are **friends indeed**

During the summer of 2007, the Milford Flat wildfires were responsible for the deaths of at least four people, burned more than 500,000 acres and caused in excess of \$6 million in direct losses to farmers in Millard and Beaver counties. Extension was able to quickly rally its campus specialists and county agents to help the ranchers most affected by the fires.

Twenty semi-truckloads of hay were donated and delivered to Millard and Beaver county ranchers. The 460 tons of hay were valued at \$69,000 with another \$26,000 contributed in the form of delivery services. Twelve truckloads came from Cache County, four from Sanpete County, two from Rich County and one each from Piute and Weber counties. The effort was also aided by a Web site developed by Lyle Holmgren, Box Elder County agriculture agent. The site helped connect buyers and sellers of feed stocks.

According to Cache County agriculture agent, Clark Israelsen, the team effort also received help from Joe Fuhriman, Cache County Cattlemen's Association president, who rallied more than 100 local producers who either donated bales of hay or cash to the project. Assistance also came from Guy Chambers Transportation, Robert Murray Transportation and Sharp Transportation.

Economic information was provided regarding how to make appropriate herd culling and feed purchase decisions and also regarding tax implications resulting from the forced sale of livestock. Beaver County agriculture agent Mark Nelson believes hard times are still ahead for Southern Utah ranchers since the burned rangeland will not be able to be used again for at least two years. The land is being seeded and early winter moisture will help promote growth, but many ranchers will still have to cull their herds, move them long distances to graze or pay for expensive feed to be trucked in.



The Milford Flat fire of July 2007

into thin air: measuring **evapotranspiration**



Robert Hill (second from right) on the bank of Rich County's Randolph-Woodruff Canal, discusses a proposed new water measurement structure with local water users.

In the often hot, dry and windy climate of Utah, the second driest state in the nation, efficient water management in production agriculture is essential. Robert Hill, USU Extension irrigation specialist, is currently involved in research measuring water usage by two Utah crops — alfalfa and turfgrass. Results from these studies may identify possible regional differences throughout the state.

The alfalfa field research study factors in the effects of weather on crop water need utilizing weather stations in Curlew Valley, western Box Elder County, during the 2005-2007 growing seasons. The primary source of irrigation on these fields was pumped ground water delivered through center pivots. The results of this study will help determine if the equations used to estimate alfalfa water use can be applied reliably to estimate crop water needs in other similar growing conditions.

In the turfgrass study, 11 water-collection devices were placed at golf courses and turf sites in Cache, Salt Lake, Utah and Washington counties for data collection over a three-year period to measure turfgrass water use. Factors

determined in this study will provide more accurate methods to estimate turfgrass evapotranspiration. This may lead to improved recommendations for homeowners' watering practices.

Accurate turfgrass water use values are important in urban water conservation programs such as those now in place along the Wasatch Front, as shown in programs implemented by the Utah Division of Water Resources. Site specific verification in a range of conditions will provide increased confidence in turfgrass water use estimates.

Hill is also involved in the design of three proposed water measurement structures in Rich County. The total volume of water to be measured by these structures per year is estimated to be 64,000 acre-feet. If the structures improve measurement by even 10 percent, the resulting fiscal impact would represent about \$250,000 annually.

xeriscape, don't zero-scape: **practical turfgrass areas**

By Kelly Kopp, USU Extension Water Conservation and Turfgrass Specialist; Paul Johnson, Associate Professor, USU Plants, Soils and Climate Department; and Loralie Cox, former USU Extension Horticulture Agent

Of the seven guiding principles of water-wise landscaping or xeriscaping, the most controversial involves the use of turfgrass in the landscape. At times it has seemed that water-wise landscaping might not allow for the use of turfgrasses at all. But the fact is that water-wise landscaping recognizes turfgrass as an integral component of the landscape.

A water-wise landscape must meet the needs of the users, and if that means recreation space, turf is the best and often only appropriate ground cover (except for pavement where appropriate). Turfgrass is a very practical surface for many urban landscapes, but sometimes it is used where the function isn't recreation. In these situations, more water-conserving plant materials might be used.

The reason that turfgrass is mentioned specifically in water-wise landscaping guidelines is that there is great potential for over-irrigation. Unlike other plants that exhibit the stresses of over-watering readily, turfgrass is able to withstand a great deal of over-irrigation without exhibiting signs of stress. In addition, as an herbaceous plant,

turfgrass is often one of the first plants in the landscape to exhibit signs of drought stress. These facts, coupled with a "more is always better" attitude toward landscape irrigation, predispose turfgrass areas to over-irrigation.

Turfgrass has very specific benefits in the landscape. For example, it is the only landscape plant material that can withstand the stresses of traffic and mowing. It can be trampled, torn and mowed, and it still grows back. It is also the most practical surface for many types of outdoor recreation. Mowed lawns are also a standard component of many urban fire control strategies.

Turfgrass provides many other environmental benefits. One such benefit is a reduction in the amount of surface runoff water. This is a key component to protecting water quality. An average golf course, for example, can absorb 4 million gallons of water during a 1-inch rainstorm. A golf course or turf area can absorb far more than 1 inch of rainwater without runoff, assuming it is not coming down too quickly. This is because a dense turf area can reduce runoff to virtually



Example of a xeriscaped yard

Turfgrass can be a practical and beautiful component of a water-wise landscape. As a design component, turfgrass invites participation in the landscape while providing unity and simplicity. When using turfgrass in a water-wise landscape, a few basic guidelines are helpful.

- Only use turfgrass in areas where it is functional. These areas may include play areas, areas receiving traffic and areas needing temperature, noise or dust mitigation. If the only time a turf area receives traffic is when it's mowed, perhaps a lower maintenance plant would work in that location.
- Consider choosing turfgrass species with lower water requirements. In Utah, certain varieties perform better. These may be found at extension.usu.edu/files/publications/turfgrass.html. This bulletin also discusses the characteristics and applications of commonly used turfgrass species in Utah.
- Consider using non-irrigated turfgrass areas. If the turfgrass is not performing a functional role, does it really need to be irrigated? Many turfgrasses can withstand considerable drought stress by entering dormancy (turning brown). When conditions improve, they will green up again.
- Do not plant turfgrass in narrow, small or oddly shaped areas that are difficult to irrigate efficiently. In these types of locations, there are many other plants that are more practical choices.
- Hydrozoning in a water-wise landscape certainly applies to turfgrasses as well as other plants. Plan and design irrigation systems so that turfgrass areas are irrigated separately from other landscape plants. Also, become familiar with the actual water requirements of the turfgrass and don't exceed them.
- Use cultural practices that will improve turfgrass water use efficiency. For example, mowing at a height of 2½ or 3 inches will encourage deeper rooting and improved heat and drought tolerance. Proper fertilization will also support healthy turfgrass and allow it to better withstand the stresses of heat and drought. Returning grass clippings when mowing also helps reduce evaporation of water from the soil surface. When these guidelines are followed, turfgrass becomes an appropriate, practical, beautiful component of a water-wise landscape.

nothing. When compared to a non-turf area, such as a garden or agricultural field, grass areas can reduce runoff-induced soil erosion by up to 600 times.

Turfgrass also reduces environmental pollutants. It traps dust and pollen and controls wind erosion of soil. It also moderates tempera-

ture levels, which can reduce the amount of energy used for home cooling in the summer months. The soil microbes associated with growing turfgrass also work to break down pollutants in the environment such as air contaminants washed out by rainstorms, pesticides and pollen.

native plants for utah landscapes: from seed to success

By Heidi Kratsch, USU Extension Ornamental Horticulture Specialist



Heidi Kratsch identifies a native plant species.

Water is a limited natural resource in the West, where recurrent drought cycles, rapid urbanization, population growth and climate change are straining available supplies. Home and commercial landscape irrigation account for the greatest proportion of non-agricultural water use in Utah. Driven by a desire to conserve water and to preserve the character of our unique natural environment, the market for drought-tolerant native plants for use in landscaping is expanding rapidly. But supply has not kept pace with demand for some native species. A major focus of my research program at Utah State University is to assist the native plant industry by testing propagation and production methods that will help bring the most popular and attractive Utah native plants onto the market quickly and cost-effectively.

Through my work and the work of my students, we have found that developing production methods that match conditions to which the plants are naturally adapted enhances

plant survival. Another problem that limits native plant growers is the genetic variability of plant materials from different sources. To help solve this problem, we are performing common garden trials of native plant species that show promise for excellent performance in the landscape. In collaboration with our county Extension agents, we have established gardens in key market areas of the state and are evaluating various seed sources for their broad adaptability to the diverse climates in those market areas. This will allow us to make recommendations about where plants will grow and survive and may lead to selecting varieties that are widely adaptable and easy to maintain.

Recently, we've extended this program to coordinate the work of other universities and include growers from Utah and surrounding western states. This will further increase the market for Utah growers so they can produce desired native plants on a large scale and expand to markets throughout the West.

keeping utah raspberries at their berry best

By Brent L. Black, USU Extension Fruit Specialist

In northern Utah, raspberries have long been a popular fruit in the home garden and for small-scale commercial production. Raspberries are well suited to local production, have a relatively short shelf life and taste best just after harvest.

The Bear Lake region has developed a reputation for having high quality raspberries, but has been plagued by setbacks in recent years. In 2001, most of the fields in the region were diagnosed with a plant virus known as raspberry bushy dwarf, which causes a decline in plant health and small, crumbly fruit. Since the virus is carried to uninfected plants on pollen, it became established throughout the region. The only remedy is to replant with virus-free plants, which Bear Lake farmers did in 2002 and 2003. Just as these replanted fields were reaching maturity and should have been coming into full production, the region

when the overwintering canes of summer-bearing types are damaged by winter freezes, the crop is lost. Summer-bearing varieties do not do well in hot July temperatures. Consequently, fall-bearing raspberries are better adapted to the southern end of the Wasatch Front and other warmer regions of the state. However, the record hot summer temperatures of 2007 also resulted in damage to the fall-bearing crop in Cache Valley and along the Wasatch Front.

With Rich County agriculture agent Darrell Rothlisberger and Washington County horticulture agent Rick Heflebower, we are coordinating a multi-site raspberry variety trial in five cooperating locations. Thirty-seven raspberry varieties are included to identify those with sufficient heat tolerance and winter hardiness to thrive in Utah's varied climates. Several of these varieties are also resistant to bushy



Brent Black speaks with growers.

suffered from severe winter and spring weather that resulted in significant crop loss in both 2006 and 2007.

Raspberry varieties fall into two categories: summer-bearing or floricanefruiting types, such as Canby, which produce flowers and fruit on second-year canes, and fall-bearing or primocanefruiting types, such as Heritage, which flower and fruit on first-year canes. The growing season in Bear Lake and other high elevation locations in Utah is too short for the fall-bearing types, and

dwarf. These trials were planted in the spring of 2006, so comparisons are in the early stages.

USU Extension has also been active in organizing the Utah Berry Growers Association to provide a forum for farmers to learn about new varieties, crop management and marketing.

For fact sheets on general raspberry culture and raspberry irrigation, visit the "Horticulture" and "Fruit" sections of the USU Extension Web site: extension.usu.edu/htm/publications.

utah pest management help is **just a click away**

The Utah Pests Web page, utahpests.usu.edu is newly updated and is the place for Utah citizens to find helpful information on pests of plants, turfgrass, households, humans and pets. Pests addressed include insects, spiders and plant diseases (fungi, viruses, bacteria and nematodes). Information on nutritional deficiencies and chemical injuries of plants, reduced risk pesticides and biological control is also included. Information is targeted to homeowners and commercial producers of agricultural and horticultural commodities. Emphasis is placed on pest management strategies that reduce the use of pesticides and encourage the development of balanced ecosystems.

"The Utah Pests group promotes Integrated Pest Management (IPM)," said Diane Alston, USU Extension entomologist and IPM coordinator for the state. "IPM is a way to manage pests using multiple techniques rather than heading straight for the pesticide of choice."

Other educational information found on the site includes a quarterly newsletter that provides a bounty of timely pest management information,

fact sheets on many topics, a pest photo gallery, answers to frequently asked questions, slideshows from recent training programs and plant pest sample submission information. The Utah Plant Pest Diagnostic Lab, the only lab of its kind in Utah, can identify and provide management recommendations for pest problems. Assistance is available on the Utah Pests Web site.

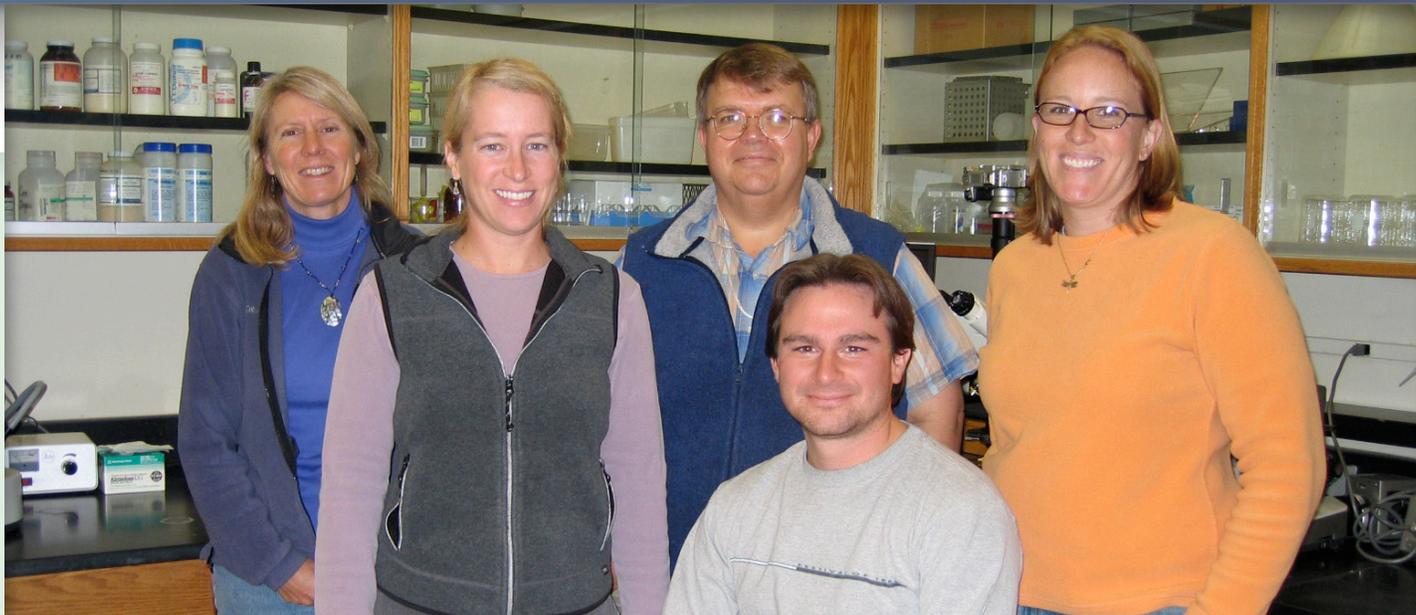
Another link on the Web site includes advisories for West Nile Virus and pests of fruits and ornamentals. The pest advisories cover the current insect and disease activity for various locations in the state. Information included in the advisories covers insect and disease biology, spray timing dates and the proper materials to use.

The advisories provide all the information fruit growers and the gardening industry need to know to avoid pest outbreaks. To obtain one or both pest advisories, requests can be sent to marion.murray@usu.edu. The advisories are also available on the Utah Pests Web site at utahpests.usu.edu/ipm/htm/advisories.

Other information on the Web site includes a series of fact sheets on turfgrass insects.



Extension agents learn how to identify pests using digital microscopes.



The Utah Pest Management Team, left to right: Diane Alston, Marion Murray, Kent Evans, Ryan Davis and Erin Hodgson

"Due to our unique climate, we can experience challenges with efficient irrigation, fertilization and overall care," said Erin Hodgson, Extension entomology specialist. "Unfortunately, insects can thrive in turfgrass that is well-maintained and reduce plant health and appearance."

There are more than 20 insects that can infest turfgrass in Utah, she said, but the most common pests are billbugs, white grubs and sod webworms. Sometimes these insects build up to damaging levels and can destroy roots and stems, but more often they go unnoticed because they live in the soil or thatch layer. Information about common turfgrass insects, including photographs and control options, is included.

The plant diseases part of the Web site contains information on living and non-living agents or causes of disease for many plants grown in Utah. This includes forages, grain crops, fruits, turfgrass, vegetables, shade and ornamental trees and shrubs.

"Descriptions of disease biology, the pathogens that cause the disease and ways to prevent or treat the problem are listed," said Kent Evans, Extension plant pathology specialist. "This also includes a list of nonpathogenic causes of plant disease, since not all diseases are caused by pathogens. Fact sheets covering the associated diseases are included and updated on the Utah Pests Web site."



Clark Israelsen and Kent Evans participate in a pest identification training session.

steps to better blended **families**

By Brian Higginbotham, USU Extension Family, Consumer and Human Development Specialist

Supported by a growing body of research indicating children fare best when reared in healthy, stable, two-parent homes, the Administration for Children and Families has actively promoted a Healthy Marriage Initiative. Despite solid research linking marriage to economic, physical and emotional well-being for both adults and children, there are still unanswered questions related to effective implementation of marriage and relationship education programs for individuals in low-income, ethnically diverse and complex (i.e., remarried) couple relationships.

The government's interest in implementing marriage education for under-researched and under-served families, such as low-income, Hispanic couples in stepfamilies, stems from the fact that most marriage-related programs have historically been developed for and offered to middle-class, European Americans who are married or will be getting married for the first time. Even programs designed for diverse audiences are largely based on research from non-divorced,

middle-class, European Americans. This raises the question of suitability for couples with diverse characteristics who face unique barriers and challenges to healthy marriages. For example, challenges facing low-income couples include restricted financial resources and lower levels of non-financial resources such as community support, work experience, literacy and education. These challenges are risk factors for healthy marriages. They account for the higher divorce rates and translate into barriers to marriage education participation. Even when marriage education classes are offered in low-income communities, transportation costs, participant fees and childcare costs can make attendance prohibitively expensive.

The Administration for Children and Families created the Hispanic Healthy Marriage Initiative to address the unique cultural, linguistic, demographic and socio-economic needs of children and families in Hispanic communities.



Brian Higginbotham

The government and academic scholars have also called for tailored approaches to marriage education to address risk factors faced by couples with step-relationships. The existing literature on marital quality, in general, offers an incomplete examination of the full range of factors related to couple quality in stepfamilies. These factors include children living part-time in different homes, ambiguous roles, interference by previous partners, developing stepparent/stepchild relationships, child support, negative stepfamily stereotypes and lack of social support which may result in educational experiences that are inadequate to meet their unique needs.

In light of these additional challenges for low-income couples, regardless of their race or ethnicity, USU Extension family life specialists have developed programs to teach healthy marriage skills

to remarried couples and stepfamilies. The project utilizes the Smart Steps curriculum, a 12-hour research-based program. Adults, children and adolescents up to age 17 meet separately for the first hour-and-a-half of each session, then combine for the last half-hour for family-strengthening activities. Classes are offered in Spanish and English. The curriculum focuses on commitment, communication, parenting, stepparenting, family budgets, conflict management and other elements to enhance family stabilization. The adults attending the classes show statistically significant increases in knowledge and skills related to healthy relationships and have also experienced statistically significant increases in relationship stability and satisfaction.

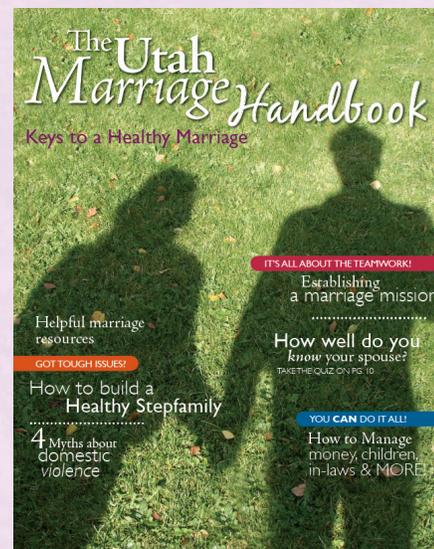
utah marriage **handbook**

While no two marriages look exactly alike, all people enter marriage with similar hopes. Strong, healthy, long-lasting marriages happen when two people are intentional about their marriage.

The Utah Marriage Handbook was prepared under the direction of Brian Higginbotham, Extension family, consumer and human development specialist. It won a National Publication Silver Award and the National APEC Grand Award. It was written and compiled by Higginbotham; Francesca Alder-Baeder, of Alabama Cooperative Extension; and David Schramm and Amber Paulk, of Auburn University.

The handbook includes pointers on managing money, work and family, home and house care responsibilities, children and in-laws. Special topics covered include remarriages with their myths and realities, strategies for step-parenting, co-parenting with ex-partners, issues that hurt relationships including substance abuse, gambling and other addictions, mental health problems and sexual infidelity. It also addresses domestic violence facts and myths and where to get help.

The handbook will be given out at all county clerk offices in the state to couples who apply for a marriage license. They are also available in county Extension offices and can be ordered online through the Utah Commission on Marriage at utahmarriage.org. More than 28,000 copies have been produced statewide.



surviving and transcending a traumatic childhood: **the dark thread**

Linda Skogrand, Extension family life specialist, is lead author of the recently released book, "Surviving and Transcending a Traumatic Childhood: The Dark Thread." Other authors are Nikki DeFrain, John DeFrain and Jean E. Jones.

Skogrand said the book has been three years in the making and includes 90 stories of survival to create a silver lining of hope for those struggling to heal from childhood trauma.

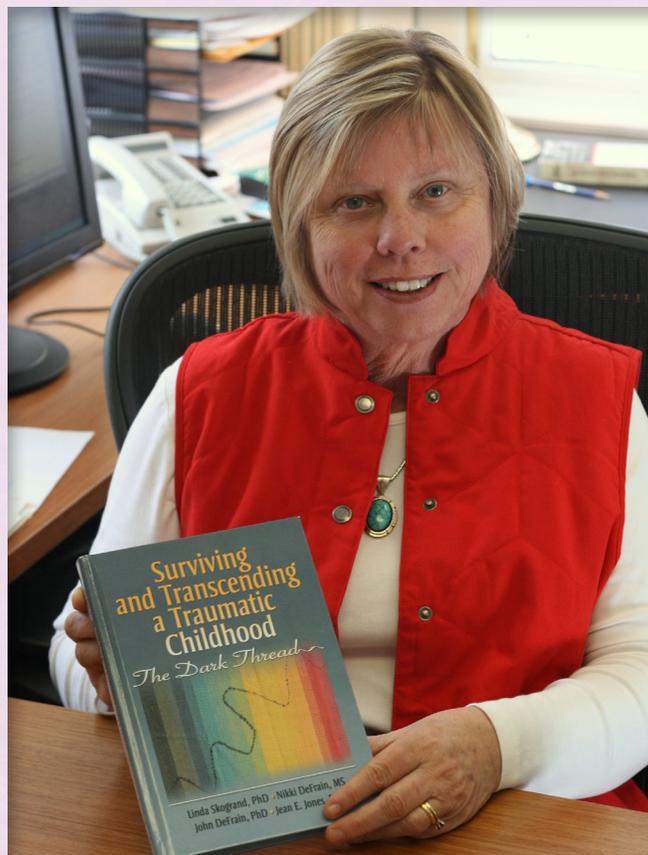
"We aimed for a sample of at least 100 people who believed they had not only survived but transcended a traumatic childhood, growing into relatively happy, emotionally healthy adults," Skogrand said. "After considerable effort, we were pleased to have collected completed, comprehensible questionnaires from 90 adults. The vast majority of these participants believe they have transcended their childhood trauma. We personally and professionally agree with the majority of these people, based upon our reading of 23 to 46 pages of written testimony from each. Many wrote much more."

The stories told in "Surviving and Transcending a Traumatic Childhood: The Dark Thread" explore when the trauma began, common feelings associated with trauma, the usefulness of therapy and support groups, getting married, escaping abuse, the role of religion and spirituality, significant people who provided help, types of homes where abuse occurred, the positive effects of surviving trauma, and school life and patterns of survival. The book also includes a list of resources to help those in the process of transcending trauma and a self-study guide for developing a deeper understanding of the healing process.

"Conventional wisdom in our society holds that individuals who are scarred early in life cannot be healthy as adults and, in fact, pass the effects of these experiences down to the next generation," said Skogrand. "Research sheds new light on this belief. This book is about hope for those who feel life is hopeless. It has been written for those who experienced a traumatic childhood and want to

learn from others about how to become healthy. It is also written for friends, family and people in the helping professions who offer support, encouragement and a listening ear to those who have experienced trauma as a child."

The book focuses on the triumphs of rising above difficulties rather than focusing on the dysfunction that can result, said Skogrand. The "dark thread" of trauma will always be there, but it does not have to control one's life. The book is about the strengths that people draw upon to transcend what happened to them.



Linda Skogrand holds her book, "Surviving and Transcending a Traumatic Childhood: The Dark Thread."

diabetes: stepping up to the plate

curriculum

By Nedra Christensen, USU Extension Nutrition and Food Science Specialist



Nedra Christensen

An estimated 7 percent of the population, or 20 million Americans, have diabetes with 4,000 new diagnoses per day. In Utah, the estimated number of residents with diabetes is 93,000, or approximately one in every 25 Utahns. This proportion increases with age, so that by age 65 or over, the prevalence is closer to one in five or 20.7 percent.

Uncontrolled diabetes can result in severe complications. Each year in the United States, between 12,000 and 24,000 people with diabetes become blind, more than 42,800 develop kidney failure and about 82,000 undergo leg, foot or toe amputations. Diabetes

increases the risk of heart disease and stroke by two to four times.

The Centers for Disease Control and Prevention report that improvements in care to control blood pressure, blood glucose and blood cholesterol levels could reduce the risk of complications. Deaths from diabetes could be reduced by as much as 30 percent.

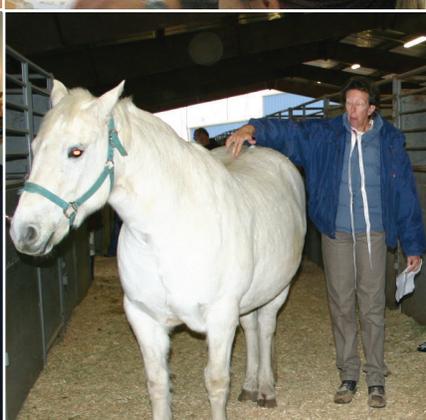
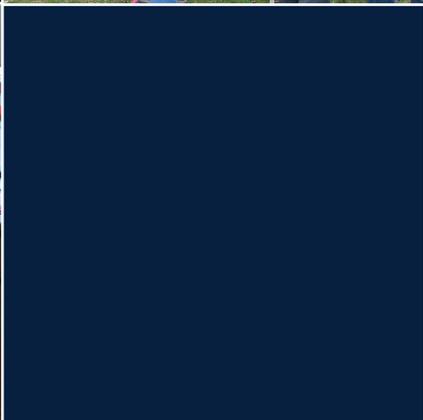
In financial terms, one in every 10 health care dollars (10.6 percent) in the United States is spent on health care costs for people with diabetes. Specifically, in 2002, \$91.8 billion was spent on direct health care costs, with a total of \$132 billion with indirect costs added in. Diabetes is the sixth leading cause of death in Utah and in the United States. In 2004, Utah death records listed diabetes as the underlying cause in 485 deaths, or about one in every 27 deaths in the state.

Utah State University Extension has a program on food portioning skills to help control diabetes. The Diabetes: Stepping Up to the Plate curriculum is a series of seven classes that focus on food portion, label reading and general nutrition skills. An evaluation of the program showed that participants had a significant improvement in blood glucose. There was also a significant improvement in other areas including food portioning skills, nutrition knowledge, body mass index and waist and hip circumferences. These improvements have been estimated to reduce medical costs by \$94,010, or \$1,305 per each of the 78 persons who have completed the program.

Each Extension county office has this curriculum available and can be contacted for information on the next available series of classes.



year of the
specialist

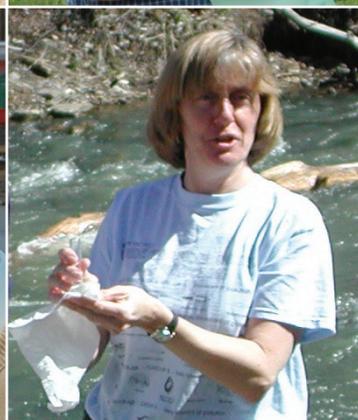




Utah State
UNIVERSITY
extension



2008



urban tree care IQ

By Michael Kuhns, USU Extension Forestry Specialist

Because of erroneous ideas about urban trees, a study was conducted to determine what people know and think about trees and tree care and management in urban areas. Questions were posed to 2,100 residents of Boise, Salt Lake City, Phoenix, Albuquerque, Denver and Cheyenne. The results were interesting and a little surprising. They are shown below as the percentage of people answering a certain way (DK means don't know). The correct answer is in bold.

1. Fertilization usually is needed to keep trees healthy.	True-48%	False-30%	DK-22%
2. Trees should be planted deeper than they were grown in the nursery.	True-37%	False-33%	DK-30%
3. Root ball packing materials should be removed when trees are transplanted.	True-32%	False-43%	DK-25%
4. Tree roots need oxygen to survive.	True-61%	False-14%	DK-25%
5. Fertilizing trees feeds them.	True-78%	False-7%	DK-15%
6. Most tree roots are fairly shallow.	True-32%	False-46%	DK-22%
7. Trees that normally grow large can be kept smaller by pruning without harming them.	True-48%	False-18%	DK-34%

It is not surprising that non-experts think fertilization usually is needed to keep trees healthy (#1), even though trees do very well in poor soils. Still, sometimes fertilization is sold as a magic formula for tree health. Given this lack of understanding, it's not too surprising that people also think they are feeding a tree when fertilizing (#5), rather than it feeding itself through photosynthesis. Many people also don't seem to know that most roots are shallow (#6), though most are in the top 6 to 12 inches of soil. This misunderstanding may be part of what leads people to believe that trees should be planted deeper than in the nursery (#2). Deep planting is the cause of eventual failure for many trees. Most people seemed to know that roots need oxygen (#4).

Most people were wrong about and many professionals disagree on #3. Removing root ball packing materials at planting time is good practice, but it takes time. People get confused because they get mixed messages on this from professionals. Finally, most people think that pruning techniques exist that allow large trees to be kept smaller without harm. Except for pollarding, a labor-intensive technique mostly done in Europe, this can't be easily done, yet some tree professionals talk about "crown reduction" as a legitimate and effective way to lower tree height.

The USU Extension forestry Web site at extension.usu.edu/forestry can answer tree and forestry questions and help improve tree IQ.



Michael Kuhns points out forest health issues with undergraduate forestry students.

bird's eye view of **landscape management**

By Roger Banner, USU Extension Range Management Specialist



Roger Banner, left, prepares to launch a landscape management tool.

Monitoring vegetation is an expensive but necessary element of land management. Traditional approaches are labor intensive, and results are generally limited in terms of monitoring key vegetation attributes on a landscape scale. Canopy cover by a functional group such as tree, shrub, herbaceous, litter or bare ground is perhaps the most important index to vegetation characteristics affecting water infiltration, erosion, fire risk and land health.

Low-level aerial photography with computer-aided analysis of photos provides an efficient and effective way to estimate vegetation cover across the landscape. This approach uses a small, helium-filled blimp as a photographic platform, an alternative to a manned aircraft, thus reducing costs. Data obtained via digital aerial photographs is analyzed using remote sensing analysis software.

Funding for evaluating and demonstrating the techniques involved is supported by three projects

in which evaluating the effects of land treatments and management is critical. The Utah Watershed Initiative, the Sage Grouse Restoration Project and NASA provide support for this unique application of remote sensing and GIS in natural resources management.

The approach is to take aerial photos from a small, helium-filled blimp that is approximately 200 feet above ground level at desired intervals across the subject area. GPS locations are recorded for repeatability and photographs are analyzed by classifying vegetation cover by functional group (willow, sagebrush, perennial grass, annual vegetation, litter, rock, bare ground, etc.) and estimating percentages of cover using remote sensing software. Photographs are retaken after an appropriate period of time and changes in cover are evaluated.

cattle and sheep graze together on cedar mountain

At the creation of the National Forest Service in 1905, a drastic change in grazing patterns resulted. Although these adjustments to the grazing seasons and locations helped avoid a common problem of over-grazing, a USU study shows that reverting back to multi-species grazing would be ideal for livestock performance and rangeland conditions.

Jim Bowns, USU Extension area rangelands specialist and professor of range, forestry and wildland resources at Southern Utah University, has been the range expert for the long-term study of several grazing systems, known as the Cedar Mountain Project. Bowns and John Malechek, professor of rangeland management at USU, are currently writing a summary of the rangeland component of the study, which they found benefited from dual cattle and sheep grazing. This manuscript will be published as a Utah Agricultural Experiment Station bulletin.

In 1979, the USU animal science department, range science department and the Agricultural Experiment Station partnered to begin a long-term study of the effects of continuous grazing and deferred grazing with cattle alone, sheep alone and both livestock species together on a private 3,000-acre tract of land near Cedar City. Prior to the study, the land had been continuously grazed by only sheep for 80 to 90 years. Twenty miles of

fence and 10 years of monitoring later, Bowns said the results were not surprising.

"By using cattle and sheep together, more of the plants on the range are benefited," Bowns said. "The cattle use some plants, the sheep use others and with the combination, we get more uniform use of most of the plants and the entire range."

Changing to a multi-species grazing system is not suitable for all ranges because it requires a diversity of plants. However, Bowns said that the results from the Cedar Mountain project are typical of many of the ranges in the West. The study is not alone in nature, but the 10-year length sets it apart. The study accounts for extremely wet and extremely dry years and neutralizes their opposing effects. The results reiterate the fact that vegetation changes for the benefit of key species on ranges when both cattle and sheep graze the land on a deferred rotation system.

Bowns is able to use results of the Cedar Mountain project to consult with ranchers on the best stocking rates for both the range and animal performance. Bowns has seen some interest in ranchers converting to a multi-species program. However, he has seen plenty of reluctance and said the system has not been used as much as they would like.





"Cattle and sheep do very well together," Bowns said. "It's the sheepman and the cattleman that don't get along. But if one man owns both species or they can agree to a partnership, the multi-species system is very beneficial."

Bowns said the owners of the land where the study was performed are pleased with the improvements on the range and are now the most loyal supporters. Also, the range is home to a large elk herd. Bowns said that elk numbers in Utah have been increasing, but the boost from just one elk on the Cedar Mountain range can be largely attributed to improved health of the land.

The site of the study has been used for many fieldtrips by livestock producer associations and land management agencies. Both are aware of the benefits, but the concern is that not only is it hard to change people's behavior, but sheep numbers are declining.

Bowns is also studying the blackbrush scrub, the least studied vegetation type in the Southwest, and is currently a member of Utah's Grazing Improvement Program Technical Committee. He was hired by USU in 1965 and sent to SUU to teach and conduct range research. Later in his career, he added an Extension appointment.

"I enjoy Extension because I prefer to work with people rather than do research," Bowns said.

Throughout a 43-year career, Bowns has done research, teaching, Extension and a lot of conflict resolution, too. Bowns said he does not take sides when resolving issues between producers and land management agencies. As a range specialist, he said he "just looks at the best science to answer the questions I am asked."



Nicki Frey, wildlife research assistant, is involved with research on the Cedar Mountain Initiative. She also helps with pup-rearing and captive coyote maintenance at the USDA/APHIS/WS research station in Millville.



meaty program beefs up manager's education

By C. Kim Chapman, Area Animal Scientist, Project Director, Beehive Master Beef Manager Program

Sustainable cattle production is vital to the economy of rural Utah and the Intermountain West. Cattle producers face many types of risk, though they often accept risk as part of production agriculture. However, they often overlook some areas of risk which, if managed, could optimize productivity and improve profitability. Some of this lapse can be attributed to the fact that many agricultural decisions have outcomes that take place months or years after the initial decision is made.

The five areas of risk are production, financial, market or price, institutional and human risk. Production risk often carries impacts which affect other types of risk exposure. The Beehive Master Beef Manager Program was devised as one way to educate cattle producers about risk by helping them identify perceived risks within their operation and teach them principles to assist in developing strategies to manage these risks.

During the program, cattle producers are taught about the various types of risk and how to manage some risk factors using computer simulation software titled Right Risk™. Producers are then asked to determine which aspects of risk have the highest priority within their individual operations. The results of this survey are then compiled for each teaching location, and priorities for future

educational programming are established to meet the producer-identified needs. Some of these needs are similar across locations, but differences also exist. Perhaps the program's greatest strength is that the producers establish the educational priorities to meet their needs.

The Cow-Calf Management Guide and Cattle Producer's Library serves as the primary resource manual for the workshop sessions, coupled with supplemental materials for topics not covered adequately in the guide. This comprehensive guide to cattle management is written and updated annually by Extension specialists from throughout the western United States, enabling the producers to have the most current, up-to-date reference material available.

More than 70 Utah producers, with management responsibility for more than 27,000 head of cattle, have participated in the program at one of seven locations, which have included Roosevelt, Randolph, Tooele, Heber City, Richfield, Price and Beaver. This program is funded by a grant from USDA-CSREES through the Western Center for Risk Management Education administered through Washington State University.



extension brings dairy education to **central america**



Gustavo Pena, Allen Young and Duarte Diaz

Cache Valley and Utah State University are known for their high quality dairy products, and USU Extension is literally extending this expertise to Central America and the Dominican Republic this winter through a USDA Foreign Agriculture Service grant.

The USU Extension team of Duarte Diaz, Allen Young and Gustavo Pena designed and will present a series of three-day milk quality workshops in Honduras, Nicaragua, El Salvador, Guatemala and Costa Rica. This is part of the CAFTA-DR (Central American/Dominican Republic Free Trade Agreement) designed to facilitate trade of agricultural products across borders.

According to Young, USU Extension dairy specialist, USU has a long history in international dairy programs. This has produced the Hispanic Dairy Training Program, which consists of a series of ongoing workshops taught in Spanish. These workshops are called USU Milking Schools. The Department of Animal, Dairy and Veterinary Sciences also has a one-year herdsman training program designed to train students in the basic skills required to manage dairy farms.

Diaz's research has focused on milk quality in humid areas such as Central America. The team leader and Extension dairy nutrition specialist is a

leading researcher in the field of fungus-produced aflatoxins that can contaminate dairy herd feed and, in turn, leave residues in milk. These aflatoxins have been classified as a human carcinogen in more than 100 countries.

"What we are teaching is proper feeding and milking procedures to minimize the possibility of contamination," Diaz said. "We cover topics such as proper animal preparation prior to milking, inspection of udder and teats and appropriate medication, sanitation of personnel and equipment prior to and after milking and proper handling of milk to avoid bacterial contamination."

Diaz said Central America is starting to produce more dairy products. People there drink a more raw milk than we do in the United States and also consume a lot of milk in the form of yogurt, sour cream and cheese.

Diaz was raised in Puerto Rico and also has international experience as a post-doctoral researcher in Italy.

Pena, a graduate student in dairy science from Mexico, is helping with the instruction. He also has an undergraduate degree in veterinary science from Autonomous University of the State of Mexico in Toluca.

turkey research aims at **fitter fowl**



David Frame

According to collaborative research between Snow College and Utah State University, the health benefits of turkey meat could be increased if turkeys are fed the meal by-product of the oilseed, Camelina. This diet modification is believed to increase the omega-3 fatty acid content in poultry meat.

The USU nutrition and food sciences department is scheduled to perform consumer tests comparing Camelina-fed versus control-fed turkey meat in early 2008. In collaboration with Snow College, David Frame, USU Extension poultry specialist, and Matt Palmer, Sanpete County Extension agent, secured a \$6,000 grant to fund this consumer test. If the results are positive, Utah turkey producers will have a new niche marketing opportunity.

Frame is also feeding the meal to hens nearing market age at a 10 percent level and comparing performance to a control group receiving no meal. The meal contains residual oil that is high in omega-3 fatty acids. A pilot study proved that a significant amount of the fatty acids transferred into the turkey breast and thigh meat. Medical research shows that human cardiac health is benefited from a diet abundant in omega-3 fatty acids — and turkey could be the newest source.

"The USU Turkey Research Facility has traditionally directed studies toward areas of practical value to Utah turkey growers and processors," Frame said. "The focus of our 2007-2008 research is to take the already highly nutritious food of turkey meat and enhance its value to health-conscious consumers."

Snow College is exploring the increasing interest in converting the Camelina oilseed crop into biodiesel in order to decrease dependence on petroleum products for fuel sources. If the oil is proven economical for biodiesel production, then utilizing the resultant meal will be a benefit to producers and the biodiesel production.

Frame has also worked closely with the Utah Department of Agriculture and Food in awareness and biosecurity training of commercial poultry producers regarding avian influenza, including the highly pathogenic Asian strain that has caused heavy bird mortality and some human deaths, mainly in Southeast Asia.

Frame is supervisor of the USU Turkey Research Facility located in Ephraim, Utah, where numerous applied research experiments have been performed to improve and optimize turkey production practices in Utah.

partnership brings added hispanic education programs

Hector Mendiola, Extension Latino programs specialist, was awarded the 2007 USU Diversity Award for his work teaching English as a Second Language and bringing other educational opportunities to Hispanics in Cache County. He also serves on the Utah State Board of Education Advisory Committee representing minority students statewide and was recognized at the Governor's residence December 13, 2007.

Mendiola organizes and teaches classes in partnership with Logan High School, USU Extension and the Monterrey Institute of Technology and Higher Education in Mexico. The courses are self-

guided and taught through computer software developed by Monterrey Tech. In the Fall of 2007, 23 students graduated with certificates in computer literacy.

This community partnership is open to Hispanic residents of all ages. The USU Charter Credit Union provided \$1,500 a year to pay the licensing fees for the software, allowing students to attend free. In addition to the computer course, Mendiola also organizes a high school General Equivalency Diploma Program taught in Spanish with materials from Monterrey Tech that soon may be adopted by other Utah school districts.



Twenty-three Latino students graduated with certificates in Basic Computer Skills proficiency September 23. A graduation ceremony was held at the Logan School District office. This is one of several courses taught at the Multicultural Center at Logan High School.

\$600,000 food safety **grant**



Brian Nummer

Food Safety Specialist Brian Nummer was recently awarded a \$600,000 grant to enhance and expand the retail food safety consortium. The USDA grant is part of \$14 million awarded to researchers and educators at 17 universities for the purpose of improving food safety and reducing the incidence of food-borne illness. There are more than one million food service establishments in the United States.

This grant will bring research and outreach from Cooperative Extension to retail food safety professionals. It will provide resources and educational materials that health inspectors, Extension agents and food safety professionals can use to make food safer in grocery stores, convenience stores, restaurants and school cafeterias.

Nummer is the overall project manager for the consortium. He is responsible for sustaining the consortium and enhancing collaboration between academics and professionals working in the area of food service and retail food safety. He is also

responsible for identifying proven practices in retail food safety.

This project will expand on USU Extension's food safety manager training program that has been training managers in Utah since 1999. With collaboration and cooperation, the consortium can make the food supply safer at the retail level and fill gaps in the safety of the retail portion of the complete farm-to-fork food chain.

For more information, please visit extension.usu.edu/rfsc.



**Retail-Foodservice
Food Safety
Consortium**

2007: year of the **centennial**



Extension began disseminating information to the public in 1907, when a gallon of milk cost 31 cents, a car was about \$500, a house cost \$4,500 and the average household income was \$897 a year. Fast forward 100 years, and Extension is still disseminating information, just in a different way.

"Research and technology have greatly enhanced the way we do business now," said Noelle E. Cockett, vice president and dean for USU Extension and agriculture. "But we are still working to improve the quality of life for individuals, families and communities, just like we did in 1907. Extension is as relevant as ever, and perhaps even more so now, due to the increased diversity and complexity of the issues people face."

Employees, community members and dignitaries helped celebrate the Extension centennial year.

Utah Governor Jon M. Huntsman Jr. declared the week of Sept. 9-15 as Utah State University Cooperative Extension Week. Huntsman's declaration states that Extension is dedicated to improving the quality of life for Utahns by responding to diverse issues with research-based, non-biased information and to strengthen the social, economic and environmental well-being of individuals, families and communities. A framed copy of the declaration hangs in the USU Extension administration office.

"We are pleased that Governor Huntsman recognizes USU Extension as an important asset to the state, and we appreciate him for acknowledging our legacy through this declaration," said Cockett.

The centennial year was well publicized at the Utah State Fair Sept. 6-16, where Extension sponsored a 100-year booth in the 4-H building. Thousands of Utahns filed through to see the display. A new flavor of Aggie ice cream, Blue Ribbon Raspberry Crème, was also produced for the celebration.

The Extension annual planning and professional development conference held in March 2007, focused on the centennial, and included speakers, break-out sessions, employee recognition and awards.

Items for a time capsule, made of representative materials from every county in the state, were gathered throughout the year and will be carefully stored. The capsule will then be re-opened in 2057.

"It's been a wonderful year," said Cockett. "We have the opportunity of working for an organization that has not only been around for a long time, but will also be here for many years in the future."



Extension booth at the 2007 Utah State Fair

non-credit course **highlights**

This is just a sampling of non-credit course topics offered by Utah State University Cooperative Extension. Additional courses can be designed to meet individual and community needs. Contact a local county office for current programs being offered in your area.

4-H AND YOUTH

ATV Safety Training
 Citizenship and Life Skills
 Clothing and Textiles
 Earth, Physical and Biological Sciences
 Farm Field Days
 Food, Nutrition and Physical Health
 GIS/GPS
 Outdoor Education and Safety
 Plants and Animals
 Robotics
 Service and Leadership
 Shooting Sports and Gun Safety
 Summer Adventure and Science Camps
 Technology and Engineering
 Visual and Performing Arts

AGRICULTURE

Computerized Dairy Rations
 Crop Management
 Farm Safety
 Irrigation
 Master Beef
 Noxious Weed Control
 Pesticides Applicator Training
 Range Management
 Risk Management
 Small Acreage and Equine
 Spanish Language Dairy School

FAMILIES AND COMMUNITIES

Emergency Preparedness
 Home-Based Businesses
 Marriage Enhancement
 Planning for Retirement
 Sewing

FINANCE AND ECONOMICS

Bankruptcy Education
 Debt Reduction
 Home Buyer Education
 Take Charge of Your Money

FOOD AND NUTRITON

Food Safety
 Food \$ense Nutrition Education
 Food Preservation
 Diabetes Management
 Extension Food and Nutrition Education Program (EFNEP)

HORTICULTURE

Landscaping
 Master Gardener
 Pruning
 Water-wise Plants

NATURAL RESOURCES

Forestry Management
 Streamside Science
 Water Management
 Weed Management

2008 event highlights

January

- 21-23 Utah State Horticulture Association Convention
utahhort.org
- 23 Utah Berry Growers Association Convention
- 28-30 Utah Green Industry Conference and Trade Show
utahgreen.org
- 29-30 Intermountain Nutrition Conference
adv.susu.edu
- 29 Utah Beef Field Day
- 31 Focusing Cache
focusingcache.org
- 31 Ag Outlook Conference
uba.org

February

- 1 Ag Outlook Conference
uba.org
- 2 GOED/USU Extension Webcast
- 19 Utah Onion Association Winter Meeting
- 20-22 Diversified Ag Conference
diverseag.org
- 23 Sheep and Goat Education Day
- 26-27 Utah Weed Control Association Conference
utahweed.org
- 24-29 America Saves Week
utahsaves.org

March

- 11-12 Utah Water Users' Workshop
extension.usu.edu/uwuw
- 13-15 Association of Youth Councils' Leadership Institute
ayc.usu.edu
- 25-26 Rural Business Conference hosted by
Senator Bennett
www.ruralutah.com

April

- 1-4 Utah County Farm Field Days
- 8-9 Arizona/Utah Range Livestock Workshop
- 10-12 4-H Leadermete
utah4-h.org

May

- 1-2 Keeping America Prepared Conference
extension.usu.edu/americanprepared
- 21 GOED/USU Extension Webcast

June

- 19 Annual Utah Conservation Field Day
wildlife.utah.gov

July

- 14-16 4-H State Contests
utah4-h.org
- 17-18 Utah Farm Bureau Mid-Year Convention
utfb.fb.org

August

- 6-8 Utah Rural Summit
utahreach.org/urs
- 21 GOED/USU Extension Webcast

September

- 16-18 Restoring the West Conference
restoringthewest.org
- 4-14 Utah State Fair
utahstatefair.com
- 13 4-H Day at the State Fair
- 25-26 Utah Association of County
Commissioners Conference
- 29-30 Face of Hunger Conference

October

- 16-18 4-H Teen Leadership Training
- 17-19 Utah Bioneers Conference
extension.usu.edu/bioneers

November

- 5-6 4-H Annual In-service
utah4-h.org
- 12-14 Utah Association of Counties Conference
- 13-14 Farm Bureau Annual Convention
utfb.fb.org
- 20 GOED/USU Extension Webcast

December

- 3-5 Utah Cattlemen's Association Convention
utahcattlemen.org

To Be Announced

- Timber Harvest Tour
- Professional Tree Care Workshops
- Woman Entrepreneurs Conference
- 4-H Aggie Adventures Camps
- County Fair dates

*All dates subject to change.
Learn about more events at
extension.usu.edu/events*

2007 specialist award and grant highlights

Marilyn Albertson

National Extension Association of Family and Consumer Sciences Continuing Excellence Award

Diane G. Alston

Award for Excellence in Integrated Pest Management, Entomological Society of America, Pacific Branch

DeeVon Bailey

Overall Specialist Award, USU Specialists Association; Outstanding Extension Program Award-Group, American Agricultural Economics Association

Roger Banner

Extension Diversity Award

Richard Beard

Utah Governor's Blue Ribbon Advisory Council on Climate Change; Utah Division of Wildlife Resources Volunteer Recognition, Utah Northern Region Award

Steven W. Burr

Recreational Water Use Capacity on Utah's Lakes and Reservoirs, funded by the State Division of Parks and Recreation for \$52,800, 2005-2007; Conflict Management Through a Collaborative Process for the 37 Logan Ranger District; Wasatch-Cache National Forest, funded by USU Extension for \$21,000 and the USDA Forest Service for \$10,000, \$31,000 total, 2006-2007; The National Visitor Use Monitoring (NVUM) Research Program on the Wasatch-Cache, Uinta and Ashley National Forests, funded by USDA Forest Service for \$190,000, 2006-2007; Off Highway Vehicle (OHV) Use in a Review of the Socioeconomic Analysis in the Draft Environmental Impact Statement, prepared by the USDI Bureau of Land Management, Richfield Field Office, funded by Six County Association of Governments for \$5,000, 2006-2007; Review of Draft Recreation Management Competency (Knowledge, Skills, and Abilities), for the Process of Establishing a Professional Recreation Management Series in the USDA Forest Service, funded by the USDA Forest Service for \$10,000, 2006-2007; Utah Public Lands Connections: Socioeconomic Profiling, funded by the Governor's Office of Public Lands Policy Coordination: A Statewide Survey of Registered OHV Users, funded at \$67,500; 2006-2007; and Recreational and Tourism Impacts on Rivers Designated as Part of the Wild and Scenic Rivers System, funded at \$61,000; 2006-2007

C. Kim Chapman

Innovative Program Award, USU Extension Specialists Association

Nedra K. Christensen

Department of Nutrition and Food Sciences Researcher of the Year; Utah Dietetic Association Undergraduate Poster Session for Research Class

Noelle E. Cockett

Distinguished Service, Western Section, American Society of Animal Science

Steven Daniels

Excellence in Extension and Public Outreach, Rural Sociological Society

Howard Deer

National Environmental Health Association Certificate of Appreciation; Certificate of Service for 25 years

Steven Dewey

Selected as first Weed Science Society of America's Subject Matter Expert (SME) liaison to the Environmental Protection Agency

David Drake

State Early Career Award, Iota Chapter, Epsilon Sigma Phi

Patricia Evans

Agent Team Award with Justen Smith

David D. Frame

Editorial/Review Board for the Journal of Applied Poultry Research, 2006-present

Nicki Frey

The Wildlife Society committee member; Central Mountain Plains Section; Hosted the National Wildlife Habitat Evaluation Program Contest

E. Bruce Godfrey

Honorary American Farmer; National FFA Organization; Blue and Gold Service Award, Utah FFA Association; Outstanding Extension Professional in Utah, E.G. Peterson Extension Award; Certificate of Recognition-Extension Specialist, USU College of Agriculture

Brian Higginbotham

Utah State University Extension Taggart-Ballard Award of Excellence; Undergraduate Research Mentor of the Year in the College of Education and Human Services; Program of Distinction on behalf of the Utah State 4-H office for the 4-H Mentoring: Youth and Families with Promise program, National 4-H Headquarters; Principal Investigator; Teaching Healthy Marriage Skills to Ethnically Diverse, Low-Income Couples in Stepfamilies, Sept. 2006-Sept. 2011; Principal Investigator, Relationship Quality and Stability in Rural Newlywed Remarriages: The Rural Utah Remarriages Study; July 2006-June 2011; National Publication Award: Silver Award, Association of Communication Excellence in Agriculture, Natural Resources and Life and Human Sciences

Dallas Holmes

Cache County Outstanding 4-H Club; Task Force Leadership, Metro Extension The Future is Now

Kelly Kopp

Cooperative Conservation Award, U.S. Department of the Interior; Nation's Top Trendsetter Award, Public Works Magazine

Heidi Kratsch

New Specialist Award

Michael Kuhns

ANREP Silver Award Refereed Journal Article

Mark Larese-Casanova

Non-Point Source Water Quality Award, Utah Non-Point Source Task Force; Extension CURI Grant for Utah Master Naturalist Program, \$10,000

Nancy Mesner

Bear River Watershed Initiative to develop online watershed information system, provide information and outreach throughout basin, and pollutant trading feasibility study, 2005-2007, \$621,800; EPA Watershed Initiative Program, Co-PI with David Stevens, Terry Glover, 2005-2007, \$645,000; Coordinated Agriculture and Water Quality Programming in Intermountain West, CSREES / USDA 406 WQI Program (PI), 2005-2007, \$195,000; USU Extension Statewide Nonpoint Source Pollution Education Program for fiscal year 2005, EPA 104(b)(3) Grants Program (PI), Jul 2005-Sep 2009, \$36,500

Terry Messmer

Lifetime Fellow Appointment, The Wildlife Society; E.G. Peterson Extension Award; Utah Community-Based Conservation Programs, \$140,000; Gunnison Sage-Grouse Response to Irrigation and Grazing of CRP and Native Rangelands, \$200,000

Mark Nelson

Achievement Award, 4-H and Youth

Bob Newhall

National SARE Letter of Recognition; College of Agriculture Letter; Gary Straquadine, associate dean; Certificate of Self Assessment of 2007 Diversity/Civil Rights Training

Brian A. Nummer

USDA NIFSI, \$600,000, Sept. 2007-2010

Ann Parkinson

National Extension Association of Family and Consumer Sciences Distinguished Service Award

V. Philip Rasmussen

\$42 million in SARE grants to USUWSARE-Center to date; Appointed to the Agronomy Tri-Societies COSA Task Force

Linda Skogrand

Dean Don Felker Award

Utah Plant Pest Diagnostic Lab

Extension Vice President's Team Award for Excellence presented to Erin Hodgson, Marion Murray, Kent Evans, Diane G. Alston, Julie Jenkins (former employee), Alan Roe (deceased)

Bill Varga

E.G. Peterson Award Nominee

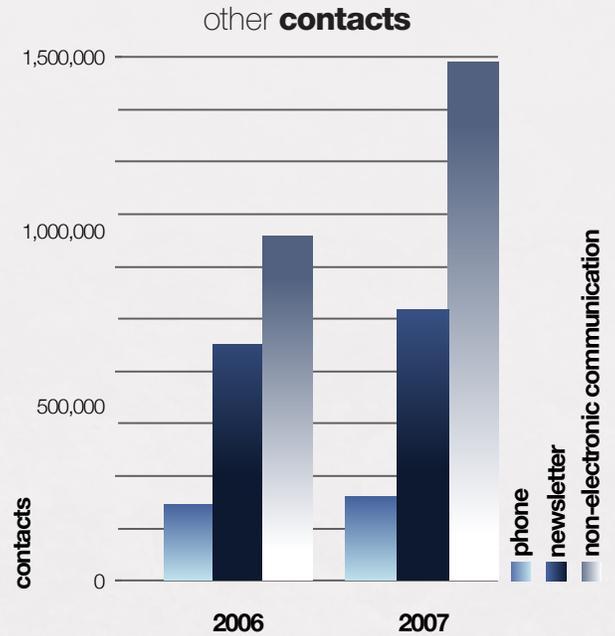
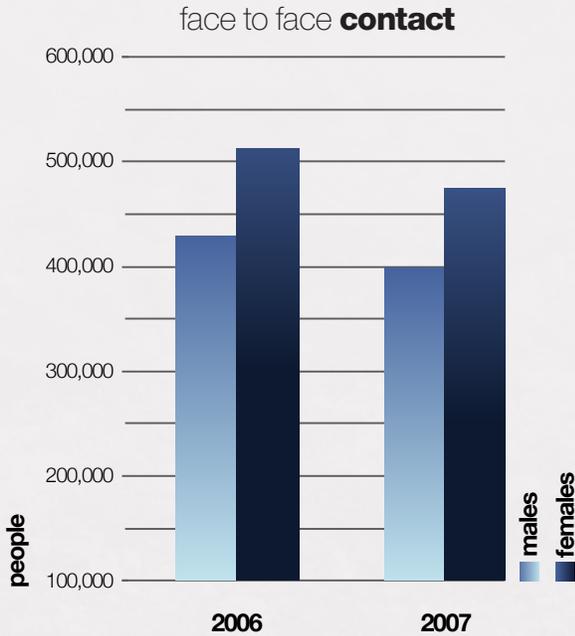
Ruby Ward

American Agricultural Economics Association Distinguished Extension Group Award

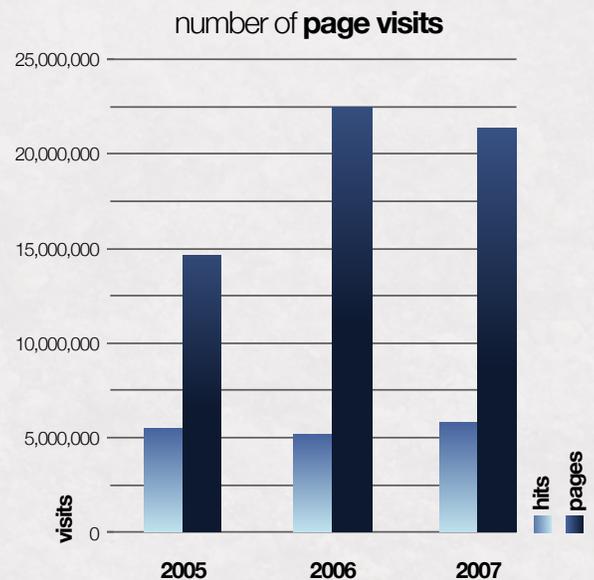
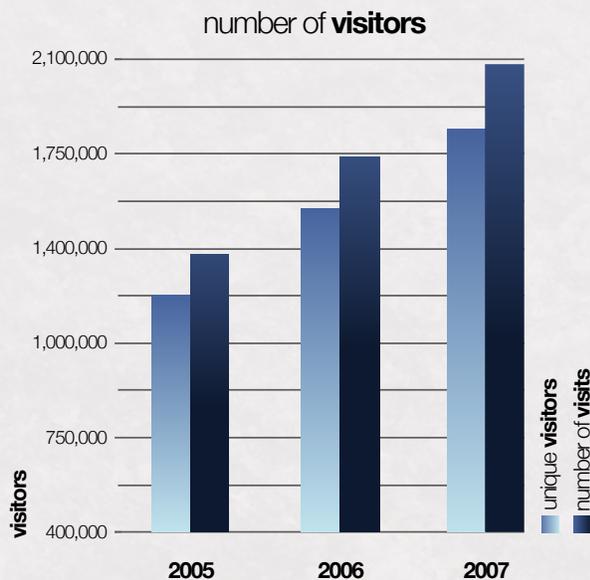
Dale ZoBell

Taggart-Ballard Award of Excellence; Innovative Program Award, Extension Specialists Association

extension by the numbers **highlights**



web **communications**



county contact **information**

Northern Region

Director: Diane Reese	8330 Old Main Hill	Logan, UT	84322	(435)797-3590
Box Elder County (Brigham)	265 West 1100 South	Brigham City, UT	84302	(435)734-2277
Box Elder County (Tremonton)	400 North 1000 West, P.O. Box 206	Tremonton, UT	84337	(435)257-5447
Cache County	179 North Main Ste. 111	Logan, UT	84321	(435)752-6263
Davis County	28 East State Street, P.O. Box 618	Farmington, UT	84025	(801)451-3412
Utah Botanical Center	725 South Segoe Lilly Drive	Kaysville, UT	84037	(801)593-8969
Utah House	920 South 50 West	Kaysville, UT	84037	(801)544-3089
Morgan County	48 West Young Street, P.O. Box 720	Morgan, UT	84050	(801)829-3472
Rich County	20 South Main, P.O. Box 8	Randolph, UT	84064	(435)793-2435
Salt Lake County	2001 South State Street Ste. 1200	Salt Lake City, UT	84190	(801)468-3170
Tooele County	151 North Main	Tooele, UT	84074	(435)277-2400
Weber County	1181 North Fairgrounds Drive	Ogden, UT	84404	(801)399-8200
Weber Ogden Botanical Gardens	1750 Monroe Boulevard	Ogden, UT	84404	(801)399-8080

Southeast Region

Director: Steve Cox	100 East Center St. Rm. L600	Provo, UT	84606	(801)851-8464
Carbon County	120 East Main Courthouse	Price, UT	84501	(435)636-3233
Daggett County	Served by Uintah County			(435)781-5452
Duchesne County	100 South 50 East, P.O. Box 978	Duchesne, UT	84021	(435)738-1140
Emery County	75 East Main #114, P.O. Box 847	Castle Dale, UT	84513	(435)381-2381
Grand County	125 West 200 South	Moab, UT	84532	(435)259-7558
Thanksgiving Point	3003 North Thanksgiving Way	Lehi, UT	84043	(435)768-7443
San Juan County	117 South Main, P.O. Box 549	Monticello, UT	84535	(435)587-4123
Summit County	45 East 100 North, P.O. Box 127	Coalville, UT	84017	(435)336-3217
Uintah County	152 East 100 North	Vernal, UT	84078	(435)781-5452
Utah County	100 East Center St. Rm. L600	Provo, UT	84606	(435)851-8460
Wasatch County	55 South 500 East	Heber City, UT	84032	(435)657-3235

Southwest Region

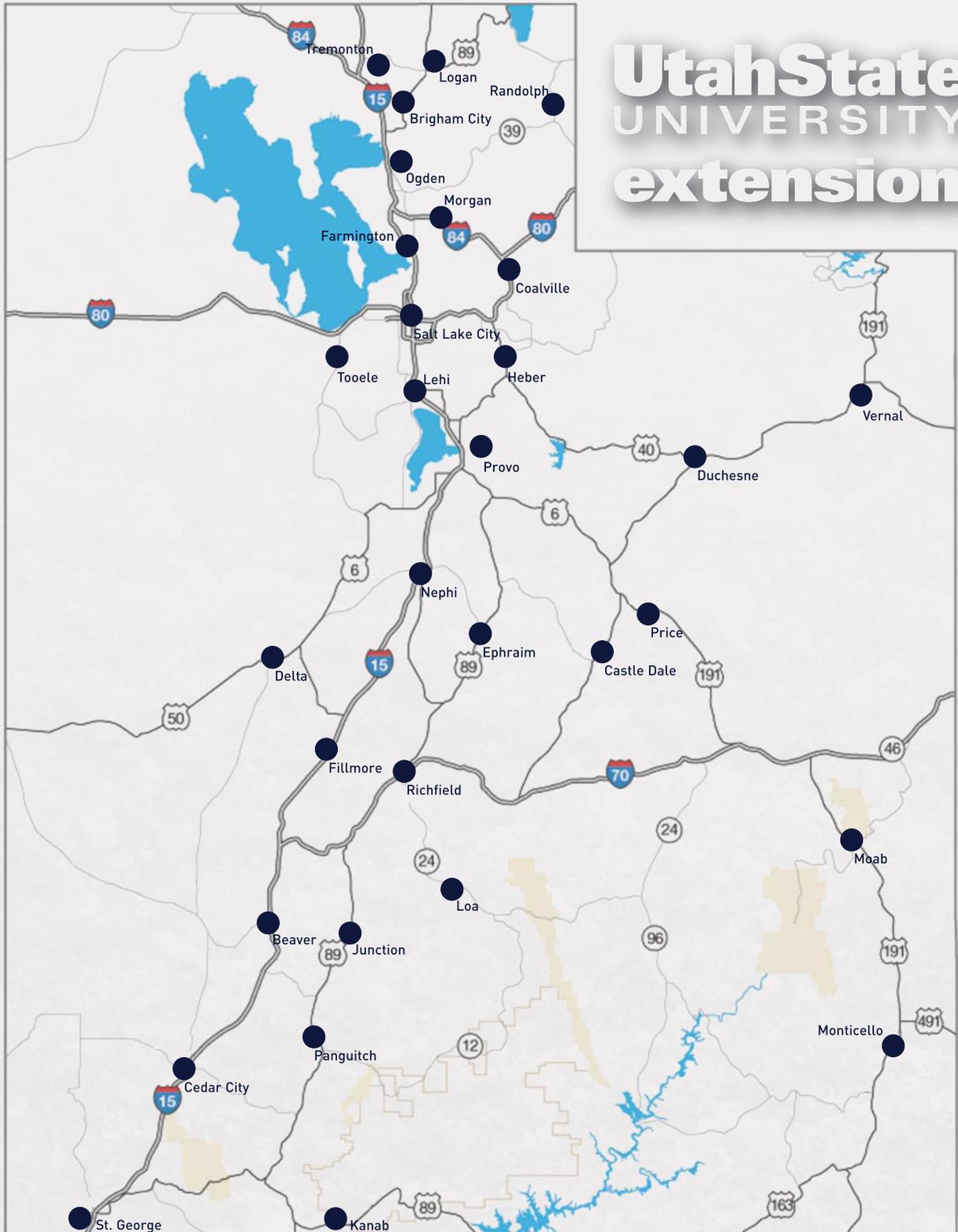
Director: Kris Saunders	250 North Main	Richfield, UT	84701	(435)893-0470
Beaver County	105 East Center, P.O. Box 466	Beaver, UT	84713	(435)438-6451
Garfield County	55 South Main, P.O. Box 77	Panguitch, UT	84759	(435)676-1113
Iron County	585 North Main #5, P.O. Box 69	Cedar City, UT	84720	(435)586-8132
Juab County	160 North Main	Nephi, UT	84648	(435)623-3450
Kane County	180 West 300 North	Kanab, UT	84741	(435)644-4901
Millard County (Fillmore, Tue/Thu)	50 South Main	Fillmore, UT	84631	(435)743-5412
Millard County (Delta, M/W/F)	83 South Manzanita Avenue	Delta, UT	84624	(435)864-1480
Piute County	550 North Main, P.O. Box 69	Junction, UT	84740	(435)577-2901
Sanpete County	325 West 100 North	Ephraim, UT	84627	(435)283-7597
Sevier County	250 North Main	Richfield, UT	84701	(435)893-0470
Washington County	44 North 100 East	St. George, UT	84770	(435)634-5706
Wayne County	18 South Main, P.O. Box 160	Loa, UT	84747	(435)836-1312

specialist and specialty resource personnel directory

Program	Contact	E-mail
Agriculture		
Program Leader & Ag Economics Specialist	DeeVon Bailey	d.bailey@usu.edu
Animal, Dairy & Veterinary Sciences		
Area Animal Scientist	Kim Chapman	kim.chapman@usu.edu
Beef Nutrition Specialist	Randall Wiedmeier	rdw@cc.usu.edu
Beef Specialist	Dale Zobell	dale.zobell@usu.edu
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Poultry Specialist	David Frame	david.frame@usu.edu
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Veterinarian Dairy Specialist	David Wilson	david.wilson@usu.edu
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Equine & Small Acreage	Scott McKendrick	scott.mckendrick@usu.edu
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Pesticides		
Pesticides & Toxicology Specialist	Howard Deer	howard.deer@usu.edu
Agricultural Systems Technology & Education		
Ag Engineering Specialist	Richard Beard	richard.beard@usu.edu;
Environmental Quality Specialist	Rhonda Miller	rhonda.miller@usu.edu
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Economics		
Business Development & Retention Specialist	Marion Bentley	marion.bentley@usu.edu
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Plants, Soils & Climate		
Program Leader & Landscape Horticulture Specialist	Larry Rupp	larry.rupp@usu.edu
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Diversified Crops/Bio Diesel	David Drake	david.drake@usu.edu
Irrigation		
Irrigation & Water Resources Specialist	Robert Hill	robert.hill@usu.edu
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Coordinator, Statewide Master Gardener Program	Larry Sagers	larry.sagers@usu.edu
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Plant Pest Management		
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Soils		
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Weed Science		
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Agronomic Weed Specialist	Ralph Whitesides	ralphw@ext.usu.edu
4-H		
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4-H Mentoring	Craig Dart	craig.dart@usu.edu

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4-H Volunteer Development Youth Leadership, Citizenship, Ambassadors & Staff Development 4-H Science, Engineering, Technology & Natural Resources Equine Programs 4-H Events 4-H Livestock Programs	Deb Jones John Paul Murphy David Francis Scott McKendrick Lauralee Lyons Jim Jensen	deb.jones@usu.edu jp.murphy@usu.edu dave.francis@usu.edu scott.mckendrick@usu.edu lauralee.lyons@usu.edu jim.jensen@ext.usu.edu
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extension **map**



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