

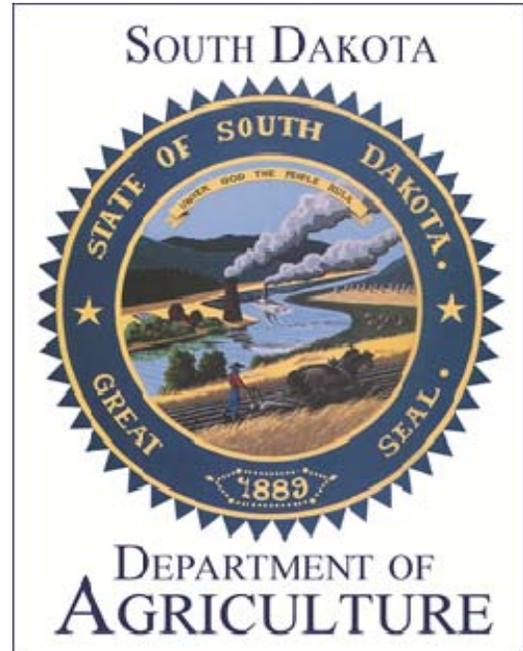
**FY2009 SCBG Final Performance Report
South Dakota Department of Agriculture
Grant No. 12-25-B-0949**

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Project 1 – Final Report (previously submitted)

Title – Missouri River Breaks Specialty Crops Trials (Hazel Nut & Ginseng)

Sub-Grantee – Thelma Deffenbaugh

Contact Person – Thelma Deffenbaugh – 605-935-6435

Project Summary

There are 110,500 acres of forested land in eight counties along the Missouri River in South Central South Dakota, with 44,000 acres in Gregory County, the site of these trials. These forest lands are dominated by hardwoods that show little new seedlings; however, cedar encroachment is occurring on the uplands. Landowners struggle with land use decisions on these forest lands that will be economical (grazing, recreation, etc.), and currently much of the land economic returns are poor to limited.

Ginseng is native to southeast South Dakota, and the potential of growing it along the Missouri River has not been explored. The Hazel nut proposed for planting is a variety not tried in this area before, and according to research the soils and climate are suitable (ginseng and hazel nut), and this holds the potential for a possible marketable industry.

Project Approach

I started with two plots of ginseng in 2008 and then added a second planting of ginseng in 2010, using the FY09 SCBGP funds. These plots are demonstration plots to see if ginseng is a crop that can grow in the cedar draws along the Missouri River in Gregory County. These demonstration trials will allow me to share my results with other land owners, who can then choose if they want to begin ginseng production as well.

My additional ginseng rootlets were planted in the fall of 2010. About 50 new plants were planted in one plot. I now have three plots of ginseng rootlets and one plot started with ginseng seed.

I have also started stratifying my own ginseng seed. I collected the berries from the plants in the fall of 2010 after they turned red. Then I placed a layer of sand in a bucket with some holes in the bottom, laid the berries on top of the sand and then covered the berries with more sand. I buried the bucket in the ground and placed a piece of plywood on top and covered that with some soil and leaf litter. I dug up the seeds in the spring and planted them. I added the seeds to the existing plots and also created one new plot.

In 2011, the ginseng had a cicada type bug affect the plants. Because of this pest, I wasn't able to collect and stratify the seeds this fall. I will have to watch the crop in 2012 but I don't expect this pest to be a continuing problem. Worked well with stratifying – had a very good germination. Added to the current plots and added a new plot last year with the seed and expanded existing plots.

The funds allowed me to experiment with ginseng as a marketable crop. I studied this crop and had assistance with soil samples from the Gregory and Hutchinson County extension agents showing feasibility. It is a perennial crop and is more valuable with age. The RC&D funds helped me explore this product, on how to plant it and where it is best suited.

Three hazelnut trees were planted in the fall of 2010. I wanted to plant more and have additional trees ordered, but I wasn't able to get them from my supplier in 2010. 12 additional trees are set to be planted in the spring of 2011 for a total of 15 hazelnut trees. It is expected that they will

produce a crop in their 4th year. The trees planted in 2010 doubled in size in one year and the growth has been tremendous.

I hosted a field day at my plots on June 24, 2010. About 22 people attended – observing the growing cycle of ginseng and many learned to identify the plants. I showed 100 + plants, all healthy.

We had 22 people attending the field day. Folks from NRCS, SDSU Cooperative Extension Service, horticulturists and potential growers. I was asked to allow an article to be written for the South Dakota Magazine. Someone will contact me for an interview. Also two newspapers covered articles on ginseng and hazelnuts.

I also was a speaker at the Specialty Crops Workshop in Mitchell, SD in November 2010. Over 100 people attended the workshop and 40-50 people attended the session on ginseng and hazelnuts.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To increase the reliable information available to landowners pertaining specifically to growing ginseng and hazel nuts as specialty crops along the Missouri River in South Dakota	Hold 2 publicized field days	1 field day on 6/24/10 and 1 workshop on 11/5/10
	Double the requests for specialty crop information	This was not able to be collected because the RC&D and Extension positions that were tracking the requests were eliminated.

Beneficiaries

This project is to help financially anyone with idle river break acres. Also boost the economy of Gregory County and the State of South Dakota. 22 people attended the field days and about 50 people attended the session on ginseng at a conference. All of those people benefitted from hearing about growing ginseng and learning from my project. Many of them have indicated an interest in growing ginseng themselves. The people at the field days and conferences ranged were potential producers, horticulturists, foresters, Extension personnel, NRCS folks and other resource providers.

Lessons Learned

2011 was a difficult year for my partners. The funding was eliminated for the RC&D and the Extension Service in South Dakota underwent a major re-organization so that there are no longer county offices. Many of those folks are the ones who offered planning, advice and handled the requests for information for this project. Because those positions were eliminated, we are unable to collect the data about how many requests were received for information on ginseng and hazelnuts. These were also the folks that were instrumental in hosting the field days and planning the workshop where I spoke.

Additional Information

Get more help. You have to stick your neck out and take a risk. We need to offer an alternative to other producers. Don't be afraid to use the resources that are out there – especially for new and beginning producers.

Project 2 – Final Report (previously submitted)

Title – Providing How-To Manuals to South Dakota Specialty Crop Producers Selling at Farmers Markets

Sub-Grantee – Capitol City Farmers Market

Contact Person – Julie Bolding – 605-224-4348 - juliebolding@yahoo.com

Project Summary

The South Dakota Department of Agriculture (SDDA) and the United States Department of Agriculture (USDA) are promoting specialty crop production and direct marketing of farm products through farmers markets. People with hobby farms or large acreages, or farmers who traditionally have produced commodities are interested, but how do they learn how others have successfully direct-marketed specialty crops?

The answer is that they are going to need an enormous amount of information to be profitable direct marketers of farm products. If they haven't raised vegetables, herbs, fruits or flowers commercially before, they need to learn how. They need to know which types and varieties can be grown in the semi-arid Midwest and the methods to protect them from weather, marauding critters, insects and diseases. They need to know what types of produce and flowers are the most profitable, and what laws and regulations might apply. They would benefit from having thoughtful business plans. They have to learn how to display products attractively and to be successful in farmers markets. They need liability insurance and to purchase seeds, nursery stock and equipment. They may need to build coolers or hoop houses.

The Internet is a convenient source of free information through the USDA Agricultural Marketing Service Web site and various extension service Web sites. Often, though, the information is piecemeal, such as an article on raising asparagus in South Dakota, or not relevant to someone operating in South Dakota's climate. This applicant could not find any free, online, up-to-date and comprehensive guides to starting a specialty crop operation that would sell at farmers markets in our region.

The applicant also found that these types of comprehensive manuals were generally not available at South Dakota public libraries. There was not a single book on the topic in the Rawlins Municipal Library in Pierre, the city where our market is located.

Project Approach

Our primary goal was to provide the Growing for Market newsletter and a set of books dealing with growing specialty crops to 12 South Dakota libraries in the following communities: Aberdeen, Gettysburg, Highmore, Huron, Miller, Mitchell, Onida, Pierre, Presho, Rapid City, Sioux Falls and Watertown. We selected Highmore, Onida and Pierre because our market already has vendors from those cities, and then Gettysburg and Presho because those cities are close enough to have potential vendors for the Capital City Farmers Market. The other cities were chosen because they are population centers in South Dakota.

During the period Jan. 13, 2010-Sept. 30, 2010, the following titles of how-to manuals and one farmers market newsletter were purchased on behalf of this project:

1. Specialty Cut Flowers: the Production of Annuals, Perennials, Bulbs and Woody Plants for Fresh and Dried Cut Flowers 18 copies
2. Market Farming Success 18 copies
3. The Flower Farmer 18 copies
4. Hoophouse Handbook 18 copies
5. Growing and Selling Fresh-Cut Herbs 17 copies
6. Sharing the Harvest 17 copies
7. The Small Commercial Garden 18 copies
8. The Winter Harvest Handbook 17 copies
9. Sell Your Specialty Food 17 copies
10. Growing for Market newsletter 17 subs.
11. The Organic Farmer's Business Handbook 2 copies
12. The Backyard Berry Book 2 copies
13. The Backyard Orchardist 1 copy

One copy each of the first 10 titles was sent to the public libraries in the following communities: Aberdeen, Gettysburg, Highmore, Huron, Miller, Mitchell, Onida, Pierre, Presho, Rapid City, Sioux Falls and Watertown. There are five exceptions to this: Siouxland Libraries of Sioux Falls already had Sharing the Harvest, the Aberdeen library already had Sell Your Specialty Food, and the Rapid City Public Library already had Growing and Selling Fresh-Cut Herbs and The Winter Harvest Handbook. That's why I ordered 17 copies of those instead of 18. Also, the Rapid City Public Library did not get the newsletter, because it does not accept gift periodical subscriptions. The six extension agents also received subscriptions to the newsletter and one copy each of the first nine titles.

Because I was able to purchase the basic set described in the grant proposal at a discount from the Growing for Market Web site, I added 17 copies of The Winter Harvest Handbook to the collection. I thought this would be valuable in helping specialty crop producers extend the short South Dakota growing season. The remainder of the grant was spent on two copies of The Organic Farmer's Business Handbook, two copies of The Backyard Berry Book and one copy of The Backyard Orchardist.

The Pierre library received one copy each of the The Organic Farmer's Business Handbook, The Backyard Berry Book and The Backyard Orchardist.

The other copy of The Organic Farmer's Business Handbook and the other copy of The Backyard Berry Book went to Rhoda Burrows.

Project Publicity

To publicize the availability of the new books and newsletter, each library received a fill-in-the-blanks press release announcing the addition of these how-to manuals to their collections, plus descriptions of each title. I saw or heard about articles about the gifts that ran in the Pierre, Huron, Watertown and Onida newspapers. The Pierre article is included as Attachment 1 and the Watertown news brief is Attachment 2.

The Siouxland Libraries—which includes the Sioux Falls library, its branches and libraries in nearby small towns—made the most impressive publicity efforts, and consequently had the best circulation of all the libraries, a total of 87 uses of just 9 books. Demand for The Winter Harvest Handbook was so great that Siouxland purchased a second copy.

The collection was first displayed at the Crooks branch and then out to several of Siouxland's other branches. Pictures of the books were posted on Facebook and Siouxland's blog, with links to the online catalog, so that customers could request the books directly. The books were on Siouxland's "What's New" page of the online catalog for four months, and after the first week or so, all were checked out and most had holds. Finally, the two librarians discussed the collection in a spot on their local public-access television program. A copy of the script is attached as Attachment 3.

"Thank you so much for including us in your grant," wrote Carla Williams, the librarian who spearheaded the publicity efforts, in her letter providing circulation statistics. "It was a wonderful idea, and I'm sure these books will be popular for several years to come."

The Gettysburg librarian reported that three individuals checked out the entire collection. One of the three then checked out the entire collection a second time.

The Huron Public Library sent out a press release announcing the collection that was published in the Huron newspaper. The books were then displayed with other books from that library's collection of farming and marketing resources. A copy of the article was not submitted.

As their publicity efforts, the Onida, Pierre and Miller libraries separately gathered a local farmers market vendor or vendors for a picture for the local paper. The Miller and Pierre libraries then featured the collection in a display for the spring and summer.

Aberdeen, Mitchell, Presho and Rapid City did not report any publicity efforts.

Watertown used the press release form, and the Watertown Public Opinion published a news brief on the collection as mentioned above.

Presho did not provide circulation figures. The librarian reported "there was not a big demand for the books."

I also have provided a press release in September 2011 to Rhoda Burrows to send out to her farmers market e-mail list, so that those folks know these collections continue to be available to them. A copy of that press release is included as Attachment 4.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
	Provide a set of books and newsletter to 12 SD libraries, SDDA, and five SDSU Extension personnel	12 libraries, SDDA, and five SDSU Extension personnel received a set of books and a the newsletter
	106 books provided to libraries	180 books were provided to the libraries, SDDA and SDSU Extension
	Each title checked out 4 times	Each title was checked out between 16 – 47 times. Titles were checked out 2.5 times on average at each library
	Extension educators to monitor use of books they receive	

At the 12 libraries, the books were used a reported 312 times from when they were delivered in the spring of 2011 through August 2011.

Below the books are listed by the number of times each was checked out:

1. The Winter Harvest Handbook, 55 check-outs
2. The Hoophouse Handbook, 47 check-outs
3. The Small Commercial Garden, 44 check-outs
4. Growing and Selling Fresh-Cut Herbs, 36 check-outs
5. Market Farming Success, 30 check-outs
6. Sell Your Specialty Food, 29 check-outs
7. The Flower Farmer, 25 check-outs
8. Specialty Cut Flowers, 21 check-outs
9. Sharing the Harvest, 16 check-outs
10. The Backyard Orchardist, 4 checkouts (only 1 copy in Pierre)
11. The Organic Farmer's Business Handbook, 3 check-outs (only 1 copy in Pierre)
12. The Backyard Berry Book, 2 check-outs (only 1 copy in Pierre)

Even though this is the end of the grant period, these libraries will likely keep these books in their collections for many years, and patrons will continue to make use of them. The larger libraries use the South Dakota Library Network (SDLN) as their online public-access catalog, so occasional checks can be made as to whether the books are checked out or not.

The libraries weren't asked to keep circulation figures for the Growing for Market newsletter, since current issues are usually displayed in a periodical area and cannot be checked out. Patrons usually just sit and read these.

Some libraries did check them out, though. Onida reported 36 uses of issues. Pierre's issues showed signs of wear, and this grant recipient checked out most of the issues to read at home.

Use by the South Dakota State University Extension Educators

Use by the five Extension agents and Bob Weyrich, the value-added agriculture staffer at the S.D. Dept. of Agriculture in Pierre, was spotty, due in part to the changes in the Extension Service in 2011 and Weyrich leaving SDDA for other employment.

Jerry Mills, the now-retired Extension agent in Aberdeen, found the collection “very, very useful.” Four of his customers checked out the hoop house book and came back “with smiles on their faces,” saying the books provided the information they were looking for. Another two customers checked out Market Farming Success.

Bob Weyrich said he never had a chance to go through the collection. I have contacted Ty Eschenbaum, his replacement, and advised him to give the collection some good use.

Chris Zdorovtsov in Sioux Falls reports that she’s used items in the collection about 10 times.

In Yankton, Cynthia Bergman said she hoped to use them as references and visual aids in the future, but hadn’t made use of them recently.

Rhoda Burrows in Rapid City said she generally takes the collection to meetings where vendors will be present, including master gardener training, so that people can look at them and decide if they want copies of their own.

No response from Ricky Abrahamson.

Beneficiaries

This project equipped 12 communities and six agriculture-promoting professionals with some of the highest-quality information resources available to start and support farmers markets in South Dakota. As mentioned in the initial grant application, helpful books on raising specialty crops and participating in farmers markets were rare in South Dakota before this grant provided them.

As mentioned above, the 163 books were used 312 times by residents in urban and rural South Dakota, and, because these collections will remain in the libraries for years, many more people are likely to benefit. Farmers market managers can cultivate new vendors by recommending they read these books to learn how to garden commercially.

The materials also probably benefitted people who simply like to garden and were interested in new plant varieties or growing techniques. Since gardening is the gateway to interest in farmers market participation, this is a good thing, too.

Finally, it introduced many people to the Growing for Market newsletter as a source of news about farmers market trends. Maybe some considered getting an individual subscription.

Lessons Learned

This project went very well with no problems or delays. We were even able to purchase an additional book for the collection. There are some books that were not checked out as much as this grantee had expected.

Almost across the board, interest in the books on raising flowers was low. To me, this seems like an opportunity missed. There is a hole for South Dakota value-added agriculture to fill with regard to garden seed retailing. Perhaps someone could target the semi-arid region of U.S. and both develop and market plants that can thrive here, as well as promote pioneer-era heirloom varieties.

Cold weather growing is an area where products and techniques are still evolving, and South Dakotans' interest seems high. Resource providers should monitor technological developments and provide information and support for folks trying to extend the South Dakota growing season.

Herbs, too, seem to be an unexplored specialty crop in South Dakota. The single book on the topic was checked out more than the flower books were used.

The SDSU Briggs Library Collection of Agricultural Information Resources

This extensive collection deserves to be publicized and promoted to specialty crop producers by Extension Service agents. Most of these resources can be loaned by the SDSU library to patrons of local libraries. Farmers just need to know the resources are available and to be advised to ask their local librarian to request them by interlibrary loan.

Additional Information

Article from Pierre *Capital Journal*, April 19, 2011

4/19/2010

Rawlins Library adds collection of books about selling goods at farmers markets

CAPITAL JOURNAL STAFF

PIERRE — Rawlins Library has information to help people be profitable and efficient from the fruits of their labor.

The library was selected by the Capital City Farmers Market to receive a collection of some of the newest books available on raising vegetables, flowers, fruit and other agricultural products to sell at farmers markets.

"We are glad to add these books to our collection because they will be extremely helpful to those already raising agricultural products and also to those who would like to do so and just need some useful, timely information. The books include a variety of titles and have step-by-step instructions as well as excellent illustrations," said library director Beverly Lewis.

She also pointed out specific titles that include business plans for beginning growers.

The titles in this new collection include "Growing and Selling Fresh-Cut Herbs," by Sandie Shores; "The Organic Farmer's Business



Courtesy photo

Lindy Geraets (left), member of the Capital City Farmers Market and Rawlins Library Director Beverly Lewis stand by the library's collection of new gardening and agricultural books.

Handbook: a Complete Guide to Managing Finances, Crops and Staff — and Making a Profit," by Richard

Wiswall; "The Small Commercial Garden: How to Make \$10,000 a Year in Your Backyard," by Dan

Haakenson; and two titles by Lynn Byczynski: "Market Farming Success" and "The Flower Farmer: an Organic Grower's Guide to Raising and Selling Cut Flowers."

In addition to the books, the library received a one-year subscription to *Growing for Market*, a newsletter with practical articles about food and flower growing, selling at farmers markets, community-supported agriculture and selling to restaurants, supermarkets and florists.

The Capital City Farmers Market received a grant from the State Department of Agriculture under the Specialty Crop Block Grant Program of the Agricultural Marketing Service, U.S. Department of Agriculture, to provide this collection to the library.

The people at the Pierre market want to encourage central South Dakota residents to use these materials to start their own homegrown produce businesses and to join the Pierre market.

Anyone interested in selling at the Capital City Farmers Market can contact Julie Bolding at 605-224-4348 or juliebolding@yahoo.com.

Library to house books on growing food

The Watertown Regional Library is one of 12 state libraries selected by the S.D. Department of Agriculture to receive a collection of books on raising vegetables, flowers, fruit and other agricultural products to sell at farmers markets.

Along with the books comes a one-year subscription to Growing for Market, a newsletter with articles about food and flower growing, selling at farmers markets, community supported agriculture, and selling to restaurants, supermarkets and florists.

The books are:

The Small Commercial Garden: How to Make \$10,000 a Year in your Backyard.

Specialty Cut Flowers: The Production of Annuals, Perennials, Bulbs and Woody Plants for Fresh and Dried Cut Flowers.

Market Farming Success.

The Flower Farmer: An Organic Grower's Guide to Raising and Selling Cut Flowers.

The Hoophouse Handbook: Growing Produce and Flowers in Hoophouses and High Tunnels.

Growing and Selling Fresh-Cut Herbs.

Sell Your Specialty Food: Market, Distribute and Profit from Your Kitchen Creation.

The Winter Harvest Handbook: Year-round Vegetable Production using Deep Organic Techniques and Unheated Greenhouses.

Share the Harvest: a Citizen's Guide to Community Supported Agriculture.

Growing for Market and the book collection were provided by the State Department of Agriculture using federal funds under the Specialty Crop Block Grant Program of the Agricultural Marketing Service, U.S. Department of Agriculture.

WATERTOWN PUBLIC OPINION Feb. 23, 2010

Article from *Watertown Public Opinion*, Feb. 23, 2010

Siouxland Libraries public-access channel television program script

Commercial gardening segment

Carla: Hello! Krystal and I are just looking over our vegetable delivery for the week. This year we, and several others at the library, have been getting deliveries of vegetables from an organic farmer every Thursday. It's like Christmas once a week!

Krystal: That's right. This week we have ----- (Just go through the box and show what's in it.)

Carla: With all the emphasis on eating locally, and organically, this sort of business is bound to be successful. And the fact that we don't have to get up early on a Saturday morning to go to the farmer's market is a big selling point for us too!

Last spring we got a collection of books through a grant from the South Dakota Department of Agriculture to encourage just this kind of thing, and we'd like to show some of them to you today in case any of you would like to plan this kind of business for yourselves.

Krystal: That's right, Carla. The cool days we're having now remind us that winter is not far off. What better time to plan your new gardening business for next summer? (In whatever words you want! This is only a suggested direction for the flow of the segment.)

Carla: O.K., Krystal – let's see what you have!

Krystal: (Proceed to show some of the books and tell about them individually. I will throw a question in once in a while just to keep it conversational.)

Carla: Since these books have been so popular this spring and summer, we've added even more to our collection along the same lines as these. Let us show you how to find other books like these in the catalog.

Krystal: (Show how to link to other books from *Small Commercial Gardens*.)

Carla: And since we have all these veggies coming at us every week, Krystal and I have both found that it's keeping us on our toes in expanding our vegetable repertoire. Krystal's even made a beet chocolate cake! We have lots of vegetable cookbooks in our collections, so along with the rest of these books that we're going to link to on our website at siouxlandlib.org, we've each chosen one of our favorite veggie cookbooks.

Krystal: (Show one veggie cookbook you like.)

Carla: (I think I'll talk about *The New Vegetarian Epicure*.)

Look for the list on our website at siouxlandlib.org or on Facebook or our blog.

Thanks for all the information Krystal! Happy cooking tonight! (to camera:) We hope you've enjoyed hearing about this too, and that maybe some of you will be inspired to start your garden business for next summer!

Press release sent out via SDSU Extension Service farmers market e-mail listserve on 10/3/11

With our first frosts behind us and the end of harvest in sight, it's time to think about making next year even better.

A new vegetable, fruit or flower could delight your customers and increase your sales. The new state law allowing homemade baked goods and pickles, salsas, jams and jellies provides opportunities for vendors and markets to add value to their products and attract new customers.

A collection of how-to books full of ideas for farmers market vendors is now available at libraries in Aberdeen, Gettysburg, Highmore, Huron, Miller, Mitchell, Onida, Pierre, Presho, Rapid City, Sioux Falls and Watertown. Here's the list:

1. The Small Commercial Garden: How to Make \$10,000 a Year in Your Backyard, 2nd ed., 1998, Dan Haakenson. The author's operation was in Bismarck, N.D., and his growing information for carrots, green beans, cabbage, cucumbers, onions, peas, peppers and tomatoes is detailed and practical. Includes guidance on hoophouses and greenhouses. His military background means the focus is on efficient use of labor and materials.
2. Specialty Cut Flowers: the Production of Annuals, Perennials, Bulbs and Woody Plants for Fresh and Dried Cut Flowers, 2003, 2nd ed., rev. & enl., 586 p., A.M. Armitage. Considered by some to be the bible on raising flowers.
3. Market Farming Success, 2006, 138 p., Lynn Byczynski. Another excellent book on starting a farmers market produce stand. Byczynski edits the Growing for Market newsletter from Kansas and summarizes what has been learned about direct marketing by farmers throughout the United States and Canada.
4. The Flower Farmer: an Organic Grower's Guide to Raising and Selling Cut Flowers, 2008 rev. & expanded, p. 266, Lynn Byczynski. The organic perspective and a briefer book than no. 2.
5. The Hoophouse Handbook: Growing Produce and Flowers in Hoophouses and High Tunnels, 2003, 57 p., Lynn Byczynski. Offers valuable information about extending the short growing season in the Midwest.
6. Growing and Selling Fresh-Cut Herbs, 2003, 483 p., Sandie Shores. Praised as "the best how-to book for commercial production of culinary herbs."
7. Sell Your Specialty Food: Market, Distribute and Profit from Your Kitchen Creation, 2009, 303 p., Stephen F. Hall.
8. The Winter Harvest Handbook: Year-Round Vegetable Production Using Deep-Organic Techniques and Unheated Greenhouses, 2009, 256 p., Eliot Coleman. Coleman outlines a system in which cold-tolerant vegetables are grown in the soil under a low tunnel, inside a high tunnel. The second layer of protection is crucial to winter production in most parts of the U.S. and Canada. The book provides construction details for movable hoophouses, which can slide onto new ground in spring and fall to accommodate different crops. Includes many other technical recommendations, such as row cover weights, and vegetable varieties.
9. Share the Harvest: a Citizen's Guide to Community Supported Agriculture, rev. & expanded, 2007, Elizabeth Henderson and Robyn Van En. Many family farms now sell seasonal produce by subscription, that is, a package of fresh vegetables and fruit delivered weekly to customers. This book describes how community-supported agriculture works.
10. The Organic Farmer's Business Handbook: a Complete Guide to Managing Finances, Crops and Staff—and Making a Profit, 2009, 224 p., Richard Wiswall. This book got five stars from five of the six reviewers on amazon.com. One reviewer called it a "[g]reat book for beginner farmers and small business owners with little experience and accounting background. Easy read, lots of great ideas based on tried experiences." Includes a CD with self-calculating spreadsheets for creating crop budgets. [Only the Pierre, Brookings, SDSU and Huron libraries have this, but you might be able to get it through your local library by interlibrary loan.]
11. The BackYard Berry Book, 1995, 284 p., Stella Otto. Has been called a "great resource for small-scale, commercial or home berry growers." [Available at Pierre, Vermillion and Yankton libraries]

12. The BackYard Orchardist, 1993, 250 p., Stella Otto. Considered the best resource for beginning tree fruit growers. [Available in Madison, Pierre and Vermillion libraries]

As always, the Growing for Market newsletter (www.growingformarket.com) is the best source of farmers market news on an ongoing basis. Most of the libraries received a one-year subscription to this title along with the books. However, some may not be continuing the subscription. Check with your librarian, or get a subscription of your own. It's only \$33 for 10 issues.

The books were distributed by the Capital City Farmers Market of Pierre, which received a grant from the state Department of Agriculture under the Specialty Crop Block Grant Program of the Agricultural Marketing Service, U.S. Department of Agriculture, for this public information project.

Project 3 – Final Report (previously submitted)

Title – Two Tools to Increase Consumer Spending on South Dakota Grown Specialty Products: the South Dakota Local Foods Directory and the South Dakota Online Food Coop

Sub-Grantee – Dakota Rural Action

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

Project Summary

This project addressed the problem of increasing visibility and sales for South Dakota food producers, specifically those producing specialty crops such as vegetables, fruits, tree nuts, and dried and processed vegetables and fruits, and possibly nursery crops such as vegetable starts in the spring. Increasing consumer awareness of, accessibility to, and purchases of locally grown specialty products, even by a small percentage, has the impact of increasing income for producers significantly.

Direct sales are an important marketing tool for vegetable and fruit producers. In one study of organic vegetable producers, 60% of growers who farm ten acres or less use direct-to-consumer markets, rather than using brokers, packers/shippers, or processors. (Source: Greene, C., C. Demitri, N. Richman. 2001. Organic Marketing Features Fresh Foods and Direct Exchange, Organic Marketing.)

This project continues DRA's efforts to promote South Dakota grown foods among our state's food consumers by expanding the South Dakota Local Foods Directory and distributing to an increasing audience statewide. The success of our work thus far has built consumer demand in east-central South Dakota for greater year-round access to locally produced foods. Because of this demonstrated demand, DRA is now working to implement a new on-line marketing cooperative that will increase year-round sales for local food producers. The South Dakota Local Food Directory was previously funded by the SCBGP program.

Project Approach

Local Foods Directory

In April 2010 we completed the third edition of our Local Food Directory with 105 listings which released on Earth Day, April 22, 2010. We printed 4,800 copies of the Local Food Directory.

For the Local Foods Directory, we did outreach through various means. We sent out a press release to news outlets all over the state, we queried our membership for their own information, we searched various websites for South Dakota producers and contacted them, we listed our contact information in the directory for people to reach us to be included in future editions, we

offered information on the DRA website, and word of mouth through our membership proved to be very helpful. We promoted expanding consumer use of the directory by holding a release banquet during our Earth Day events in Brookings, we unveiled the new edition at our annual Earth Day Family Days in Brookings and Rapid City, we included the directory in tabling events such as the Plain Green Conference, the Watertown Farm Show, etc., we included information about our directory in our newsletter, we gave copies for distribution to many businesses and extension offices across the state, we link the directory to our DRA and Co-op websites, and we offer the online version of the directory.

There are currently 91 producers listed in the directory. 49 of them (54%) are specialty crop producers representing crops such as flowers, melons, herbs, grapes, garlic, tomatoes, pumpkins, sweet corn, leafy greens, eggplant, peppers, onions, potatoes, radishes, carrots, zucchini, and squash.

Online Food Co-op

To recruit producers for the online food coop, we contacted producers in the DRA membership, contacted producers in the Local Food Directory, ran press releases, held informational sessions, distributed brochures, listed an ad in the Local Food Directory, hung posters in and around Brookings and Sioux Falls, ran ads in our newsletter, distributed information at all tabling events including the Plain Green Conference and the Watertown Farm Show, distributed information at our Earth Day events, listed information on our DRA and Local Food Directory websites, and listed information on Facebook and Twitter.

We also offered two education sessions regarding the online food co-op. These sessions were taught by a DRA member who is also a producer. The education classes were announced through our website, press releases, our newsletter, and an alert sent to members of DRA and producers listed in the Local Food Directory. We have also developed a "How-To Guide" to help people use the website.

In advance of launching the online food coop, we held a public meeting in Brookings with Bob Waldrop, President and founder of the Oklahoma Food Co-op on September 15, 2009. It was attended by 23 interested producer and consumer members, including 6 members of the SD food coop committee. Bob also met separately with the food coop committee members, to provide more in-depth consulting and discussion.

The Co-op launch opened on May 1, 2010 with 28 producers offering over 230 locally produced products for members to purchase. Fruits and vegetables make up a large percentage of sales. From May to November, the co-op saw sales of items such as lettuce, shallots, onions, peas, beans, carrots, beets, tomatoes, potatoes, okra, raspberries, rhubarb, apples, eggplant, mulberries, peppers, squash, zucchini, cucumbers, pumpkins, gourds, herbs, and live fruit and vegetable plants. Processed fruits and vegetables, by means of pies, jams, jellies, granola, pesto and more, also make up a large portion of sales.

Original collection and drop off points for the coop were in Brookings and Sioux Falls. In 2011, additional sites were added in western South Dakota including Rapid City and Spearfish.

The coop is still young but continues to see growth. There are currently 130 members, 31 producers (12 offering specialty crops or 39%) and total sales of \$35,141.53. Further analysis shows the coop has sold \$2,093.51 in specialty crops and products made from specialty crops. The coop currently has 392 products listed this month.

The coop steering committee meets monthly to plan for the needs of that month's transactions and to plan for the future activities of the coop.

SCBGP funds were used for 31% of the expenses for these projects. The proportion (39% - 54%) of specialty crop producers is greater than the amount of SCBGP funding in relation to overall funding for this project.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Increase consumer and awareness and support for locally grown specialty crops in South Dakota	120 specialty crop producers will be listed in the SD Local Foods Directory	49 specialty crop producers are currently listed in the SD Local Foods Directory (54% of all producers listed). This is an increase of 3 specialty crop producers from the 2009 directory.
	5,000 SD Local Food Directories will be printed and distributed by Dec. 2010	4,800 copies of the SD Local Food Directory were printed and almost all have been distributed
Create marketing infrastructures that increase local markets for South Dakota specialty crop producers	5 specialty crop producers join the online SD Food Cooperative	12 specialty crop producers are listed on the online SD Food Cooperative
	20 cooperative members by the Dec 2010	130 members in Dec 2011
	400 visits per month to the online SD Food Cooperative	350 visits per month to the online SD Food Cooperative

Beneficiaries

Specialty crop producers and their customers are the direct beneficiaries of this grant. 49 specialty crop producers were listed in the 2010 SD Local Foods Directory. These producers have benefitted by getting their farm name and products/services in front of the nearly 4,800 consumers who have picked up a copy of the directory, indicating an interest in local foods. We have distributed nearly all of the directories, so nearly 4,800 consumers have directly benefitted from this project by learning about food producers in their area that they can buy fruit and vegetables from.

12 specialty crop producers have listed their fruits and vegetables on the online SD Food Cooperative, which has led to additional sales for these producers. 130 members have joined the cooperative and purchased fruits and vegetables or other specialty crops from the 12 specialty crop producer members.

However the entire local foods industry in South Dakota also benefits from these tools being in place.

Lessons Learned

These two tools have been an important part of the growth of the local foods industry. The Local Foods Directory has opened the door for many new producers to reach out to consumers

and the SD Local Foods Cooperative has offered an easy way for those new specialty crop producers to market their products to a diverse and growing group of customers.

Over the past two we've seen the orders of specialty crops increase on the cooperative as more growers have gotten involved. However, we find the coop immediately benefits other types of local foods producers. Challenges faced by specialty crop producers include:

- The monthly order cycle makes it hard for specialty crop growers to predict at the beginning of the month what will be available later at the delivery date. However, consumers have been supportive of the grab bag approach to buying these products; giving the producers needed flexibility to deliver what is ready on the delivery date.
- The perishability of specialty crops also causes problems, however producers are exploring ways to add value to their crop and preserve it for sale later.
- Our short growing season means there are months when specialty crops are not available on the coop. Many producers are exploring season extension which has increased the time these products are available to consumers.

Additional Information

Website - www.sdlocalfood.org

Project 4 – Final Report

Title – From Sanborn County Fields to Your Table

Sub-Grantee – Woonsocket FFA Chapter

Contact Person – Malisa Niles – 605-796-4431 – malisa.niles@k12.sd.us

Project Summary

In 2010, Watermelon and muskmelon production in our county supplied three wholesale distributors, 33 farmers market stands, and 21 retail markets in the 5 state region of South Dakota, Iowa, North Dakota, Wyoming, and Minnesota. The current food market demands a high quality, fresh locally produced product. At the inception of this project, there was no central retail distributor, no promotion for the local produce, and no educational program to promote the quality and health benefits of our local specialty crop. The harvesting, processing, and packaging aspect of watermelons and muskmelons was very limited due to the number of distributors, availability of retail markets, and the relatively short shelf life of the melons (5 days from field to consumption). There was very little research on determining the sugar content (ripening) of melons. Another limiting factor was that the melon operations are small scale family owner operations. They do not have the facilities to experiment with storage, work with extending the shelf life, and are not organized as a group to create a marketing or education plan.

Unfortunately, this project was terminated before all of the work and all of the measurable outcomes could be achieved.

Project Approach

The Woonsocket FFA surveyed area growers on their market niches and the various facets they use to supply those companies.

One of our objectives was to Educate 5 high school students on how to survey the public, and communicate with producers to create a marketing plan. Seven of the Woonsocket FFA members surveyed growers, and determined viable markets for production. They created a

marketing plan that was presented to area growers and at the district and state level FFA Leadership Career Development Events. The marketing plan included a brochure on food cooperatives. Another brochure was created on Sanborn County melons.

The students also created a draft of a coloring book on melon production and the health benefits of including melons in your diet. However, the project was terminated before the coloring book could be printed and distributed.

As part of the research for the marketing plan, students surveyed the growers about their interest in forming a market hub or cooperative. We met with extreme reluctance in forming a melon cooperative by 58% of the melon growers in our area. We discovered while on paper it was a good concept, the growers were determined to remain independent in their operations.

We were planning to attend the National Watermelon Convention in 2010. After investigating the conference, we learned the conference was more a business affair and social event rather than a marketing and educational event. Based on that information, we decided not to attend the convention.

Students of the agricultural processing class performed 5 different experiments to test various hypotheses on how to extend the life of a melon. The group determined dry refrigeration was the best form of storage.

We attempted to make watermelon wine to create a value-added market for watermelon, but due to the wet weather the watermelon sugar content was too low for quality production. The wine was bitter.

Communication between the growers and the public increased 15% during the first stages of the project.

All of the work accomplished under the subgrant was accomplished during the 2010-2011 school year. After the 2011 school year, the original PI left employment with the Woonsocket FFA Chapter.

Goals and Outcomes Achieved

One of the outcomes at the inception of this project was to increase market demand for watermelon by forming a cooperative for distribution of the watermelon. What we discovered was that while on paper it was a good concept, 58% of the growers were determined to remain independent in their operations.

We also attempted to make watermelon wine to create a value added product from watermelon but the attempt to make wine from watermelons was not successful.

One of our objectives was to Educate 5 high school students on how to survey the public, and communicate with producers to create a marketing plan. Seven of the Woonsocket FFA members surveyed growers, and determined viable markets for production. They created a marketing plan that was presented to area growers and at the district and state level FFA Leadership Career Development Events.

During the course of this project, we were able to increase communication between growers and consumers by 15%.

Beneficiaries

FFA students benefitted from this project by creating a marketing plan for watermelon.

Lessons Learned

We met with extreme reluctance in forming a melon cooperative by 58% of the melon growers in our area. We discovered while on paper it was a good concept, the growers were determined to remain independent in their operations.

We were planning to attend the National Watermelon Convention. After investigating the conference, we learned the conference was more a business affair and social event. We had been looking forward to marketing sessions and growers' workshops.

The PI for the project left employment during the course of this project. SDDA contacted the current FFA Chapter advisor who had no knowledge of this project and was not responsive to completing the remaining activities. Unfortunately, this project was terminated before all of the work and all of the measurable outcomes could be achieved. SDDA tried contacting the new FFA chapter advisor but had little success.

Project 5 – Final Report (previously submitted)

Title – Growing and Processing Hops in South Dakota

Sub-Grantee – Dakota Hops

Contact Person – Steve Polley – 605-642-7146

Project Summary

The initial purpose of this project was to move towards the processing functions of designing and manufacture hop harvesting, drying and packaging equipment.

Phase One of our study determined whether hops would grow in western South Dakota for small farm production. After three years of testing, we believe the answer is yes. But, we had no way to harvest the crop other than by hand-picking.

The challenge becomes developing efficient and cost effective processes and equipment for small scale hop harvesting, drying and packaging. It takes approximately 15 to 45 minutes for one hop plant to be manually picked; this becomes an overwhelming task when considering 2, 5 or 10 acres. Existing drying and packaging equipment will require retooling to adapt to the unique structure of the hop and the precise characteristics brewmasters demand of the end product.

Project Approach

Harvester

In September 2009 students from the Mechanical Engineering Department, South Dakota School of Mines and Technology began designing and construction of a hop harvester and hop dryer. Both units were completed in May 2010 but not tested until harvest in August at Bob Fuchs hop field in Rapid City.

At that time it was determined that the teeth on the stripping rollers were not adequate to remove hops from the vines and a different design would be necessary.

The harvester then went to a local welding shop in Belle Fourche, South Dakota where we added special fingers to the drums. It was completed for the 2011 hop harvest.

The harvester will process a hop vine in about 1-2 minutes at approximately 90-95% efficiency. Sometimes we run a vine through a second time. Because the harvester processes thinner vines better than bulky vines, we plan to make adjustments to our growing practices and string up fewer vines per plant on the trellises.

Dryer

The dryer is also completed and stored at the hop site but was not used because we froze all out hops. We checked with other growers, but they did not have a use for it this year, either. Although it was not used this year, there is a possibility that it will be used during the 2012 harvest by Dakota Hops, LLC for research applications or by other growers in their hop operations.

Processing/Packaging

Our packaging process produces hops in 2 ounce, 4 ounce and 8 ounce packages for use by home brewers and nano-breweries. Some of the hops are packaged as whole hops and the others are ground and placed in molds such as “hockey pucks” (2 oz) and “slabs” (4 & 8 oz) and frozen. We do not dry hops for preservation except for research applications.

The current status of preserving and utilizing brewing hops as “hockey pucks” takes the following form:

- Immediately after harvest the hop cones are identified by variety, placed in laundry bags, labeled and frozen in a conventional freezer.
- The frozen cones are processed in a commercial meat grinder.
- The ground hops are then placed in molds of various shapes which now includes: 2 ounce – 3 inch diameter “hockey pucks” for use by home brewers; 4 ounce -- 8 ounce “slabs” that measure 5” x 8” x 0.5” thick for brewery use; 2 ounce square “biskets” for hops obtained from Idaho.
- The molded hops are then frozen – either conventionally or cryogenically.
- The frozen molded hops are individually vacuum sealed.
- The package hops are stored in a conventional freezer.

The process of keeping the hops frozen from harvest through processing, storage, transportation to final use by the craft brewer formulates our position that freezing hops, rather than drying, provides a superior brewing hop. Our position is likewise supported by research titled Hop Freezing Investigations, by Ernest H. Wigand and D.E. Bullis, 1944, Oregon State University --- Corvallis.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Provide quality, fresh hops to brewers		
Provide knowledge and resources for increased		

production and processing in our region		
	Reduce harvesting time by 75% by designing and manufacturing a small hops picker	Reduced harvesting time by at least 86% by using a mechanical picker.
	Build an accessible and affordable drying unit	Drying unit is completed.
	Market whole leaf hops in packages from 2 oz to 11 pounds	Hops are currently processed in 2-, 4-, or 8-oz packages

Beneficiaries

We are currently helping the following three individuals plan and establish hop operations. These hop operations are located both in western and eastern South Dakota.

We are working with two new nano-breweries in Custer, South Dakota (2 barrel system) and Reno, Nevada (3 barrel system) by providing frozen hops for use in their brewing programs.

We are also working with Eagle Sales of the Black Hills, Inc. (Budweiser distributor), Rapid City, South Dakota in establishing a small hop yard and using frozen hops in their brewing system.

The potential economic impact of this project is unknown at this time.

Lessons Learned

We are continually looking for ways to improve our processes and ensure the quality of our hops product. This involves much more expensive research than we had originally anticipated.

We still need a sorter that separates the hop cones from the leaves. We built a manual device out of chicken wire that works but needs more improvement for the 2012 harvest.

Additional Information

Black Hills State University has been a very willing partner in our research. At one point four of the five chemists in the chemistry department had something to do with our hop program. We are also working with the business department developing marketing plans, and with the chief of research, with a blind tasting study we hope to implement in January 2012.

Project 6 – Final Report

Title – Production of Vitis Vinifera Grape Varieties in Cold Climates

Sub-Grantee – Chateau Sylvania Vineyard and Winery

Contact Person – Scott Overmyer – 605.794.9463 – scotto@chateausylvania.com

Project Summary

Currently, the world’s most popular grape varieties will not survive winters unprotected in northern climates. Those who wish to produce wine using these varieties must purchase these grapes or juice from warmer areas of the country. For those wineries that wish to make high-quality, competitive wines, it is difficult to locate grapes that are suitable for the rapidly evolving palates of consumers. We believe that providing high-quality, grapes of familiar varieties within the state is much preferred to the current situation. Further, we think that greater grape

production would be stimulated in northern states, allowing us to compete by avoiding transportation costs, and producing a greater variety of high-quality wines.

Project Approach

In 2010, we planted 200 Shiraz #7 vines, installed 4 - 300' 2-wire trellises with a high-wire cordon training system, and started an initial spray and nutrient program. We also poured a 6' X 8' slab for housing the geothermal equipment including storage and pressure relief tank as well as the manifold and pump for distribution of the geothermally heated (propylene glycol) liquid.

Over the winter of 2010-2011, we conducted baseline research to determine Shiraz's cold hardiness without any winter protection. We examined all of the Shiraz vines for bud damage and winter kill. This gave us baseline data into the cold hardiness of Shiraz grapes grown in this climate. We found that of the 200 Shiraz vines planted, 182 died and only 18 survived. In the Spring of 2011, we had to replant 182 Shiraz #7 vines, since all but 18 of the original vines died with no bud activity or possibility of salvage. This demonstrates our assertion that Shiraz #7 in specific, and *vitis vinifera* in general, will not grow unaided in South Dakota due to the cold climate. All other conditions (water, nutrients, weed control, etc.) were ideal.

We have experienced significant delays in completing the geothermal system. This would have been done in October 2011 before temperatures reach critical levels, but after the vines have hardened off for winter. We experienced unexpectedly warm in South Dakota and the vines didn't harden off until later in the fall. Then to add to the delays, in October 2011, the PI was unexpectedly sent to Kazakhstan for academic work and was unable to complete the remainder of the activities in this project.

Even though this project did not turn out as we had anticipated, we will be sharing the results of what we have learned with members of the SD Winegrowers Association. The information will be shared during direct communications with vineyard growers and at meetings of the SDWGA once the PI returns from his work in Kazakhstan.

Goals and Outcomes Achieved

By collecting our baseline data, we found that 91% of the vines died without adequate winter protection.

Another outcome was to reduce the amount of time it takes to protect the vines from cold-weather-related bud damage. Currently, it takes 40 hours per acre to tack and bury vines that are not cold hardy. However, we were not able to measure this outcome before the PI was sent out of the country.

See Lessons Learned section on why the measurable outcomes were not achieved.

Beneficiaries

We have actual evidence that Shiraz grapes will not grow in South Dakota, un-aided by cold weather treatments. While we still believe cold-weather treatments will improve the survival of these grapes, we were unable to prove it.

Of the 16 wineries currently operating in South Dakota, likely all would benefit from this project, if they found that it was possible to successfully grow, at reasonable cost, *vitis vinifera* grapes in climates such as South Dakota. If successful, this project could have a significant impact on the ability to economically grow European grape varieties in South Dakota. This would relieve

wineries in Northern locations from the need to purchase and ship grapes from other growers farther south, and from the obligation to utilize hybrid cold weather hardy varieties of vines that produce less-than-satisfactory wine. The potential economic impact extends not only to grape production, but also to the manufacturing and installation of our proposed cold weather protection devices.

Information from this project will be shared directly with members of the SD Winegrowers Association and other interested parties. The information will be shared during direct communications with vineyard growers and at meetings of the SDWGA once the PI returns from his work in Kazakhstan.

Lessons Learned

We have experienced significant delays in completing the geothermal system, as in October 2011, the PI was unexpectedly sent to Kazakhstan for academic work, and was unable to complete the work. We had intended to complete the work using a contractor, but were unable to find one to complete the work.

In retrospect, it might have been helpful to work with a team on this project so if one team member is unavailable, the work can move forward anyway.

Additional Information

N/A

Project 7 – Final Report

Title – Toil, Soil, Sun, and Fermentation: fruit of the vine, a new industry for SD

Sub-Grantee – South Dakota State Agriculture Museum

Contact Person – Carrie Van Buren – 605-688-6226 – carrie.vanburen@sdstate.edu

Project Summary

The purpose of this project was to create an exhibit that explained the agricultural history of grapevine origin, grape production, wine industry development and current grapevine improvements that support this new SD specialty agricultural product and industry.

The exhibit is important because it captures the history and provides public access to and an increased awareness of the place the new grape and wine industry holds in the SD agricultural landscape. It also provided marketing support for the industry and its associated SD specialty crop producers. The project is timely in that several wineries are well established, oral histories can still be gathered from former SDSU fruit breeders, and SDSU is actively involved in grapevine research.

Project Approach

The Agricultural Museum staff produced an exhibit script (short research paper) describing the development of the grape growing and wine industry in South Dakota. This paper along with a bibliography was sent to the exhibit design company. The research paper and bibliography was included in the museum's docent guide for the docents to study and become familiar with the exhibit. From there the design company and museum staff developed the exhibit's kiosk panels. During the planning and development stages, museum staff and the design company (consultant) performed both formative and remedial evaluations of the mockups and prototypes developed to produce a high-quality grape and wine exhibit. Museum staff worked with Anne Fennell in developing an oral history project with Ron Peterson. Mr. Peterson is a former SDSU

fruit breeder who preserved native grapevine stock before the Missouri River dams flooded v. riparia habitat.

A questionnaire was available alongside the exhibit for visitors to complete to gauge their knowledge and interest in South Dakota’s grape industry. An estimated 11,536 people viewed the exhibit and 28 questionnaires were completed.

The SDSU Horticulture, Landscape and Parks Department provided technical information for developing exhibit script and photographs used in the exhibit. One local grower provided artifact material that was briefly on display at the Ag Museum.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To develop a grape and winery exhibit that highlights the development of the farm wine industry and its role in economic development and promotion of specialty crops in SD		A three kiosk exhibit with interactive components was produced.
Capture the history of the industry development, including: history grape develop from the native grapes, activities of SD fruit breeders N.E. Hansen and R. Peterson, current varieties, farm winery entrepreneurs and the development of information and tools for the next generation of growers and producers.		An oral history with fruit breeder Ron Peterson was developed by Mac Harris and conducted by Anne Fennell. Mr. Peterson is a former SDSU fruit breeder who preserved native grapevine stock before the Missouri River dams flooded v. riparia habitat.
	3 educational programs – 2 for adults on wine and grapes and 1 for middle schools on grapes	Three OLLI classes were hosted by the SD Agricultural Heritage Museum and conducted by Anne Fennell. Each class had 12-15 participants. The exhibit was presented to school and adult tours conducted at the museum.
	Increase awareness of grape and wine industry via exit questionnaires	The exhibit raised an awareness among SD residents of a growing industry and informed museum guests from out of the region that there is a viable grape and wine industry in the Northern Great Plains.

28 questionnaires were completed. The most often heard comments from adults while the exhibit was at the Ag Museum were:

- “I didn’t know grapes could be grown in SD!”
- “SD has wineries?”
- “Beautiful pictures”
- “We used to make dandelion wine, plum wine....”

Results from the surveys showed that 35% of people could identify 3 varieties of wine grapes grown in South Dakota after viewing the exhibit; only 10% of people could name the native SD grape that is crossed with other varieties. Most people increased their knowledge about South Dakota viticulture after visiting the exhibit.

Beneficiaries

The exhibit benefits the SD horticulture and wine industries by providing information to residents and tourists about a new agricultural industry in the state. The immediate beneficiaries are the grape growers, wineries and the tourism industry. The exhibit will directly impact the producers whose products are showcased at wineries and will help direct individuals to viticulture resources developed by SDSU, CES, and AES. The SD Agricultural Heritage Museum benefits from this project because it connects the museum with commodity groups and agricultural specialty producers.

The exhibit provides the museum with a traveling exhibit that promotes the museum, as well as generate and increase awareness of the grape and wine industry in the state. The exhibit provides an added marketing and promotion tool to growers, wineries, and to the SDSU research programs involved with viticulture research.

Lessons Learned

The exhibit worked very well with adults. It is visually appealing and is informative without being dry and scholarly. This exhibit is not particularly kid friendly—starting with the topic, wine production is not a children’s topic. Children enjoyed flipping up the sandwich slices, but didn’t take time to do much beyond slamming the doors and spinning the wheels.

It was surprising how few people actually knew that grapes grow in SD, especially wild grapes, and that the Native Americans and early explorers used them as a food source. The one item that stood out on the exit surveys was that visitors did not understand the base stock for modern grape varieties came from native SD wild grapes. Overall, the reaction to the exhibit has been very positive. People who viewed it say they learned from it and thought the museum should do more exhibits, like this one, about other crops and livestock produced in the state. Another unexpected observation is the low level interest in the exhibit itself, especially from the growers and producers. During the planning and development stages of the exhibit, staff had difficulties collecting artifact material and information from the growers and wineries.

Additional Information



Exit questionnaire for visitors to fill out after viewing the exhibit.

Viticulture: Grapes & Wine in South Dakota Exhibit

Please take a few moments to answer some questions about the Viticulture exhibit. Your responses will help us improve the quality of our exhibits. There are questions on the reverse, too. Thank you!

(Circle the number that best describes your experience: 1 = lowest, 10 = highest)

Did you enjoy this exhibit?

1 2 3 4 5 6 7 8 9 10

Was the exhibit text easy to understand?

1 2 3 4 5 6 7 8 9 10

Was the lettering used in the exhibit text easy to read?

1 2 3 4 5 6 7 8 9 10

Did you find the interactive/hands-on of this exhibit interesting?

1 2 3 4 5 6 7 8 9 10

How much did you know about this exhibit subject **before** your visit?

1 2 3 4 5 6 7 8 9 10

How much did you know about this exhibit subject **after** your visit?

1 2 3 4 5 6 7 8 9 10

See questions on reverse

Specific questions about the Viticulture exhibit

1) Name 3 varieties of wine grapes produced in SD?

2) Where in South Dakota can you find wild grapes?

3) When was the South Dakota Farm Winery Bill passed?

4) What is the name of the native SD grape that is crossed with other varieties to produce the hardy SD wine & table grapes?

Please include any other comments here:

Thank you for your responses! Please place the completed form in the box at the end of the exhibit.

South Dakota Agricultural Heritage Museum, SDSU Box 601, 11th St. & Medary Ave, Brookings, SD 57007, 605-688-6226, www.agmuseum.com

Project 8 – Final Report

Title – More Matters in South Dakota

Sub-Grantee – South Dakota Department of Health

Contact Person – Larissa Skjonsberg – 605.773.2171 – larissa.skjonsberg@state.sd.us

Project Summary

Fruit and vegetable consumption 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. At the time of the grant application, South Dakota reported only 18.6% of adults eating the minimum five servings of fruits and vegetables per day (2007 Behavioral Risk Factor Surveillance System) and only 16% of SD high school students eating the recommended five or more servings of fruits and vegetables per day (Youth Risk Behavioral System)

Continued work needs to be done throughout the state to help change the trend of decreasing fruit and vegetable consumption. 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. Our strategy of promoting locally grown fruits and vegetables and buying locally at farmers' markets hopefully would make fruits and vegetables more appealing, aid in reversing the trend, and enhance South Dakota's specialty crop production.

Project Approach

Activity: Development of fruit and vegetable brochure

The contracted ad agency and partner *Hot pink, Ink*, developed a brochure in the Fall of 2010 that highlighted not only fruits and vegetables but those that are available in our state during specific months. The brochure's message also focused on promoting SD grown produce along with the health benefits of consuming fruits and vegetables. 5,000 copies of the brochure were printed in March 2011 with 1,700 being distributed as of October 2012. The brochure has been marketed and distributed to consumers via the HealthySD.gov website, schools, community health offices (WIC program), and worksites. Our various partner organizations such as the SD Dietetic Association and SDSU Extension also played a key role in marketing the brochure and thus promoting increased consumption of fruits and vegetables grown in South Dakota. Copies of the brochure can also be obtained utilizing the Department of Health's website where our consumer publication ordering system is housed and includes several educational materials including the newly created fruit and vegetable brochure.

Activity: Development and placement of fruit and vegetable ad.

Contracted ad agency, *Hot pink, Ink*, developed the ad based on the goals and interest in promoting South Dakota grown fruit and vegetables and encouraging South Dakotans to eat more fruit and vegetables. The ad was completed in August 2010 just in time for it to be run during September, which is National Fruit & Veggie Month. Data collected from the first round of ads placed netted 648 Gross Rating Points (GRP). A flight of ads was also placed on Native American radio to reach that demographic.

Included below is the link to the TV ad that we have posted on YouTube.com. We posted the link on the Healthysd.gov website as well.

<http://il.youtube.com/user/ImagineAgency#p/c/F169B7D4924FCDE3/16/IO4P0Ge2CpM>

South Dakota grown specialty crops, specifically fruits and vegetables are featured in the TV ad, which is also posted on the healthysd.gov website. The website also includes newsletters and posters which encourage people to visit farmers markets and purchase South Dakota grown fruits and vegetables.

Activity: Write and place article in *Municipalities* publication.

An article titled "Creating Healthy Communities through Community Greening" that highlighted the importance of community leaders and planners in city government to look at utilizing their unused spaces for community gardens which in turn would encourage the support of locally grown produce was placed in the April 2011 edition of *Municipalities*. The article shared the benefits to a community and its individuals both economic and social for creating healthier communities and implementing community gardens. Through the unique partnership with the SD Municipal League we were able to reach all the various positions in city government that include mayors, finance officers, city administrators, city managers, council members, attorneys, street superintendents, public works directors, water superintendents, etc. In addition, copies of

the publication are also sent to state legislators, state offices, libraries and newspapers in the state. The municipal league publishes 12 times per year with 2,800 copies being mailed out each month. The article can be found at the following link:

<http://sd.govoffice.com/vertical/Sites/%7B2540DC39-A742-459F-8CAF-7839ECF21E89%7D/uploads/%7B205F4B2C-43CD-42D3-80DD-6417EB33BAE2%7D.PDF>

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Provide resources and information to encourage South Dakotans to purchase locally grown fruits and vegetables	Increase % of South Dakotans consuming five servings of fruits and vegetables per day	2007 – 18.6% 2009 – 15.7%
increase awareness and provide education to South Dakotans on the health benefits of consuming more fruits and vegetables and the importance and benefit of consuming locally grown produce	Hits to the HealthySD.gov website	2009 – 15,000 annually 2010 – 21,926 annually 2011 – 27,878 annually

The short term goal we set was for 21.6% of South Dakotans to consume the recommended amount of fruits and vegetables per day. Most recent BRFSS data on this specific risk factor shows that in 2009, only 15.7% of South Dakota adults reported consuming the minimum five servings which is a decrease from 2007 and therefore we are moving the other direction from meeting our short term goal. This statistic was just one of the catalysts behind the department realizing this issue is serious and it needs to be made a priority.

Fruit and vegetable data is only collected in odd years from BRFSS and YRBS so data was not collected in 2010. The 2011 data was supposed to be made available in the Summer of 2012 but as of late November 2012, the 2011 BRFSS data has not been released yet.

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 anecdotal data that farmers' markets in South Dakota have seen increased traffic throughout the past two years and the number of farmer's markets throughout the state is also increasing which leads to economic growth for the farmers growing, supplying, and/or selling produce and ultimately for the state of South Dakota.

Through marketing and distribution of the brochure with our various partners, we were able to provide consumer awareness and education related to the benefits of fruit and vegetable intake and to encourage the purchase of SD grown produce.

In addition, we feel that in order to start making changes in our state, we need communities on board to support fruit and vegetable production in those areas. Therefore, an article written in the municipal league publication was just one step in educating that group of key people who have the power to make policy and environmental changes in their communities. We plan to

continue this relationship with the municipal league by having a presence at their state meetings and by submitting additional articles focused on fruits and vegetables, community gardens, and supporting community farmers' markets, etc.

Lessons Learned

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 is in the beginning 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.

Although we are not meeting our short-term goal of South Dakota adults consuming the recommended amount of fruits and vegetables we feel there were positive results that occurred from the implementation of this project. This project really clarified for us the emphasis that needs to be put on fruits and vegetables in our state and that it is going to take time to reverse our trend of poor consumption. We do feel we have the infrastructure in place to implement an initiative that will focus on this issue and will engage several partners over the next few years. It is our goal to implement an initiative that will not only impact our consumption rates but will also influence South Dakotans decisions to buy locally and support our farmers/producers in our state and thus increase our states revenue and economic growth.

Staff implementing the project had very minimal challenges. The steps in selecting a contractor after the RFP process was delayed with the department's executive management team delayed the project initially. We did not anticipate this delay and therefore revisited timelines and adjusted them as needed to get the advertisement developed and completed in a timely matter. We felt with the minor setback with our original timeline we were still able to accomplish the tasks in an efficient and effective way not to risk compromising the quality of the work necessary to complete the project.

Additional Information

SOUTH DAKOTA FRUITS & VEGGIES
Availability Guide

VEGETABLES

	MAY	JUNE	JULY	AUG	SEPT	OCT
Asparagus						
Beans						
Beets						
Broccoli						
Cabbage						
Carrots						
Cauliflower						
Sweet Corn						
Cucumbers						
Eggplant						
Kale/Chard						
Lettuce						
Onions						
Pears						
Peppers						
Potatoes						
Pumpkins						
Radishes						
Rubikins						
Summer Squash						
Winter Squash						
Tomatoes						

FRUITS

	MAY	JUNE	JULY	AUG	SEPT	OCT
Apples						
Pears						
Plums						
Melons						
Raspberries						
Apricots						
Strawberries						
Sour Cherries						
Nanking Cherries						
Currants						
Graspberries						
Grapes						



SOUTH DAKOTA DEPARTMENT OF HEALTH
615 East 4th Street, Pierre, SD 57501
605-773-3737 • healthsyd.gov



fruits&veggies
MORE MATTERS

THINK
HEALTHY
THINK
COLOR

Eating more fruits and veggies of different colors gives your body a full range of valuable nutrients like fiber, folate, and potassium as well as vitamins A and C.

Green asparagus, red peppers, orange sweet potatoes, purple plums, white onions and yellow corn are all grown right here in South Dakota.

When you eat more, YOU GET MORE!

Because they are great sources of many vitamins, minerals and other natural substances, eating more fruits and veggies is one of the easiest ways to improve your diet. They are low in fat and rich in vital nutrients which helps to lower your risk of developing cancer and other chronic diseases like diabetes, heart disease and high blood pressure.



FIBER
Diets rich in dietary fiber have been shown to have a number of beneficial effects including decreased risk of coronary artery disease.

EXCELLENT™ VEGETABLE SOURCES: navy beans, kidney beans, black beans, pinto beans, lima beans, white beans, soybeans, split peas, chick peas, black eyed peas, lentils, artichokes

FOLATE
Healthful diets with adequate folate may reduce a woman's risk of having a child with a brain or spinal cord defect.

EXCELLENT VEGETABLE SOURCES: black eyed peas, cooked spinach, great northern beans, asparagus

POTASSIUM
Diets rich in potassium may help to maintain a healthy blood pressure.

GOOD™ FRUIT AND VEGETABLE SOURCES: sweet potatoes, tomato paste, tomato puree, beet greens, white potatoes, white beans, lima beans, cooked greens, carrot juice, prune juice

VITAMIN A
Vitamin A keeps eyes and skin healthy and helps to protect against infections.

EXCELLENT FRUIT AND VEGETABLE SOURCES: sweet potatoes, pumpkin, carrots, spinach, turnip greens, mustard greens, kale, collard greens, winter squash, cantaloupe, red peppers, Chinese cabbage

VITAMIN C
Vitamin C helps heal cuts and wounds and keep teeth and gums healthy.

EXCELLENT FRUIT AND VEGETABLE SOURCES: red and green peppers, kiwi, strawberries, sweet potatoes, kale, cantaloupe, broccoli, pineapple, Brussels sprouts, oranges, mangoes, tomato juice, cauliflower

EXCELLENT SOURCES: These foods contain 20 percent or more of the Daily Value per reference amount.
GOOD SOURCES: These foods contain 10 to 19 percent of the Daily Value per reference amount.

Source: www.fruitsandveggiesmatter.gov

fruits&veggies
WHAT'S A SERVING?

Eating the recommended amount of fruits and vegetables is so easy. Try drinking orange juice at breakfast and having an apple for a snack. Then enjoy a salad at lunch and 2 vegetables at dinner. IT'S THAT SIMPLE.

FRUITS



VEGETABLES



For more information on where to find the freshest South Dakota grown fruits and veggies, please visit www.sdlocalfood.org



HOW DO YOU FIT A RAINBOW OF FLAVOR INTO YOUR DIET?

Try some of these quick and simple tips to help you GET MORE fruits and veggies in your diet!

- Top your morning cereal, waffles, pancakes or yogurt with 1/2 cup of fresh fruit.
- Mix in vegetables like broccoli, spinach, mushrooms, bell peppers or tomatoes into your egg or egg white omelet.
- Add cooked, mashed sweet potatoes or carrots into your kids' mac & cheese or grilled cheese.
- Include sliced or diced red peppers, chopped spinach and shredded carrots into each layer of your lasagna.
- Dress up your night with more veggies like red, yellow or green peppers, avocado and fresh homemade salsa.
- Try substituting fresh spinach for iceberg lettuce on sandwiches and in salads.
- Add puréed vegetables to any pasta sauce, soup or stew.
- While fresh is always a great choice, don't forget that canned and frozen fruits and vegetables are often just as nutritional and can add color and flavor to every meal.

THINK HEALTHY.
THINK FRESH RECIPES.

These healthy recipes showcase a variety of fresh ideas using nutritious and delicious combinations of fruits and vegetables that will bring great flavor and color to your table.

CHICKEN and RICE CASSEROLE with SUMMER VEGETABLES

- 1 TABLESPOON VEGETABLE OIL
- 1 MEDIUM ONION, CHOPPED
- 2 CLOVES GARLIC, MINCED
- 1 RED SWEET PEPPER, CHOPPED
- 1 MEDIUM ZUCCHINI, CHOPPED
- 1 POUND CHICKEN BREAST MEAT, TRIMMED AND CUT INTO 1/2-INCH PIECES
- 2 MEDIUM TOMATOES, CHOPPED
- 1 CUP BROWN RICE
- 3 CUPS UNSALTED CHICKEN BROTH
- 1/2 TEASPOON SALT
- 1/2 TEASPOON FRESH-GROUND PEPPER
- 3 TABLESPOONS CHOPPED PARSLEY

Coat the bottom of a large, heavy-bottom saucepan with the vegetable oil. Add the onion, garlic, red pepper, and zucchini to the pan. Cook over low heat, stirring occasionally, until the vegetables are very soft, about 5 minutes. Add the chicken and turn the heat up to medium-high. Stir until the chicken is cooked lightly on all sides. Add the tomatoes, rice, chicken broth and salt. Bring the broth to a boil and then adjust the heat to maintain a slow simmer. Let the casserole simmer until the rice is tender, about 45 minutes. Stir in the pepper and the parsley and serve.

YIELDS 6 SERVINGS. EACH SERVING CONTAINS 262 CALORIES (21% FROM FAT), FAT 6.5G, CHOLESTEROL 47MG, FIBER 3MG, SODIUM 355MG.

APPLE-CABBAGE SLAW

- 3 CUPS CABBAGE, SHREDDED
- 2 CUPS RED DELICIOUS OR WINEAP APPLES, DICED
- 1 CUP CEBERY, SLICED DIAGONALLY
- 1/4 CUP ONION RINGS, THINLY SLICED (optional)
- 1/2 TEASPOON MUSTARD DRESSING (recipe follows)

Pineapple-Yogurt Dressing

- 1/2 CUP FLAVORED YOGURT
- 2 TABLESPOONS PINEAPPLE JUICE
- 1/4 TEASPOON PREPARED MUSTARD
- 1/4 TEASPOON CEBERY SEEDS

Combine cabbage, apples, celery, and onions. Gently toss with Pineapple-Yogurt Dressing.

YIELDS 6 SERVINGS. EACH SERVING CONTAINING 49 CALORIES (9% FROM FAT), FAT 0.5G, CHOLESTEROL 1MG, FIBER 2G, SODIUM 36MG.

THAI-STYLE BEEF SALAD

- 1 POUND BEEF SIRLOIN STEAK (beef steak)
- 1 1/2 TABLESPOONS REDUCED-SODIUM SOY SAUCE
- 2 TABLESPOONS RICE VINAGAR
- 1 TABLESPOON LEMON JUICE
- 1 1/2 TEASPOONS BROWN SUGAR
- 1 LARGE CLOVE GARLIC, MINCED
- 1 TEASPOON ORIENTAL SESAME OIL
- 1/4 TEASPOON RED PEPPER FLAKES
- 4 CUPS SHREDDED ICEBERG LETTUCE
- 1 1/2 CUPS SHREDDED CARROTS
- 1 CUP THINLY SLICED GREEN ONIONS
- 1 CUP COOKED THIN SHRIMP (2 ounces dry)
- 1/4 CUP LOOSELY PACKED FRESH CILANTRO LEAVES

Cut beef into strips 2 inches long by 4 inches wide. In large nonstick skillet, stir fry beef strips over high heat until brown, about 3 minutes. Remove from pan; cool to room temperature. To make dressing, in small bowl mix soy sauce, vinegar, lemon juice, brown sugar, garlic, sesame oil, and red pepper flakes; set aside. In a large bowl combine beef with remaining ingredients; toss with reserved dressing. Serve immediately.

YIELDS 6 SERVINGS. EACH SERVING CONTAINING 49 CALORIES (9% FROM FAT), FAT 0.5G, CHOLESTEROL 1MG, FIBER 2G, SODIUM 36MG.

Included below is the link to the TV ad that we have posted on YouTube.com. We posted the link on the Healthsyd.gov (<http://www.healthsyd.gov/>) website as well. <http://il.youtube.com/user/ImagineAgency#p/c/F169B7D4924FCDE3/16/IO4P0Ge2CpM>

Project 9 – Final Report (previously submitted)

Title – To Establish a Super Berry Market in the State of South Dakota

Sub-Grantee – George and Carrie Stepp

Contact Person – Carrie Stepp – 605.356.6003 – cyberstepp@yahoo.com

Project Summary

Nutritional, antioxidant-rich foods are growing in demand from the consumer marketplace due to the health benefits and medicinal nature that super foods provide. Research has found that such super foods contain compounds that fight degenerative diseases, heart conditions and cancer.

Research indicates that consumer demand exceeds production levels producers can provide and that demand is expected to grow. Most super fruits in the market today are imported from other countries making them difficult to obtain. For this reason, we would like to expand our berry acreage that will in turn begin creating a Super Berry market for the state of South Dakota and the Midwestern Region.

Project Approach

- Planted a total of 2500 Aronia Melanocarpa, 220 Saskatoons, 22 Elderberry seedlings along with 75 fruit trees along with the native species of wild raspberries, chokecherries, mulberries, plums, etc. that grow wild across the acreage.
- Built cages for each planting to protect from deer, rabbits and other wildlife.
- Covered each seedling with either black garden felt or mulch.
- Annually plant an organic vegetable and herb garden with a variety of heirloom tomatoes, peppers, various squash, melons and hard to find medicinal herbs.
- Harvested produce to process and test recipes for finished products.
- Partnered with the Midwest Aronia Association with over 70 members across the country.
- Locally marketed and sold produce and high antioxidant fruits, vegetables and herbs primarily through farmers markets.
- Developed partnerships with other farmers market vendors, producers and marketers of local and organic foods working towards getting local produce into school systems, hospitals, etc.
- Attended various seminars, garden shows and festivals, with featured speakers on planting, caring for and harvesting produce, processing of foods and growing medicinal herbs.
- Ongoing research via books, online forums, blogs on organic gardening, production and marketing.
- Attended the 2011 Moses Organic Farming Conference in LaCrosse, WI and attended 2 all day workshops at Organic University on the growing and marketing of garden produce.
- Purchased domain name and began building web portal for www.RuralWisdom.com that will be dedicated to helping new and established growers explore the world of specialty crops and will feature: How To eLearning courses, resources, recipes, articles on sustainable farming, farm profiles and notes from the field of local fruit, vegetable and specialty producers. This website will be ongoing and will have updated information posted on a weekly basis.
- The SD Farm Beginnings Course will allow us to conduct whole farm planning, assist us with the organic certification requirements, explore marketing opportunities and establish additional resources and partnerships.

The Midwest Aronia Association (www.midwestaronia.org) was established in 2008 to help connect people interested in growing Aronia berries. The meetings, website and members also provide information about all aspects of aronia including cultivar selection, planting techniques, plant maintenance, fertilization, picking, production, nutritional value, etc.

The purpose of the Aronia Association is to:

- Gather and provide information regarding Aronia.
- Better the conditions of those engaged in aronia growing and encourage sustainable growing practices.
- Improve the quality and marketability of aronia produced through the use of education and research.
- Promote the aronia industry and other value-added uses.
- Network and cooperate with related government agencies, educational institutions, development organizations and private industry to address these stated purposes.

The aronia association has opened us up to a network of other growers, has assisted with questions related to growing and links us with others within our vicinity that are interested in growing aronia. We have received several calls from people interested in growing the berries and help answer any questions they may have to help promote the industry, offer tours of our farm, opportunities to share planting and harvesting equipment and resources. Also, once a grower begins producing a large quantity of berries, the association helps to link growers with buyers, assists in marketing efforts, etc.

During the summers of 2010 and 2011, we attended weekly Farmers Markets in Vermillion, SD where we sold vegetable produce and berries (aronia, raspberries, mulberries, etc). It was a great experience being “in the trenches” to meet vendors, network and share growing information and marketing tips, promote local/organic produce and inform and educate others of the aronia berry opportunity.

We partnered with another vendor and sold one another’s produce to expand on the number of farmer’s markets either of us could attend and discussed future opportunities with several other growers on the opportunity of a combined CSA (Community Supported Agriculture). We joined the Upper Missouri Valley Local Foods Coop (soon to be named Red Earth Coop) located in downtown Vermillion, SD and I am on steering committee for the coop to help educate and promote local foods initiatives and opportunities.

We partnered with the South Dakota Value Added Agriculture Development Center and Buy Fresh Buy Local SD to help other growers get started. The group is working to create a local food distribution hub that would bring growers and buyers together so that local produce can be distributed to school systems, hospitals, nursing homes, restaurants and small grocers.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To expand Super Berry acreage	1,000 plants by Sep 2010 1,000 plants by Sep 2011	1,400 planted in 2010 1,100 planted in 2011
To establish a Super Berry market for the State of South Dakota and the Midwestern Region as a whole	Assist 3-4 additional super berry producers get established by Fall 2011	Provided 50 seedlings to 3 super berry producers to get established

Increase the awareness of the super berry potential and related health benefits	Website portal designed in 2010 with established presence by Fall 2011	www.ruralwisdom.com established in 2011 with approximately 100 hits to date
To increase production levels	Yield in 2010 = 500 pounds Yield in 2011 = 2,500 pounds	2010 = 25 pounds (flooding started in 2010) 2011 = 100 pounds (flooding became severe in 2010)
Obtain organic certification	Become certified organic by Fall 2011	On track to become certified organic by Spring 2012

Beneficiaries

We've been able to form more partnerships than we'd originally anticipated and have become friends with several producers, farmers' market vendors and customers. We have learned so much during this endeavor and reach out to others whenever possible to assist others in both our failures and successes.

During the short two years of our superberry endeavor, we have opened our farm and enterprise to hundreds of people to help promote the industry, educate potential growers and customers and have received a handful of phone calls from people interested in pursuing the opportunity. We've partnered with the Midwest Aronia Association and its 70 members to educate. The aronia association has opened us up to a network of other growers, has assisted with questions related to growing and links us with others within our vicinity that are interested in growing aronia. We have attended various events such as Aronia Festivals held at Sawmill Hollow, the Moses Organic Conference in LaCrosse, WI and the 2011 Fruit and Vegetable Symposium in Sioux City, IA where there were educators speaking on the Aronia berry industry and we were able to help educate and promote the industry in regards to some of the failures and successes that we've encountered. By attending those conferences alone, we were able to interact with a few hundred people in the industry. We have provided aronia seedlings to at least three interested parties and have offered the contact for Spring Meadow Nursery, our wholesale plant distributor to several people but to our knowledge, we're unaware of how many people have actually decided to pursue superberry production at commercial levels as a direct result of our efforts.

We have become aware of additional growers of Aronia including meeting growers from SE South Dakota at the Moses Organic Conference that we can form alliances with. We have provided Aronia seedlings to several friends and neighbors to plant and they've been having great success. We have talked with and had several others out to our farm that are interested in planting high anti-oxidant seedlings and discussed opportunities for harvesting, sharing planting equipment, and marketing opportunities.

We partnered with the South Dakota Value Added Agriculture Development Center and Buy Fresh Buy Local SD to help other growers get started. The group is working to create a local food distribution hub that would bring growers and buyers together so that local produce can be distributed to school systems, hospitals, nursing homes, restaurants and small grocers.

Overall, there seems to be growing interest in what we are doing from established farmers, specialty crop producers and future growers. Established, traditional farmers seem to be the least likely to transition due to the hands-on work required to plant and harvest compared to current row crops that can be planted and harvested with large equipment. It seems a majority of those interested are smaller acreage owners and hobby farmers that are "watching from the

sidelines” and observing our failures/successes as we continue to reach out to those interested in getting started.

Lessons Learned

It's been vital for us to connect with others in our industry and surround ourselves with like-minded people on both sides (consumers and producers). By attending related seminars, taking tours of farms, being 'down in the trenches' and contacting those that have walked our path, it has provided us with growing tips, resources and marketing opportunities that have been very insightful.

Have a ready market, or create the market and then fill those markets as the demand increases. Large markets cater only to the very large growers, but small growers can compete as well if they come together and organize themselves, which is our approach.

Don't put "all your eggs in one basket" as markets rise and fall at various times. By diversifying with a few different crops, but still maintaining focus, you won't have to "lose the farm" by relying on a single crop alone. For example, presently the aronia market is very strong with raw berry retail prices reaching upwards of \$30/lb, however that price is unsustainable as berries are now being imported from other countries and that price is expected to lower and will more than likely end up being similar to other berry prices, which is closer to \$6/lb retail, \$2/lb wholesale, however it's anyone's guess as to when that will take place. By diversifying with other super-berries such as saskatoons, elderberries and the like, if something happens to the market of one crop, there will be additional opportunities to continue to thrive in the specialty crops industry.

Know your market. For example, it is important in the super-berry industry that the berries are organically produced, which ours are, as there are very few buyers for non-organic berries. If you know your intended market early, it allows you to make decisions based on the end goal in mind.

That no matter how much or how hard you plan, Mother Nature sometimes makes the final decision. We have lived on our acreage located in SE South Dakota for over 10 years now and the past 2 years brought record flooding never seen in our area before, which was devastating, however we can now make future decisions based on the worst possible scenario and are planning accordingly.

Additional Information

Website – www.ruralwisdom.com

Overall, we have learned a great deal and it's been a very rewarding, fulfilling adventure and often times even exhausting as we work towards accomplishing a dream. However we have lost approximately 60% of our seedlings and fruit trees we'd planted due to unexpected record flooding in our area of Southeastern South Dakota during the Summers of 2010 and 2011. During an upcoming farm planning course, we plan to layout our property as a whole and devise a plan for our acreage as a whole that will take into account a plan to build drainage areas that will protect from future flooding and plan to replant lost seedlings along with adding additional high antioxidant plants and herbs that grow well in our location. We've learned as beginning farmers, that we need to be extreme optimists and keep pressing forward regardless of what Mother Nature may throw us.

Project 10 – Final Report (previously submitted)

Title – The Commercial Production and Distribution of Vine Ripened, Pesticide Free Hydroponic Tomatoes with the Addition of Romaine Lettuce and Cucumbers

Sub-Grantee – Happy Hydros, LLC

Contact Person – Teal Scholl – 605.680.9093 – happyhydros@hotmail.com

Project Summary

Commercial hydroponic production or Soil-less Controlled Environment Agriculture is not commonly practiced in the state of South Dakota. While offering fresh vine ripened, pesticide free tomatoes we have developed a high demand for our product, however; Happy Hydros still faces the stigmas of warehouse hydroponic tomatoes that are shipped in and have no flavor. Our intention was to further educate consumers about our product and future products through packaging, advertising, and branding. The retail distribution, placement and promotion of added products will help capitalize on the current demand. By adding more products, such as lettuce & cucumbers we will enhance the competitiveness of specialty crops in South Dakota while reducing the cost of distribution and increasing the efficiency of this young company. We introduced hydroponic lettuce and cucumbers in the spring of 2010. It is also important to educate the retailers and consumers on the safety benefits of hydroponic production and buying local.

We also worked with other potential growers by hosting trainings and providing tours of our facility to show them the challenges and successes we have had in order to help them understand what is involved in hydroponic production and to encourage more growers to engage in this type of agriculture.

Project Approach

Happy Hydros has increased the competitiveness of specialty crops in South Dakota by developing long term market basis and enhancing trade for local retailers, increasing and meeting local demands for availability, quality, variety, and freshness.

Happy Hydros has continued to share with the industry by maintaining an open door policy. Several tours have been given in the 2011 growing season to sixty one people that were part of groups such as the South Dakota Specialty Producers Association, SDSU FFA State Officers, SD County Extension Educators, SD Buy Fresh Buy Local state coordinator, SD Value Added Agriculture Development Center, as well as the general public. Happy Hydros also hosted one growers workshop with 22 attendees from neighboring states. We had a total of 83 documented visitors in 2011.

Happy Hydros continues to educate the local consumer on the quality, variety and availability of locally produced specialty crops in South Dakota by widely displaying hydroponic tomatoes, lettuce and cucumbers. Methods used are website, radio advertisement, brochures, signage and actively participating in three South Dakota farmers markets. Brochures were purchased and used in addition to display toppers for the 2011 marketing season. While toppers are primarily for retail outlets, we found that brochures are more effective and could be distributed on a broader basis such as tours, workshops, farmers markets, grocery store demos and potential future customers and/or distributors. Approximately 300 out of 400 brochures were distributed in 2011. Consumer education on quality, variety and availability is measured by the increase of annual gross sales for 2009, 2010, and 2011. Gross sales represent the increase of consumed locally produced specialty crops in South Dakota.

Year	2009	2010	2011
Gross sales	Baseline sales	38% ↑ over 2009	11% ↑ over 2010

Note: 2009 represents only tomatoes
2010 represents tomatoes with the introduction of lettuce and cucumbers
2011 represents tomatoes, lettuce and cucumbers

Exploring the Sioux Falls area increased our market base with an additional 6 outlets to include a hospital and the Sioux Empire Farmers Market. In total, long term market basis have been established with 43 retail outlets. The outlets consist of 3 institutions (hospitals), 3 farmers markets, 19 grocery stores and 18 restaurants, as well as onsite sales at the greenhouse. The turnover in outlets in less than 5% annually with an average of 95% being consistent for the past three growing seasons. The distribution area has increased to include Sioux Falls along with central South Dakota and the Rapid City area. While consumptions have been directed towards schools, the demand has not been consistent within our operation for 2011.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To educate consumers and retailers about the availability and quality of hydroponic tomatoes, lettuce and cucumber produced locally in the state.	Add three retail stores to current customer base. Increase sales by 38%	2009 – 40 outlets 2011 – 43 outlets 2009 sales - Baseline 2010 sales – 39% ↑ (over 2009) 2011 sales – 12% ↑ (over 2010)
	To increase the consumer's demands and consumptions by offering additional specialty crop products produced locally. Increase lettuce sales by \$56,000 and cucumber sales by \$16,875	2010 lettuce consumption = baseline 2011 lettuce consumption = 138% ↑ (over 2010); increase of 6,482 units 2010 cucumber consumption = baseline 2011 cucumber consumption = 70% ↓ (below 2010)*; decrease of 9,258 units
	increase gross revenues for both producer and retailer and the state of South Dakota.	2009 sales - Baseline 2010 sales – 39% ↑ (over 2009) 2011 sales – 12% ↑ (over 2010)
	To possibly become a training facility for Crop King Inc.	2010 grower training – 29 attendees (2 workshops) 2011 grower training – 22 attendees (1 workshop)
	To increase the sales of raw materials, this project has projected gross sales from additional products of \$98,590	2009 sales - Baseline 2010 sales – 39% ↑ (over 2009) 2011 sales – 12% ↑ (over 2010)

* In 2011, we planted fewer cucumbers due to lack of man power. They grow about a foot or more a day, and at one point one person was picking over 300 cukes per day, plus the clipping,

suckering- not to mention the lettuce & tomato harvesting, packing & deliveries. This year we will up the plantings to somewhere between 2010 and 2011 levels because the demand is high.

Beneficiaries

Happy Hydros has continued to share with the industry by maintaining an open door policy. Several tours have been given in the 2011 growing season to sixty one people that were part of groups such as the South Dakota Specialty Producers Association, SDSU FFA State Officers, SD County Extension Educators, SD Buy Fresh Buy Local state coordinator, SD Value Added Agriculture Development Center, as well as the general public. Happy Hydros also hosted one growers workshop with 22 attendees from neighboring states. The guest book for 2011 documents 52 visitors in addition to the growers workshop.

The consumption increases of variety at Happy Hydros are approximately 11,200 units of lettuce and 4,000 cucumbers. The availability of these additional products enhanced retail trade for local grocery stores by 30%, on the average. The additional variety of specialty crops also benefited 3 local farmers markets in South Dakota while meeting local consumer's demands state wide.

Lessons Learned

As new producers, we experienced several learning curves while producing multiple crops together in a controlled environment. Some unexpected delays were experienced in the lettuce production that affected the overall 2010 yields. Marketing what was harvested proved challenging in the beginning but has improved substantially for the 2011 growing season. Other challenges varied from germination issues, poor growth/quality and disease. While tomatoes, lettuce and cucumbers can be produced and housed together, many factors had to be considered for each crop. We had to learn how to maintain the overall climate in the greenhouse to be positive and effective for all crops, as well as the location of crops in the greenhouse. Proper climate control and crop location was achieved by consulting with Crop King to better understand each crops needs and the greenhouse equipment capabilities. While focusing on the bulk of our crop – tomatoes – the lettuce was not thriving and was poor in growth and quality.

For the 2011 growing season, adjustments were made in the heating/cooling, dehumidification and air flow to better accommodate the lettuce production while minimizing any adverse effects to the tomato and cucumber crops. Moving the cucumbers to the west side of the greenhouse, where it is warmer, reduced the conditions for powdery mildew to set in and eliminated the chances of it being transferred to the lettuce so easily. While powdery mildew only affects the leaves of the cucumber plants, it can be easily controlled with minimal fruit loss, however; powdery mildew can wipe out an entire plot of lettuce in a short time. The change in overall climate and crop placement increased the lettuce margins from about 35-40% being marketable in 2010 to 90% being marketable in 2011.

Project 11 – Final Report

Title – Development of Osha (L. porteri), a medicinal plant, as an Economic Resource for Native American Communities

Sub-Grantee – South Dakota State University

Contact Person – Bernadette Terrell – 605.691.9734 - bmterrell@jacks.sdstate.edu

Project Summary

The study is to determine the beneficial value of cultivated medicinal plants as compared to wild-harvested medicinal plants. Native plant species such as oshá are prized by Native Americans for their medicinal qualities.

Over the past twenty plus years many native plant species, traditionally used by Native Americans, have reached the commercial market as the general populous returns to more holistic methods for maintaining good health. Many native plant species, such as oshá, are not currently grown commercially; rather, they are wild-harvested for an increasing demand in the herbal market. The increased demand to supply the commercial market greatly impacts availability of medicinal plants for many Native Americans and the sustainability of natural stands of native plant species. Oshá (*L. porteri*) has the potential to be developed as a cultivated plant to replace wild-harvest.

Cultivating medicinal plants for a commercial market would benefit Native American communities as an economic resource thereby decreasing the need for wild-harvest of medicinal plants. As an example of economic value; the current market price for oshá ranges from \$30 to \$60 per 455 g (1 lb) of dried root. As an example of cultivation of oshá; yield results from a one season study of a three year cultivation of ten oshá plants produced one pound of oshá root material. These results indicate it may be possible to cultivate oshá in a nursery/garden setting thereby providing an economic resource and eliminating or decreasing the need to wild-harvest.

Project Approach

The PI conducted research on the background of oshá (*Ligusticum Porteri*) including traditional Native American uses, their medicinal purpose, chemical compounds and the commercial market.

A survey questionnaire was sent to twenty three commercial entities that retail botanical herbs. The intent of the questionnaire was to obtain information concerning quantities harvested annually and manner of harvests (wild-crafted or grown), particularly of oshá. Participation was low with five out of twenty three responses.

A separate survey was performed for cost comparison of oshá (*Ligusticum Porteri*) root material on the market. Of the nineteen commercial markets surveyed the average retail market value of oshá (*Ligusticum Porteri*) is \$50/lb. At this time the low retail market is \$36/lb and the high is at \$99.40/lb.

Plots were set up (N=3, 5x4x4) using black woven weed barrier to assist in weed control and ease of observations. Due to the late season planting (July, 2009), closer observation was made to plant survival in the first three months. Although weed barrier was used it was necessary to manually remove invasive plants (2010). The problem is the fabric weave of the weed barrier making possible for seeds of neighboring invasive plants to become lodged giving invasive plants a chance to take root.

Spring observations made starting in April 2011 ending late August 2011. Manual weed control ended in July to allow for weed competition observations. Final harvest completed September 2011.

Observations of oshá (*Ligusticum Porteri*) in the field showed sporadic growth and morphological variations. It was noted that several plants were dividing at the crown and plants

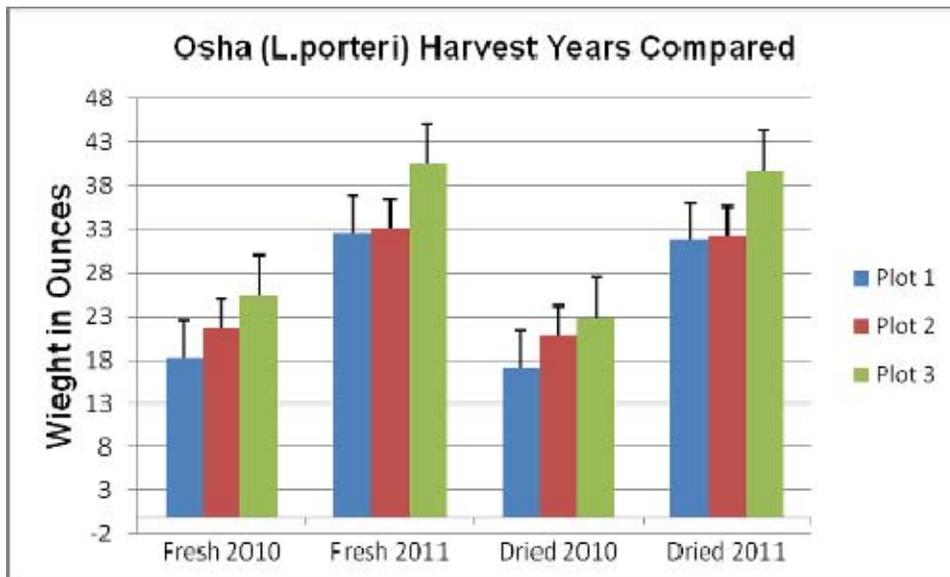
counted as a loss in the previous year emerged. These observations were not recorded but were observed.

For each consecutive year, twenty-five plants were harvested from each plot. The results indicate that cultivation methods can produce satisfactory yields of plant material in the second year.

For harvest, plant root material was cleaned of all field soil and measurements taken. The roots were then allowed to dry for one week and measurements were taken again. Measurements per plant include number of leaf stems, crown, dormant leaf buds, number of root, and length of main root. A statistical analysis has not been completed. Attached is data taken from plot one for years 10/2010 and 10/2011.

Weight by fresh and dry harvest

2010 Totals				2011 Totals		
	Fresh	Dried			Fresh	Dried
Plot 1	18.43	17.23		Plot 1	32.59	31.78
Plot 2	21.68	20.9		Plot 2	33.1	32.31
Plot 3	25.44	22.92		Plot 3	40.56	39.8



An educational module has been created combining this project with a previous project. This consists of a PowerPoint, a poster, handmade seed packets, and seed propagation handouts.

The title of the PowerPoint is Oshá Owozu Otakuye and Community (Oshá Plant Relations and Community).

Information in the poster is based off a previous undergraduate research project that was published in Native Plants Journal, June, 2009. The title of the poster is Oshá, L. porteri, Seed Propagation Study.

Root material and seeds harvested over a two year period were used as part of leave behind materials for the presentations. Seed packets were created using recycled Kraft Paper cut to size for the printer and a blank template. The template was then customized with a label, printed onto the recycled paper, cut out and manually assembled into seed packets. Packets contain seeds measured at 1 tablespoon per packet.

Presentations were made to one Native American reservation group and to one group of elementary and middle school teachers. We also had a difficult time scheduling presentations with Native American Tribes; despite many efforts to schedule a presentation, only two presentations were able to be scheduled. Thirty five people attended the two presentations. There was some interest about osha production at the presentations.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Research economics of current commercial plants	Information to be used in economic model	Current market value of osha plants was identified. ¹
Development of an economic model for osha	Information on supply and demand analysis and wild harvest vs. cultivated harvest	This information would have been yielded from surveys. Only five out of twenty-three responded. ²
Comparison of wild harvested vs. cultivated roots	Analysis of wild harvested oshá roots vs. cultivated oshá roots	The comparison of wild vs. cultivated harvest could not be done due to lack of response in surveys. Only a measure of cultivated was accomplished. ³
Development of propagation and cultivation manual for distribution	Was it developed? Yes or No	A propagation handout was developed for distribution with seed and root samples. 35 handouts were distributed.
Presentation of propagation and cultivation methods	Present information to 4 Native American Tribes.	Presentation was made with one Native American Tribal group at Milks Camp. One presentation was made at SDSU.

¹ Results of the current market value of osha are identified in the Project Approach section. However, due to lack of survey response, a reliable economic model could not be developed.

² The information on supply and demand analysis and wild harvest vs. cultivated harvest was to be answered by the commercial entities that retail botanical herbs. The survey response was only 20% or 5 surveys, which did not yield enough information to develop a reliable economic model for osha.

³ Survey responses did not provide enough information on wild harvested osha roots to make a comparison to the cultivated osha roots. Measurements of the cultivated osha from the field plots were taken and recorded.

Beneficiaries

The Native American Advocacy has a youth program. June 5th, a trip was made to Milks Camp in Bonesteel, SD to participate in the Harvest Camp and discuss the project. Approximately 25 youth attended the camp. They benefitted from this project by increasing their knowledge about

a native plant (osha) that was traditionally grown by Native Americans, learning more about their culture in a safe and supportive environment with elders. They also received samples of osha, so that they could go home and plant it in order to sell it, which would increase their income. The project was also presented to ten SD teachers (4-7 grade level) taking a summer course (Using Native Plants in Science Curriculum) at SDSU, Brookings, SD. Oshá (L. porteri seeds) with propagation handout and a sample of dried oshá root were left behind for the attendants of both groups.

Plans have been made to return to Milks Camp in spring 2013 for medicinal garden planting.

Lessons Learned

Surveys were sent to 23 commercial botanical sources to identify harvesters that supply the commercial market. The surveys would have also identified localities of harvested plant materials, and tonnage yields of wild-harvested medicinal plants. Only five surveys were returned. The original intention of the survey questionnaires was to gather tonnage data from other localities of wild harvested oshá. We also had a difficult time scheduling presentations with Native American Tribes; despite many efforts to schedule a presentation, only two presentations were able to be scheduled.

Additional Information

N/A

Project 12 – Final Report (previously submitted)

Title – Improving Youth Vegetable Consumption and Nutrition Awareness through Gardening

Sub-Grantee – South Dakota State University

Contact Person – Kimberly James – 605.688.5553 – Kimberly.james@sdstate.edu

Project Summary

An alarming number of children in the U.S. are overweight and the numbers continue to rise. Understanding where food comes from and what it does for the body are important pieces of knowledge to enable good choices that lead to lifelong health. Gardens can improve nutritional knowledge and preferences for vegetables in youth by instilling feelings of ownership and connection to produce.

A major issue with youth programs interested in using gardening to teach nutrition is the lack of gardening knowledge or skills. The questions of what to grow, when to sow seeds, insect and disease control, watering needs, when and how to harvest, etc. can be overwhelming. This program was designed to help provide answers and guidance for all aspects of vegetable gardening.

There is currently an active local foods movement in the Brookings, SD area. Encouraging the consumption of fresh vegetables is a critical first step in encouraging the purchase of local produce.

Project Approach

Accomplishments

Vegetable gardens were established at GAP (Great Afterschool Program) summer youth care locations in Brookings, SD. Three raised planting beds were purchased, constructed, and filled with media. Existing raised beds were also cleaned and amended. Once completed, the youth

planted and maintained the beds. Eight raised beds in all were planted with a variety of vegetable crops at 3 locations.

Weekly visits were made to all locations by the PI and/or a local Master Gardener volunteer. Visits addressed issues related to watering, insects, harvesting, tying, thinning, and other garden related issues. Youth participated in every aspect of plant care. Additional harvesting and care was conducted by GAP staff. All produce was consumed on site.

Nutritional lessons were developed and conducted during site visits in addition to the general plant care lessons. They focused on the changes in taste and nutrition between cooked and raw vegetables, encouraging youth to try vegetables in a variety of forms, the importance of consuming produce in a variety of colors for nutritional purposes, and awareness of produce origins including the benefits of purchasing and consuming locally grown produce for increased nutritional value, community support, and lower food fuel miles. Lessons can be found in the appendix. Through participation in this project, and the express concern of some staff, it became apparent that they lacked general gardening knowledge necessary for success. The quantity and complexity of basic gardening information was overwhelming leading to a need for explicit, simple information based on individual crops grown. To meet these needs crop based growing fact sheets and a weekly summer garden tasks calendar have been developed. Content of lessons and publications are being formatted to coincide with and enhance Gardening in the Classroom and Youth Gardening lessons currently available through the South Dakota Cooperative Extension.

Pre and Post surveys were distributed to both youth and parents. Parental surveys focused on vegetable consumption and purchasing habits and preferences. Youth surveys focused highly on variety and form of vegetable consumption with additional question on nutrition. Youth surveys were administered by GAP instructors resulting in *85 Pre surveys and 135 Post surveys collected. (*This is only 45% of total enrollment in the summer GAP program due to variability in part-time attendance.) Parental surveys were placed in take-home folders and were to be brought back to the individual sites and placed in a collection bin within 2 weeks. A reminder e-mail was sent to all parents one week after initial distribution. Return rates were 19% (34) for Pre surveys and 13% (24) for post surveys.

Results

Survey analysis revealed parents with youth enrolled in the summer GAP program perceived significant increases in interest regarding project goals.

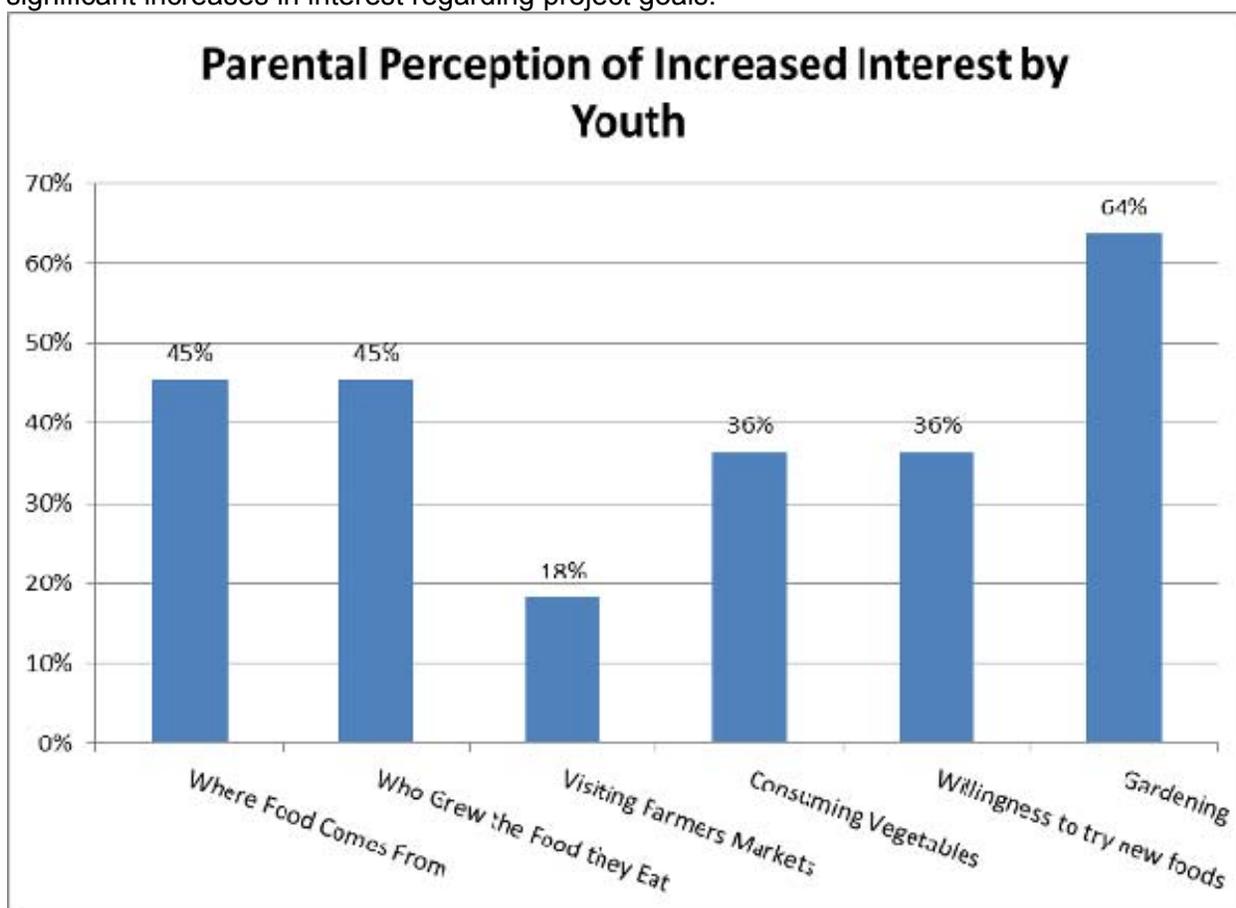


Figure 1. Percent of parents reporting perception of increased interest by youth in areas pertaining to vegetables and gardening after youth participation in summer gardening program. A majority of parents indicated student-initiated home conversations regarding general gardening (82%) and harvesting or selecting vegetables (62%). Parents also noted discussing the colors of vegetables (27%) but few references to taste (0%), nutrition (9%), or local foods issues (9%).

Youth Surveys indicate an increase in vegetable preference and a decrease in vegetable dislikes.

How much do you like to eat your vegetables?	Pre-Survey Response	Post-Survey Response	% change
I love it	6.4	7.0	+9%
It is ok	3.6	4.0	+10%
I do not like it	3.8	3.5	-8%
I have never tried it	3.2	2.5	-22%

Forms of vegetable consumption remained relatively similar.

How do you eat your vegetables?	% Response Pre-Survey	% Response Post-Survey
Fresh/Raw	24%	27%
Fresh/Cooked	24%	28%
Canned	9%	7%
Frozen	3%	2%

I do not know	13%	8%
I don't eat this vegetable	27%	28%

Each student had 17 individual vegetables they could respond to with eating preference options. They were able to mark multiple options per vegetable. Percentages were of all marked options.

Post data for nutritional survey questions was skewed due to incomplete surveys. Pre-survey data indicates a belief that local produce is more nutritious.

Question	% Response Pre survey
Which do you think is more nutritious?	
Raw Vegetables	44%
Cooked Vegetables	36%
They are the same	16%
No answer	4%
Which do you think is more nutritious?	
Vegetables grown locally	69%
Vegetables shipped from other places	7%
They are the same	20%
No answer	4%

A substantial increase (24%) in vegetables purchased and consumed from farmer's markets was reported by youth.

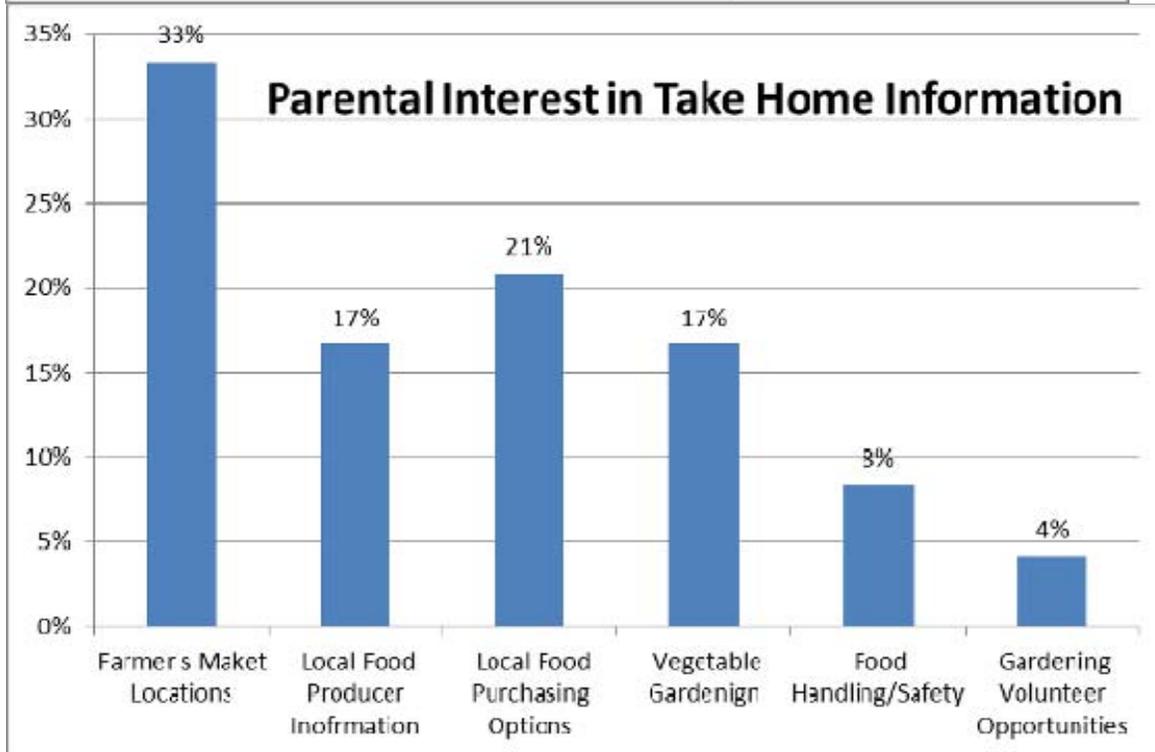
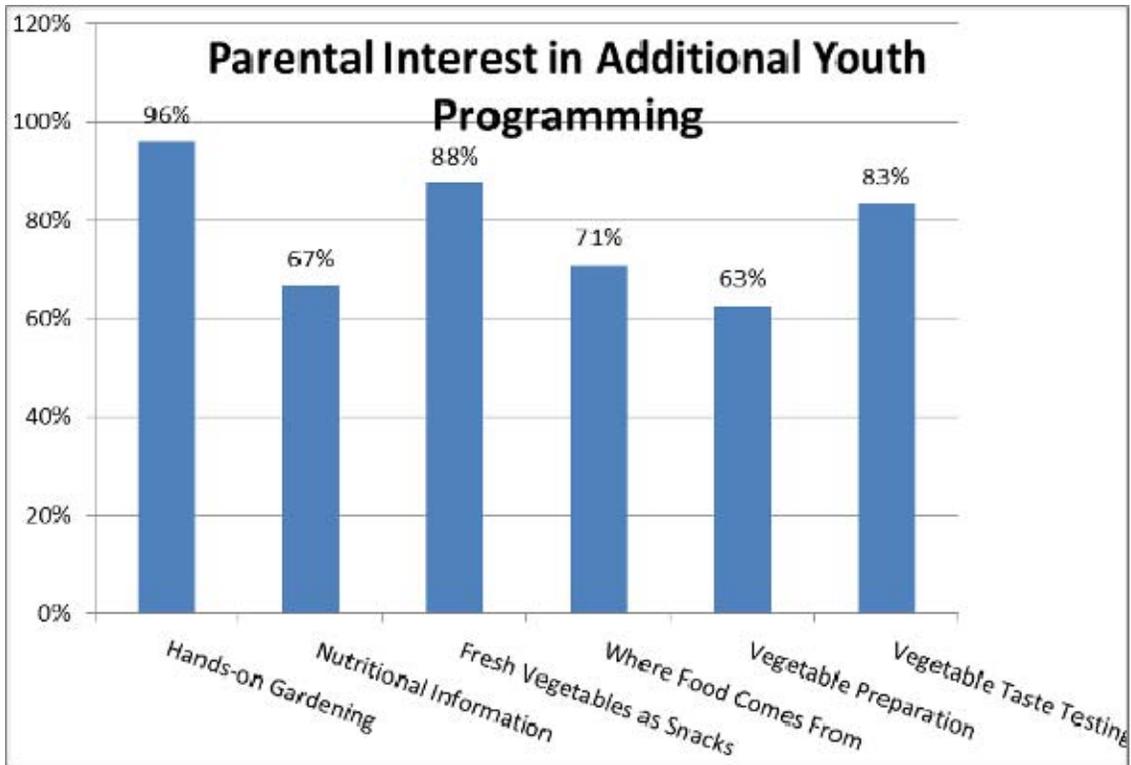
Where do the vegetables you eat come from?	% Response Pre-Survey	% Response Post-Survey
Grocery Store	82%	84%
Farmer's Market	30%	54%
Garden	38%	21%
Other	0%	4%
Don't know	5%	0%

Multiple responses were allowed. Percent reported represents percent of respondents that chose the individual option.

The question "What colors of vegetables do you eat?" saw a 3% increase on average from pre to post survey.

No significant change was noted in number of vegetable servings consumed daily (2). This average may have been negatively influenced by a weight of "0" for youth who indicated they did not know how many servings they consumed daily. Increased vegetable consumption by youth was indicated by parental survey data.

Parents indicated great interest in the continuation and expansion of vegetable and nutritional programming for youth; however, they were less inclined to want or request information be sent home.



Post data indicated an increase in overall participation and frequency of Farmer's Market visits.

How often do you visit your local farmer's market or produce vendors?	% Response Pre-Survey	% Response Post-Survey
Never	40%	5%

1 or 2 times per year	37%	40%
Once per month	14%	40%
2-3 times per month	9%	15%

Parental Surveys provided consumer preference data for producers.

Importance of factors when purchasing fresh vegetables	Scale of 1-4 Least to Most Important
Visual Appeal	3.3
Familiarity of Product	3.1
Locally Grown	2.3
Low Price	2.3
Grown in the USA vs. other country	2.1
Packaging/Ease of use	2.0
Novelty/Something new	1.5
Organic	1.5

Summary and Conclusions

Overall the project was well received by students, parents, and staff. Positive gains were made in diversity of vegetables consumed, willingness to try new foods, and overall consumption. The frequency, purchasing and consumption of local foods were also increased. A fostering of appreciation for gardening was increased as well. The project will have continued impact on the state through supplemental materials created. It is recommended that efforts be made to heighten awareness of these resources.

Partner Contributions

Dr. Anne Fennel was instrumental as liaison in the initial collaboration efforts between GAP and this project. GAP provided the space and some daily plant maintenance and also assisted in the collection of survey data. Master Gardener Bernadette DeGreef assisted with lessons and hands-on activities. Her help was instrumental as I dealt with unexpected medical issues. A new partnership with Extension Agent Chris Zdorovstov will allow for the wide access and distribution of developed material throughout the state.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Provide youth information on vegetables and promote vegetable consumption	10% increase in the following areas: nutritional awareness, diversity of vegetable consumption, overall vegetable consumption, purchase of locally produced vegetables	Post-data skewed - Nutritional awareness 3% increase- Diversity of vegetables consumed 9-10% increase in vegetable preference 36% of youth showed increased interest in vegetable consumption 24% increase in purchasing of locally produced vegetables

Through the hands-on gardening practices, in class curriculum, and local foods handout the following goals were met:

- Provided youth the opportunity to grow a variety of vegetable crop
- Provided nutritional information on select vegetable crops

- Promoted diversity of vegetable consumption
- Promote increased vegetable consumption
- Promote the purchase of locally produced vegetables

Parental and Youth Survey data confirmed the following outcomes

- Increased diversity of vegetable consumption
- Increased vegetable consumption
- Increased purchase of locally produced vegetables

Beneficiaries

There were 190 students enrolled in the GAP summer program. Youth attending the Brookings GAP summer program received nutritional and informative lessons, participated in hands-on gardening lessons, and were provided health snacks resulting in increased diversity and consumption of vegetables.

Parents were aided in efforts to encourage efforts to encourage healthy eating habits for their children.

The GAP program received garden supplies, growing instructions, and nutritional curriculum. They also received parental feedback and ideas for future programming.

The Extension service received additional lessons and information to strengthen educational resources provided to educators in the state of South Dakota.

Local producers will receive information on consumer preference by dissemination of information to local food groups. Local food producers may also see economic gain due to increased preference and consumption of vegetables, distribution of information on the value of local foods, and increased nutritional awareness by youth.

Lessons Learned

One of the test sites was compromised when the school district began construction near the raised beds prohibiting the students from entering the area. Staff was still able to access the area and utilize produce but student participation and engagement was severely limited. Collaboration with site management in addition to organizations is advised.

While Garden Journals were provided for each of the students, no follow-up or enforcement was conducted by staff to ensure their use, therefore very few entries were made. While snack counts were kept, more than one snack option was offered on a daily basis and no distinction was recorded as to the choices made, thereby making the snack count data unusable for assessment.

The assistance received by a local Master Gardener was invaluable. This relationship between Master Gardeners and youth programs should be more integrated. It yielded benefits for all involved, MG, students, and instructors alike.

Additional Information

Project 13

Title – Specialty Crop Promotion and Marketing Resource Project

Contact Person – Alison Kiesz – 605.626-3272 – alison.kiesz@state.sd.us and Joan Hegerfeld-Baker – 605.688.6233 – joan.hegerfeld-baker@sdstate.edu

Project Summary

This project was broken down into two separate components. Component A one was to provide training for third-party processing authorities. Component B was to provide a resource guide of information for specialty crop producers.

Component A

Fresh, whole raw fruits and vegetables grown in South Dakota can currently be sold without any regulatory requirements. However, once a raw fruit or vegetable is processed, South Dakota law requires that certain regulations must be followed in order to ensure the safety of the product. During the 2010 legislative session, South Dakota lawmakers passed the “Home-Processed Foods Law,” which approves home-processed foods sold at farmers markets, roadside stands, and similar venues from some of these licensure requirements. The new law specifically lifts the requirements that food processing be conducted in a state-licensed (and inspected) facility or “commercial kitchen,” as long as the food is sold at a farmers market, roadside stand, or similar venue. However, as part of this new law, specific alternative requirements must still be met to ensure food safety.

Any person selling canned goods with a pH level of 4.6 or less or water activity level of .85 or less must be verified by a third-person processing authority.

A third-party processing authority with knowledge of the thermal processing required of food in hermetically-sealed containers shall verify the method of processing and that the pH or water activity threshold levels are met. The processing authority shall provide any such verification in writing.

Starting July 1, 2010, specialty producers were able to produce and process limited products and gain initial approval under this new statute via SD Home Food Processing Authorities.

Component B

This project brought together multiple SD partners to satisfy the ongoing demand for clear, concise, and South Dakota specific information. While the information is readily available piecemeal from the respective agencies, specialty crop producers and processors may not know about all the requirements or opportunities specific to their product and marketing program. Producers may also lack a full understanding of the challenges or the rational and intent of statutory parameters.

Project Approach

Component A

The individual selling of home-processed (canned) foods under this exemption must have a letter of verification from a third-party processing authority approving the method of processing and documentation that the pH and/or water activity standards are met to ensure food safety.

The following specialty crops are included in this exemption:

- Home-canned foods having an equilibrium pH value below 4.6 and meeting standards that destroy bacteria, yeast, and molds to a required level. Examples may include but are not limited to:
 - acid foods—jams, jellies, fruit syrups and most fruits
 - acidified foods (pickled/fermented) that also have a water activity greater than 0.85—pickled/fermented vegetables, salsas, chutneys
 - tomatoes have a pH that borderlines between low-acid and acid due to growing conditions and variety; therefore, acidification would be necessary
 - fermented foods—sauerkraut and pickles

SCBGP funds were used to help train the food processing authorities across the state.

Three workshops were held in the Summer of 2010. The one day workshops included the following:

1. Information on USDA home food processing guidelines, equipment and the science and food safety risks of home food processing.
2. Food preservation principles and recommended practices – acid and acidified foods
3. Correct use and maintenance of pH meters
4. HB 1222 and its implications
5. Reviewing food processing methods for verification
6. Writing letters of verification.
7. Resources to share with their clientele that address the safe food handling risks associated with home processed acid and acidified foods

27 individuals were trained with 10 completing an assessment and are capable of reviewing the process of home-canned foods.

After successfully completing the one day course, the South Dakota Home Food Processing Authorities for Acid Foods were competent in the following:

1. Review processes (recipes) for acid foods (primarily jams and jellies) and determine if it meets USDA standards.
2. Conduct a pH test for acid foods (basically jams and jellies)
3. Write letters of verification using a standardized format

There are six food processing authorities in the state that are still testing acid foods. However, everyone that went through the training has been very good at helping to get the word out to home processors and send people to SDSU for testing and questions of both acidified and acid foods.

Component B

Work on this component was initially delayed due to the South Dakota Legislature's passage of the Home-Processed Foods Law. While initial partner conversations took place about specific solutions in 2010, the actual work plan wasn't started until early 2012.

SDDA contracted with SDSU Extension to develop a foundation to create a resource guide for food entrepreneurs across the state of South Dakota that are adding value to and/or marketing specialty crops.

1. An SDSU Food Science Honors Student Intern researched nearly every state to become familiar with the various types of resources that have been developed across the United

States to serve food entrepreneurs that market specialty crops. Marin organized an extensive resource packet to glean from her search. This is systematically filed and referenced to continue this process. Many hours were spent by her conducting this research with weekly updates to the Food Safety Extension Specialist.

2. The student intern attended several Extension programs that had several specialty growers in attendance. She did distribute a take-home survey for marketers to complete, and offered an incentive upon completion. No one completed the surveys. This was conducted during the summer which is a very busy time for growers.
3. She visited several farmers' markets across the state and interviewed specialty crop marketers regarding what they felt would be useful regarding a resource guide.
4. A very extensive outline was created that was very inclusive regarding all aspects of marketing specialty crops.
5. The first outline was reviewed by three Extension food safety and community development specialists as well as the representative from the SDDA.
6. From this meeting, a revised outline was created.
7. The revised outline (refer to #6) was once again reviewed and revised. This was conducted in September by the following: several farmers' markets directors in the northeastern part of South Dakota; SDDA, Local Community Development Directors and SDSU Extension Specialists in Food Safety and Community Development. The resulted in a very extensive revision. The outline consists of a very detailed outline, with comments that will need to be incorporated into the next level of development.
8. The portion of the document that has had the opportunity to be tested includes the power point and revised fact sheets that will be incorporated into the resource guide.
9. Several Extension programs have been delivered to this target audience from May through September of 2012. Information critical to safe food preservation at farmer's markets and similar venues was a key message that will be integrated into the resource guide as well.

Goals and Outcomes Achieved

Component A

Goal	Measurable Outcome	Actual Result
Train Food Processing Authorities (FPAs)	Train 10-15 FPAs	27 trained; 10 completed assessment
Increase the number of growers selling directly to consumers	30-40 growers/marketers	40 specialty crop growers/marketers have been assisted through this project.

Component B

Goal	Measurable Outcome	Actual Result
Provide information to specialty crop producers	Assist 200 existing specialty crop producers	275 specialty crop producers have accessed the information.
	Assist 30 new specialty crop producers	27 new specialty crop producers
	Conduct 4 outreach/hands-on education activities	2 formal activities were held with partners and users of the guide. Several other one-one-one conversations were held with specialty crop producers

		in developing the guide.
	Increase specialty crop sales by \$300,000	N/A. Specialty crop producers were not willing to share this information.

Even though specialty crop producers were not willing to share their sales information, we have heard from those producers that this information is a very helpful resource guide and it will help them grow their business.

Beneficiaries

Component A

Home food processors that are developing and selling acidified foods at farmer's markets and similar venues; small specialty processors that are developing a formulation for an acidified food, regional extension offices – various field extension specialists can use the pH meters with those that come into the office to assist them with their food product.

Component B

Specialty crop producers and processors in the state will benefit from the resource guide that was developed. This resource guide will continue to be used for many years (with updates) to provide those specialty crop producers with regulatory information from many different regulatory industries in South Dakota (including departments of Agriculture, Health, and Revenue).

Lessons Learned

Component A

To date:

82 acidified foods have been tested for pH

1. 40% had pH > 4.0
2. 8.5% of products tested pH above 4.2 (not approved)

70 products have undergone Microbial Analysis:

1. 61% passed with required changes –processing time, excessive headspace, dirty containers, ingredients, simmering food too long.
2. 26% not approved – requirements not met: (aerobic plate counts <10 CFU/g; coliforms <10 CFU g, and yeasts and mold < 10 CFU/g)

Component B

This work on this resource guide was initially delayed because of passage of the Home-Processed Foods Law and the importance of that to our state's specialty crop producers. During this transitional period of implementing the new law, the value of the on-line resource development (in the original scope) was shifted to the future after the new rules and policies were more clearly defined.

Then during that transition time, SDDA had staff changes which further delayed the implementation of this resource guide.

We've also learned that using an increase in sales is not a good measurable outcome. It is too difficult to get producers to share their sales information. And even if they did, it's very difficult to tie sales increases to one specific project or activity. There are multiple reasons that producers increase their sales over time.

Additional Information

Component A – N/A

Project 14

Title – Beginning Farmer Incentive Program (with FFA)

Contact Person – Nora Kohlenberg – 605.773.5146 – nora.kohlenberg@state.sd.us

Project Summary

Beginning farmers encounter tremendous cultural and financial obstacles when attempting to challenge the current market models of agricultural production in the region. Specialty crop production can provide opportunities for beginning farmers in situations where there are limited resources and production knowledge, and generally, the incentive to attempt production of specialty crops. While there are opportunities in agriculture in this region, widespread commercial production is elusive, especially for beginning farmers. Headway has been made in the three years since this project was started, but there it is still incredibly important that students be made aware of opportunities that exist in specialty crop production. Many Secondary Agricultural Education teachers are also unaware of opportunities for their students in specialty crop production. They often only think of the traditional agriculture opportunities in the state and steer their students in that direction. This project attempted to provide education and information to Secondary Agricultural Education teachers and their students in order to create successful, commercially viable, demonstration projects.

Project Approach

SDDA and SD DOE worked together jointly on this project. Starting in late 2009/early 2010, staff defined the best approach for providing incentives for specialty crop project demonstrations.

In April 2010, SDDA and DOE staff presented a session at the SD FFA Convention to Agriculture, Food and Natural Resources (AFNR) teachers. The session made the teachers aware of this new program. Each received posters for their classroom/school and 10 postcards to hand out to students. About 30-35 students and 60 ag instructors/FFA advisors attended an initial session at the State FFA Convention about the new Specialty Crops Program.

Approximately 250 students received an email announcing the grant the week prior to state FFA convention. A reminder was given to ag teachers in July and August about the opportunity. In early September, a postcard was mailed to all 79 AFNR programs as a reminder.

Presentations by SD Department of Agriculture staff were given to Secondary Agricultural Education teachers from across the state in December 2010 to 30-35 teachers and another meeting in April 2011 was attended by approximately 70 teachers. The presentations informed the teachers about the Specialty Crops Program. SDDA staff also presented the information during a workshop at the 2011 State FFA Convention.

Posters and postcards were also created to inform teachers and students about the FFA Specialty Crop SAE grant. Multiple emails were also sent to 78 SAE teachers to inform them of the program and to encourage students to apply.

Applications for the grant were created to be similar to the current FFA Proficiency applications for member SAEs. Applications were collected in February of 2011, for the first year of the

grant. Only one application was received. Nora Kohlenberg (SD Department of Education) and Robert Weyrich (formerly SD Department of Agriculture) reviewed the application and determined that the application was indeed eligible for the award. Each year the award is based on the number of eligible and quality specialty crop projects in the applications received.

Only one application was received in 2011, which is lower than the goal for the program.

An FFA student from Morrystown, SD, was awarded \$2,500 in April, 2011. Her project was an entrepreneurship SAE which included her garden and orchard. She started her SAE in producing pumpkins, watermelon, tomatoes, cucumbers, sweet corn, squash and carrots. She then took her produce to Lemmon to sell in her produce stand. After a successful first year, she worked with an individual with the Natural Resource Conservation District to start an orchard and she planted 115 trees. Her goals include expanding her produce varieties, expanding her garden and orchard, and becoming a certified organic grower.

SDDA staff also presented the information during a workshop at the 2012 State FFA Convention.

Applications were collected again in February of 2012 and again, only one application was received. Program staff from SD DOE and SDDA reviewed the application and determined that the application was eligible for the award. An FFA student from Salem, SD was awarded \$1,600 in April 2012. Her project was also an entrepreneurship SAE which included her garden. Her garden included sweet corn, pumpkins, gourds, Indian corn and other garden vegetables. She sold her product through roadside stands, farmers markets and direct to customers. Her goals included preserving a family tradition of growing specialty crops.

This project helped to encourage and demonstrate specialty crop production in South Dakota. It attempted to challenge the status quo and demonstrate to many young high school students the opportunity to produce specialty crops in a competitive, sustainable, and commercial manner. With this increased incentive and corresponding production projects, we expect that information sources and transfer will increase and an institutional knowledge base will grow with the beginning farmers and those they interact with. A network consisting of beginning producers, existing producers, resource people, and consumers will grow and strengthen. The benefit of this is both in terms of specialty crop value, agricultural development and a renewed intent to compete in worldwide markets.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To increase the number of beginning specialty crop producers that are willing to demonstrate economically sustainable and commercial production	10 specialty crop producers assisted	2 specialty crop producers were assisted
	6 outreach/hands-on educational activities	4 outreach activities were held
	Increase specialty crop sales by \$5,000	

Beneficiaries

Two South Dakota FFA students benefitted from this project by receiving incentives for their specialty crop production. These two students received \$4,100 collectively and increased their sales.

We hope indirectly, this project has made Secondary Agriculture Education teachers/FFA advisors think about specialty crops as a viable alternative for their students and has helped raise awareness of the option of raising specialty crops.

Lessons Learned

While we hoped to assist 10 specialty crop producers over the course of the project, we were only able to assist 2 specialty crop producers. The number of applications received is below what was expected but with any new program it is hard to anticipate how many applications would be received. We tried to approach the education of teachers in a different way that is easier for them to understand what the program is and how it is more related to what some of their students are doing.

We feel that teachers/FFA advisors were notified several times and had multiple opportunities to learn about this program and pass the information along to their students. Likewise, students had the opportunity on at least 3 outreach activities to learn about the program so we aren't sure why more applications were received.

Because specialty crops aren't widely planted in South Dakota (compared to other crops such as wheat, corn and soybeans), we think it may be that many teachers/FFA advisors aren't accustomed to working with specialty crops and are hesitant to encourage their students to work with specialty crops as well.

In hindsight, we think a project that works with an entire FFA Chapter or an entire ag education classroom would have a greater impact and affect more students. We are considering implementing a project that develops specialty crop curriculum and also incorporates hands-on learning.

Additional Information



Project 15 – Final Report (previously submitted)

Title – South Dakota Wine Promotion and Education Project

Contact Person – Alison Kiesz, SDDA, 605.626.3272, alison.kiesz@state.sd.us

Project Summary

Wine production has actually increased from no commercial production only 15 years ago to over 90,000 gallons in 2011. 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.

This project continues to build on efforts in the past but also acknowledges the dynamic nature of this fledgling industry. Additionally, newcomers are challenged to know or define quality characteristics of specialty crop production.

Project Approach

The South Dakota Department of Agriculture along with the South Dakota wine industry hosted the SD Wine Pavilion at the 2010 SD State Fair. This is the fourth 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 2-6, 2010. Twelve South Dakota wineries participated in the five day event (three for the first time). In 2009, 10 wineries participated, so the event is growing from an industry-participation standpoint. The event is set up so that consumers can sample a variety of South Dakota wines. We had 42 varieties of wine available and had roughly half of them available each day for consumers to sample. We had five regular tasting stations set up – each one featuring a different type of wine (fruit, 2 white stations, sweet red, and full-bodied red). In addition to the regular tasting stations, this year we had a station featuring either “signature” wines or featuring a particular winery. 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. We had cheese available from each of the state’s six cheese manufacturers. We worked with the SD Beef Industry Council, South Dakota Cattlemen’s Association 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 2,900 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 did not have an accurate way to count those people.

South Dakota wineries sold over 82 cases of South Dakota made wine at this event. The wines at the event represented the following specialty crops: grapes, cherries, apples, strawberries, rhubarb, black currants, raspberries, aronia berries, figs, and jalapenos.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
To increase specialty crop production destined to producing wines	75 specialty crop producers assisted	71 specialty crop producers assisted
	100 new specialty crop producers assisted	54 new specialty crop producers assisted
	2 outreach/hands-on education activities	2 educational seminars on South Dakota wine and food pairings with beef and pork
	\$100,000 increase in specialty crop sales over 1 year	\$84,590 increase in specialty crop sales to wineries from 2009 – 2010.

We did fall short of meeting the expected measurable outcomes in three different areas. However, we still feel this project has been very successful and very beneficial to South Dakota’s wine and fruit industry. Looking at the outcomes that were developed two years ago, we now feel that those initial outcomes weren’t realistic for the scope of this project.

Beneficiaries

Twelve South Dakota wineries, 71 specialty crop producers and 2,900 consumers benefitted from this project. The wineries saw their revenues increase by nearly \$16,000 from this project. Likewise, these wineries purchased over \$84,000 worth of specialty crops in 2010 to turn into wine. Also at least 2,900 consumers had the opportunity to learn about and sample South Dakota wine. This project has helped the wineries gain a 6.7% market share of all wine sold in South Dakota in 2010.

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.

Additional Information

None.

Project 16 – Final Report

Title – Fresh Mitchell

Contact Person – Billy Mawhiney, 605.770.8534; bmawhiney@timeatthetable.org

Project Summary

It is estimated that more than 50% of all adults and children in the United States do not eat their daily recommended amount of fruits and vegetables. In South Dakota only 15.7% of people eat at least five servings of fruits and vegetables daily. 1 in 7 South Dakota Residents live below the poverty line and 50% of them are children. In 2011 the Mitchell Food Pantry served over 6,000 residents providing over 10,000 bags of groceries, most of which were canned and box items. According to the F as in Fat report, we know that the lower the income the higher the obesity rate and vice versa. This tells us without even breaking the surface we have two major obstacles: nutritional education and accessibility

Fresh Mitchell aimed to take on the task of educating our residents in a three-fold project:

- Working with local businesses, groups, and organizations encouraging a communal effort to provide our local food pantry with fresh fruits and vegetables by gardening or planting and extra row.
- Canning harvests in the Fall so that quality food continues throughout the year minimizing waste.
- Educating the next generation in regards to how food comes farm to plate through cooking classes and preserving through canning classes.

Project Approach

Our first priority was to recruit local churches, groups and individuals to either plant an extra row in their garden or plant a full garden specifically to provide fresh food for the Mitchell Food Pantry participants. We were able to gain 4 gardens and an additional 7 individuals. Seeds were donated from Bakers Creek Heirloom Seed Company for individuals and church garden expenses were reimbursed from the Mitchell Food Pantry.

The Salvation Army estimates that over 1200 lbs. of fresh produce was donated this summer. Ideally we had set out to host canning classes with the abundance of vegetables, but we realized the food pantry participants were so excited the very little went bad before it was gone. In general, poverty stricken individuals have an increased chance of being overweight or obese and with South Dakota ranking the lowest amongst all states in vegetable consumption we felt offering opportunities for fresh food might affect buying power when it comes to the grocery store. If your income is



limited trying new foods may not be an option, but if you try kale you received from the food pantry and liked it, there is a good chance when you go grocery shopping you may purchase kale.

Kitchen Kids

Our second priority was to hold from scratch cooking classes for kids, teaching a sense of cooking confidence and increasing consumption of vegetables. The lessons consisted of recipes for making marinara, smoothies, salsa, veggie rollups, guacamole, lemonade and sometimes we simply used shapes and colors to draw pictures on our plate.

Classes were held in three locations:

The Salvation Army - on Wednesdays a total of 16 participants for 4 weeks.

We had 14 surveys returned. Parents estimated on average only **14% (2)** of participants ate 5 or more vegetables in a day, but that number did increase to **29% (4)** after classes ended. **79% (11)** of participants reported to increase their vegetable consumption, while the remaining stated their consumption remained the same.

The YWCA - on Tuesdays and Thursdays a total of 18 participants for 4 weeks.

We had 10 surveys returned. Parents estimated on that no participants ate 5 or more vegetables in a day. That number increased to **20% (2)** after the class ended. **90% (9)** reported an increase in vegetable consumption with the other participant reported it remained the same.

Big Brothers/Big Sisters - a one-time event where the “bigs” and “littles” came to learn to make pasta and marinara from scratch. No surveys were given, although one participant was from the Salvation Army group.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Result
Fruit & Vegetable Consumption 5 Servings a day	20% of cooking class participants consume 5 servings a day	35% of participants consume 5 or more servings a day
Vegetable consumption at home	30% of community funded garden recipients increase their vegetable consumption	50% increased their vegetable consumption

Surveys were sent to participants growing the gardens and the results state that 50% of those growing gardens have increased their vegetable consumption, while the other 50% reported their consumption stayed the same. 38% participants reported they eat 5 or more vegetables per day.

Combined Cooking Class

Results: 24 surveys, return rate 71%

8% ate 5 or more veggies prior to class increased to **25%** after class



Benchmark: 13.7% Target: 20% **83%** reported an increase in veggie consumption **17%** remained same.

Beneficiaries

Low income families who utilize the food pantry for their families' needs benefitted from this project because they had increased access to fresh fruits and vegetables. The 24 kids who participated in the cooking classes benefitted by learning how to cook with fresh fruits and vegetables. From our surveys, we learned that 83% of the kids who participated in the classes reported an increase in vegetable consumption.

Lessons Learned

The Salvation Army estimates that over 1200 lbs. of fresh produce was donated this summer. Ideally we had set out to host canning classes with the abundance of vegetables, but we realized the food pantry participants were so excited the very little went bad before it was gone. In general, poverty stricken individuals have an increased chance of being overweight or obese and with South Dakota ranking the lowest amongst all states in vegetable consumption we felt offering opportunities for fresh food might affect buying power when it comes to the grocery store. If your income is limited trying new foods may not be an option, but if you try kale you received from the food pantry and liked it, there is a good chance when you go grocery shopping you may purchase kale.

Additional Information

Kitchen Kid Pre Survey:

Child's Name: _____ Child's Grade (starting 2012-2013): _____

Parent's Name: _____

Q1. On a typical day does your child eat 5 or more vegetable servings, including all meals and snacks for that day? Yes or No

Kitchen Kid Post Survey:

Child's Name: _____

Q1. On a typical day does your child eat 5 or more vegetable servings, including all meals and snacks for that day? Yes or No

Q2. Please circle the answer that best describes your child who participated in the Kitchen Kids program.

- A. Overall vegetable consumption increased
- B. Overall vegetable consumption stayed the same
- C. Overall vegetable consumption decreased

Garden Monthly Survey

Name: _____

Garden Type: _____

Individual (plant row) or Group/Church (plant whole garden)

Q1. On a scale of 0-5 (more than 5 simply use 5), please mark the average daily amount of vegetables consumed?

Month: Rating: 0 1 2 3 4 5



Project 17 – Final Report

Title – 2012 Farmers Market Grower Grants

Contact Person – Alison Kiesz, SDDA, 605.626.3272, alison.kiesz@state.sd.us

Project Summary

Farmer's Markets are an important outlet for specialty crop producers to market their products. They also foster interaction between producers and consumers. There are many new specialty crop producers selling their products at farmers markets. Many of them have questions on pricing their fruits and vegetables. Before this project, there was no information readily available from a cross section of farmers markets across the state.

Interest in purchasing fruits and vegetables directly from the producers is also at an all-time high. SDDA has seen a high interest from the industry in the local foods movement. Collecting pricing information from the farmers markets will help us start gauging the economic impact that farmers markets have across the state.

Collecting this data also us to know when specialty crops are available at the farmers markets and will allow specialty crop producers to identify new opportunities for bringing early and late season crops to the market, which will expand their sales and income. For example, we've

identified that many early season crops are not in great supply – there is an opportunity for specialty crop producers to bring these products to market and expand their seasonal sales.

Project Approach

SDDA used our network of farmers markets and provided information to all of them about this program in March 2012. We used direct email contact as well as utilizing a South Dakota Farmers Market Listserve to inform potential applicants about the program. Information and the application were also available on our website. Applications were due April 15 and were accepted and approved on a first-come first-served basis.

We originally approved 13 applications and then throughout the course of the growing season, 2 markets were unable to fulfill all of the grant requirements. All successful farmers markets were notified of funding in late April and a conference call was held with all subgrantees in May to review the program requirements.

Qualifying farmers markets will be eligible for \$1,000 grant. Fifty percent of the funds were made available upon signing a grant agreement and fifty percent of funds were made available when all information was successfully submitted.

Farmers market managers submitted three pieces of information to SDDA over the course of the growing season.

1. Markets were required to record and submit lists of products sold and their respective sale prices at three different times throughout the season (early, mid and late season) to SDDA. SDDA provided a template for farmers markets’ use. Pricing information was collected by all markets:
 - The last market in June
 - The first market in August
 - The third market in September
2. Farmers markets also submitted gross sales data from their vendors at three different times throughout the season (early, mid and late season) to SDDA. Vendors submitted the data anonymously by writing their gross sales figures on a slip of paper and putting it in a box or envelope marked by the farmers market manager.
3. Farmers markets collected customer information through a dot survey once during the market season. Information collected included the following information: miles traveled to market, customer age and gender, and customer dollars spent at the market.

SDDA worked closely with the farmers markets during the growing season. We sent them a template for reporting pricing and gross sales. We also provided a brief overview on how to use the dot surveys. We sent them email reminders and/or follow up phone calls to remind them to collect this information and submit it to SDDA.

SDDA presented the results of this information at the 2012 South Dakota Local Foods Conference.

Goals and Outcomes Achieved

Goal	Measurable Outcome	Actual Results
Increase information available about pricing for fruits and vegetables	10 farmers markets will submit pricing information 3 times during the growing	11 farmers markets provided pricing information 3 times during the growing season

	season	
	90% of people that receive this information will find it useful	100% of people that have received this information have indicated it is useful

Sixty people have received this information directly from SDDA at workshops and through an email to the SD Local Foods Collaboration. They have used it to evaluate their pricing strategies and to consider adding new crops to their operation. People have also used the information to demonstrate the economic impact of specialty crops and farmers markets.

Beneficiaries

Specialty crop producers will benefit from this project by being able to identify a pricing scheme for their product based on their geographic location in South Dakota. We have also identified crops that are not in high supply and/or seasons where the selection of specialty crops is low. This information can also be useful to specialty crop producers because it helps them identify additional marketing periods for their products or identify additional crops that they can add to their farm to increase their growing season and their sales opportunities.

The information obtained from this project will be used as a baseline going forward so we can start to look for trends in the information collected. It also helps make the case of how specialty crop production is becoming more and more important to our state’s economy. Even though it is dwarfed by traditional crop production, it is starting to make an impact on our economy and to our specialty crop producers.

Lessons Learned

Going forward, we have learned some lessons and will be conducting the application process a bit different in coming years. We approved applications on a first come-first served basis, but this may not be the best choice. Because of the selection process, we lacked diversity in the size of the markets. Many of the markets that participated in this program were very small. In the future, we will include a wider array of market sizes in the selection process. We also want to continue to make sure that we have geographic variety in the markets – that the markets involved in this program are spread out across the state and aren’t all concentrated in one area of the state.

An unexpected benefit of this project was that we were able to identify additional marketing opportunities for specialty crop producers – there is a lack of supply for early and late season crops and this could be an opportunity for producers to expand their marketing season and realize some additional income.

Additional Information

N/A