



GROWING SOUTH DAKOTA

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COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / WINTER 2013



COMMITMENT TO
COLLABORATION

**SPOTLIGHT ON STATEWIDE
PARTNERSHIPS &
PROGRAMS**

WATER
WATCHERS
STATE INSTITUTE
MONITORS
WATER ISSUES

RESEARCH
RESULTS
AG EXPERIMENT
STATION
ANNUAL REPORT

GROWING SOUTH DAKOTA

VOLUME 3, NO. 2, WINTER 2013

Dean of the College of Agriculture & Biological Sciences and Director of SDSU Extension: Barry Dunn

Associate Dean/Director for Academic Programs: Don Marshall

Associate Dean/Director for Agricultural Experiment Station: Daniel Scholl

Associate Director of SDSU Extension: Karla Trautman

Communications and Marketing Director: Emery Tschetter

Editor/Writer: Kindra Gordon

Contributors: Lura Roti, Christie Delfanian

Designer: Kristi Schelhaas

Photographers: Kindra Gordon, Eric Landwehr, Wyatt McCoy, Robby Gallagher

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Please notify the College of Agriculture & Biological Sciences if your address has changed.

College of Agriculture & Biological Sciences,
South Dakota State University
1010 N. Campus Drive, Box 2207,
Brookings, SD 57007
Phone: 605-688-4148
Fax: 605-688-6320
Email: SDSU.agbio@sdstate.edu

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On the Cover:

The handshake is often a symbol representing agreement; formation of a partnership; and even gratitude and appreciation. In this issue, we highlight the partnerships and collaborations occurring across South Dakota as SDSU's College of Agriculture and Biological Sciences moves forward with its mission of teaching, research and Extension outreach.



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FROM THE DEAN: TOGETHER WE ARE STRONGER



“Let us put our minds together and see what life we can make for our children.”

Sitting Bull

In both 2011 and 2012, I have been honored to be part of South Dakota Secretary of Agriculture Walt Bone's Agriculture Leadership Roundtable. Held in July, these meetings have been an intense, and very valuable, moderated discussion amongst an inclusive group of people representing every organization associated with agriculture in South Dakota.

For these discussions, Walt challenged us to put our differences aside, and work together to distill the issues and challenges facing agriculture in South Dakota to create a prioritized list that we could work together to solve, or at least improve. The final topics were similar each year, and focused on things like livestock development, infrastructure, agriculture research, zoning, and environmental challenges like too much water and then not enough.

One of the topics that came through loud and clear both years was a concern over the implications of the age of the farmers and ranchers in South Dakota. As a state, South Dakota has the oldest farmers and ranchers in the nation; the state average is over 58 years of age. While some of us consider that a rather noble age (I will turn 60 in 2013), the process of the Agriculture Leadership Roundtable brought up a critical issue for our state and helped our state leadership focus on ways to address it.

And we did! A powerful partnership has been created, including the South Dakota Department of Agriculture, SDSU Extension, Farm Credit Services of America, USDA-Farm Service Agency, USDA-NRCS, Great Western Bank, First Dakota National Bank, First National Bank, South Dakota Farm Bureau, South Dakota Farmers Union, the South Dakota Cattlemen's Association, Dakota Rural Action, and the South Dakota Center for Farm/Ranch Business Management from Mitchell Technical Institute in Mitchell. An event was held in November on the SDSU campus, and over 300 individuals came to listen and learn about the challenges and opportunities for young farmers and ranchers.

Educational as well as financial resources were discussed to an energetic audience that included not only students from SDSU, but also students from Lake Area Technical Institute in Watertown and Mitchell Technical Institute in Mitchell. The program also provided attendees opportunities to network and engage with the sponsors of the program and with each other. It was a great conference, made stronger because of the partnerships that created it.

I am very proud of the other stories of collaboration and partnerships that you will find in this issue of "Growing." On page 2, "Commitment to Collaboration" is a series of stories that describe exciting work that has helped SDSU Extension create strong learning communities across the state. For example, by joining with the visionary leader Greg Von Wald, President of Mitchell Technical Institute, we have formed new programs with the Center for Farm and Ranch Business Management at Mitchell Technical Institute, and continue to explore additional opportunities for working together.

Our SDSU Extension forester, John Ball, has worked closely with the South Dakota Department of Agriculture to tackle one of the most critical challenges facing our state, the mountain pine

beetle in the Black Hills. Russ Daly serves in a joint capacity as SDSU Extension Veterinarian and state Public Health Veterinarian, providing front line leadership with emerging disease like Epizootic Hemorrhagic Disease, which affects both deer and cattle.

We collaborate with state and national commodity organizations that strengthen our state's agricultural industry. Examples range from precision agriculture conferences and research; to the beefSD and sheepSD programs.

Pesticide training occurs in South Dakota because of a strong partnership between the South Dakota Department of Agriculture, responsible for pesticide regulation, and SDSU Extension, responsible for education. As societal concerns continue to grow around issues like food safety and environmental sustainability, the importance of these programs will only increase in coming years.

There is growing collaboration between the SDSU College of Agriculture and Biological Sciences and the College of Education and Human Science. This partnership brings together plant scientists, geneticists, and human nutritionists to create robust programs in food science research. This information extends into SDSU Extension and supports Food and Family programs across the state.

The South Dakota 4-H program is a tremendous example of partnerships. 4-H would simply not be possible without the commitment of hundreds of volunteer leaders in communities across the state. The South Dakota 4-H staff, including 4-H Specialists, Field Specialists and 4-H Program Advisors provide the overall program planning and coordination, but the success of the 4-H program is its local delivery. Every time a 4-H member learns a new skill, participates at State Fair, or wins a national scholarship, it demonstrates the success of the 4-H partnership between staff and volunteers.

At South Dakota State University, we understand the power of partnerships, and have worked to build a culture that encourages new ideas, based upon both new and historic partnerships. We work to serve the people of South Dakota, and actively seek out partners who can accomplish what we cannot do alone. The benefits are not only better service, but equally as important, more efficient use of our states precious, and limited, resources.

But a good partnership, like a good marriage, doesn't just happen. It must start with a mutual commitment from all parties to work toward the accomplishment of common goals. In our case, those goals center around service to South Dakota.

As I sat through both of Secretary Bone's Agriculture Leadership Roundtable, I remember clearly the famous quote from Chief Sitting Bull coming to my mind: *"Let us put our minds together and see what life we can make for our children."* I have always been struck by its sincerity, altruism, and vision. Given the context of defeat and despair in which he made it, it is even more remarkable. Today, we have the opportunity, and responsibility, to make the same commitment, from a much different set of circumstances.

In South Dakota, everyone is our neighbor. And our lives are better when every neighbor is also our partner.


Barry H. Dunn, Ph.D.



COMMITMENT TO COLLABORATION

Working Together On Common Goals Adds Efficiency
To Budgets; Effectiveness To Solutions

Helen Keller is credited with the quote *“Alone we can do so little; together we can do so much,”* – and in today’s world, that simple collaborative observation still rings true. Partnerships, teamwork and collaboration are now – more than ever – the essential building blocks for progress and success.

Through its mission of teaching, research and Extension outreach, SDSU’s College of Agriculture and Biological Sciences faces a growing number of services to provide and challenges to address – while resources and finances continue to be limited. However, partnerships and collaboration with government entities, private industry and commodity organizations provide an opportunity throughout the state to leverage tax dollars and achieve effective solutions.

Here, we highlight several examples of these efforts and SDSU’s continued commitment to collaboration.

Tackling Mountain Pine Beetle and other tree needs

As the Black Hills region struggles to stop the deadly Mountain Pine Beetle – which is estimated to have killed 4 million Ponderosa pine in 2012, SDSU forestry professor and Extension specialist John Ball is in the thick of the battle. Ball also has a split appointment with the South Dakota Department of Ag’s Division of Forestry.

Given his forestry experience and expertise, Ball is working closely with others in the state – including staff from the Black Hills National Forest – to tackle the Mountain Pine Beetle issue. Land surveys, research and landowner education are the current strategies being used in the collaborative approach to stop the bug’s invasion.

Ball’s role also has him teaching forestry courses on campus, conducting research, as well as providing landowner and logger education programs. He also enjoys one-on-one opportunities to help individual landowners in urban and rural settings learn more about caring for – and saving – their own trees. Next up on his docket is addressing management and control of the Emerald Ash Borer (EAB) that is expected to arrive in South Dakota from eastern states.

For more information contact John.Ball@sdstate.edu or call (605) 688-4737.



Promoting the next generation of livestock production

Agriculture generates billions of dollars for South Dakota's economy – and employs approximately 123,000 people in ag-related jobs across the state. With the global population growing rapidly, the need for food is also increasing and expected to double by 2050.

And, South Dakota has an opportunity to lead in supplying safe, wholesome ag commodities for the world's future food needs.

Lynn Gordon, a SDSU Beef Extension Field Specialist, points out, "South Dakota is fortunate to have access to land for producing food and to water for raising crops for feed resources – along with the people and infrastructure necessary to be domestic and international leaders in production agriculture."

To that end, SDSU Extension and the South Dakota Department of Agriculture (SDDA) have joined together to spotlight the opportunities available in the state for livestock development and the ripple effect that a strong agricultural economy has throughout the state.

A series of meetings will be held across South Dakota from January through

March at area livestock auction markets to help livestock producers and communities recognize the benefits of growing South Dakota's livestock industry for the future.

"Whether it is beef cattle, dairy cattle or pork production, a thriving livestock industry means thriving communities and counties and a strong infrastructure," says Sarah Caslin, Livestock Development Coordinator for the SDDA. She points out that the agricultural sector is the

largest single sector of South Dakota's economy, and each dollar of agricultural output generates economic activity for the state, which also makes it more profitable and feasible for the next generation to return to the farm.

Announcements of upcoming meeting dates are available on iGrow.org. For more information contact Sarah Caslin, SDDA, (605) 280-4833 or Lynn Gordon, SDSU, (605) 782-3290.



Dual appointment benefits health of South Dakota's people, livestock

As an Extension Veterinarian and Associate Professor at SDSU, Russ Daly has primarily focused on livestock health and disease in his service to the state. But in 2011, he was appointed as the State Public Health Veterinarian with the South Dakota Department of Health as well – meaning he also keeps a watchful eye on human health and zoonotic diseases which can pass from animals to humans and vice versa.

Daly explains that most state health departments have their own dedicated public health veterinarian, so in South Dakota this dual role with University Extension and the state Health Department is unique.

Daly does not draw a salary from the state Health Department, but he says the partnership allows both the agency

and the University to collaborate and achieve their goals – particularly with regard to educational messages related to animal contact and/or disease risk to the public. He notes, "It allows the health department access to the educational and outreach capabilities of SDSU Extension in a very unique and effective way."

Additionally, Daly's relationship with the SD Department of Health has already resulted in enhanced research collaboration. As examples, a twice-yearly discussion group has been formed bringing many state agencies and stakeholders together to discuss zoonotic disease issues important to South Dakota. As well, Daly was able to secure a grant this summer which allowed him to study human cases of E.coli and Cryptosporidium infection to

identify whether exposure to animals may have increased the risk for exposure. He says, "Working with the South Dakota Department of Health has allowed access to medical case information for research that has not normally been available to Extension."

Daly was recently appointed as SDSU's Interim Department Head of Veterinary and Biomedical Sciences. Editor's Note: During 2012, Daly reports that strong collaboration also occurred among SDSU Extension, veterinarians at SDSU's Animal Disease Research & Diagnostic Laboratory and the South Dakota Game Fish & Parks as they addressed concerns and control of Epizootic Hemorrhagic Disease (EHD) in South Dakota deer and cattle populations.

Serving rural communities; Strengthening rural economies

Building leadership skills. Promoting small business and the rural economy. Developing food entrepreneurship networks. These are a sample of the topics and projects being addressed as SDSU Extension's community development team works with communities across South Dakota.

Presently, SDSU Extension is partnering with USDA Rural Development on a unique grant called "Stronger Economies Together." Two regions in the state were chosen to participate in the 2-year program which is designed to assist them in forming a regional group to write a regional economic development plan. The counties of Kingsbury, Jerauld, Beadle, Spink, Clark and Hand will form one regional group, while West River counties Haakon, Jackson and eastern Pennington will form the second group.

Another USDA Rural Development grant was recently received by SDSU Extension to build South Dakota's local food system through the establishment of an online Local Foods Center. The aim is to create structured connections between local growers and resource providers. The online center will allow resource providers across the state to supply a collection of



educational materials such as podcasts, fact sheets and guides related to local food entrepreneurship, processing and production.

Additionally, SDSU Extension community development specialists have hosted numerous programs across the state. A "Small Business Beginnings" series of classes was held in Newell in October and November to help new and expanding business owners. A similar series of classes with an emphasis on food entrepreneurship was held over the summer and fall in Montrose, Estelline and Kadoka/Philip.

This fall, the communities of Hot Springs and Mitchell hosted one-day workshops with the theme "Growing Leaders SD." SDSU Extension worked with local chambers of commerce and young professionals groups to coordinate these workshops and focus on developing leadership skills among aspiring leaders in communities.

Staff is also coaching youth /adult groups in four high schools on a project called, "Youth Voices." The communities of Philip, Eureka, Kimball, and Hyde Co. have put together a committed group of 6-8 youth and 6-8 adults planning projects to improve the quality of life in their towns.

Of these efforts across the state, SDSU Extension Field Specialist Kari O'Neill says, "SDSU Extension recognizes the value of our rural communities and the leaders who live there. All of our community development programs are focused on building capacity in communities so that as residents plan for the future, new leaders will step up to the plate with the knowledge of how to put those plans into action."

For more about SDSU Extension's community development programs contact David.Olson@sdstate.edu or call (605) 688-5614.

Invigorating South Dakota's sheep industry

A new effort is underway to help potential and beginning sheep producers enter and expand into the sheep industry in the state. Sixteen beginning farmer/rancher sheep operations from across South Dakota have committed to the three-year long program called sheepSD.

As members of sheepSD, these sheep producers will become part of a learning community that will prioritize the industry relevant topics of study as well as apply for grants and funding to improve the learning experience. The program

will also provide mentorship by current successful sheep ranchers to beginning sheep producers.

The three-year program is being administered by SDSU Extension in collaboration and with co-funding from the American Sheep Industry.

To learn more about sheepSD, contact David.Ollila@sdstate.edu or call (605) 394-1722. A similar program called beefSD is available for the state's beginning beef producers. To enroll contact Ken.Olson@sdstate.edu or call (605) 394-2236.



Initiative addresses South Dakota's food deserts

All of South Dakota's Indian Reservations are classified as "food deserts" – areas in which residents have limited access to large food retailers, and particularly fresh foods. In response to this, SDSU Extension has placed an emphasis on providing training to tribal communities for home gardening, youth gardens, and ultimately establishing commercial growers who may also tap into entrepreneurship opportunities.

Shawn Burke, the Native American Program Director for SDSU Extension, reports that numerous partners have teamed with Extension to help grow this effort. Partners across the state include tribal governments; Lakota Funds and Hunkpati Investments, Inc. which are both community development financial institutions; the Club for Boys in Rapid City and many more.

Extension programs on healthy foods have reached all of the reservations

in the state in some form in 2012 – from workshops on gardening to food processing and food preservation.

One example project involved a youth garden program at the Club for Boys in Rapid City. SDSU Extension provided funding for development of 19 garden plots during the summer of 2012. Students from Central High School helped build some of the gardens. As well, Master Gardeners, Extension staff and employees from local restaurants were involved with the growing, harvest and educational exchange involved with the project.

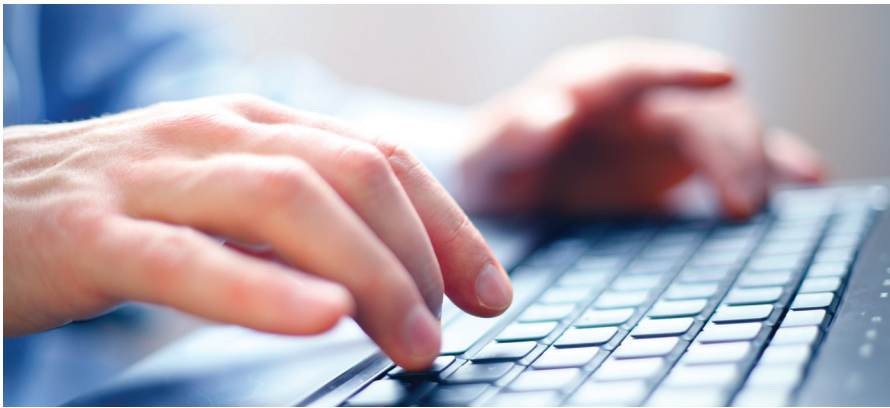
On the Crow Creek Sioux Indian Reservation, SDSU Extension has also worked with the Crow Creek Fresh Food Initiative administered by Hunkpati Investments, and funded by First Nations Development Fund. This summer the commercial garden project expanded from a few raised beds to a half acre garden as

it works toward its goals to grow enough fresh fruits and vegetables to provide for the community; encourage agricultural entrepreneurship; educate tribal members about the newly available fruits and vegetables; and teach children about nutrition and agriculture.

Whitney Jandreau provided oversight of the Crow Creek Fresh Food Initiative for the 2012 growing season and says, "SDSU Extension has been a great resource in the growth of our program. My dream is to see the Crow Creek Fresh Food Initiative become its own non-profit organization in the future, and I believe the knowledge shared by SDSU Extension will play a crucial role in making that happen."

For more information about the Healthy Foods and Garden Initiative contact Shawn. Burke@sdstate.edu or call (605)394-2236.

Teaming up to strengthen farm business management



The old adage "two heads are better than one" is evident with a partnership that has been forged over the past year in Mitchell, SD. When reorganization of SDSU Extension occurred in October 2011, the Regional Extension Center in Mitchell was housed under the same roof as Mitchell Technical Institute.

Both entities serve farmers and ranchers, so it's no surprise that collaboration took root. Mitchell Technical Institute had recently established a Center for Farm/Ranch

Management with the aim of helping South Dakota agricultural producers become better business managers. SDSU Extension has a long history of providing technical assistance to agricultural producers on everything from economics to livestock nutrition, breeding and genetics, range management and more.

By working together both MTI and SDSU Extension have been better able to serve South Dakota producers, believes Jack Davis, an Economics Field Specialist at the Mitchell Regional Extension

Center. "It's been a great opportunity to provide farm and ranch management information – from economics to operational – to the people of South Dakota," Davis says.

In the past year, the two entities have worked with one another to offer several educational seminars including the Ag CEO program; a program titled Beef Cattle Marketing: An Explorative Approach; and most recently, the Beef Production Audit series, which includes six sessions focusing a various segments of the beef production system. To highlight their farm business program efforts, SDSU Extension and MTI also shared a booth space during the annual Dakotafest in Mitchell in August.

Of the future Davis says, "There are many educational opportunities to work together, and our partnership with MTI has great potential."

For more information about the farm business management programs offered contact Jack.Davis@sdstate.edu or call (605) 995-7385.

Working together to address obesity; Offer healthy concession choices

In an effort to address obesity – particularly among kids – SDSU Extension and the South Dakota Department of Health are collaborating to implement “Munch Code,” a program for concession stands. The program, developed by the Department of Health, promotes healthy concession choices by identifying food and beverage items with green, yellow and red color codes. Green foods and beverages are the healthiest options and can be enjoyed often; because of the levels of added sugar, fat and calories, yellow items should be eaten occasionally and red items sparingly.

State grant funding from the Department of Health has allowed for an SDSU Extension position to be dedicated to the implementation and development of this program across the state. Megan Sexton, an SDSU Extension Nutrition

Field Specialist in the Sioux Falls Regional Extension Center currently fulfills that role. Recently, additional funds from the Department of Education have helped to implement the program.

Sexton has worked to create awareness and educate others about the optional program, and says the response has been overwhelmingly positive. She explains that Munch Code simply means offering more fruit, vegetable, yogurt and skim milk options within the concession stand, and also making easy substitutions such as offering a lower fat turkey hot dog or a veggie pizza with a whole grain crust.

Sexton explains that two years ago the Munch Code program was piloted to target non-school related concession events such as hockey and baseball, as well as park and recreation facilities like

swimming pools. Now, it has expanded to include concessions at schools.

Kristin Biskeborn with the South Dakota Department of Health notes that they’ve had a long standing working relationship with SDSU Extension over the years, but is pleased that a dedicated staff person is making Munch Code successful – and is making it easier for kids and adults to eat healthy.

Learn more at www.munchcode.org.



Providing resources for crops, environment



Throughout South Dakota, SDSU researchers and Extension specialists are at work to aid in the continued improvement of crops and conservation efforts. As one example, Chris Hay, SDSU Extension water management engineer, (pictured above at right) helped lead a field demonstration project this summer near Baltic, SD, that implemented a bioreactor as part of a drainage system. The bioreactor is designed to reduce losses of nitrates to surface water.

The project was showcased as part of the AgPhD Field Day in late July hosted by Hefty Seed Company with more than 4,000 attendees.

The demonstration project was made possible with funding from a Conservation Innovation Grant from the Natural Resources Conservation Service (NRCS), with additional funding support from the East Dakota and Vermillion Water Development Districts, SD Corn, SD Farm Bureau, and SD Soybean. Advanced Drainage Systems, Agri Drain Corporation, Hefty Seed Company and SDSU provided in-kind support.

This winter SDSU researchers are installing a second bioreactor study site, with two more planned for next spring. *Learn more about the research at www.sdstate.edu/label/wri/research-projects/bioreactors.cfm.*

Additional resources offered by SDSU Extension include:

- Continuing to offering the Pesticide Applicator Training program for commercial and private applicators. Extension provides the educational portion of the program, while the South Dakota Department of Ag oversees funding and regulatory issues. For 2013, some of the training may be offered in a “smart class” format where applicators gather for the training at a meeting location and instructors are featured online.
- Developing a 2-minute animated video showing how to properly speed-scout for soybean aphids. SDSU entomologist Buyung Hadi worked with SDSU professor of animation and film Cable Hardin and SDSU Extension soybean entomologist Kelley Tilmon to produce the video. The collaboration recently earned an award from the Entomological Society of America and was also written about in the New York Times. *View it on YouTube at: http://www.youtube.com/watch?v=n_WmCQA00Hs*



SPECIAL PULL-OUT SECTION

2012 ANNUAL REPORT

South Dakota Agricultural Experiment Station

Partners for the Future

The South Dakota Agricultural Experiment Station (SDAES) works best when it works in partnership with South Dakota agriculture. Our partners include ag leaders who help define the questions to be studied; commodity groups who help sponsor the research; scientists who investigate the questions and work to develop answers; and SDSU Extension that disseminates the results. Additional partners include funding agencies outside of South Dakota. These national partners bring resources to our state to enable testing, innovation and discovery to better serve South Dakota agriculture.

In 2012, SDAES scientists raised more than \$200,000 per FTE from funding partners in support of research. Twenty-two percent, or \$3.3 million was spent on research on behalf of non-profit organizations, mostly agricultural commodity groups. The agricultural community also supports the construction and operation of research infrastructure, such as the Seed Technology Laboratory, new greenhouses, the Davis Dairy Plant, the new cow-calf and swine teaching and research facilities, and more.

The research partnerships that serve South Dakota create a long-term, durable impact on future generations. Inside, we highlight several of these research partnerships, and the progress being achieved.



Photo by South Dakota 4-H member Wyatt McCoy

Partners in new product development

Development of economical soy-based fish feed could tap a new market for South Dakota soybean producers – and commercial fish production entities.

Through a partnership with the SD Soybean Research and Promotion Council, South Dakota Agricultural Experiment Station scientists Michael Brown from SDSU's Department of Natural Resource Management and William Gibbons from SDSU's Department of Biology and Microbiology have joined forces to develop soymeal as a protein component in commercial fish feed.

Currently commercial fish farms must rely on feeds containing fish meal as a protein source - with prices from \$1,500 to \$1,800 per ton. By replacing fish meal with sustainable plant-based protein products, Gibbons and Brown say they can decrease the cost of feed, expand opportunities for value-added products from soybeans and increase profitability for fish farms.



To accomplish this goal, Gibbons transforms the soybean meal into a form that the fish can more easily digest. Then Brown (*pictured with SDSU Wildlife and Fisheries student Tabor Martin from Canton, SD*) determines the percentage of soy product that can be used to replace the marine-derived protein, yet maintain a nutritionally balanced diet for the fish. The project, which began in 2011, will receive about \$1.7 million over three years from the SD Soybean Council and United Soybean Board through the producers' checkoff system.

As the global population continues to grow – along with demand for fish and shellfish, development of this economical soy-based fish feed offers opportunities for expanding

the fish production industry here in South Dakota and across the county.

Of the effort, Doug Hanson of Elk Point, who is the South Dakota Soybean Council's aquaculture liaison, says, "We just need research that shows it's profitable for investors to look at it really seriously."

Partners in human nutrition and livestock production

Red meat often gets a bad rap when it comes to a heart healthy diet, but the South Dakota Beef Industry Council (SDBIC) aims to change that perception through its beef checkoff-funded partnership with South Dakota Agricultural Experiment Station researcher Kendra Kattelmann.

Kattelmann, a SDSU professor of health and nutritional sciences, evaluated how consuming an additional 7 to 9 ounces of lean beef affects iron status. A total of seven graduate students worked on the one-year projects. The first two projects tracked a total of 51 physically active females over a 10-week period, while the third looked at 34 collegiate athletes competing in volleyball or cross-country (*pictured*) during an 8-week period.

From the research, Kattelmann and her students concluded: 1) A high protein diet does not negatively affect a woman's bone density; and 2) Long-distance runners who supplemented their diets with lean beef retained more lean body mass during the season than those who did not consume



the extra protein. Even though the amino acids consumed were the same, Kattelmann says, "The use of lean beef attenuated the loss of lean tissue." This was not the case for volleyball players, but Kattelmann explains that the aerobic nature of running could account for the difference.

Kattelmann's next project with the SDBIC will be

to evaluate how eating lean beef affects adults at risk for developing heart disease, stroke and type 2 diabetes. She is working with Avera Heart Hospital to recruit and monitor 40 participants for the three-month study which will begin in 2013.

Of the research partnership, Holly Swee, the SDBIC's Director of Nutrition and Consumer Information says, "The Council is focused on funding science-based research to support the benefits of beef's high quality protein in a healthful diet... We believe this checkoff-funded research will benefit both beef producers and consumers in South Dakota and beyond."



FROM THE DIRECTOR: DANIEL SCHOLL

Providing Knowledge, Information & Technologies

As we reflect on 2011 and 2012, we are quickly reminded of some of the challenging conditions that South Dakota farmers, ranchers and the state population as a whole confront. Variability in weather, domestic and global politics, markets, and public opinion all influence the status of the South Dakota agriculture economy and South Dakota communities.

It is in this context that the South Dakota Agricultural Experiment Station (SDAES) strives to provide knowledge, information and technologies to help South Dakota agricultural businesses and communities make the decisions that are optimal for their well-being.

During this last year, we celebrated the 150th anniversary of the Morrill Act (1862) which established land-grant universities such as SDSU. Representative Justin Morrill specifically recognized declining productivity of colonial farm lands and envisioned active state-specific agriculture research programs to improve our ability to feed ourselves. Agriculture Experiment Stations were established at land-grant universities with the passage of the Hatch Act (1887) to continue the effort.

The SDAES has a long and productive history, and I am excited to share some highlights of SDAES research in this Annual Report.

Central to the SDAES approach of identifying relevant research questions and acquiring the additional funds that conducting the research requires are the strong partnerships we have with South Dakota's agriculture organizations. We could not serve South Dakota effectively without the ever-strengthening partnerships, sponsorships and communications we have with these groups.

Finally, I would like to recognize the dedicated and effective work done by our faculty. To conduct the research that SDSU is known for, our faculty raise external research funds equal to over 250% of their salary each year. This is just one example of their hard work and intellectual leadership. It is a pleasure to work with this stellar group of professionals.

Partners in wheat production and economic development

Higher yields, increased grain protein and greater disease resistance top South Dakota wheat farmers' wish list when it comes to traits they want, according to the 2011 Wheat Variety Survey. Through partnerships with the SD Wheat Commission and Bayer CropScience, Agricultural Experiment Station scientists in the state are working to fulfill these needs and make an end product that is as tasty as it is healthy.

SD Wheat Commission is a long-time partner that has been funding research at SDSU for more than 50 years. About 40% of each year's wheat checkoff funds go to SDSU research projects, amounting to about \$600,000 per year, though not all of it goes to the breeding program.

As an example of current research, molecular genetics techniques are being utilized by SDSU plant geneticist Jose Gonzalez who collaborates with spring wheat breeder Karl Glover, winter wheat breeder William Berzonsky, and cereal chemist Padu Krishnan on projects to identify and use the genes responsible for resistance to fusarium head blight, stem rust and orange blossom wheat midge.

Krishnan and his four graduate students also evaluate the consumption quality of the wheat crop at his lab in the Seed Technology facility.



Pictured: SDSU post-doc researcher Melanie Caffé-Tremblay pollinates wheat with corn pollen as the first step in creating a doubled-haploid. This technique is expected to reduce the time it takes to develop a new variety by approximately two years.

Bayer CropScience is a newer partner collaborating with SDSU wheat researchers. Over the last three years, Berzonsky has been working with Bayer CropScience and Ducks Unlimited on the Winter Cereals: Sustainability in Action project, which aims to enhance the habitat for wildlife in the Prairie Pothole Region. Waterfowl have a 24 times higher chance of hatched nests in winter cereals than in spring planted. Thus, the goal of their effort is to develop better

cold tolerance in winter wheat.

To develop new wheat varieties faster, a doubled-haploid technique that takes approximately two years off the 10-year breeding process is being used.

In 2011, SDSU expanded its relationship with Bayer CropScience by signing a non-exclusive agreement that gives the company access to a selection of SDSU's spring wheat germplasm. The scientists say this will allow South Dakota breeding materials to reach a wider market, and the support will eventually create an endowment to further strengthen the program.

Our Foundation – The Morrill Act

As we look back 150 years and recognize the brilliant foresight and leadership of Justin Morrill, the U.S. Congress, and President Abraham Lincoln, we recognize their efforts to create hope and opportunity during the darkest days of the Civil War. Our nation was being torn apart, but these visionary leaders worked to lay the groundwork that would establish the system of land-grant universities, and create the Hatch Act that established Agricultural Experiment Stations.

This early legislation opened the doors for publically supported agricultural research in each state, including South Dakota. Today, our partners and our highly-qualified faculty keep that research mission alive and effective.

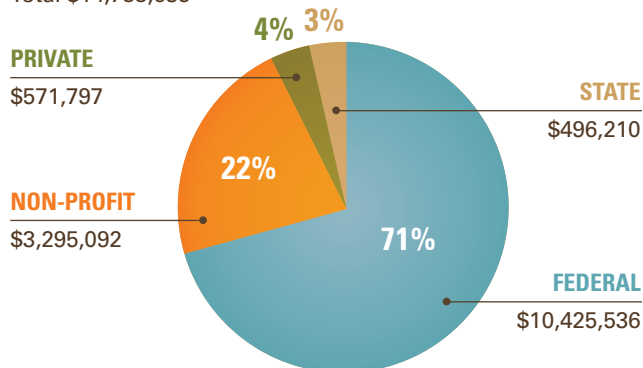
Continuing For The Future

Our generation bears the responsibility of providing the tools of prosperity for future generations. The food production capacity and profitability that future generations will enjoy is based on the research occurring today. Just as Justin Morrill and Abraham Lincoln set the stage for the science of today, so too we must work to assure that objective and unbiased research is available to future generations. Together, we can assure that South Dakota farmers and ranchers meet the world's needs through economically sustainable and efficient agricultural production and bioscience innovation.

AES External Research Funds – Fiscal year 2012

Actual Expenditures

Total \$14,788,635



WATER WATCHERS

The South Dakota Water Resources Institute Provides Research, Education & Outreach



Water tends to be a hot topic for just about every state. Some years there's too much water; or in years like 2012, there's not enough. As well, different interest groups can have different priorities for water use – from agricultural and industrial to urban, recreational and even oil and gas development.

To ensure the integrity and quality of this valued resource, the South Dakota Water Resources Institute (WRI) at South Dakota State University provides leadership on finding solutions to evolving water concerns through research, educational opportunities, and community outreach.

"There will always be issues that we need to find solutions for in the state related to water," explains Jeppe Kjaersgaard, an assistant professor of agricultural and environmental water management at the Institute.

In the 1970s, initial research by the South Dakota WRI focused on land suitability and management for irrigation of cropland using water from the Missouri River reservoirs. In subsequent years, the focus shifted to studying lake ecosystems and lake water quality, particularly because of the uniqueness of South Dakota's Prairie Pothole region. Today, agricultural and environmental water management research including tile drainage, hydrology, water quality assessments and water quality for livestock are among WRI's projects in the state.

"We are using the newest technology including satellite imagery, advanced computer models and field monitoring equipment in our research," he explains.

Kjaersgaard is one of the SDSU researchers who oversee the efforts of the Institute, along with director Van Kelley,

WATER AWARENESS FOR KIDS, TOO

In an effort to help young people learn more about protecting our precious water supply, the annual Big Sioux Water Festival is held each May on the SDSU campus. One thousand local fourth graders are bused in for the festival which teaches them about watersheds, their water footprint and protecting water quality. *(Pictured above.)*

The South Dakota Water Resources Institute is one of the host organizations for the event in partnership with the Eastern Dakota Water Development District, Brookings County Conservation District and SDSU's Plant Science and Agricultural and Biosystems Engineering Departments.

Jeppe Kjaersgaard, SDSU assistant professor of agricultural and environmental water management, says it's a great event for sparking youth's interest in science and water. The 2012 water festival marked the 20th anniversary for the event.

assistant director Kevin Dalsted, program manager Mary O'Neill and program assistant Trista Koropatnicki.

But the efforts of WRI extend beyond these individuals. Kjaersgaard explains that collaboration – with other university researchers at SDSU and across the state, as well as industry and different government agencies – is integral to the process to find solutions to current and emerging water issues.

To this end, South Dakota WRI hosts a water conference in Brookings annually in October. At the conference, participants share information on the work they are doing through panel discussions, presentations, and research poster sessions.

In 2012, about 200 individuals representing universities and local, state and federal government entities and industry attended the conference, including the South Dakota Department of Environment and Natural Resources, South Dakota Department of Agriculture, Agricultural Research Service, Natural Resources Conservation Service and United States Geological Survey.

Additionally, in collaboration with the United States Geological Survey (USGS) the South Dakota WRI annually awards

research grants to researchers at different universities in the state. Kjaersgaard says about \$65,000 is awarded across four or five proposals each year.

"It's a modest amount of money, but it provides seed money to young faculty trying to build a program or fund a graduate student study. Many water related research projects in the state started under the auspices of this grant program," Kjaersgaard says.

Looking to the future, Kjaersgaard anticipates WRI's role – and collaboration – will grow as new water issues emerge. He cites water for continued development of the state's economy, urban population growth, industrial needs and possible oil and gas development in the state among those challenges to be addressed.

Editor's Note: The South Dakota WRI is one of 54 water resources research institutes across the nation that were authorized by Congress and created after the Clean Water Act was passed in 1972. At SDSU, the Institute is affiliated with the College of Agriculture and Biological Sciences, Department of Agricultural and Biosystems Engineering and the South Dakota Agricultural Experiment Station. Funding for the Institute comes from federal and state sources.

WINTER COLLEGE NEWS

12 Communities Tap 4-H Teens As Teachers Program

In 2013, South Dakota 4-H youth will have the opportunity to teach younger students in their community through the 4-H Teens as Teachers program.

4-H Teens as Teachers allows youth to problem solve and plan by developing and carrying out lesson plans for grades 3-5 that are relevant to the SD Health Education Standards, explains Suzy Geppert, SDSU Extension 4-H Youth Partnerships Field Specialist.

This year's program will be offered in 12 communities across the state. These communities applied to be part of the program in the fall of 2012. Participating communities will include: Baltic, Belle Fourche, Burke, Clark, Lower Brule, McIntosh, Phillip, Redfield, Sturgis, Sisseton, Webster, and Winner.

Teens will attend a training session and take their training back to their local 3-5 grade youth in elementary classrooms and after-school programs. They will design and carry out lessons in conjunction with local 4-H program advisors and teachers. They will write newsletters, plan activities, and submit a 3-5 minute reflection video upon completion as well as various evaluations.

Approximately 68 high school age students will receive a \$500 scholarship upon completion of the Teens as Teachers program. The scholarship will be directed toward the post-secondary institution of the student's choice, upon payment of fees to that institution.

This program has support from several partner organizations including the SD 4-H Foundation. For more information on the Teens as Teachers program contact Suzanne.Geppert@sdstate.edu or call (605) 773-8120.



SDSU Extension Staff Receive International Recognition For Authoring iGrow Wheat



The American Society of Agronomy recognized South Dakota State University faculty and SDSU Extension Specialists

with the Excellence in Extension Materials Award for their efforts in co-authoring "iGrow Wheat: Best Management Practices for Wheat Production."

More than 30 South Dakota State University faculty and SDSU Extension staff authored the handbook designed to be used as South Dakota wheat producer's go-to resource.

"What makes this resource exceptional is the fact that it is user-friendly and filled with relevant information that is easily defined, making it a good resource for South Dakota's wheat growers," states John Holman, associate professor of Cropping Systems at Kansas State University and chair of the judging committee.



Fundraising Proceeds For Swine Teaching And Research Facility

In October, First Bank & Trust announced a \$250,000 leadership investment toward SDSU's planned Swine Teaching and Research Facility. "We are proud to play this important role, supporting SDSU's commitment to education and research in the swine industry," said Kevin Tetzlaff, President of First Bank

& Trust, Brookings. "After all, we see how all of the communities we serve in eastern South Dakota and southwestern Minnesota can benefit from these advances."

First Bank & Trust and the South Dakota Pork Producers Council have provided the first financial commitments to the project, and each entity will be recognized as a "founding member" of the SDSU Swine Education Advisory Council.

Construction of the facility is pending as the fundraising efforts continue and is subject to approval through the South Dakota Board of Regents' capital project process. The overall project is estimated to cost \$7 million.

For more information contact Mike Barber, South Dakota State University Foundation at (605) 321-6468.

SDSU Dairy Products Judging Team Brings Home 5th National Championship



South Dakota State University's Dairy Products Judging Team placed first in All Products at the 2012 Collegiate Dairy Products Evaluation Contest, in Springfield, MO, in early November.

This was the fifth consecutive year that a SDSU team won the national championship. In dairy products judging, students evaluate the appearance, texture, and flavor of

six dairy products like milk, butter, cheddar cheese, ice cream, yogurt, and cottage cheese.

SDSU team members are pictured left to right: Coach Lloyd Metzger, SDSU Professor of Dairy Science and Alfred Chair in Dairy Education; Laura Mealy, Springfield, OR; Austin Asche, Hutchinson, MN; Lee Alexander, Milbank, SD; Cassandra Hulstein, Edgerton, MN; and assistant coach and SDSU student Justin Ochsner.

SDSU has a long history at the event and has won the national championship 20 times in the 91 year history of the contest. The team placed first in milk and cheddar cheese, second in ice cream, third in cottage cheese, fourth in butter, and fifth in yogurt. A total of 53 undergraduate and graduate contestants from 17 universities in the U.S. and Canada participated in the contest.

"The training students receive through dairy products judging is important for students studying dairy science because it allows them to determine if products have quality defects," says Lloyd Metzger, SDSU Professor and Director Midwest Dairy Foods Research Center. "Members of the judging team often obtain a position in quality control or manufacturing and they use their products judging skill to identify issues and improve the quality of dairy products.

For placing first overall, the SDSU team won the Shirley Seas Memorial Scholarship. This scholarship is in memory of Shirley Seas, who coached the SDSU team for 21 years. Metzger also received the Aurelia and George Weigold Coach of the Year Award.

Online Training For Master Gardeners Being Piloted

Many people look to gardening as an economical way to feed their family, but many have not gardened before. That's where SDSU Extension's Master Gardener program can help.

Master Gardener volunteers across South Dakota help train both young people and adults in techniques for growing vegetables in the South Dakota climate and soils. In her new role as the statewide Master Gardener Coordinator, Mary Roduner will provide guidance and help develop training materials for the program which trains about 100 South Dakotans each year, in classes offered at locations throughout the state.

About 1,400 South Dakotans have taken the intensive training course since the program began in 1985. Volunteers receive more than 60 hours of classroom and hands-on training over a nine-week period. SDSU Extension staff provides the training for a nominal fee, asking that in return, participants volunteer 50 hours over the following two years in their communities sharing their knowledge.

SDSU Extension Horticulture Specialist Rhoda Burrows, who is the state's former Master Gardener Program Coordinator, says the result is more than 7,200 volunteer hours shared with South Dakota communities each year.

Traditionally, all Master Gardener courses were taught in a classroom setting. But, Burrows and Roduner are currently working to pilot a new training method for Master Gardeners. According to Burrows, the goal is to make much of the course training available online, with a smaller portion of the class in-person for subjects best learned with hands-on experience. This would minimize travel to a classroom, as well as making the Master Gardener program more accessible to a wider range of South Dakotans.

Roduner and Burrows are currently working with other SDSU Extension staff and SDSU Horticulture faculty to develop the online courses. Anyone interested in participating in Master Gardener training in 2013 should contact Roduner at Mary.Roduner@sdstate.edu or (605) 394-1722.



2012 Crop Performance Results Now Available

South Dakota State University crop performance trial results are now available at www.iGrow.org. These results are released annually through SDSU Extension and the South Dakota Agricultural Experiment Station.

"This is valuable information for South Dakota's farmers as they plan for the 2013 growing season," says Nathan Mueller, SDSU Extension agronomist. When selecting varieties and hybrids, growers should also consider availability and cost of seed; yield potential and relative maturity; traits and technologies; and management practices.

Growers can contact an agronomy field specialist at their local SDSU Extension Regional Center with questions regarding the performance trial results. Mueller can be reached at Nathan.Mueller@sdstate.edu.



SDSU EXTENSION: ONE YEAR LATER

Reorganization Prompted Restructuring – And Renewed Commitment

The drought's effect on South Dakota in 2012 offers a real-world example of how services offered by SDSU Extension continue to be valued by the state's ag producers.

Veterinarian Jim Stangle has seen this firsthand. The producers Stangle works with have had to be creative when it comes to finding forage for their cattle because the drought left them with reduced hay supplies and little to no winter grazing.

"Because of the drought we knew nitrates would be a big problem this year. I took an SDSU Extension training course so I could provide local testing to producers in my area," says Stangle, who was one of many South Dakota veterinarians to receive certification from SDSU Extension this summer on the nitrate quick test.

Along with getting their forages tested for nitrates, Stangle says that because many of his clients have to purchase additional forages or protein supplements, this year, many cattle producers rely on SDSU Extension to provide them with unbiased information on affordable options, as well as, customized feed rations.

"Because they aren't selling a product, producers know they can trust SDSU Extension Field Specialists for unbiased recommendations," Stangle says.

Adele Harty is the SDSU Extension Cow/Calf Field Specialist Stangle works with. She is one of about 40 SDSU Extension Field Specialists hired when a new staffing model was put into place in October 2011 as part of a complete SDSU Extension reorganization implemented to comply with state budget cuts.

Despite the changes, SDSU Extension has remained committed to the service and leadership it provides to South Dakota citizens.

Specialized Service

Harty has worked within SDSU Extension since 2005. When she was rehired in 2011 as an SDSU Extension Field Specialist, her job description changed. Although she continues to serve livestock producers within the new staffing model, Harty now focuses on working specifically with cow/calf producers.

As a field specialist within today's SDSU Extension staffing model, Harty and her peers are expected to have their master's degree. Also, instead of working from county offices, today's field specialists office in one of eight regional centers, but often travel throughout the state.

"This provides a greater level of expertise to the entire state," explains Rosie Nold, SDSU Extension Program

Director for Agriculture and Natural Resources. "Instead of generalists in each county, we have several specialized staff serving the entire state. This allows SDSU Extension to provide a deeper level of focus, expertise and research-based information to help solve the challenging questions or issues South Dakotans face."

Karla Trautman, Associate Director of SDSU Extension adds that because field specialists serve the entire state, there is an increased focus on collaboration between SDSU Extension Field Specialists, SDSU faculty and supporters throughout the state. "The synergies created today are incredible," Trautman says.

Learning Communities Expand

Kiersta Machacek, principal of Hayward Elementary in Sioux Falls has also benefitted from SDSU Extension's expertise. By working with SDSU Extension, her students now have a school garden.

"Gardening is a great way to get students outside, connect them with healthy eating habits and provide a hands-on science lesson," Machacek says.

But implementing a school garden is no simple task – and Machacek's teaching staff was already spread thin. This is where SDSU Extension Community

Development Field Specialist, Christina Zdorovtsov came to the rescue.

Zdorovtsov worked with a local nonprofit, Ground Works, to establish the garden. She then worked with Hayward teachers to develop a science-based, hands-on curriculum which meets state standards and is centered on gardening activities.

Zdorovtsov relishes her role as an SDSU Extension Field Specialist, saying, "Before the reorganization, I was a generalist in the area of horticulture. Although I worked on developing local food systems, I wasn't able to dedicate all my time to this purpose. Today I get to focus all my energy in this area, and really develop some exciting results."

Tapping Technology

Knowledge sharing continues to be integral to the mission of SDSU Extension. Today's SDSU Extension communicates with South Dakotans through many venues including face-to-face educational seminars and workshops, webinars, smartphone apps and 24/7 access to educational materials and information through iGrow.org.

iGrow is an online teaching platform that positions SDSU Extension as an indispensable outreach link of South Dakota's land-grant university. The free service gives producers information they need to monitor current developments in agriculture, research and trade; farm-specific agricultural weather; profitability calculators; and libraries of agricultural production and management information, podcasts and forums, all in a highly secure, accessible online environment.

"We look at iGrow as our virtual SDSU Extension office. Within its first year of operation, this virtual office has had 96,000 visitors and those visitors asked 300,000 questions," says Emery Tschetter, Director of Communications & Marketing for SDSU College of Agriculture & Biological Sciences.

Tschetter adds that SDSU Extension dedicates 20% of its staff time to the ongoing development of iGrow.

SDSU Extension hit the airwaves in 2011 as well, introducing the iGrow Radio Network. A companion service to iGrow.org, the daily 3-minute segment



SDSU Extension Community Development Field Specialist, Christina Zdorovtsov, works with elementary students in their school garden.

can be heard on 12 major radio stations across the state and region.

Hosted by farm broadcaster, Pam Geppert, iGrow Radio Network programs feature SDSU Extension Field Specialists and University faculty who cover topics ranging from agronomy and weather, to livestock production and rural life.

South Dakotans can also utilize AnswerLine, which provides a toll-free connection to family and consumer science specialists who answer questions and direct consumers to research-based resources and horticultural information.

To learn more about SDSU Extension, visit iGrow.org.



4-H REFOCUSED, STRENGTHENED

Through the budget driven reorganization, SDSU Extension increased its commitment to 4-H. More than 30 4-H Youth Program Advisor positions were created, in coordination with local communities, to focus on 4-H, a program which serves more than 59,000 South Dakota youth each year.

"The university reinforced its commitment to 4-H and youth development by implementing county-level 4-H Youth Program Advisor positions," says Peter Nielson, SDSU Extension 4-H Youth Development Program

Director. Nielson explains that today there is more of a prioritized 4-H focus because 4-H Youth Program Advisors like Field Specialists, devote their time fully to 4-H and youth programming. Prior to the reorganization, SDSU Extension personnel were responsible for subject matter programs, such as family and consumer sciences, livestock or agronomy in addition to 4-H programming. 4-H Youth Program Advisors office in the county or counties they serve.

"Although there have been growing pains, in many areas 4-H members and their families have seen increased opportunities this year," says Paula Hamilton, president of the State 4-H Leaders Association.

Because of the life skills Hamilton and her husband, Scott, developed as 4-H members, it was very important to them that their four children become involved in South Dakota 4-H. As Spink County 4-H members, the Hamiltons work with Kim McGraw who is the 4-H Youth Program Advisor that serves both Spink and Clark counties. Like all 4-H Youth Program Advisors, SDSU Extension cost-shares her salary with Spink and Clark counties.

Hamilton sees it as a winning arrangement. "I like the fact that Kim is dedicated fulltime to 4-H. She is available to us when we need her. Because she serves two counties, there is also a lot of knowledge sharing that happens."

BULLSEYE

South Dakota's 4-H Shooting Sports Program Sees Continued Growth & Success

Focus. That's a skill Becky (Lambert) Harstad says she honed through her involvement with South Dakota's 4-H shooting sports program during the 1990s. At that time, Harstad was a 4-H'er from Spink County; her dad was one of the local coordinators for the shooting sports program.

Of the program, Harstad, who shot air rifle and .22 rifle in 4-H shooting sports events, recalls, "It was something special for us kids to do with our dad. He helped us set a high standard and encouraged us to practice."

Harstad qualified for her first 4-H national shooting sports competition when she was 14. She competed at the national level for three years – and coached a team one year while she was in college.

She still has fond memories and recalls the lessons learned, saying "I learned patience and being able to calm down and work through something. If you are doing poorly shooting, the worst thing you can do is get excited or upset. You learn to focus, block everything out and just shoot. I still use that focus today when I'm working on a project."

Today, Harstad is married, has two young children – ages 2-1/2 and 1 – and lives near Wilmot, SD. She's already planning their future involvement in 4-H shooting sports, saying, "In six years, I hope to be involved again."

Established in 1983, the South Dakota 4-H shooting sports program has continued to attract new participants and grow year after year. "Most programs grow and then level off after a few years, but the thing that is unique about 4-H shooting sports in the state is that it has seen a steady rise in participants. Each year we've had more kids compete at the state contests," says 4-H Youth Development



In 2012, 2,800 youth across South Dakota participated in 4-H Shooting Sports in the discipline of their choice including rifle, shotgun, air gun, muzzleloading, trap/skeet and archery. Pictured is Brookings County 4-H shooting sports participant Nathan Braun.

Science Field Specialist Kathryn Reeves. She has been involved with the program since joining SDSU Extension in 1990.

In 2012, Reeves reports that 2,800 youth across South Dakota participated in 4-H shooting sports, and 1,259 individuals qualified for state competition. To participate, youth must be enrolled in 4-H.

Participants learn safety and shooting techniques in the discipline of their choice including rifle, shotgun, air gun, muzzleloading, trap/skeet and archery. Youth are instructed in how to handle firearms responsibly for target practice and hunting and learn respect for the natural environment. The program is taught by local volunteer coordinators – who go through 15 hours of certification training. Coordinators and youth participants meet and practice from January through September. "That's a big commitment," Reeves points out.

Supporters count numerous successes

from the state's strong 4-H shooting sports program. Most visible are the many South Dakota youth who have become national champion individuals and teams in several of the different shooting sports disciplines.

Reeves says support from parent and community volunteers as well as sportsmen's clubs across the state has also been a key part of the program's success story. "They really buy into the program and are committed to its success."

Additionally, Reeves says the 4-H shooting sports format has helped introduce new families to 4-H. "It's a great tool to show them what else 4-H has to offer and about 30% of our shooting sports participants do become involved in other 4-H activities."

Last but not least, Reeves emphasizes that through 4-H shooting sports youth are developing life skills, learning about safety, enhancing their shooting skills, spending time with family and other youth and having fun. "Great things are happening," she concludes.

Editor's Note: In 2012, a unique collaboration with SDSU Computer Science professor Sung Shin's CSC 485 class helped develop an online registration and scheduling program for South Dakota's 4-H shooting sports program. The custom program will add efficiency to register participants, record qualification match entries and schedule state shoot times.



Making a personal commitment...

What thoughts enter your mind when you hear the words “charitable giving?” How do those two little words make you feel?

When used in casual conversation about worthy causes, they make people feel pretty good. We are a country comprised of people that “give” to support causes, and people who need that support. We take pride in our sense of community and selflessness.

There is another side to those two words – a very personal side – that affects each and every one of us in our own, unique way. For some of us, while we know these causes are important and worthy of consideration, we also know that we have not, for whatever reason, decided to make a personal commitment to them.

For others, that sense of pride and selflessness is even stronger because we have made it a part of our own lives and we do give of ourselves.

As our campaign, **It Starts with STATE: A Campaign for South Dakota State University** moves toward a successful end, I want to acknowledge that there are more than 22,000 different people, businesses, and organizations that can hear those two words – charitable giving – and immediately take ownership. They are familiar with that. They do that. They identify causes that matter to them, and they support them financially. They have made that leap from general conversation to personal commitment.

For me to simply say we appreciate the generosity of our donors is an understatement. Each of these 22,000 donors has made an impact; they have made our campus, our university and our state and region a better place.

To every donor to this historic campaign, thank you for taking that leap and for making a difference. Thank you for making this personal.

Mike Barber '97



Dr. Paul Kohler and Dr. Dan Gee at the SDSU Animal Science Complex

LIVESTOCK JUDGING ENDOWMENT IN HONOR OF DR. PAUL KOHLER & DR. DAN GEE SOUTH DAKOTA STATE UNIVERSITY Department of Animal Science College of Agriculture and Biological Sciences

The SDSU Department of Animal Science has hired a graduate student in recent years to coach the Livestock Judging Team. A decision has been made to once again hire a full-time coach to fill this important role within our Department and our College.

In order to ensure that this position will be funded for years to come, we are working to create an endowment that will cover half of the costs for the coach's salary along with the summer programs that will be run by the coach.

A financial commitment from those who understand the value of the livestock judging experience will make this endowment a reality. We are pleased to name the endowment after two of the men who held this position in the past and have positively impacted hundreds of lives along the way. Please consider being a part of this important cause!

For more information or to make a contribution, please contact:

Mike Barber
Development Director
SDSU Foundation
1-888-747-7378 (toll-free)
Mike.Barber@sdsufoundation.org



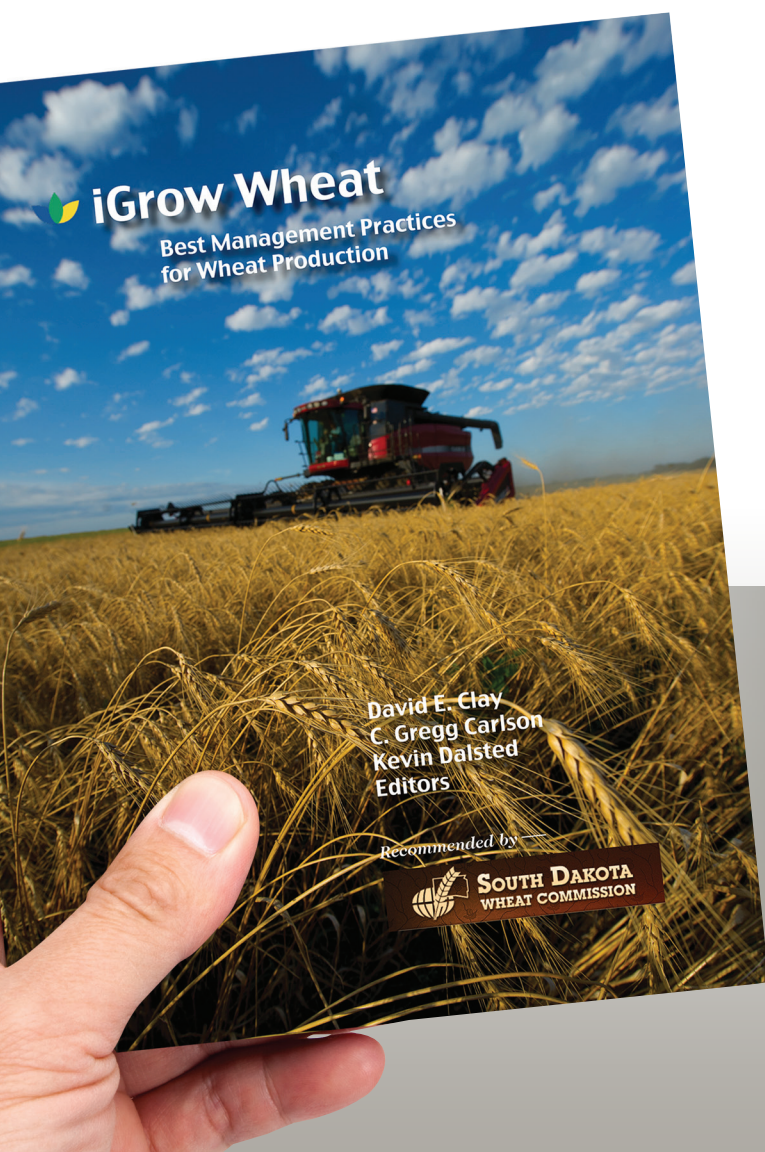
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