

**FY2010 SCBGP-FB
Final Performance Report
South Dakota Department of Agriculture
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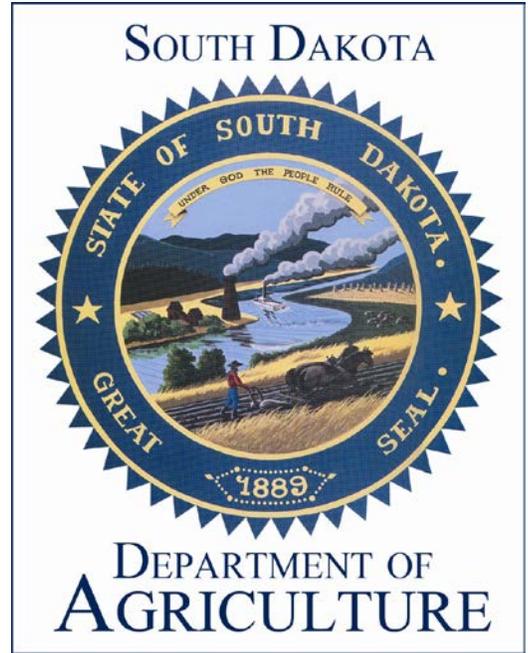


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Project 1

Title – South Dakota Wine Country

Subrantee: South Dakota Wine Growers Association

Contact Person – Dave Howard | 605-321-5532 | dakotafallswinery@sio.midco.net

Previously Submitted

Project Summary

Many residents from South Dakota, Iowa, North Dakota, Nebraska, Wyoming and Minnesota are unaware of the quality wines that are created from specialty crops in South Dakota. The South Dakota Wine Growers Association (SDWGA) currently has eleven members promoting their grape, fruit and honey wines.

The goal of the project was to increase the gallons of South Dakota Wines produced. With increased sales come the demand for South Dakota produced specialty crops. There continues to be strong interest for new growers of South Dakota fruits.

The SDWGA feels now is the time to promote their wines and educate the public on specialty crops used to produce them. The SDWGA understands that there is strength in numbers. By working together they can effectively reach more people more often to showcase their wines created from specialty crops. The SDWGA anticipates this concerted marketing effort will ensure increased awareness and sales of wines created from specialty crops in South Dakota.

Project Approach

The South Dakota Winegrowers Association executed a marketing campaign beginning July 2010 to promote travel to South Dakota wineries. Strategic partners included: South Dakota Tourism Million Dollar Match, South Dakota Department Agriculture, South Dakota Specialty Producers Association, & participating association wineries.

The campaign includes television media, outdoor advertising, magazine print media, regional tourism associations, social media, electronic focused advertising, and website development.

This is a multi-year campaign and the association is continuing using the services of professional media consultants which have advised the South Dakota Winegrowers on development and strategic placement of advertising that have promoted travel to South Dakota wineries. Increased number of visitors to South Dakota wineries is helping achieve the goals of higher exposure to South Dakota specialty products. The budget for the campaign was \$105,000 with \$35,000 from Specialty Crop Block Grant Program – Farm Bill funds; \$42,500 from South Dakota Tourism; \$10,000 from the South Dakota Specialty Producers Association and individual participating wineries contributing \$17,500.

The marketing campaign includes 8 billboards in Minnesota and South Dakota, three on I-90 in eastern SD, two on I-90 in Black Hills area, two on I-29 in South Eastern South Dakota and one on I-29 in Northeastern South Dakota. Two of these billboards had the generic 'explore sd wine country' message, with the remaining 6 billboards were jointly funded by 5 winery tasting rooms that also carried the 'explore sd wine country' message, plus directions to an individual winery tasting room. The 'Great Faces Great Places' logo was used on all billboards and TV spots

TV Advertising was concluded in fall of 2010. A generic message for 'explore sd wine country' plus the trailer included a message about a local winery. Two wineries jointly funded these spots.

We have transitioned to Click Rain of Sioux Falls, who has taken over our web development and viral marketing. Promo packages have been developed but not distributed to date.

Printed surveys completed in all participating wineries – Surveys will be sent to winery tasting rooms for responses at the end of September 2011, which is when the billboards complete their cycle

Website visitor statistics – We have requested that information from Blue Fire.

Text number inquiries from consumers – Not available at this time.

Visitor traffic counts at participating wineries – The wineries have reported anecdotal responses where travelers have stopped because of seeing billboards or ads.

Two wineries have reported increased sales of approximately 12% and 16%. We will be requesting tasting room sales increases from the wineries at the end of September.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Results
Promote SD wine and specialty crops	Increase wine sales by 22% from 2009-2010	2009 - 67,560 gallons 2010 – 78,258 gallons (16% increase)

This project has helped the members of the SDWGA understand that there is strength in numbers. By working together we have effectively reached more people more often to showcase our members' wines created from specialty crops. This project has helped the SDWGA members gain skills in promoting our wines through joint advertising and marketing along with a website for 'Explore South Dakota Wine Country.' This joint project has increased awareness and sales of wines created from specialty crops in South Dakota.

Beneficiaries

Beneficiaries of this project included existing fruit growers because more fruit was purchased from them. We continue to see an increasing interest in growers starting new vineyards, orchards and other specialty crop operations to service the growing wine industry.

Research shows that in 2010, South Dakota wineries purchased \$724,000 worth of specialty crops. The wineries grew an additional \$96,000 of specialty crops themselves.

Additional statistics show that \$11.73 of specialty crops are fermented to yield \$67.23 of retail value for one gallon of wine alone.

Lessons Learned

We learned that choosing the consultants is extremely important. The first consultant we hired was unable to perform to our standards in timing and quality of product. However, they did do an excellent job with the TV promotion piece. We have seen a remarkable improvement in the website from once we hired a different consulting firm. We learned that the questions asked during the interview process were extremely important. We also learned that having a detailed written agreement with a consultant is important. Having the tasks, outcomes and related timelines detailed in writing is extremely valuable.

The start of the campaign was delayed from what the SDWGA initially proposed. Most of the ads didn't begin until August 2010.

Additional Information

The website for the South Dakota Winegrowers Association is <http://sdwinegrowers.org>.

The South Dakota Winegrowers Association has established a membership fee structure based on production and has incorporated a \$1 per bottle donation at joint sales events to help support association continued efforts.

Project 2

Title – Healthy South Dakota Fruit and Vegetable Campaign

Subgrantee – South Dakota Department of Health

Contact Person – Larissa Skjonsberg | 605-773-2171 | larissa.skjonsberg@state.sd.us

Previously Submitted

Project Summary

Consumption of fruits and vegetables in our state continues to be low with South Dakotans eating less than the national average and less than the recommended amount in the Dietary Guidelines for Americans. South Dakota is worse than the United States with only 18.6% of adults eating the minimum five servings of fruits and vegetables per day according to the 2007 Behavioral Risk Factor Surveillance System data. The national median in 2007 was 24.4%. According to the 2007 Youth Risk Behavioral System, only 16% of South Dakota high school students had eaten five or more servings of fruits and vegetables per day during the past seven days which puts us below the national average for this population.

The 2010 State Plan for Nutrition and Physical Activity to Prevent Obesity and Other Chronic Diseases was released in early 2010 with an update from the plan that was written in 2006. The updated plan with specific objectives listed under each target group (i.e., Parents/Caregivers, Schools & Youth Organizations, Worksites, & Communities) specifically focuses on improving fruit and vegetable consumption including strategies about promoting locally or state grown products and information to communities on how to start a farmers' market. Various partners across the state continue to work to implement these specific objectives and strategies to help reverse the trend of low fruit and vegetable consumption in our state. Increasing fruit and vegetable intake is also an objective of the Department of Health's (DOH) 2020 Initiative.

DOH's Healthy South Dakota received funds from the 2009 DOA Specialty Crop Grant Program that supported the promotion of locally grown fruits and vegetables and buying locally at farmers' markets. The 2010 Specialty Crop Grant program used additional funds with the project to compliment the work happening this year and to enhance and build on the priorities and goals of the current project. Furthermore, continued work needs to be done throughout the state to help change the trend of decreasing fruit and vegetable consumption in our state. Research shows that increasing fruit and vegetable intake has sufficient science-based evidence to help prevent obesity and other chronic disease. South Dakota trends are showing the numbers are getting worse.

Project Approach

The activities the Department of Health, Nutrition and Physical Activity program carried out included hiring the contractor to place the media ad. We worked very closely with the media agency to select the venues that would have the most impact. Regular communication via telephone took place. Grant funds supported the purchase of TV and radio ads. Secondly, the DOH organized meetings and attended partner meetings/conferences where staff had the opportunity to network with others and share information about the project. Staff time to carry out grant activities was in-kind.

Activity: Development of materials promoting SD specialty fruit and vegetable crops that would be distributed through farmers' markets and other venues.

As a result of our program not receiving the entire requested amount of grant funds, this activity was scaled back. The program instead continued to market and use existing materials that had been produced in the past along with various online resources that were placed on the HealthySD.gov website. We also marketed the materials at various partner organization meetings and conferences such as the SDSU Nutrition Seminar, Healthy SD Stakeholders meeting, and Human Resource Managers annual conference and the Coordinated School Health network for example. We distributed and presented on fruit and vegetable resources that we developed such as the Yum! Ad and fruit and vegetable brochures to participants at our partner meetings. We distributed fruit and vegetable handouts to participants at meetings, included the materials in presentations during breakout sessions, and distributed brochures at our Healthy South Dakota booth during the conferences. Approximately 450 materials were distributed between the above noted partner meetings.

As an incentive to participate in the Healthy South Dakota challenge that focused on vegetable and fruit consumption, we provided vegetable seeds to participants- again stressing the importance of growing produce in our state and thus increasing the consumption of fruits and vegetables.

We provided 900 vegetable seed packets to the healthy challenge participants and distributed an additional 300 at the SDSU Nutrition Seminar, Healthy South Dakota stakeholders meeting, and the Human Resource Managers annual conference. Preventive Block Grant funds supported the purchase of the seed packets.

Activity: Collaborate with community groups and unique partners such as local farmers' markets and vendors to help with marketing and outreach to communities about the importance of fruits and vegetables and their availability in our state.

Again this was another activity that had to be scaled back due to less funds being received however we felt we accomplished this activity by the efforts we do on a continuous basis with our partners about the importance of educating and providing programming and incentives to increase fruit and vegetable consumption in our state and by focusing on SD grown produce. Partners such as the Department of Education- Coordinated School Health, Department of Education- Child Adult and Nutrition, SDSU Extension, and WIC were key leaders in helping us do outreach in schools, worksites and in communities. Through our Healthy Communities program located in the DOH- Office of Health Promotion, the program coordinator also delivered several messages focused on fruits and vegetables specifically those grown in South Dakota in her newsletters and other print materials she provided to community planning groups.

Because this activity had been scaled back the only education we provided to communities was via our Healthy Communities program newsletter that is sent out to community groups quarterly. The Healthy Communities coordinator included articles focused on fruit and

vegetables that highlighted promotion of local farmers' markets, the importance of buying local, and community gardening.

Activity: Increase and enhance the media advertising focusing on fruit and vegetables and buying locally.

Public service announcements and purchased advertising were again placed during the year utilizing the YUM! ad developed the previous year. We had positive feedback on the ad and didn't feel it was necessary to change. Research shows that media has a great impact on behavior change as well as audiences seeing the message continuously. The ads were placed in the same venues as the previous year with a few new additions along with a flight of ads being placed on Native American radio to reach that demographic.

In addition to the Specialty Crop Block Grant we received, other fund sources were needed to support the purchase of advertising. A total of \$27,000 (\$20,000 from SCBGP) was used to place the F & V TV spot in Aug/Sept 2010 for four weeks. That amount netted 648 Gross Rating Points. We also added a Native American radio flight to help reach that demographic. The additional cost for radio placement was \$2,500 which was funded through other dollars. 1200 spots were placed on 7 east river television stations while 900 spots were placed on 6 west river television stations. The ad ran 330 times on KILI-Pine Ridge radio and 340 times on KINI-Rosebud radio. This included paid spots and "bonus" spots which are not paid for and are run when stations are needing to fill a spot. Reach for the 2010 fall YUM TV flight was: East River- 34%, West River- 27%

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Increase fruit and vegetable consumption	21.6% of South Dakotans will consume the recommended amounts of fruits and vegetables per day	15.7% of South Dakotans currently consume the recommended amounts of fruits and vegetables
Increase awareness of the health benefits of consuming fruits and vegetables	26,400 unique visitors to HealthySD.gov each year	27,878 unique visitors to Healtysd.gov in 2011

The 2007 SD BRFSS showed only 18.6% of South Dakotan adults reported consuming the minimum five servings of fruits and vegetables per day. This was the percentage at the beginning of the project. In 2009, fruit and vegetable data was collected again (*note, BRFSS fruit and vegetable questions are only asked on odd years in South Dakota) showing the percentage had dropped to 15.7% which is a significant decrease from the original baseline at the start of the project. 2011 BRFSS data has not been released yet.

Our long term goal is for 25% of South Dakota adults to consume the minimum. We continue to strategize and implement activities towards achieving this long term goal.

The Nutrition and Physical Activity program in mid-2011 began the phases of an initiative that will complement the work that has previously been done to increase consumption of fruits and vegetables in our state and therefore aid in reaching our long term goal. With the recent statistic showing South Dakota having the lowest vegetable consumption rate in the nation, we feel it is imperative we take action in reversing this trend and devote more time and resources to making this happen. The first phases of the initiative included collecting key informant

interviews with grocery store produce managers, researching other fruit and vegetable interventions that have been done and securing additional funds to help support the DOH in conducting a formative assessment and gathering additional information on the reasons why South Dakotans are not purchasing and thus consuming fruits and vegetables. Information gathered from that assessment will help us in the planning of an initiative that will include various objectives and partners in carrying out the plan.

Beneficiaries

Although we do not have hard data that shows the economic impact of the project we implemented we are confident that there was some. The impact and reach of placing the fruit and vegetable ad likely motivated consumers to purchase more fruits and vegetables in their communities. We have learned from the SD Department of Agriculture that as of 2012 there were more than 40 farmers' markets with hundreds of vendors selling locally grown fruits and vegetables. Trends are showing that this number continues to increase from year to year which indicates economic growth for our state.

Through marketing and outreach to our partner groups, we were able to provide education and resources to them that they can be sharing with their organizations such as schools, worksites, communities, etc.

Lessons Learned

Although we are not meeting our goals for consumption rates in South Dakota, we feel there were positive impacts that occurred from the implementation of this project. Anytime you can educate and bring more awareness to a topic, in this case fruits and vegetables most specifically SD grown, you are moving in the right direction. Education is one of the key steps in order to change our trends of low consumption. However, we know that it is not enough and that it is going to take a multi-level intervention with multiple partners working together to make change. As of mid-2011, the DOH has begun the process to learning more about South Dakotans and the reason for low fruit and vegetable consumption rates. Through a formative assessment with focus groups and a public opinion poll along with a food systems review specifically looking at fruits and vegetables in South Dakota, we are hopeful we can better understand consumer behaviors and in turn implement interventions engaging various partners to help us reverse the trend of low consumption rates but will also influence South Dakotans decisions to buy locally and support our farmers/producers in our state and thus provide economic growth and increase revenues in our state.

Additional Information

N/A

Project 3

Title – South Dakota Specialty Crops Workshops

Subgrantee: South Dakota Specialty Producers Association

Contact Person – Rhoda Burrows | 605-394-2236 | rhoda.burrows@sdstate.edu

Project Summary

Because the specialty crop industry has been rapidly expanding the past few years, new and potential producers are hungry for reliable, current, up-to-date information on presently unique crops for niche markets. However, the timely production and exchange of information has not kept up with the demand. New specialty crop species, growing innovations and new techniques

have rapidly come on the scene making production possible and potentially profitable in South Dakota.

A specialty crops workshop presentation was created to demonstrate more detail on the basics of business planning and development and answer real time questions from participants. The structure of the workshop included an overview of specialty crops currently being grown in South Dakota.

The overall goal of this project was to accelerate the proper development of the specialty crop industry through accurate and timely crop and business information and education provided at the workshop and later through new partnerships formed at the workshop.

Project Approach

A Specialty Crops Workshop was held on November 5, 2010 in Mitchell, SD with 82 participants. The event was organized and sponsored jointly by SD Specialty Producers Association (SDSPA), SDSU Cooperative Extension Service, and Randall and Lower James RC&D Councils; the planning committee also including representatives of industry, the S.D. Value-Added Development Center, and the S.D. Department of Agriculture.

Topics included in the workshop included an Overview of specialty crops in South Dakota, Business Plan Basics, Business & Marketing funding and assistance, and break-out sessions on an array of specific specialty crops, ranging from apples to ginseng to raspberries. A survey was administered at the workshop to evaluate the usefulness and delivery of the information provided, as well as to determine interest in specific topics for future workshops. Thirty-three surveys were returned; participants noted that the speakers were engaging and honest about their subject matter and felt that the personal experiences from local people who grow small bush crops, strawberries, apples, and other crops was very helpful. Many noted that more time was needed for individual subjects; this was expected as the goal was to acquaint the participants with possibilities rather than serve as a growing guide.

Suggestions for future workshops focused on organic/biodynamic topics, with a range of other topics, including marketing and advertising, and specific crop information.

The workshop was a success in part because of the cooperation of the sponsors. The sponsors were able to share resources and work together so it was not a huge unwieldy effort by any one organization. This also helped keep costs down which may have resulted in attracting more attendees. The four main sponsors also provided in-kind contributions, including administration of the grant by the Specialty Producers Association, with oversight provided by the Randall and Lower James RC&D Councils. Other important organizations and individuals who provided workshop planning committee help along with fulfilling a speaker role included, Blaine Martian with the Big Sioux Nursery in Watertown; Cheri Rath with the S.D. Value Added Development Center; and Alison Kiesz with the SD Department of Agriculture. In addition, representatives of the S.D. Dept. of Tourism and Rural Development of Yankton, S.D., presented information on resources available to producers.



A second Specialty Crops Workshop was held on November 2, 2012 in Ft Pierre, SD with 44 participants. The agenda was as follows:

Friday, November 2, 2012	
9:00am Central	Registration and Networking
9:30 - 10:45 am	Herbicides on Non-Target Crops. Rhoda Burrows, SDSU Extension and SDDA
10:45am - 11:00am	Break
11:00am - 12:00pm	RFP..Bids..Quotes..Procurement agent...Why all this process to sell our product? Pat Garrity,
12:00pm - 1:00pm	Lunch
1:00pm - 2:00pm	Managing Insect Pests. Dr. Buyung Hadi -SDSU
2:00pm - 2:45pm	Winemaking Without Grapes. Dave Greenlee, Tucker's Walk Vineyard
3:00pm	Leave for ChrisaMari Vineyard
3:15pm - 4:00pm	Tour of ChrisaMari Vineyard and Wine Tasting
4:00 pm	SD Specialty Producers Association Meeting
6:00pm	Return to AmericInn

In March 2013, another Specialty Crops Workshop was held in Spearfish, SD. 20 people attended. As part of the workshop, attendees indicated goals and a plan of work for the SD Specialty Producers Association, the primary organization in South Dakota focused on specialty crops. The workshop agenda was as follows:

Monday, March 18, 2013	
9:30 am	Welcome & Introductions
9:45 am	Northern Grapes Research Update - Dr. Anne Fennell
10:45 am	Organic Pest Management – Dr. Buyung Hadi
11:45 am	Buy-Fresh Buy Local Update

12:00 pm	Noon Lunch / SDSPA meeting
1:45 pm	Specialty Crop Block Grant program/other SDDA info. - Alison Kiesz
2:00 pm	Sensitive Crops Registry
2:15 pm	Food Safety Update – Rhoda Burrows
2:45 pm	Drip Irrigation - what you need to know– Hal Werner
3:45 pm	Wrap-Up

A 6-page publication titled “Fruit Varieties for South Dakota” was published in January 2013. This publication covers the production of apples, apricots, pears, cherries, plums, currants, gooseberries, raspberries, strawberries and other shrub fruit. The publication is available for anyone to download online at <http://igrow.org/up/resources/06-3001-2012.pdf>

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Conduct a workshop for 100 interested individuals	100 attendees	2010 – 82 participants 2012 – 44 participants 2013 – 20 participants
Produce specialty crop fact sheets		“Fruit Varieties for South Dakota” was published in early 2013

Surveys indicated that 65% of participants at the workshops were producers, 5% were prospective producers and 30% were other resource providers (i.e. non-profits, government agencies). Attendees stated that they felt that the personal experiences from local producers who grow small bush crops, strawberries, apples, and other crops was very helpful. These sessions made them more determined to expand or develop a new specialty crop business. Participants who participated in the business plan sessions stated that they had a better idea of what to include in a business plan and how to begin writing one as a result of this session.

Beneficiaries

The 126 producers that attended the workshops received valuable information that they can use on their own operations and increase the competitiveness of their farms and the specialty crops they grow. Some of the participants were also from agencies that work with producers, and will better be able to guide producers that they work with. Growers who download or obtain the “Fruit Varieties of South Dakota” publication will also benefit from the work done under this project.

Lessons Learned

There is strong interest in specialty crops in South Dakota, but markets are scattered, requiring producers to spend considerable effort to find outlets for their potential crops, and discouraging industry development. A next step might be to bring in potential buyers, possibly thru videoconferencing.

We did not meet our original goal of separate specialty crop fact sheets, in part because of agency re-organizations that disrupted key personnel. This difficulty may have been at least

partially ameliorated if we had budgeted for contracting a publication manager to oversee writing and publishing.

Additional Information

“Fruit Varieties for South Dakota” is available at <http://igrow.org/up/resources/06-3001-2012.pdf>

Project 4

Title – Genetic Diversity of Blue Grama Ecotypes as a Specialty Crop in West River, SD

Subgrantee – South Dakota State University

Contact Person – Leo Schleicher | 605-688-5138 | leo.schleicher@sdstate.edu

Final Report

Project Summary

Cool-season turfgrasses are generally poorly adapted to the arid and semi-arid regions of the U.S. and require substantial inputs of water, fertilizer, chemicals, and energy. Alternative turfgrasses with lower water use requirements and other reduced inputs are needed in response to increasingly limited and more expensive natural resources in the future. Blue grama (*Bouteloua gracilis*) is a native, perennial warm-season grass with reduced input requirements compared to cool-season turfgrasses, and is among the most drought tolerant of all turfgrasses. Several blue grama varieties typically used for grazing, forage, erosion control, or utility turf have been released commercially, but none have the qualities to be considered a ‘turf-type’ grass for home lawns or sites demanding similar turf quality. Development of a turf-type blue grama would fill the need for a reduced-input alternative turfgrass for home lawns.

Production of turf-type blue grama seed could be an important specialty crop to South Dakota agriculture as producers look for alternative markets in the western U.S., Canada, and Mexico to complement traditional production. Specialty crops that support an expanding market, are well-adapted to South Dakota's climate, and require a small investment from producers typically offer the greatest opportunities.

The objectives of the project were two-fold, 1) to determine the interest of South Dakota seed producers in producing blue grama seed based on a survey of seed growers, and 2) Develop genomic tools to identify genetic diversity of Blue Grama ecotypes. More specifically, the objective during the first half year of 2013 was to sequence a blue grama cDNA library for expressed genes in leaves of young seedlings and predict simple sequence repeats (SSR) to develop SSR markers.

Project Approach

Molecular Marker Research

Materials and Methods: Plant genotype and RNA preparation: ‘Bad River Ecotype Blue Grama’, which was developed by North Dakota - Bismarck Plant Materials Center, USDA Natural Resource Conservation Service, was selected for this research. Seeds of the ecotype

maintained in SDSU Turfgrass Science Lab and 50 lines were germinated in pots in a greenhouse. Young leaves from newly germinated seedlings were used to extract total RNA using RNeasy Plant Mini Kit (QIAGEN).

Library construction and sequencing: Purified RNA at 100ng/μL was checked for quality using the Agilent R6K ScreenTape system and high quality RNA was used to construct a TruSeq Stranded RNA-seq library. The cDNA library was sequenced using the Illumina Hiseq2000 100bp paired-end technique in the Microarray Core Facility at the University of Utah.

Sequence analysis and SSR prediction: Both forward- and reverse-direction readings of raw DNA sequences were checked for quality by the FastQC program. High quality readings were assembled using the ABySS (Assembly By Short Sequences) program (v.1.3.4, [Canada's Michael Smith Genome Sciences Centre](#)). The assembling was tried with different k values (30 to 64), with k32 generating the longest N50 contigs. The assembled DNA sequences were predicted for simple sequence repeats (SSRs) at the SDSU High Computation Computing Center. The SSR prediction was conducted using the MicroSATellite (MISA) identification program developed by Plant Genome Resources Center, Germany. Candidate SSRs were identified as sequences with 6 (or more) repeats for the motif of 2 nucleotides or 5 (or more) repeats for motifs of >2 (3, 4, 5, or 6) nucleotides.

1. **About 333 million 100-bp DNA sequence reads obtained from the blue grama leaf cDNA library:** The length of cDNA clones from the library was 344 bp on average, ranging from >200 to ~1000 bp (Fig. 1). The Illumina paired-end sequencing generated >166 million 100-bp reads for each of the forward and reverse directions (Table 1). The quality of these sequence reads was high as shown by the quality score of >20 for individual nucleotides (Fig. 2).

Figure 1. Distribution of physically sheared DNA fragments from the blue grama leaf cDNA library.

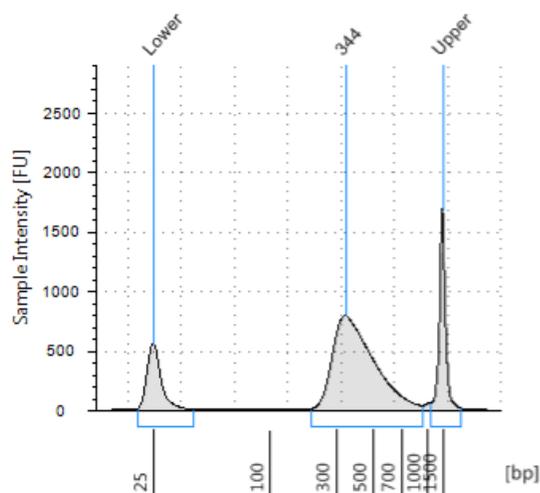
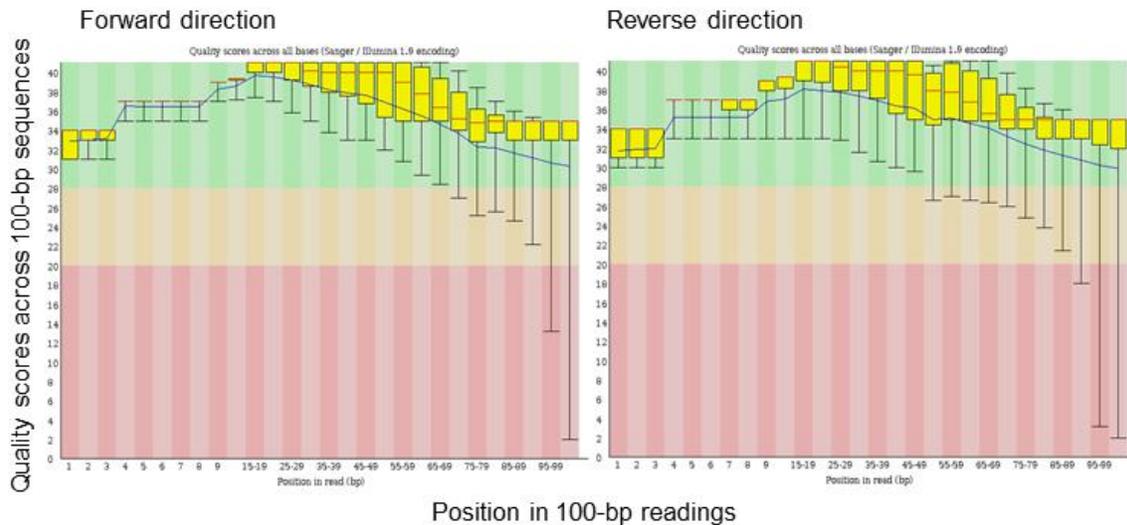


Table 1 Summary of characteristics of RNA sequence reads reported by FastQC.

Parameters	Forward direction	Reverse direction
Number of sequence reads	166,332,096	166,332,096
Sequence length	100	100

(bp)		
GC content (%)	49	51



of physically sheared DNA fragments (Fig. 1). The vertical bars indicate the mean and variation of accuracy levels for individual nucleotides in the 100-bp sequences. Quality scores of >20 indicate the accuracy level of >99.9%.

2. **More than 170 ,000 contigs or scaffold assembled:** Assembling the >333 million 100-bp forward and reverse reads generated 95,200 unitigs (uncontested groups of reads), 88,808 contigs (overlapping sequences) and 82975 scaffolds (contigs interrupted with gaps) (Table 2). More than 50% assembled contigs/scaffolds are longer than 456/503 bp and more than 20% assembled contigs/scaffolds are longer than 906/1112 bp. The longest assembly is 8413 bp for both contigs and scaffolds.

Table 2 Summary of sequence assemblies in the blue grama leaf cDNA library

Type	Number ^a	N80 (bp) ^b	N50 (bp) ^b	N20 (bp) ^b	Longest contig (bp) ^c
unitigs	95200	256	395	742	6647
contigs	88808	274	456	906	8413
scaffolds	82975	282	503	1112	8413

^a Number of assembled contigs longer than 200 bp.

^b N80 (N50 or N20) is such a contig length that sum of all contigs greater or equal to it account for 80% (50 or 20%) of the assembled contig (transcriptome) length.

^c The longest assembled contigs.

3. **61,468 SSRs predicted:** A total of 61,468 SSRs were predicted (Table 3). The SSRs with dimer (27,124) or trimer (32,068) motifs accounted for 96%.of the total. The DNA sequences with the predicted SSRs will be used to design SSR markers for blue grama.

Table 3 Summary of SSRs identified in the transcriptome of blue grama.

Motif type	No. of repeats	No. of SSRs	Proportion (%)
Dimer	≥6	27,124	44.1
Trimer	≥5	32,068	52.2
Tetramer	≥5	1,105	1.8
Pentamer	≥5	545	0.9
Hexamer	≥5	626	1.0
Total		61,468	100.0

Seed Grower Survey

Materials and Methods: A brief survey consisting of nine questions was developed and mailed to 148 South Dakota producers in May 2013 from a mailing list obtained from the *South Dakota Certified Seed Growers Directory*. . An introductory letter and an informative paper discussing the project, titled “Description of blue grama as a potential seed crop for SD producers,” were also included. Producers were asked to answer nine questions by circling “Yes” or “No”. Additionally, producers were asked to list any seed crops that they were currently producing, and specifically any current or previously harvested grass seed crops. To maintain privacy, returned surveys were assigned a number based on the chronological order that surveys were received. Data from returned surveys were analyzed and results were mailed to all 148 seed growers.

Results: Forty-eight of 148 (32%) SD seed producers who were mailed surveys responded to the survey, but not all questions were answered on some surveys. A number of surveys contained written responses to questions indicating that more information was needed before a question could be answered. Eighteen of the forty-eight respondents (38%) indicated that blue grama seed production sounded like a feasible crop for their operation while 10 producers (21%) were uncertain or needed additional information. Although nine producers were currently producing grass seed, 8 of the 9 were uncertain about producing blue grama or they required additional information.

Eight of nine (89%) producers who returned surveys indicated that they have marginal land or additional acres that could produce a grass seed crop; 58% were interested in producing a specialty crop in the future; and 21% were currently producing a specialty crop. Twenty-nine percent of the respondents have produced grass seed previously, including smooth brome grass, switchgrass, intermediate, western and crested wheatgrasses, green needlegrass, and sideoats grama.

Producers were asked how much earned income per acre (i.e., after seed and fertilizer costs) they would require to grow blue grama for seed production. Answers were highly variable and ranged from \$88 to \$1000 per acre with a mean of \$390 ± \$260. Seventy-three percent of those who responded to the survey asked to be kept informed on the progress of the project.

Conclusion: We believe that South Dakota has the potential to become a national leader in development and production of blue grama seed as an important specialty crop; however, it appears that more information is needed before additional producers react favorably to blue grama seed production as a specialty crop.

Goals and Outcomes Achieved

Goal	Target	Actual Results
Increase interest in producing a turf-type blue grama cultivar	10 (16.7%) respondents indicating a strong interest in production	38% of respondents indicated an interest in producing a turf-type blue grama cultivar

Discussion: The results of the survey were highly informative and demonstrated a definite interest by producers in growing turf-type blue grama as a potential seed crop in South Dakota. Two of the goals stated in the SCBG proposal were to 1) obtain > 33% return of mailed surveys and 2) achieve > 16% of respondents indicating an interest in producing turf-type blue grama. In actuality, the numbers were 32 and 38%, respectively. The percent of survey respondents interested in this potential new crop was more than double the minimum number that was anticipated. Interestingly, 11 producers who answered “No” to the feasibility of blue grama production in their operation requested that they be kept informed on the progress of this project.

Beneficiaries

Molecular Marker Research

- 1) About 60 kilo base DNA sequences with predicted SSRs will be used to develop microsatellite markers for the turfgrass blue grama. These markers are valuable genomics tools as they can be used to evaluate ecotypes or germplasm collections for genetic distance or genetic diversity, to map the blue grama genome and locate genes or quantitative trait loci associated with agronomic traits and resistances to biotic and abiotic stress factors, and to initiate marker-assisted selection in breeding programs.

- 2) This research generated about 300 million DNA sequences that are expressed in young leaves of blue grama. These sequences will be deposited in the public database for grass species. The assembled contigs will be used as queries to blast against annotated genome sequences in the Gramene database to predict genes expressed in the leaf tissues of blue grama seedlings and conduct comparative genomics research with the other grass species, such as rice, corn, wheat, and *Brachypodium distachyon*.

Seed Grower Survey

It appears that the number of individuals and groups who benefited from the survey greatly exceeded the 48 respondents. A Google search using the terms “blue grama seed production” listed the Extension article, “Grower Survey Reveals Interest in Turf-Type Blue Grama Seed Production,” second out of 105,000 results. The article was published on the South Dakota State University *iGrow* website: URL <http://igrow.org/gardens/gardening/grower-survey-reveals-interest-in-turf-type-blue-grama-seed-production-as-s/>. Beneficiaries include crop producers, plant breeders, seed distributors, parks, recreation, environmentalists, conservationists, government and institution facilities, golf course roughs, and homeowners. Turfgrass seed production covers about 650,000 acres and turfgrass seed sales exceed \$700 million each year. Turfgrass seed production in the U.S. is second to corn seed production (Source: The Lawn Institute).

Lessons Learned

1. Based on comments of survey respondents, additional information could have been included with the survey, including methods of establishment of blue grama production fields, inputs,

expected yields, seed costs, harvesting equipment and procedures, and seed ripening. The number of respondents may have increased with additional information.

2. Alternative plans for conducting research were required after the graduate student failed to fulfill the duties required for the project. The research was then assigned to a Post-Doc who did an excellent job. It is important to have alternative resources available.

Additional Information



South Dakota
State University

College of Agriculture and
Biological Sciences

Plant Science Department
Northern Plains Biostress Laboratory
SNP 247, Box 2140C
1110 Rotunda Lane North
South Dakota State University
Brookings, SD 57007-2141
Phone 605-688-4450
FAX 605-688-4452

Addressee
Company
Address
Address

Re: Potential seed crop for SD producers

Dear

My name is Leo Schleicher and I'm a professor in the Plant Science department at South Dakota State University. I'm asking you and other South Dakota seed producers to spend just a couple of minutes answering a few questions in a brief survey. The questions are related to a potential seed crop that you and others may be interested in.

Purpose of the study

The survey is part of a larger study investigating the development and potential of a 'turf-type' blue grama grass for lawns, commercial grounds, schools, golf course roughs, etc. Funding for the project comes from a USDA Specialty Crop Block Grant distributed by the SD Dept. of Agriculture.

If you participate in the survey you will not be identified by name or company nor will your responses be linked to you. The survey is totally confidential and results will be sent to all who participate in the survey as well as to the SD Cooperative Extension Service for our agricultural stakeholders.

Background Information

SDSU Turfgrass Science has been working with blue grama since we began collecting ecotypes across the state in 2004. A five-year study was conducted at the Central Crops and Soils

Research Station in Highmore, SD to evaluate ecotypes grown in field plots. Although there are several commercial ecotypes available, such as 'Bad River', there are no "turf-type" varieties.

Your assistance is valuable

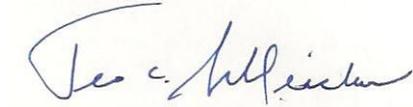
The information obtained from the survey may also help us to obtain additional funding from federal or industry sources to continue our research. Our goal is to develop a new crop for South Dakota producers and entrepreneurship opportunities for South Dakota business.

Our request

We have enclosed the brief survey and a stamped envelope addressed to me. **Please mail the survey by May 15th** so that your responses can be included in the results.

Thank you for your assistance in this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Leo Schleicher". The signature is written in a cursive style with a large initial "L".

Leo Schleicher, Ph.D.
Professor and Extension Turfgrass Specialist
605-688-5138; leo.schleicher@sdstate.edu

Survey

Blue Grama as a Potential Seed Crop for SD Producers

Instructions: Please answer the following questions by circling Yes or No, or fill in the blank, and return the survey in the stamped, self-addressed envelope. Thank you in advance for your participation.

1. Are you currently producing a specialty crop in addition to your main agronomic crop(s)? Yes No

2. If not, would you be interested in producing a specialty crop in the future? Yes No

3. Are you
currently producing and harvesting a crop for seed? Yes No
If yes, what crop(s)? _____

4. Do you have marginal land or additional acres that could produce a grass seed crop? Yes No

5. Does blue grama seed production sound like a feasible crop for your operation? Yes No

6. Do you have a
planter and combine that could handle blue grama? Yes No

7. Have you ever
raised a grass seed crop in the past? Yes No
If yes, what crop? _____

8. Approximately how many dollars per acre, minus the cost of seed and fertilizer, would you expect to earn for you to be interested in producing a blue grama seed crop? \$ _____

9. Would you like to be kept informed on the progress of this research project? If so, please provide your name or company, and address.

Name or Company: _____

Street address or P.O. Box _____

City _____ State _____ Zip _____

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Grower Survey Reveals Interest In Turf-Type Blue Grama Seed Production As Specialty Crop

Leo Schleicher – 6/17/2013

[Back »](#)

FIELD STAFF LISTING



Above: Blue grama is a native, warm-season perennial grass
Photo Credit: L.C. Schleicher, South Dakota State University

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Article by **Leo Schleicher** (<http://igrow.org/about/authors/leo-schleicher/>) with contributions from **X-Y Gu** and **E. Brent Turnipseed**.

Specialty crops are becoming increasingly important to South Dakota agriculture as producers look for alternative markets to complement traditional production. Specialty crops that support an expanding market, are well-adapted to South Dakota's climate, and require a small investment from producers typically offer the greatest opportunities.

Seed production of native, alternative turfgrasses is a specialty crop that meets the above criteria. Alternative turfgrasses that require less water and energy are needed in response to increasingly limited and more expensive natural resources in the future.

Blue grama is a native, perennial, warm-season grass with excellent drought, heat, and cold tolerance that requires less water, fertilizer, pesticide, and energy inputs compared to traditional turfgrasses, such as Kentucky bluegrass, perennial ryegrass, or fescues. Traditionally used as a forage or range grass in the mixed and short grass prairies of the Plains, blue grama was planted extensively during the severe drought of the 1930s to control erosion.

The demand for drought tolerant turfgrass species has stimulated renewed interest in blue grama in recent years. The potential market for turf-type blue grama seed includes most of the western U.S., Canada and Mexico, as well as other arid and semi-arid countries.



[1-orig.jpg](#)

[\(http://articles/8079-](#)

Above: SDSU blue grama selection BGr557
 Photo Credit: L.C. Schleicher, South Dakota State University

Several blue grama ecotypes have been released commercially, such as 'Bad River', 'Hachita', and 'Lovington'; however, there are no true 'turf-type' cultivars. SDSU has been evaluating blue grama since 2004 and is currently working on developing a turf-type blue grama for lawns and golf course roughs.



[2-onq.jpg](#) [//up/articles/8079-](#)

In May, a brief survey was mailed to 148 South Dakota seed growers to estimate interest in turf-type blue grama seed production in the future (Table 1). Growers were asked to circle one of two possible answers to the questions, either "yes" or "no"; however, some growers did not answer all questions while others growers indicated that they needed more information before providing an answer.

Table 1. Summary of grower responses by percent.

Questions	Yes	No	Maybe	No Answer
• Are you currently producing a specialty crop in addition to your main agronomic crop(s)?	20.8	79.2	0	0
• If not, would you be interested in producing a specialty crop in the future?	58.3	31.3	4.2	6.3
• Are you currently producing and harvesting a crop for seed?	89.6	8.3	0	2.1
• Do you have marginal land or additional acres that could produce a grass seed crop?	81.3	16.7	0	2.1
• Does blue grama seed production sound like a feasible crop for your operation?	37.5	33.3	20.8	8.3
• Do you have a planter and combine that could handle blue grama?	31.3	47.9	12.5	8.3
• Have you ever raised a grass seed crop in the past? If so, what crop?	29.2	70.8	0	0
• Approximately how many dollars per acre, minus the cost of seed and fertilizer, would you expect to earn for you to be interested in producing a blue grama seed crop?	58.3	10.4	14.6	16.7
• Would you like to be kept informed on the progress of this research project?	72.9	27.1	0	0

Thirty-two percent of growers who were mailed surveys responded. Thirty-eight percent of those returning surveys indicated that blue grama seed production sounded like a feasible crop for their operation, while 21% were uncertain or needed additional information. Although nine producers were currently producing grass seed, 8 of the 9 were uncertain about producing blue grama or required more information.

Eighty-nine percent of respondents indicated that they have marginal land or additional acres that could produce a grass seed crop, 58% were interested in producing a specialty crop in the future, and 21% were currently producing a specialty crop. Twenty-nine percent of the respondents have produced grass seed previously, including smooth brome grass, switchgrass, intermediate, western and crested wheatgrasses, green needlegrass, and sideoats grama.

Producers were asked how much earned income per acre (i.e., after seed and fertilizer costs) they would require to grow blue grama for seed production. Answers were highly variable and ranged from \$88 to \$1000 per acre with a mean of \$390 ± \$260. Seventy-three percent of those who responded to the survey asked to be kept informed on the progress of the project.

The results of the survey were highly informative and demonstrated a definite interest by producers in growing turf-type blue grama as a potential seed crop in South Dakota. Two goals of the survey were to obtain > 33% return of mailed surveys and > 16% indicating an interest in producing turf-type blue grama. In actuality, the numbers were 32% and 38%, respectively. The percent of survey respondents interested in this potential new crop was more than double the minimum number that was anticipated. Interestingly, 11 producers who answered "no" to the feasibility of blue grama production in their operation requested that they be kept informed on the progress of this project.

We believe that South Dakota has the potential to become a national leader in development and production of blue grama seed as an important specialty crop.

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© 2013 South Dakota State University Brookings, SD 57007 Questions? Call 1.605.688.4148 or email sdsu.igrow@sdsu.edu

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Project 5

Title – South Dakota Wine Promotional Events Project

Subgrantee – MB's Consulting Service

Contact Person – Mari Beth Baumberger | 605-940-4347 | winembb@gmail.com

Project Summary

The wine industry in our state, which adds value to several specialty crops such as many varieties of grapes, fruits and honey (mead) is still relatively new and developing. The wine industry began in South Dakota in 1996. It is difficult and expensive for new and emerging wineries to create awareness of their products directly to consumers and convey the uniqueness of their wines and operation to potential customers. Our South Dakota Wine Promotional Events Project provided a means for small, independent wine producers who are members of the South Dakota Wine Growers Association (SDWGA) to have their wines featured to a wide variety of audiences across the state without the winery owner taking time away from their vineyard and winery.

This project created a time and resource savings for the wineries because preparation, travel and event execution as well as follow-up work is done by one source (MB's Consulting Service in cooperation with SDWGA) rather than duplicated by each winery. This project also provided a collaborative effort to enhance growth and progress for the wine industry in our state as a whole which also directly benefits the growers of specialty crops.

Project Approach

Promotional South Dakota Wine Tasting Events – Out overall goal was to hold 10-12 promotional South Dakota wine events. To date 10 promotional events have been conducted featuring a variety of SDWGA member wineries at each event so that goal was realized. Each event featured 3-5 wineries with multiple wine varieties from each. These events varied in style widely with each reaching a different target consumer. Each event successfully helped the project stay on track to reach its target goals. The SDWGA has been an effective partner in execution of these events with assistance in application for necessary licenses for the events requiring licenses.

MB's Consulting Service worked in conjunction with SDWGA to seek out events that would be appropriate for a wine tasting. Mari Beth Baumberger negotiated South Dakota wine representation at these events. Events were held during fairs, industry conferences and chamber of commerce dinners. MB's Consulting will coordinate with the host entity to choose the wineries and wines represented at events and will facilitate the procurement and delivery logistics of the wines. At some of the events, the wine tasting was accompanied by wine tasting workshops/"edutainment" sessions presented by MB's Consulting Service in agreement between the event host entity and MB's Consulting Service.

MB's Consulting made arrangements with wineries for contracting wine and logistics for events. The wineries were paid wholesale prices for the wine provided for these events.

MB's Consulting recruited qualified, professional staff to assist with certain events.

SDWGA was responsible for assessing and paying applicable taxes for the retail sales via event sales reporting from MB's Consulting.

The SDWGA was an effective partner in execution of these events with assistance in application for necessary licenses for the events requiring licenses.

Goals and Outcomes Achieved

Goal	Target	Actual Results
Consumer Education	600 consumers	1,525
Wine Consumer List	120 customers	105
Member Winery Exposure	600 consumers	1,500
Retail Sales	\$6,600	\$6,079
SDWGA Revenue	\$660	\$607
SDWGA New Members	2 members	3
SDWGA Member Retention	11 members	14
Increased Revenue SD DOR	\$888	

These events have reached over 1500 people which far exceeds our goal of 600. Our consumer list has grown consistently but falls 15 short of the goal but still reaches over 87% completion. Event sales ranged quite a bit and 92% of the targeted retail sales were realized. The number of new members of the wine growers association did increase by 3 wineries so that goal was exceeded. The organization was able to retain its membership at 14 members strong resulting in another achieved goal.

As a project whole we were able to achieve or exceed on 3 of the 5 stated goals. The 2 goals that fell short were very close to achievement being near or above 90% completion.

Beneficiaries

This project created an opportunity to promote multiple wineries and the industry in general to local audiences that may not have been previously aware of the growth of the wine industry in South Dakota. It demonstrated a collaborative effort to market wines from various wineries across the state. This project represented the South Dakota Wine Growers Association in a cohesive way to potential consumers. SDWGA has grown its membership during the course of this grant project by 3 members and the new winery members as well as previous members were retained. Our grant project also cross promoted other South Dakota Specialty Crop products as well as agricultural commodity products and groups during events. We were able to promote wine consumption as part of a healthy lifestyle through events that had a healthcare focus.

Lessons Learned

In this project we learned that customers appreciate the opportunity to learn about wineries that they have not visited or may not have been aware of prior to our promotional activities. Consumers take advantage of tasting samples and are more comfortable purchasing product they have already tried. We found that it is challenging to understand the one-day special license requirements as they change from city to city. SDWGA was a very cooperative partner in licensing and most cities were helpful but the pricing and timelines seemed to vary widely across the state. The lesson learned is that it is smoothest if the organization planning the event takes on the duties of licensing. Customers are usually most likely to purchase wine from multiple wineries given the opportunity to sample product from various wineries across the state which was a higher likelihood than we anticipated.

Two of our project goals fell slightly short. If we maintained the consumer list on-line and perhaps through the SDWGA this could have grown our number more and could have added a way for people that were not at our events but interested in the project be able to sign up. Our sales were also not at 100% of goal. We found that larger events with increased sales opportunity were a much larger investment of time and staff efforts with some risk involved. Smaller events that benefitted local organizations and charities with industry cross promotions were efficient to organize and execute but did not garner the sales of large scale events.

Additional Information

N/A

Project 6

Title – Icahunyapi Partnership’s Fresh Food Initiative

Subgrantee – The Harvest Initiative, Inc. on behalf of the Icahunyapi Partnership

Contact Person – Jason Yates | 515-401-8290 | Jason.M.Yates@gmail.com

Previously Submitted

Project Summary

As with many Indian communities, Crow Creek’s remote location and its limited household budgets have historically forced residents to utilize the food safety net of federal food programs in large numbers. Additionally, the only places to buy food on the reservation are a gas station and a small grocery store. The gas station carries typical gas station food such as pizza and various fried foods, and no fresh fruits or vegetables. The shelves of the grocery store are stocked with mostly processed foods. They do carry a very limited amount of produce, but because there are no competing grocery stores on or near the reservation, what they do offer is expensive. From Fort Thompson, the population center, it’s a long drive to either Chamberlain or Pierre to reach a grocery store with a significant selection of healthy food and traveling that distance is no small obstacle for people facing such significant economic challenges. For families wanting to break this cycle, healthy food has been difficult to acquire, and the training and resources needed to start growing a garden or to take control of local food production were not previously available.

Because of this situation, various community organizations on Crow Creek banded together to form the Crow Creek Fresh Food Initiative. Participating organizations include the Harvest Initiative, Hunkpati Investments, the local Boys & Girls Club, South Dakota State University Extension, and Crow Creek Tribal Schools. The Fresh Food Initiative seeks to grow enough fresh fruits and vegetables to provide for the community; increase the income of the tribe by enabling them to profit from their own resource; educate tribal members about the newly available fruits and vegetables; and teach children about nutrition and agriculture.

The combination of nutrition education and production-oriented community gardening will improve both access to and enthusiasm for fresh fruits and vegetables in the Crow Creek community. By encouraging entrepreneurship and helping producers to access institutional purchasers, the Crow Creek Fresh Food Initiative is designed to slowly, over-time, become self-sustaining. As we continue, we believe the income generated from selling produce on and off the reservation will be sufficient to cover the ongoing costs of the project, including gardening and distribution.

Project Approach

Gardening and Nutritional Education:

During the 2010-2011 and 2011-2012 school years, all 180 students at Crow Creek Elementary School participated in lessons, activities, and demonstrations on agronomy/horticulture, nutrition, and wellness in partnership with South Dakota State (SDSU) Extension. Lessons were also taught weekly at the Boys & Girls Club in Fort Thompson. Approximately 300 students who live on or near the Crow Creek Reservation participate in Boys & Girls Club activities. Boys & Girls Club members participate in weekly hands-on educational activities at the garden and assist in light planting, watering, weeding, and harvesting. These lessons were taught in a shared learning space at the Crow Creek Community Garden. This sustainable community garden is going into its third year of production near the Crow Creek Elementary.



Crow Creek Tribal School students planting their garden and receiving gardening education

Better Access to Resources for Local Producers:

In order to increase access to resources for local producers, 98 garden kits were distributed on Crow Creek and over 70 gardens were tilled in partnership with National Relief Charities. These kits included seeds, shovels, hoes, hoses, and other supplies necessary for garden planting. Additionally, the Crow Creek Fresh Food Initiative sponsored a direct marketing training in partnership with SDSU extension for local producers that were attended by 20 community members. Through increasing the local knowledge and enthusiasm of our producers, it is our hope that we will be able to host our first community wide farmer's market this summer.



Garden Kits Ready for Community Distribution

Better Access to Healthy Food and Vegetables through the School/Community Garden

The Crow Creek Community Garden has, over the last two years, produced a bumper crop of vegetables. The garden, which is located next to Crow Creek Elementary School, survived late frosts and summer flooding last year to provide fresh squash, peppers, tomatoes, carrots, radishes, and beets for members of the Crow Creek community.

This garden is tended by local students who spent the summer tending the garden and assisting with activities at the Boys & Girls Club. Four students worked diligently to grow fresh vegetables for their family, friends, and neighbors on Crow Creek. The youth were assisted by a Lower Brule teacher who taught the lessons and activities at the Boys & Girls Club in Fort Thompson.

In August, the Community Garden started setting up weekly food stands on Wednesday afternoons. These stands were a huge success and a regular feature in Fort Thompson. This produce was available on a suggested donation price, and we found that community members were willing to pay as able. We have established this produce stand as a transition to the upcoming farmer's markets. Leftover vegetables were given to the elders at the Golden Age Nutrition Center and to Boys and Girls Club of Three Districts.



Local Youth Distribute Vegetables in the Community

Goals and Outcomes Achieved

Goals	Measurable Outcomes	Actual Results
Assist small growers in first producing and then marketing their products locally to further develop the local Crow Creek economy	The direct technical assistance provided to 10-15 individual growers in the areas including producing and marketing	20 community members attended direct marketing training
	All 300 plus students at Crow Creek Tribal Schools being exposed to education in the areas of agronomy, entrepreneurship, nutrition and wellness; and	180 students at Crow Creek Tribal School participated in lessons, activities, and demonstrations on agronomy, nutrition, and wellness and 300 students at the Boys and Girls Club participated in weekly hands-on educational activities at the garden and assist in light planting, watering, weeding, and harvesting
	Sustainable school garden developed at Crow Creek Tribal Schools with direct marketing access; and	School garden developed in 2010 and is in the 3 rd year of production. Produce is available to community members.
	At least 300 adults educated through classes and direct technical assistance;	98 individuals received gardening kits

	10-15 identified growers developed and provided direct technical assistance in marketing their produce; and	20 community members attended direct marketing training
	Community knowledge about healthy nutrition. The Tribe will administer a survey throughout the community to test the community's knowledge about nutrition. The test will be administered at the beginning of the project and at the end, and the results will be compared.	After further reconsideration, it was determined that a survey on the community's knowledge on nutrition wasn't the best way to spend resources. Other gardening surveys were done and the results are below.

70% of individuals who received assistance with their community garden plot indicated that they would not have planted a garden if it weren't for help from The Harvest Initiative. 80% indicated an interest in additional education on gardening. Also, 50% indicated they were interested in learning how to sell their produce.

Beneficiaries

Local youth benefited greatly from this project in receiving access to interesting and entertaining gardening and nutritional education in partnership with SDSU Extension. Both Boys and Girls Club (300 students) and Crow Creek Tribal School (180 students) were eager to try the different vegetables they produced throughout the course of the year— hopefully helping to break generational cycles of poor nutrition. The local teens that were hired to help tend and run the community garden received their first employment as part of this collaborative project, while learning valuable production and entrepreneurial skills. Local community members also were greatly benefited from the food production associated with the community garden through better access to healthy fruits and vegetables. Lastly, 98 local producers benefited from the garden kit project, while 20 local producers benefited from in-depth entrepreneurial education. This is where we hope continued long-standing growth will occur—as Hunkpati Investments, a local Native Community Development Financial Institution, will further sponsor their entrepreneurial development and upcoming Farmer's Markets.

Lessons Learned

The Crow Creek Fresh Food Initiative has accomplished much, but it has been slow to develop. Through this process, we have learned how long it takes and how important it is to build community participation in local food production. For example, the first year we found that some of the food that was distributed to the local summer foods program from the community garden had been thrown out. Thus, the importance of finding a message that resonates with community members, which we did through the "Produce Local: Grow Crow Creek" campaign and employing local youth to tend the community gardens, cannot be overstated.

Also, the Crow Creek Fresh Food Initiative's biggest strength is also its largest weaknesses—relying heavily on partnerships. These enduring partnerships have allowed the Initiative to

accomplish more than any individual organization would have been able to achieve. However, each partner offered a unique vision that, without a larger, long-term shared plan, made finding direction for the project difficult. These difficulties were only dealt with by approaching the project in a long-term manner—layering and adding dimensions to the project as we went along.

Additional Information

This article ran in several local papers: <http://hunkpati.org/65/>

This blog was written by USDA Rural Development staff.

<http://blogs.usda.gov/2012/08/13/a-successful-community-development-financial-institution-brings-economic-opportunity-fresh-food-to-a-south-dakota-tribe/>

Project 7

Title – Buy Fresh Buy Local South Dakota

Subgrantee – Buy Fresh Buy Local/South Dakota Specialty Producers Association

Contact Person – Pat Garrity | 605-660-1034 | garrity@iw.net

Previously Submitted

Project Summary

There is a high level of interest in locally grown fruits and vegetables, both on a national and a local level, and a need for South Dakota fruit and vegetable producers to learn how best to connect to these consumers. There is a need out there for a dependable and reliable contact and information resource for local fruits and vegetables in South Dakota. The increasing growth of farmers markets, local store and institutional interest in fresh fruits and vegetables and consumer interest are all reliant on accurate, timely and dependable information.

The purpose is to increase awareness and consumption of local fruits and vegetables with a consistent cooperative marketing campaign. The granted award was \$5,888.00 from SCBG. *Buy Fresh Buy Local* continues to collaborate with other organizations with the result in the 2010 grant period of leveraging the amount to a total of \$21,792.55, a 3.7 to 1 leverage.

Project Approach

The activities were membership recruitment from 42 members to 58 members. The BFBL email listserv is now 211 members.

Website Maintenance and Updates

BFBL staff update and maintain the website on a weekly basis. An email database is also updated and maintained on a weekly basis.

Grower Skills/Training/Workshops

BFBL began a partnership with Cheri Rath from South Dakota Value-Added Agriculture Development Center (VAADC) in November to increase our impact and viability throughout the state. BFBL provides technical knowledge and printing cost in a project developing business plans. This project will help local fruit and vegetable growers develop business plans for their operations. 10 grower skills training workshops were held in 2010 with 78 attendees – about half of those were specialty crop producers, one-third were there as consumers and about one-fifth were there representing other organizations.

Farmers Market Promotion/Producer Skills/Consumer Awareness

BFBL partnered with Sandy Patton, RC&D Antelope County, NE, on Farmers Market MOMS project. This project assists families in feeding themselves through fruit and vegetable gardening and purchasing locally raised fruits and vegetables at area farmers' markets. Mitchell, Vermillion and Kimball hosted seminars featuring information about farmers market startups.

BFBL provided local food sourcing services for Institute for Agriculture & Trade Policy for the Rural Midwest Gathering in Sioux City, IA. A total of \$2,560.00 was provided to 16 local farmers and producers.

BFBL is partnering with United Retirement Center, Children's Museum of Brookings, Sioux River Cycle, and Downtown Farmers Market to sponsor "Tour de Gardens" in Brookings, SD. This is a local foods event and fund raiser featuring bike rides to area farms and nurseries. Continue working with South Dakota State University and South Dakota Department of Agriculture to reach citizens throughout the state. In-kind time was donated to this project but no SCBGP funds were expended on this activity.

Enhancing the Competitiveness of Specialty Crops

The current membership of thirty-three producers is 82% fruit, vegetable and greenhouse producers. BFBLSD has 10 farmers market memberships, which also average 80% specialty crops and 20% other food products and nonfood items. Yet, the funding for this project is 32% SCBGP funds and 68% other non-Federal funds.

Goals and Outcomes Achieved

Goals	Measurable Outcomes	Actual Results
Increase BFBL membership to 80	Membership roster	58 members; 211 on listserve
20 publications with publicity on BFBLSD	Count of the number or articles written in local media	21 articles were written about BFBLSD
Participate in 25 meetings/events in 2010	Attendance at meetings	Participated in 20 meetings

The membership total is understated as 18 of the members are under the farmers market category which allows the market to utilize the marketing material for the entire market. BFBLSD feels as the markets become more successful, more individual farmers will become members.

Project staff are receiving more and more phone calls from people interested in the concept of local foods. We anticipate that the number of meetings we participate in will continue to rise.

BFBLSD will expect increased sales at existing farmers markets, provide assistance to start new farmers markets, provide support and direction for producers to connect to the consumer and provide continuing education / seminars to provide guidance and support to expand markets to larger wholesale outlets (this is a long-term goal established in the original BFBLSD organizational goals and objectives).

- BFBL provide assistance and guidance, with partnership with Farmers Market MOMS, to start a farmers market in Kimball and Chamberlain.
- BFBL partnership with South Dakota Value-Added Development Center (VAADC) to begin business development skills to assist specialty crop producers to increase production for wholesale markets.

- To track progress BFBL monitors membership numbers, participants at fact finding meetings, producers participating in the business plan development, the number of presentations provided by BFBL and communication with Farmers Market members. 78 people attended these meetings across the state – 38 producers, 24 consumers and 16 people representing other organizations. To date (9-11-11) BFBL has seven specialty crop producers participating in the business plan development program and the number should increase to fifteen when the growing season ends, allowing more time for the farmers dedicate to the task.
- BFBL has participated in sixteen presentations, with groups such as farmers market members, school food service managers, public education programs, South Dakota State Fair presentations and South Dakota State University Horizons community meetings. All communications with Farmers Market managers and participants state increase consumers and sales at the markets. To get actual figures proves to be difficult as farmers are reluctant to disclose actual income. The partnership with VAADC plans to develop a system to collect this data and maintain the privacy of the farmers.
- As the programs come to fruition, BFBL will create reports to monitor sales to institutions and other wholesale outlets. Another beneficial report will be farmer's attendance at the markets. BFBL also works directly with FoodRoutes to learn of successful programs and monitoring which works for other chapters.

Beneficiaries

Buy Fresh Buy Local SD increased membership numbers and increased public awareness of local foods. Several farmers markets started throughout South Dakota. Several organizations (Value-Added Agriculture Development Center, Dakota Rural Action, South Dakota Specialty Producers Association, South Dakota State University Extension Service) are requesting information and seeking ways to collaborate together to increase local food consumption. Much of the work is foundation efforts to establish relationships, potential partnerships and create collaborative efforts. In the next few years this foundation work will result in programs to help growers, increase local food availability and create markets for institutional sales.

Lessons Learned

This project is a long term effort to increase local food sales from 1.5% to 10% in South Dakota. In the work performed this year, it is very evident we must collaborate with several organizations to reach this goal. The collaboration can help with financing, skill sets and understanding different objectives can lead to the same result. This year was an excellent payoff from the foundation work over the last two to three years. We soon will begin business training and increase the public awareness campaign.

Other Information

www.bfblsd.org

Facebook - South Dakota Specialty Producers Association

Project 8

Title – Kirby Science Center Exhibit: Honey Production in South Dakota

Subgrantee – Washington Pavilion Management, Inc.

Contact Person – Erica Lacey | 605-367-7397 | elacey@washingtonpavilion.org

Previously Submitted

Project Summary

This permanent exhibit has helped to educate children and the general public about the benefits of bees and honey production in the State. With increased education and awareness the general public will understand the importance of protecting bees and will understand how they can help promote a healthy bee population. Visitors will also become aware of the abundance of local honey and other bee products. As community members become informed consumers, it is likely they will increase support for locally produced honey and initiatives to promote honey production and other bee products in the state.

Now is a critical point in time, as bee populations are in decline. It is critical to educate the public about problems facing bee populations and the consequences South Dakota will face if we do not address the declining bee population.

While there was an existing bee exhibit in the science center prior to this project, the display was in need of repair. It now has enhanced graphics and a bright design to attract the attention of visitors. It also presents updated information and related hands-on activities and staff led demonstrations.

Project Approach

In July of 2010, the Kirby Science Discovery Center staff began the development stage of this project. Staff conducted research, worked with local resources including A.H Meyer & Sons, Inc. in Winfred and Rye's Honey Farm in Renner. Illustrator Ken Alvine was recruited to design the graphics presented on the panels surrounding the bee exhibit. These collaborative efforts resulted in an enhanced exhibit which promotes curiosity and discussion about bees and honey production in South Dakota. The exhibit attracts attention of a wide range of visitors who spend an extended amount of time at the exhibit. They watch as the bees come and go from the observable hive, fascinated by the bees' social structure and constant motion.

The focus of the science center is to provide high quality hands-on experiences. This newly refurbished exhibit has provided an ideal interactive experience in which to learn about bees and the production of honey. This project allowed for updates on two educational panels, which are placed on the sides of the observable hive to educate visitors about the bees and honey production. It also allowed for the addition of two additional panels, complete with professional graphics and attractive illustrations. Through Ken Alvine's creativity and long history of cartoon creation, "Beatrice the Bee" and her friends were born. These characters can be seen on the panels surrounding the exhibit and were created to speak specifically to youth, providing an entertaining way for families to learn about honey. Beatrice is an anatomically correct bee, with whom children have fallen in love. They anxiously anticipate her appearance in the newsletter or in costume throughout the science center.

Grant funding from the South Dakota Department of Agriculture also supported the acquisition of an activity table and repurposed film kiosk showing "City of Bees: A Children's Guide to Bees." These additions to the exhibit extend the experience beyond simple observation and engage visitors in meaningful educational and entertainment related to the exhibit.

Through staff members' knowledge of early childhood development, appropriate materials for the younger as well as the older audience were also integrated into the exhibit. Interactive

activities at the table include the following: puzzles, children’s picture books, a beekeepers veil and gloves, hand puppets, and specimens of beeswax and life cycles of the bee.

To provide further opportunities for patron engagement, three demonstrations were developed and offered Honey I’d Love to Dance; To Bee or Not to Bee; and Taste Sensation.

Honey, I’d Love to Dance and To Bee or Not to Bee: Enter the hive and experience the daily life of a bee. You will “waggle” your way to understanding all about bees. Fully costumed, children are given a role within the hive. Through role playing, they come to understand the different functions of bees throughout the hive and develop an affection for the bees who work so diligently to produce honey for them to consume.

A Taste Sensation: There are more than 300 unique types of honey in the United States. Come taste test a few types of honey while learning about bees!

From March 1, 2011 through June 27, 2011, 115 bee demonstrations have been performed onsite by the science center’s trained staff. These demonstrations were adjusted for special and offsite programming as well including:

Event	Date/Info	People Served
Alliance for Science Social	February 2011 – Community Business People	15
Ag Day 2011	March 2011 – Families	1,500
Women in Science	March 2011 – Dakota State University	60
Free First Friday	March 2011 – Focus on the newly updated exhibit	1,023
Earth Day – Great Plains Zoo	April 2011	500
Scout Camp-Ins	Spring 2011 – wildlife conservation programming	486

Patrons are able to purchase bee-related merchandise at the Pavilion’s Discovery Store to remember their visit including local honey, life cycle kits, figurines, hand puppets and the “City of Bees” film shown at the exhibit kiosk.

Goals and Outcomes Achieved

Goals	Measurable Outcomes	Actual Results
Increase visitor knowledge/interest in bees/honey production	People Served by bee demonstrations	3,584 people served by bee demonstrations
	Visitors to Kirby Science Discovery Center (Jan – July 2011)	56,994 visitors

Work on the exhibit is complete. Its creation was informed by some of the best apiary resources in the state. The result is a highly engaging display, effective in captivating the attention of visitors as they walk through the museum. They are initially attracted to the large observable hive. As they stop to watch the bees, their attention is directed to the colorful educational panels surrounding the hive. They are offered the opportunity to not only read about the bees and the process of making honey, they are also presented with the chance to participate in a variety of

fun activities surrounding the display. They leave with a memorable experience and an increased awareness about honey production in the state. Visitors are offered periodic demonstrations, in which knowledgeable staff members share information and offer special opportunities to taste a variety of honey and offer interesting educational facts about the exhibit.

This exhibit is one of the most popular displays in the Kirby Science Discovery Center. Visitors stand in front of the glass entranced with the constant movement of the bees as they come and go from the hive. The variety of activities and information accompanying the display make it one of the exhibits that visitors spend the most time interacting with in the science center.

We were unable to measure interaction with the exhibit as described in the original proposal. The original plan was to monitor activity of the exhibit and to compare visitor interaction with the bee exhibit to other exhibits previously observed. We found this to be a time intensive task and the staffing simply was not available to observe and record interaction with the exhibit, as planned.

Instead are reporting the total number of visitors entering the Science Center over the course of this project. While we cannot say which visitors stopped at the Bee Exhibit, we do know that it is one of the most popular attractions in the museum. It is likely that most visitors stopped for a least a short time. The exhibit opened during one of the Science Center’s busiest months for school group visits, allowing a large number of school children to interact with the exhibition and to learn about honey production in the state.

Beneficiaries

This project has offered a widespread sustainable impact on honey production in the state. Through educational and engagement in the production of honey, visitors develop a lifelong interest in honey and local agricultural products. This exhibit promotes widespread knowledge about bees and honey production in the state. Visitors are presented with demonstrations and are able to taste different varieties of honey. Through interaction with the exhibit, they become involved in related activities to stimulate interest. Visitors leave with a positive image of the industry and are more likely to support statewide efforts to promote honey as a specialty crop.

The Science Center serves primarily families and children under 12. However, a wide range of regional audience members come to enjoy the science center. There are roughly 90,000 visitors annually. In a special effort to broaden the reach of science center activities, the institution presents Free First Friday, which welcomes visitors free of charge the first Friday of each month. Last year, nearly 9,000 visitors attended science center activities free of charge, ensuring children from low income families have access.

The impact of this exhibit is regional. The reach of the Washington Pavilion spans a 150 mile radius from Sioux Falls and includes parts of South Dakota, Iowa, Minnesota and Nebraska and encompasses over 55 counties and 870,000 residents.

Sioux Falls is:	45%	of total KSDC Visitors
Rest of South Dakota is:	24%	of total KSDC Visitors
All other states are:	20%	of total KSDC Visitors
First Free Friday is:	10%	of total KSDC Visitors
No Address Available:	1%	of total KSDC Visitors
	100%	of total KSDC Visitors

Lessons Learned

The results of this project have been entirely positive. Washington Pavilion visitors anxiously awaited the completion of the new bee exhibit. Anticipation of the new exhibit was built through the website, social media and in the Washington Pavilion's bi-monthly newsletter. Visitors are very interested in bees and honey production. They are drawn to live displays and appreciate the wide range of activities offered in connection with the exhibit.

There was also some unexpected media coverage of the display this spring when a child broke the glass to the live hive. The bees escaped and filled the science center. Because the science center staff had worked closely with the apiary specialists and had done extensive research in the formation of the exhibit, they knew just what to do. Everyone remained calm and evacuated the youth from the science center for the rest of the afternoon. The beekeeper, who supplies the bees for the exhibit, came and used smoke to usher the bees out of the building. Positive news coverage of the event gained public interest and furthered education about bees and honey production in the state.

Additional Information

N/A

Project 9

Title – Promoting Locally Grown Native Prairie Grass Live Plants

Subgrantee – Sustained Horizons, LLC

Contact Person – Dan Limmer | 605-785-2125 | limmer@itctel.com

Previously Submitted

Project Summary

Most landowners/homeowners and professional landscapers are becoming interested in landscaping in a native, sustainable, low maintenance way. Most are familiar with traditional methods, but lack the knowledge, expertise and product availability needed to successfully utilize native grasses and forbs. This was an added-value agriculture that entailed the culturing of regionally sourced native prairie grass seed for the production, harvest and promotion of native prairie grass live plants. These locally grown native plants were and are being made available to landowners/homeowners and the professional landscape industry with a targeted, educational promotion effort.

Project Approach

Five species of native prairie grass live plants were harvested from production fields during May 2010. 720 potted live plants with descriptive/planting instruction tags were delivered to twelve garden centers. Each garden center was provided with professional descriptive display signage. We delivered an additional 24 plants to a garden center in Watertown.

Initial agreements were for sale on consignment and then evolved into a direct purchase by the garden centers. Complete payment for the plants was made by each garden center for a total 2010 gross revenue of \$3600. Approximately 20% of gross revenue goals was achieved.

Educational outreach was performed in February, 2011 and 2012. A quarter day training block was provided to the Lewis Garden Center School held at corporate headquarters in Sioux Falls, SD. Thirty Garden Center managers attended and were tested with questions provided

subsequent to the training session. I presented information about the local native perennials, planting guidance, first season care/maintenance, spring maintenance, dormancy, etc. I provided six questions that were used on the final exam.

An additional 120 potted live plants were delivered to two garden centers in 2011. An unusually cold, wet spring prohibited dormant plant harvesting and natural green-up of the grasses was significantly delayed. Research and preparation for strategies to achieve early plant dormancy break is ongoing.

An additional 250 potted live plants were delivered to three garden centers and one golf course in 2012.

Collaboration continues with the USDA Plant Materials Center in Bismarck, ND and SDSU Plant Sciences in efforts to promote native prairie grasses for sustainable landscaping, wildlife habitat, and for renewable biomass energy production.

Approximately \$6000 gross program income was generated through this project. This income has been and continues to be used to pursue native prairie grass live plant markets. Market outreach through printed media and direct one-on-one contact with garden centers, golf courses, and individuals is ongoing. We also continue to reach out and identify garden center training opportunities.

Goals and Outcomes Achieved

Projected measurable outcomes for this project were, and continue to be, a significant challenge.

Goal	Measurable Outcome	Actual Result
Landowners/homeowners and landscapers will gain knowledge on use of native species for landscaping	Consumers create demand for 1,800 native landscape plants in Year 1	Consumers only demanded 1,114 native landscape plants in Years 1 - 3
	Educational consultations provided to garden center managers and staff	30 garden managers attended training in February 2011

Beneficiaries

Many garden center managers became more knowledgeable about regionally sourced locally grown native prairie grass plants and the culturing of these plants. In addition, other market competitors were able to become knowledgeable as well.

Garden center managers were able to acquire the knowledge to deal with their customers effectively concerning all of the native species plants marketed in their centers. Other market competitors were able to use this model to market the same product, packaged the same way through the SD Conservation Districts at a much reduced cost.

Lessons Learned

Landowners/homeowners are generally not comfortable with plants that are not green and lush and they generally do not understand the concept of dormancy as it relates to native prairie grass plants. Professional landscapers are using annually grown native plants that are available in volume at very low price. Moreover, professional landscapers are marketing plants that are not regionally sourced or grown and that often require annual replacement because of inadequate hardiness.

We learned that identifying and breaking into a niche market successfully can be a daunting task. Whenever you are engaged in a non-traditional arena, you are constantly faced with unexpected challenges that result in many frustrations and the ongoing challenge of finding new market opportunities.

We also did not anticipate copy-cat market competition from market competitors.

Additional Information

We greatly appreciate the support of the Specialty Crop Block Grant Program in this endeavor. Although challenging, we intend to continue this effort subsequent to this project support. Again, native prairie grasses promote erosion control, reduce mowing and use of herbicides, insecticides, and fertilizers and greatly reduce water usage. Landscaping with native prairie grasses improves our quality of life with an attractive year-round landscape, increased wildlife viewing and an inspired connection with nature. These are goals well worth pursuing.

Project 10

Title – Increasing Specialty Growers Income through the South Dakota Farm to School Program and SD Local Foods Directory

Contact Person – Frank James | 605-697-5204 | fejames@dakotarural.org

Previously Submitted

Project Summary

With the specialty crop producers growing in number and forming effective marketing networks, they are ready to meet a new market – our local school districts. In 2008, Farm Bill legislation successfully passed allowing food service directors to preference local products. Increasing local food use in school lunch programs (Farm to School) is a national effort that aims to improve the nutrition and quality of our children's school lunches, provide education on health and agriculture, and to support local farmers.

Project Approach

DRA surveyed South Dakota school lunch programs during the summer of 2010 on their interest in serving locally grown foods, and found that of the 23 surveys returned, 17 school lunch programs would be interested in purchasing locally grown food to serve in school. Since that survey, we have identified at least 35-40 schools in South Dakota that are interested in buying specialty crops from South Dakota producers. The biggest barrier reported by schools was finding local food providers.

DRA mailed paper copies of the SD Local Foods Directory to every SD school district during the summer of 2010, along with a survey measuring school district interest in purchasing locally grown foods.

DRA presented information about Farm to School programs at the 2010 SD School Nutrition Association Annual Meeting, with 25 school food service personnel attending.

DRA also participated in the board meeting for the SD School Nutrition Association in February, 2011, and presented the information gathered from the survey of school districts.

DRA staff met with Farm to School leads from Nebraska regarding producer training in May, 2011. Nebraska will share curriculum regarding how to supply foods to schools and how to address food safety issues through a certification program called Good Agricultural Practices (GAP).

DRA was able to leverage the support of the SD Specialty Crop Block Grant to apply for funding from the Wellmark Foundation to take the Farm to School program even further. Through this grant, DRA has identified two pilot school districts, and a Youth and Family Services program, in which to launch Farm to School programs in 2011/2012. The pilot schools are the St. Joseph Indian School in Chamberlain, SD, and the Brookings, SD school district. At St. Joseph's, DRA has begun facilitating connections between the school's food administrator and local farmers to begin local food purchases not only for the school lunch program but also for a school store that supplies the residential houses for students. The Youth and Family Services Center includes Rapid City Head Start and the Girls Club, with a comprehensive nutrition program.

4. An additional 5,000 paper copies of the SD Local Foods Directory will have been distributed to interested consumers, and the SD Local Foods Directory website will have been accessed at least 1,000 times

5,000 paper copies of the 2010 SD Local Foods Directory have been distributed through community events, local business partners, churches, and advertising efforts. In addition, the online version of the directory currently receives approximately 250 views per month. In April, DRA printed 2,000 copies of the 2011 SD Local Foods Directory.

As we approached March 2011 and our planned training, we realized we were still learning about the barriers to Farm to School and Farm to Institution. In order to do a training we needed to have more of an idea about the questions being asked and the answers needed.

Since March 2011, we have conducted individual training for producers but we are still facing several barriers to Farm to School. For instance, schools are required to procure food from an "approved source." However, the definition of an "approved source" is not clearly spelled out. We have also found that some schools are very strict in adhering to the requirements and others are more lenient. Individual school's insurance policies/companies also might determine additional requirements. This creates additional barriers as the requirements for one specialty crop producer to sell to one school might be different than the requirements a second specialty crop producer faces selling to a second school.

We have formed a committee of specialty crop producers, local food activists, a nutrition director, food service providers and others to tackle some of these barriers. The committee is developing a three tiered system so producers can become an approved source. Once the system is fully developed, we will try to get buy-in from schools and state agencies to determine if this is a viable system that can work for Farm to School in South Dakota.

Three Tier System

1 – Farm/Food Safety Checklist – self-certified by producer (includes items such as water testing, washing procedures for vegetables, composting procedures, etc.)

2 – Plan specific to each crop – self certified by producer (includes specific handling practices for root crops, greens, etc.)

3 – Approved 3rd party – an outside third party would visit a farm and complete a checklist of farm/food safety items. We are currently looking into who the third party could be.

Through this process, we have also looked at GAP and the processes in other states.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Identify school districts across the state interested in collaborating on a Farm to School project with local farmers	Supply all school districts (192) with a copy of SD Local Foods Directory	DRA mailed paper copies of the SD Local Foods Directory to every SD school district during the summer of 2010
	Training on Farm to School for 15 producers and school lunch directors	25 school food service personnel attended training in summer of 2010
	Increased knowledge on setting up a Farm to School program (measured by surveys after training)	All barriers to Farm to School have not been identified yet. (See Project Approach section)
	5 school districts indicate interest in Farm to School	17 school lunch programs indicated interest in Farm to School
	Distribute 5,000 copies of SD Local Foods Directory; SD Local Foods Directory website accessed 1,000 times	All 5,000 copies of the SD Local Foods Directory were distributed; website averages 3,000 views per year
	10 specialty crop producers indicate interest in marketing through Farm to School	At least 30 specialty crop producers have indicated an interest in marketing through Farm to school
	70% of specialty crop producers indicate increased sales because of the directory	53% of producers indicated increased sales because of the directory.

Beneficiaries

Through surveys and other one-on-one contact with producers, we have identified at least 30 specialty crop producers who have indicated an interest in marketing their specialty crops through Farm to School. Additional beneficiaries from this project will be additional producers who become interested in marketing through the Farm to School program. Access to Farm to School will help diversify markets for South Dakota's specialty cropproducers and increase community awareness about locally grown foods.

We have also identified 35-40 schools that are interested in purchasing fruits and vegetables from South Dakota producers. Not only will these schools benefit from this project, but students at the schools will benefit by increasing their knowledge about food production and having access to healthy choices in the cafeteria.

Lessons Learned

As mentioned in the Project Approach section, we have identified several barriers for specialty crop producers to market their products to schools.

For instance, schools are required to procure food from an "approved source." However, the definition of an "approved source" is not clearly spelled out. We have also found that some

schools are very strict in adhering to the requirements and others are more lenient. Individual school's insurance policies/companies also might determine additional requirements. This creates additional barriers as the requirements for one specialty crop producer to sell to one school might be different than the requirements a second specialty crop producer faces selling to a second school.

On the positive side, we have identified many more specialty crop producers and schools in South Dakota who are interested in the Farm to School program. These stakeholders are motivated to fully understand the barriers and work to overcome them. By leveraging, SCBGP funds with other funds, we are taking steps to move Farm to School forward in South Dakota.

At the beginning of the project, we had intended to survey the specialty crop producers to inquire about any increased sales they have experienced from being listed in the local foods directory. Time limitations prevented us from being able to conduct the survey but we are going to add the question to a survey we are planning around our Farm to School campaign.

Additional Information

N/A

Project 11

Title – Sturgis Main Street Farmers Market

Contact Person – Michelle Grosek | 605-490-2919 | michelle.grosek@gmail.com

Final Report

Project Summary

The Sturgis Main Street Farmer's Market is addressing the need of providing awareness within the community of Sturgis and outlying areas of the local produce which is available, making that produce easily accessible to the public through a weekly farmer's market which will accept EBT/SNAP cards, and educating the producers as well as the customers regarding healthy local foods and safe food production and handling techniques.

The initial purpose of this project was to promote locally produced specialty crops and producers at a farmer's market in Sturgis. With growing interest in farmer's markets and local foods, we felt this was a good time to get a farmer's market going in Sturgis with one goal being to promote the locally produced specialty crops available in the area.

Project Approach

Sturgis FM operated from three different locations over the course of this grant: on the 1100 block of Main Street, at the corner of Junction and Main, and finally at the corner of 4th and Lazelle. The third location was a very good location with good visibility and easy access for customers. The market time has been moved from Friday afternoons to Saturday mornings as that time seems to work better for our customers and our vendors.

A wireless card reader was purchased in 2012 with SCBG funds and SNAP licensing was obtained. We had a lot of trouble with the wireless card machine having consistent internet access for the markets to the extent that we did not use it at all during the 2013 season as we could not justify the \$50-\$60 monthly charge for a machine that rarely worked as needed. Therefore, we also did not advertise accepting SNAP cards during the 2013 season.

- We purchased two farmer's market banners which were hung each Saturday during the market as well as we purchased one banner which was hung during the week stating markets would occur on Saturday mornings at the same location.
- We have continued to maintain advertising and publicity for the farmers market to increase the number of customers. We have created many partnerships within the community.
 - We maintained a Facebook page as well as a web page for the Sturgis Farmer's Market.
 - We listed the market in many free publications and internet listings.
 - Rockingtree Floral provided free access to their parking lot for the Farmer's Market.
 - KBHB radio and Sturgis Chamber of Commerce did free advertising for Sturgis Farmer's Market.
 - Bear Butte Gardens facilitated the web page and Facebook updates for Sturgis Farmer's Market.

Following are the activities performed by the Sturgis Farmer's Market during the 2012 season:

1. We printed 50 fliers which were hung about town advertising the farmer's market. We also maintained a Facebook page and an e-mail list from which we distributed market information each week. We have posted approximately 40 posts to the Facebook page throughout the summer so far and we send approximately two group e-mails per month through an e-mail list.
2. We have utilized a new online magazine format (Black Hills Simple Life) to list the farmer's market and to promote eating fresh, local produce.

We have 3 regular vendors now - two that sell produce and one that sells jams. That is going really well. We just wish we could have had more vendors this year. It's interesting that getting vendors has been the challenge. We hadn't anticipated that. Most vendors are able to sell almost all of the produce they bring to market.

Because we have a small market, educational information was provided to vendors on a one-to-one basis. We were able to provide information on rules and regulations regarding selling value-added specialty crops at farmers markets. We also encouraged our vendors to attend other educational classes put on by partners (such as SDSU Extension and South Dakota Specialty Producers Association).

The market didn't actually pick up until early August and then it was very busy every Saturday. It's as if people in Sturgis don't really think about vegetables until then, which is interesting. It's still going strong. We're trying to be very consistent with being there EVERY Saturday morning so that people can rely on that.

Each market attracted on average 50 customers in a four-hour period. The customer numbers were steadily climbing as the season progressed. The community population in Sturgis is 6600.

During 2012, only four SNAP recipients utilized the wireless card reader this season, but a couple them did return more than once. SNAP use for eligible specialty crops was 3 participants utilized their SNAP cards for specialty crops. One of them returned for a few visits to the market. Meade County has 1735 recipients according to 2010 data.

We tracked the sales numbers by vendor throughout the season with the results as follows:

- Specialty Crops Vendor #1 (organic vegetables) – Average sales for the entire season was \$45 per market.
- Specialty Crops Vendor #2 (vegetables) - \$50 per market.
- Specialty and Non-Specialty Crops Vendor #3 (breads/jams) - \$100 per market.

We've developed many partnerships in the community, including:

- Bear Butte Gardens provided the printing of the fliers which were distributed about the community. Bear Butte Gardens also provided a link on their website for the Sturgis Farmer's Market information as well as the man hours to keep the Facebook page and e-mail list.
- The floral/landscaping company that donated their lot space also included free advertising for the Sturgis FM in their weekly live radio interview each Saturday morning.
- KBHB Radio provided free air time to promote the Sturgis Farmer's Market each week.
- Sturgis Chamber of Commerce promoted the Sturgis FM for free each week on their facebook page.

All vendors at the farmers market sold specialty crops (they were all specialty crop growers). Therefore all SCBGP funds were used to benefit specialty crops. There were also matching funds on a 1:1 basis with the grant funds used, ensuring that SCBGP funds were only supporting those specialty crops.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Offer a local organized weekly venue to help producers increase their income	\$100-\$800/producer/day in sales	Actual sales averaged \$65/producer/day
Increase vendor education	100% of vendors will receive information	100% of vendors received educational information
Provide opportunity for EBT/SNAP participants to buy fresh fruits and vegetables	\$150/week in EBT/SNAP purchases	Only 4 SNAP recipients used the machine.

During 2012, only four SNAP recipients utilized the wireless card reader this season, but a couple them did return more than once. SNAP use for eligible specialty crops was 3 participants utilized their SNAP cards for specialty crops. One of them returned for a few visits to the market. We had a lot of trouble with the wireless card machine having consistent internet access for the markets to the extent that we did not use it at all during the 2013 season as we could not justify the \$50-\$60 monthly charge for a machine that rarely worked as needed. Therefore, we also did not advertise accepting SNAP cards during the 2013 season.

Beneficiaries

The citizens of Sturgis (approx. pop. 6000) benefited from having a weekly Sturgis FM with at least one specialty crops producer in attendance at each market, although each market had only approx. 50 customers.

The specialty crops producers who attended as vendors benefited from being able to market their products and provide public awareness and education about the specialty crops.

Lessons Learned

It is difficult to recruit specialty crops vendors to a market serving such a small population. Over the course of the project we were only able to recruit four vendors total which fell under

“specialty crops” categorization: two vegetable producers, one honey vendor, and one herb producer. The Sturgis FM is held on Saturday mornings which is also when a large FM occurs in Rapid City. Most specialty crops vendors in the area choose to attend the Rapid City FM as there is a larger population base (70,000 vs. 6,000 in Sturgis).

Going into this project we felt that there were many local vendors looking for an opportunity to sell their specialty crops if a local FM was made available. What we found out is that there really are not many local specialty crops vendors who want to be dedicated vendors every weekend through the summer. Some vendors just want to attend one or two markets when they have an excess of tomatoes or sweet corn, but not be tied to attending markets all summer.

Many potential small-scale vendors did not wish to pursue insurance and state sales tax licensing in order to be a FM vendor. Vendors that we did have attend the Sturgis FM were already insured and licensed prior to vending with Sturgis FM.

We decided not to purchase a commercial certified scale for the Sturgis FM since vendor numbers were always very low. It just did not seem like a justifiable expense for possibly one vendor per weekend to utilize it.

We only had a handful of EBT/SNAP recipients use their cards at the market even though we posted fliers at the local DSS office and put that information on the fliers about town. As stated above, we did have issues with the card reader machine, which probably did not help with the low number of EBT/SNAP cards presented.

We did not utilize paid advertising as we had predicted for two reasons: 1) area media were very accommodating in providing free PSA-type ads for the market without requiring paid advertising, 2) with the difficult drought year, decreased crop production, and low number of specialty crop vendors, it did not seem prudent to spend money on paid advertising when we could get adequate free advertising.

Project 12

Title – South Dakota Wine Pavilion

Contact Person – Alison Kiesz | 605-626-3272 | Alison.kiesz@state.sd.us

Previously Submitted

Project Summary

Wine production has actually increased from no commercial production only 15 years ago to an estimated 107,000 gallons in 2012. The value-added and experience based marketing components of wine is the engine that drives additional specialty crop production including grapes, berries, apples, pears, etc. Without the wine promotion and education, the specialty crop industry will be destined to suffer much slower growth that will plateau when the nearby markets are saturated.

The promotional elements of the project are targeted to the consumer, providing a one-of-a-kind opportunity to sample wines from nearly every winery from across the state. Many of the

customers are not aware of the quality and diversity of wines produced and may not even know that we have a fledgling wine industry. The second target of these efforts is the specialty producers. Participating wineries are there to show off the final product, talk to specialty producers, and network with resource personnel.

Project Approach

The South Dakota Department of Agriculture along with the South Dakota wine industry hosted the SD Wine Pavilion at the 2011 SD State Fair. This is the fifth year we have held a wine pavilion at the State Fair. It has been very successful based on the number of people attending the wine pavilion and tasting South Dakota wines. Anecdotally we have also heard good comments from the participants, who ask us to bring the pavilion back to the fair every year. The South Dakota Winegrowers Association has also stated that this is the most successful event they participate in.

SDDA hired a contractor to plan the wine pavilion, including contacting wineries, hiring staff, promoting the event, etc.

The wine pavilion took place during the South Dakota State Fair on September 1-5, 2011. Thirteen South Dakota wineries participated in the five day event (one for the first time). The event is set up so that consumers can sample a variety of South Dakota wines. We had 33 varieties of wine available and had all of them available every day for consumers to sample. We had five regular tasting stations set up – each one featuring a different type of wine (red, sweet red, white and 2 fruit stations). Professional staff describe and sample the wine to consumers.

We also partnered with various commodity organizations to pair the wine with South Dakota food including beef, pork, turkey, cheese and lamb. We made an increased effort to pair wine with South Dakota cheese this year. All food paired with the wine was donated by various commodity groups, organizations and businesses. We had cheese available from each of the state’s six cheese manufacturers. We worked with the SD Beef Industry Council, South Dakota Pork Producers Council, Dakota Provisions, Midwest Dairy Association and the South Dakota Sheepgrowers Association. All food paired with the wine was donated and no Specialty Crop Block Grant funds were used for purchasing food.

Once consumers sample the wine, there is a retail area where they can purchase wines by the glass to enjoy in the wine garden; or they can purchase a bottle of wine to take home with them.

We had over 3,500 people visit the wine pavilion and sample SD wine. We counted people by the number of tasting tickets that were purchased. There were certainly other people who walked through the wine pavilion but did not sample wine. We do not have an accurate way to count those people.

South Dakota wineries sold over 72 cases of South Dakota made wine at this event. The wines at the event represented the following specialty crops: grapes, aronia berries, elderberries, cranberries, pumpkins, crab apples, strawberries, rhubarb, black currants, pears, honey, peaches, apples, and figs.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To increase the number of consumers who are exposed	Expose 2,650 consumers about South Dakota wine	3,500 consumers were exposed to South Dakota

to and sample South Dakota wine		wines
	Provide a venue for 11 SD wineries to showcase their wines	13 SD wineries participated in the event

In addition, we surveyed consumers at the wine pavilion about their thoughts and preferences and had these results:

- 37% of consumers surveyed indicated they mostly buy South Dakota wine to drink in their home.
- 55% of consumers surveyed indicated that it is important or very important for them to have an option to buy wines made in South Dakota

Beneficiaries

Thirteen South Dakota wineries, 76 specialty crop producers and 3,500 consumers benefitted from this project. The wineries saw their revenues increase by nearly \$13,000 from this project. Likewise, these wineries purchased over \$84,000 worth of specialty crops in 2010 to turn into wine. Also at least 3,500 consumers had the opportunity to learn about and sample South Dakota wine. This project has helped the wineries gain a 7.0% market share of all wine sold in South Dakota in 2011.

Lessons Learned

This has been a very beneficial project for South Dakota’s wine industry. Some of the lessons we have learned along the way include keeping the activities of the wine pavilion simple and focused. There are many activities and other opportunities that can be added along and for each of them, we have asked the question, “Will this help enhance South Dakota’s specialty crop and wine industries?” If the answer is no or if that activity will take the focus off of the wine industry, then we don’t add those additional activities or opportunities.

We had originally planned to add an additional venue for the Wine Pavilion concept in western South Dakota. We looked at several existing events and sites as possibilities. We tried this concept in Deadwood, SD in 2009 using a previous SCBG and it was not as successful as we would have liked. Taking the lessons learned in 2009, we realize that location and venue are extremely important aspects. We had some initial conversations with a large, existing event in the Black Hills, but in the end we could not agree upon a location within their venue or with the terms and conditions that the event wanted to impose on us (for example, an unusually high commission rate and large rental fee). SDDA is still very interested in the idea of a Wine Pavilion in western South Dakota, but we need to find the right event and location as well as an organization that is willing to negotiate on terms and conditions.

Additional Information

N/A



Project 13

Title – South Dakota Local Foods Conference

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Project Summary

In the past few years there has been a growing interest in local foods – foods that are consumed near (within South Dakota’s borders or within 100 miles) from where it was grown (for instance if the food was grown in another state but within 100 miles of South Dakota’s border). There has also been a dramatic rise in farmers markets over the past five years. The number of farmers markets had more than doubled in that time.

The South Dakota Buy Fresh Buy Local chapter was formed in late 2008. Other groups such as Dakota Rural Action have addressed the local foods movement on a local basis. Many of these groups are focusing on the Farm to School movement – getting fresh South Dakota produce into the school lunch programs – such as apples, potatoes, squash, frozen beans and frozen sweet corn.

As a statewide agency, SDDA saw an opportunity to work with our counterparts in other state agencies, other resource providers and the producers/growers in our state. We have the contacts and resources to bring together interested individuals from across the state and help folks make some connections on a statewide level that can in turn, help them in their communities or maybe expand to a neighboring community or school district. This project has been successful in that measure as we’ve been able to bring many producers together from

across the state and help them learn from each other, make connections, and grow their business.

Project Approach

SDDA and a small committee of interested individuals (SDSU Extension, USDA Rural Development, Dakota Rural Action, Buy Fresh Buy Local, SDSPA) worked to plan and host a South Dakota Local Foods Conference in November 11-12, 2011 in Huron, SD, which was attended by 52 people.

The conference was advertised by word of mouth, direct contact with planning committee members' contact lists, email list serves and social media.

The sessions covered topics such as: high tunnels, youth and community gardening, farm to school, Buy Fresh Buy Local, community supported agriculture, value added products (from specialty crops), a panel with grocers, retailers and producers about getting specialty products on store shelves and a panel on farmers market success stories.

The SD Local Foods Conference was held adjacent to a Good Agricultural Practices training put on by SDSU Extension. The GAPs Training was held on Nov 12, 2011.

At the 2011 conference we surveyed all of the participants. 60% of the attendees were fruit and vegetable producers. 30 producers (60%) indicated that they had formed a prospective partnership because of this conference.

Because only 60% of conference attendees were specialty crop producers; costs for the conference were prorated based on the percentage of specialty crop recipients. Matching funds were used to cover over 40% of total conference costs.

Because of efficient use of grant funds, a second conference was able to be held on November 3, 2012 in Ft. Pierre, SD which was attended by 66 people. A committee approach using the same committee members was used for the planning of the conference.

The conference was advertised by word of mouth, save the date cards, direct contact with producers, email list serves, social media, radio and newspaper advertising.

The sessions at the 2012 conference covered topics such as: fruit and vegetable consumption, business plans for specialty crop producers, social media, specialty crop production on Indian Reservations, and processing of specialty foods.

This was a unique opportunity to bring together many of the players in the local foods arena together in one place. This conference could be a springboard to producers, schools, chefs and others working together to keep the fruits and vegetables that are grown in South Dakota, consumed in South Dakota.

The 2012 SD Local Foods Conference was held in conjunction with a conference planned by the South Dakota Specialty Producers Association, which was held on November 2. These two conferences have a similar audience and holding them jointly makes good sense and is a cost-efficient way for producers to attend both events.

Goals and Outcomes Achieved

Goal	Target	Actual Result
Invite producers to conference	60	118
Invite schools to conference	60	0
Facilitate partnerships between producers and schools/restaurants/retailers	12	49
# of sales between producers and schools/restaurants/retailers	48 (based on 12 partnerships created and 4 sales/producer)	24

We have had staff members from the South Dakota Department of Education participate in our event and they are very interested in getting more local foods into schools. The Department of Education staff has suggested that the best way to reach several school foodservice directors would be during the School Nutrition Association conference. With their busy schedules during the school year, it is hard for most of them to get away and attend another conference even though the local foods conference would definitely be of benefit for them. Looking back on our goal for inviting 60 schools to the conference, it was not a realistic goal.

We also had producers make many partnerships at the conference with potential customers and exceeded our goal of 12 partnerships. However, we fell short of the goal of 48 sales because of the time it takes for the producer and their customer to work out the details of the sale and the details of the product specifications as well as overcome many other hurdles involved in sales of specialty crops.

Beneficiaries

Specialty crop producers benefitted greatly from this project. We had 71 specialty crop producers attend the conference. Of those, 49 forged a partnership with other producers or potential customers at one of the conferences.

The conference really showed the collaborative efforts that are being made in South Dakota by state, federal and grass roots organizations to support specialty crop producers and local foods in South Dakota.

One of the panelists, a retailer that buys local products said that she enjoyed this conference and was hoping to find additional suppliers for her store.

Lessons Learned

We have learned that producers appreciate and value the opportunity to learn from one another and see what projects are going on across the state as well as the resources that area available to them. 100% of those filling out the surveys said they would support making the SD Local Foods Conference an annual event. This clearly states the importance of this project and the work that was done.

We targeted schools and invited them to attend the two conferences but received little interest from them and no attendance. After talking with some staff members at the state Department of Education, they suggested that we go to the schools to share the message of purchasing fruits and vegetables from local farmers. They said schools are often very busy and have limited resources to attend a conference such as this. A better approach would be to attend a School

Nutrition Conference and talk to the schools there about the possibilities of local food purchases.

We've also found the approach of an out-of-state keynote speaker who can talk about work that has been done in another state has been a good one. Then we utilize in state specialists and resources for the breakout sessions of the conference.

Additional Information

N/A