BeefSD: An Integrated and Intensive Extension Curriculum for Beginning Beef Cattle Producers in South Dakota

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ABSTRACT: The average age of beef producers in the US is 58 and increasing. A need exists to increase the opportunity and success for the next generation of beef cattle producers. Extension at SDSU and South Dakota Farm Bureau Federation partnered to address this by providing a 3-year educational program that assisted beginning beef cow-calf ranchers in South Dakota to become economically, ecologically, and socially sustainable producers. The goal was to present a curriculum that contributed to future agricultural production, land stewardship, and rural community viability. The learning objectives were to provide: (1) evaluation of alternative production systems, (2) an integrated understanding of the entire US beef cattle industry, and (3) development of individual cattle enterprise plans. The target audience was a group of 30 beginning beef cattle enterprises represented by 43 individuals (several couples and a pair of brothers participated). The curriculum was comprised of six major kinds of activities: (1) instructional workshops, (2) case studies of established successful producers using a variety of production systems and management practices, (3) evaluation of post-weaning performance of participants’ calves, (4) mentoring from established beef ranchers and other industry professionals, (5) web-based interaction, and (6) travel study trips to learn about other segments of the beef cattle industry. Outcomes of the program were evaluated using surveys of the participants beginning at 12 months into the program and thereafter at 6-month intervals. Responses were primarily open-ended written answers, lending themselves to qualitative analysis. Responses indicated that meaningful outcomes have occurred. For example, when asked the impact of the program on their operation, one producer indicated: “I just had to tell you guys that our net worth has increased by $37,000. If we can continue to be diligent we can either keep 30+ bred heifers or operate on our own money by the end of the year.” Other participants reported comparable impacts. In conclusion, the beeSFD program has been successful at fostering positive outcomes for the beginning producer participants.

Keywords: Extension service, beef cattle, beginning ranchers, beginning producers

Materials and Methods

The program was initiated in the fall of 2010 based upon a partnership of SDSU Extension and the South Dakota Farm Bureau Federation (SDFBF) to provide this educational program to 30 beginning beef cattle producers in the state of South Dakota. Because of the large size of the target area for potential participants and the desire to keep participant groups small enough to engender relationship-building and discussion, we divided participants into two core groups, one each located in the eastern and western parts of the state. This also reduced...
time and travel demands for the participants. Most activities were conducted within each core group, but some activities, such as travel-study trips, were conducted with the groups combined. This was partly needed for cost control for travel, but was also used to provide opportunity for familiarity and networking across the small-group memberships.

Recruitment of participants

The primary audience that we recruited from were beginning ranchers (defined as those in agriculture production as a business for ten years or less) who were currently involved in a family operation, those who were starting out on their own, and newcomers who had a great desire to ranch, but did not have the family connection or current financial means to get started.

We conducted an application process to recruit and select beginning producers to participate in the program. We found these beginning rancher applicants by advertising the program through news media and by working with agriculture organizations and service industries including South Dakota Farm Bureau Federation, South Dakota Cattlemen’s Association, South Dakota Beef Industry Council, South Dakota Stockgrowers Association, South Dakota Farmers Union, agricultural lenders, veterinarians, USDA agencies such as Farm Service Agency and Natural Resource Conservation Service, and other people that serviced agriculture producers. We also contacted our existing Extension clientele that were beginning ranchers. Potential applicants were directed to Extension offices and the SDFBF web site for more information and the application form for the program.

We also recruited eight established successful ranchers from western and central South Dakota to serve as case-study coaches (see below) and mentors. These established ranchers practiced sustainable management and were financially stable. We recruited these mentors from our existing Extension clientele that were beginning ranchers. Potential applicants were directed to Extension offices and the SDFBF web site for more information and the application form for the program.

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Activities

The curriculum employed six major educational components: 1) conventional classroom instruction, 2) local “case-study” ranch evaluations of alternative beef cattle production systems, 3) evaluation of post-weaning performance of participants’ cattle, 4) personalized interaction with mentors and a management advisory team, 5) interactive “web-based” learning experiences, and 6) multi-day travel-study trips.

Instructional Workshops. Workshops consisted of two-day meetings that included two major components: classroom instruction and ranch case studies. The specific location of each workshop changed for each session so that it was near the case study ranch for that session. Classroom instruction covered livestock, natural resource, marketing, business, financial, legal, and risk management tools for beginning ranchers. The livestock production and natural resource management curriculum included nutrition, range management, genetics, reproduction, animal health, and other topics. Utilization of cattle and pasture record keeping to benchmark performance and analyze management needs and opportunities was included. To develop financial management skills, each participant prepared balance sheets, cash flows, and determined unit cost of production during the program. Marketing was a major focus and was integrated in each meeting. Participants received the knowledge and skills to complete and implement business and marketing plans by the end of the project with guidance from their management advisory team. An estate-planning component was included that included both the beginning ranchers and the older generations of their families. Workshops also included components on communication and human relations.

The second component of the instructional workshops was case studies of four production systems that were evaluated throughout the entire project, including: 1) retained ownership through backgrounding of calves, 2) retained ownership to slaughter, 3) seedstock production, and 4) grass-fed production. Eight established ranchers (four per core group, one for each production system) served as case-study coaches, hosted tours of their operations and lead discussions about ranch history, their management philosophy and style, and decision-making criteria. The selected case study coaches were active leaders within their communities as well as state and national organizations; which supported the importance of developing community and organization leadership by beginning ranchers. Beginning ranchers spent part of a day at each operation as part of four of the 2-day workshops. Beginning ranchers were provided with background information related to each production system during the classroom session before and after the tour.

Post-Weaning Calf Performance Evaluation. Most South Dakota beef producers market weaned calves as their end product through a local auction market with minimal knowledge of the remaining production stages necessary to produce meat products and no knowledge of how their calves perform post-weaning. It was important to this program that beginning ranchers come to understand the entire beef production system in order to enhance their opportunity to adapt to accelerating business change in agriculture. It was also important that they learn the value of knowing their cattle’s post-weaning performance. Beginning ranchers were asked to place up to five animals each into a post-weaning performance evaluation program. Participants received feeding performance (ADG, etc.), economic data (cost of gain, net income, etc.), and carcass data (carcass weight, quality and yield grade, etc.) on their cattle. A trip was made to visit the feedlot to see the cattle near the midpoint of the feeding period. We anticipated that some participants would be looking to enter cattle production, but not yet own a cow herd. We bought 12 head of cattle for them to follow through the feeding and harvesting process. These cattle were different biological types than those owned by the participants so we could demonstrate how these differences influenced finishing and carcass performance.

Mentoring. Mentoring was a major key to beginning rancher success during this project. Beginning ranchers developed personal relationships with case-study coaches and mentors during workshops, by exchange of information
through web-based technology, and during travel-study trips. All case-study coaches expressed enthusiasm to serve as mentors and assist beginning ranchers.

Instructors assisted beginning ranchers to form and utilize management advisory teams. Each participant established an individualized team with membership chosen to meet their specific needs. Teams consisted of four or five agriculture professionals such as mentors, agriculture organization staff, agriculture lenders, feed suppliers, marketing agents, federal agency personnel, lawyers, estate planners, and/or veterinarians.

Beginning ranchers hosted at least two ranch visits by members of our project team. The first ranch visits focused on assisting ranchers in conducting an inventory of their resources and determining goals. The second ranch visit focused on options to improve profitability and formation of management advisory teams.

**Web-Based Interaction.** Between face-to-face workshops, participants were expected to interact using web-based networking activities designed to help them continue to learn. A private group on Facebook was used as an online platform for participants to maintain an ongoing conversation about beef production. This allowed an informal exchange of ideas among participants (beginning ranchers, project team members, and case-study coaches). Each of them was expected to be interactive in the social group. A web presence was hosted on the SDFBF web site that had both a public portion and a login site for beefSD members. The public portion was intended to provide educational materials for both beefSD participants and the general public. This included things such as educational YouTube videos and podcasts. The login portion provided information that might be personal, announcements of beefSD activities, polls of participants, etc. Information presented through the web increased as the project proceeded to reduce travel to face-to-face meetings.

**Travel Studies.** Three trips were conducted to expose participants to marketing tools and opportunities, as well as post-weaning segments of the beef cattle industry. The first trip exposed participants to the breadth of marketing opportunities, and included aspects of cattle and meat production. Stops were made at farmer-feeders en route to Chicago to understand the characteristics of cattle feeding in the upper Midwest. In Chicago, participants visited the Chicago Mercantile Exchange. They also visited local farmer markets and other local marketing outlets in Chicago to experience alternative product (grass-fed, natural, and organic) marketing. Thus, participants were exposed to local purchasing opportunities of large city consumers. This included visiting a Whole Food grocery store, a local wholesaler of Prime quality beef, local farmers’ markets, and an upscale white tablecloth restaurant. In these markets, the beginning ranchers were required to interact with and interview customers to gain an appreciation for the philosophies and motivators of their food-purchasing decisions. They gained an appreciation for potential product differentiation to add value through alternative markets.

The travel study trip during the second year focused on post-weaning production including large commercial feedlots, a processing plant, and meeting with cattle industry representatives (i.e., Cattle Fax). This trip was south of South Dakota into Colorado, Kansas, and Nebraska. Additionally, while in Colorado, arrangements were made for Temple Grandin to demonstrate facilities and procedures to provide low-stress treatment of cattle during handling and harvesting processes. Travel continued to Denver where participants met at the Beef Industry Council Culinary Kitchen and Cattle Fax to learn about the services they provide for cattle producers. This trip included tours of three different commercial feedyards and a large packing plant in Kansas, an elite seedstock producer, and a replacement heifer development facility, emphasizing the size and scope of the beef cattle industry.

By the third year, we expected that all participants would have completed and initiated their individual production and management plans. They should have an understanding of their knowledge and skills, and should also have a sense of further information they wanted or gaps in their knowledge base. At this point, the participants determined the destination(s) of the third travel-study trip to meet their needs and goals. They chose Washington DC to determine how government policy interacts with beef cattle production and the National Cattlemen’s Beef Association meeting at Tampa, Florida.

**Evaluation Plan**

Evaluation was a continuous process throughout the project. The project team engaged consulting services of an evaluation professional to assist with assessment of ongoing progress towards desired outcomes. We conducted three surveys of the participants. The first (in 2011) was to determine baseline knowledge levels and to learn areas (production, business, financial, marketing, etc.) wherein they were most interested in gaining knowledge, skills and abilities. The second and third surveys were conducted during 2012 (at 12- and 18-month points in the timeline of the project) to determine progress toward impacts and outcomes.

Outcomes were also assessed by one-on-one interviews (during ranch visits or through interaction on social media) with individual participants. Mileposts, such as the completion of operational inventory, assembly of a professional management advisory team, and completion of business plans, financial statements, and marketing plans were evaluated during interviews.

**Results and Discussion**

**Recruitment**

We received 58 complete applications. We had originally planned for 30 individuals, but immediately upon advertising the program, we received inquiries from many couples and siblings about whether they could apply together. We adjusted our plans to include 30 beginning enterprises with up to 2 participants from each. Ultimately, we filled our goal of 30 enterprises, which included 14 individuals, 15 couples, and a pair of brothers.

**Activities**

**Instructional Workshops.** Seven multi-day workshops were completed, including: 1) case study of
retained ownership to backgrounding, 2) case study of retained ownership to slaughter, 3) case study of grass-finished production, 4) case study of seedstock production, 5) SD Grazing School (A joint-sponsored 3-day workshop by SDSU Extension and the SD Grassland Coalition), 6) BEEF2020 (A carcass and meat evaluation course conducted annually at the SDSU Animal Science Meats Laboratory), and 7) a cow-calf management workshop.

**Post-Weaning Calf Performance Evaluation.**
Participant calves were fed at Darnall Feedyard near Harrisburg, NE. All participants received feedlot performance and carcass data. Participants had the opportunity to participate in market risk protection through hedging. Participants were hosted at Darnall Feedyard for a mid-feeding period meeting wherein they saw their cattle and participated in a mini-symposium, and a final meeting wherein they received their final report.

**Mentoring.** Ranch visits were completed and management teams were formed.

**Web-Based Interaction.** The Facebook private group has been very active. The project team members expected they would need to “seed” ideas into the conversation to stimulate discussion, but the participants have engaged actively without our stimulation. The login portion of the web site hosted by SDFBF has worked very well for announcements, polls, and other programming interactions. However, our presence on the public side has been limited. We delivered a four-part webinar series on Strategic Planning during Year 2. While it served its purpose for us to convey the material, it was not very satisfying because the participants were reticent to be interactive in the web-based setting. They were much more comfortable and talkative when in face-to-face settings.

**Travel Studies.** As expected, all 3 trips were highly successful and very well received and attended by the participants. The goal of having participants become aware of all segments of the beef cattle industry and their interactions was achieved.

**Evaluation**

Feedback from the surveys has been very positive. Excerpted outcome quotes by participants on the most recent survey related to our 6 major activity categories include:

**Instructional workshops:** “Made me come to the realization that I'm raising BEEF not cattle. Should be a requirement to attend this if you are going to mate cattle. Retrieved all carcass data on our home raised steers. Now comes to the culling of dams and sires of those that don’t make the cut to improving the herd. Had no idea that 10 days too early or too late of harvest date could affect carcass quality that dramatically.”

**Case studies:** “We have learned that networking is crucial. Being able to connect with someone who has more experience in this industry, ask them questions, and learn from their experiences is invaluable. We have also found that there is no one-right-way to be a cattle producer. There are many ways to be profitable in this industry if you are willing to take a few risks and try something new.”

**Calf post-weaning performance:** “I have a better understanding of the costs involved in retaining ownership at a feedlot. I plan to use this experience when deciding what to do with my calves this fall.” Another stated “I took what I thought was the bottom end of my calves to Darnall's Feedlot to get a baseline and I was very surprised. We had not been breeding for any carcass traits and we graded choice on our cattle. This baseline gave me the incentive to AI our entire herd this spring to improve on our carcass grade.”

**Mentoring:** “I find that decision making whether it be about grass management, marketing or genetic selection is easier because I have the tools to do so and mentors to contact for further consultation if needed.”

**Web based training:** “My strategic plan is lacking because it was not a real priority to me nor could I see a major benefit. My easy plan was to deal with each situation on a case by case basis. However, now that we are in a major drought, I realize the need for such a strategic plan. I plan to work on a solid plan starting with the information I am currently gaining.”

**Travel study trips:** 1st quote; “Being able to see the production line at the Tyson plant was phenomenal. Meeting Temple Grandin and hearing her explain her designs face-to-face and then seeing how her designs were being used in virtually every cattle handling situation that we saw thereafter was amazing. It was such a unique experience to be able to see nearly every level of the beef industry all in one trip. We watched cattle go from feedlots, to kill floors, to freezers, to a culinary kitchen, and then to our plates. The "aha" moment of this trip (and really the entire beefSD experience) is that the beef industry is so, so much bigger than the cows in our pastures.” 2nd: “The Culinary Kitchen presentation was really interesting. I plan to visit with my butcher about the possibility of trying some new cuts on our own beef, or maybe offering some of them to our freezer beef custom orders. I also plan to give my customers more than just a box of beef, but also try to give them some information on preparation of the meat through the beefitswhatsfordinner.com website or the Cooking Beef With Confidence booklet.”

**Implications**

This program has had a positive impact on the beef cattle enterprises and lives of the beginning beef cattle producers that participated in the program. Sustaining the program is very important and we have initiated the second class of beefSD.

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