National Beef Quality Audit – 2011
Phase lll: Quality Enhancement by the Seedstock, Cow/calf, and Stocker Sectors

Final Report to the:
National Beef Quality Assurance Program
National Cattlemen's Beef Association
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Table of Contents

I. Full Project Report

Background

The Beef Quality Assurance Task Force (**BQATF**) was formed in early 1986 when 3 National Cattlemen's Beef Association (**NCBA**; then, the National Cattlemen's Association) Policy Committees independently directed NCBA to address the growing issue of consumer concern about the safety and wholesomeness of beef. The NCBA Beef Quality Assurance (**BQA**) Program was initially patterned after the BQA Program of the Texas Cattle Feeders Association (**TCFA**). The TCFA BQA Program had as its objective "To ensure that all cattle shipped from this feedlot are healthy, wholesome and meet FDA, USDA, and EPA specifications" (Smith et al., 1997). Following this precedence, subsequent BQA educational efforts have resulted in tremendous advancements in beef quality. The most striking evidence of this is the reduction of injection site blemishes in the sirloin area of beef carcasses. Once the injection site issue was identified, the concerted, intensive efforts of the national and state BQA educational programs resulted in cattle producers moving injection sites from the sirloin to the neck area (Roeber et al., 2001).

Adoption and effectiveness of BQA has most often been evaluated by monitoring characteristics at slaughter [i.e. National Beef Quality Audits (**NBQA**)], in processing facilities (i.e. Injection Site Blemish Audits), or in small local/regional surveys. While these audits have provided a snapshot of a few defects that may occur in cattle production sectors of the industry, they did not directly measure the level of adoption of BQA production practices at the cow/calf, seedstock, or stocker sectors of the cattle industry. A national survey that specifically examines producer knowledge and implementation of BQA-related practices in the seedstock, cow/calf, and stocker industry sectors is needed.

Checkoff-funded NBQAs have provided important benchmarks for the U.S. beef industry since 1991. The 1991 audit helped determine monetary losses due to quality defects. It gave a snapshot view of the industry and helped producers see their management shortfalls, and it showed areas in which educational efforts needed to be focused (Smith et al., 2005). Because of the success of this initial survey, the recommendation was made to conduct an audit every 4 to 5 years. The historic focus of the audits has been centered on quantifying the performance of beef carcasses for a number of value enhancing characteristics. Therefore, all audits have focused on harvest-floor surveys, cooler audits, and interviews with post-harvest beef supply-chain partners.

This project was designed to obtain information that more directly identifies the adoption of BQA management principles by surveying U.S. cattle producers as to what they are actually doing on the farm and ranch. This marks the first time cattle producers, including stockers,

cow/calf operators, and seedstock producers, were surveyed on a national basis. Producer input was sought to strengthen the measurement of safety and quality-based practices implemented on farms and ranches that support consumer confidence in beef products and production systems.

Literature Cited

Roeber, D.L., R.C. Cannell, K.E. Belk, J.A. Scanga, G.L. Cowman and G.C. Smith. 2001. Incidence of injection-site lesions in top sirloin butts. J. Anim. Sci. 79:2615.

Smith, G.C., J.W. Savell, J.B. Morgan, and T.E. Lawrence. 2005. 2005 National Beef Quality Audit http://meat.tamu.edu/nbqa2005/nbqa2005summary.html

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Objectives

1. To quantify BQA-related production and management practices that are currently being used by cattle producers throughout the beef production industry.
2. To quantify the current adoption level of quality-oriented management practices by the industry.
3. To develop a benchmark against which to measure BQA adoption at future points-in-time.
4. To provide a foundation from which to direct future educational initiatives for cattlemen to further enhance the safety and quality of beef and improve the competitiveness of beef products with consumers.

Methods

Survey Development

In order to survey BQA adoption and assess current management practices among cattle producers across the U.S., a survey consisting of 43 questions (Appendix A) was developed. A committee of State BQA Coordinators and BQA educators, from across the U.S., were assembled to assist in developing the survey instrument. An attempt was made to develop an industry-wide survey instrument without regional biases. Surveygizmo (Boulder, CO;

www.surveygizmo.com) was the online software system used for developing and delivering this survey.

Cattle producers had access to the survey in an online format at the website www.cattlesurvey.com. Also, a written survey that mirrored the online survey was developed for the purpose of obtaining responses at state, regional, and national cattlemen's meetings. Surveys were collected online and in written form from April 2011 to February 2012. In total, 3,755 surveys were submitted. Means and frequency distribution were determined on a total respondent basis (overall), within industry sectors, and within some demographical categories. Questions in the survey were designed to collect the following (a full list of questions is found in Appendix A):

a) Biographical information about the respondent of the survey (i.e. age, primary source of income, etc.).
b) Demographical information that characterized the type and size of cattle operation of the respondent.
c) Information that quantified the respondent's knowledge of BQA principles and whether the respondent implemented practices consistent with BQA guidelines.
d) Knowledge of, or participation in, the BQA Program, including attending a BQA educational meeting and/or becoming BQA Certified.

The survey had some questions where the respondent, based on their response to a question, was routed to a set of additional questions that asked more specifically about a related area of BQA production practice adoption. Some respondents did not answer every survey question. Means and frequencies are based on the total number of respondents answering a specific question.

Each table presented in the results and discussion section is related to a specific question asked in the survey and is abbreviated as Q1 (Survey Question 1), Q2 (Survey Question 2), etc. The abbreviation Q7A, Q7B, etc. depicts subsequent questions that are related to the original question.

Pilot Projects

In addition to the national survey, 5 regional pilot projects were conducted in areas in which additional data collection efforts were focused. These pilot projects addressed more specific segments of the cattle industry. These pilot projects were coordinated by state BQA personnel and included: Pennsylvania (cow/calf and dairy), Southeast U.S. (cow/calf), Minnesota (dairy), Oklahoma (stocker/yearling), and California (dairy). Results from these pilot projects are included in this report, but results will also be analyzed individually so that each area can access data to base future BQA educational efforts.

Results and Discussion

A total of 3,755 cattle producers responded to the survey. Of surveys completed, 2,056 were submitted online and 1,699 surveys were filled out using the written version. The majority of respondents characterized themselves as commercial cow/calf (74.8%; Table 1). In addition, 25.3% of respondents represented themselves as seedstock producers, and 36.8% as a backgrounder/preconditioner or stocker operator. A small percentage (<1%) of respondents were involved in more than one sector of the beef cattle industry. Sixty-three percent of respondents' primary involvement with the cattle industry was in the commercial cow/calf sector (Table 2).

Table 1. Q1. Distribution of survey respondents by industry sector[1]

	Sector						
	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy	Other
% of Respondents (n = 3,749)	25.3	74.8	17.8	19.0	16.2	5.0	5.3

[1]Values do not sum to 100% because survey respondents could express their involvement with multiple sectors by answering more than one sector.

Table 2. Q2. Distribution of survey respondents by primary industry sector in which they were involved

	Sector							
	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy	Other	Multi
% of Respondents (n = 3,660)	14.7	63.0	2.7	4.6	8.2	3.9	2.2	0.8

[1]Multi = multiple industry segments were marked.

Overall, and in each of the industry sectors, the majority of respondents were intricately involved in the day-to-day activities of their cattle operation. Therefore, this should translate into an accurate snapshot of the current level of BQA adoption and provide insight into the current production practices in the beef industry (Table 3).

Table 3. Q3. Distribution of survey respondents and their primary role within the operation, overall and by industry sector

Role	Overall	Sector (%) Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy
Owner	36.3	41.3	35.0	32.7	36.5	35.3	45.4
M/H[1]	7.4	5.4	6.0	5.1	6.0	17.7	13.5
O/M/H[2]	52.9	51.8	56.9	57.1	56.3	36.7	29.1
Hired[3]	2.8	1.1	1.9	3.1	1.2	9.7	10.6
Contract[4]	0.6	0.4	0.3	2.0	0.0	0.7	1.4

[1]M/H = manager/herdsman.
[2]O/M/H = owner/manager/herdsman.
[3]Hired = hired labor.
[4]Contract = contract labor.

Of all survey respondents, 34.7% said that their cattle business was their primary source of income. Over two-thirds (68.2%) of responding commercial cow/calf producers said that cattle were not their primary source of income (Table 4).

Table 4. Q4. Percentage of survey respondents that agreed that cattle were their primary source of income, overall and by industry sector

	Overall	Sector Seedstock	Commercial cow/calf	Backgrounder/ Preconditioner	Stocker/ Yearling	Feedlot	Dairy
% of Respondents (n = 3,300)	34.7	26.9	31.8	44.8	37.4	54.0	70.8

Overall, and within each industry sector, the vast majority of respondents had worked in the cattle industry for more than 10 years. And, over 50% of responding cattle producers had more than 25 years of experience in their industry sector (Table 5).

Table 5. Q5. Percentage of years of consecutive involvement in the beef industry, overall and by industry sector

Years	Overall	**Sector** (%) Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy
1-3	3.5	3.0	3.5	2.0	1.8	4.0	7.0
4-10	12.6	10.1	12.6	21.4	10.7	12.7	15.5
11-25	28.7	27.2	29.2	21.4	33.3	29.0	31.7
26-50	44.1	48.1	43.1	42.9	44.6	50.0	38.0
>50	11.1	11.6	11.7	12.2	9.5	4.3	7.8

[1]Multi = multiple industry segments were marked.

Cattle producers from 45 states responded to the survey (Table 6). As a result, we were able to get responses from different regions of the U.S. and consequently different cattle production systems.

Table 6. Q6. Number of survey respondents by state

State	No. of Respondents	State	No. of Respondents
AK	0	MT	59
AL	71	NC	42
AR	30	ND	28
AZ	24	NE	97
CA	52	NH	0
CO	152	NJ	1
CT	0	NM	27
DE	1	NV	40
FL	30	NY	88
GA	105	OH	50
HI	19	OK	701
IA	73	OR	61
ID	29	PA	391
IL	88	RI	0
IN	20	SC	25
KS	105	SD	63
KY	164	TN	101
LA	48	TX	282
MA	0	UT	14
MD	17	VA	70
ME	2	VT	1
MI	32	WA	15
MN	122	WI	78
MO	62	WV	97
MS	80	WY	23
AK	0	MT	59

Tables 7, 8, and 9 show the mean number of cattle within different classes of cattle. From the mean and standard deviations, we can tell that both small operations and large operations were represented in this survey. The median number of cows was 50 and 70 head for seedstock and cow/calf respondents, respectively.. Further, 41.9% of respondents whose primary sector was seedstock had 40 or fewer cows, and 35.4% of commercial cow/calf sector respondents had 40 cows or less.

Table 7. Q7A. Mean (± standard deviation) number of animals on inventory within the last 12 months among survey respondents in the seedstock and commercial cow/calf industry sectors

		Sector		
No. of Animals	Overall	Seedstock	Commercial cow/calf	Multi[5]
Breeding females[1]	177.4 ± 750.6	111.2 ± 172.8	191.8 ± 840.3	256.6 ± 279.3
Calves[2]	133.7 ± 643.6	91.9 ± 169.6	142.7 ± 719.2	263.5 ± 285.1
Cull (market) cows[3]	20.1 ± 146.9	11.3 ± 19.1	22.4 ± 165.3	23.9 ± 33.0
Cull (market) bulls[4]	2.5 ± 9.1	3.1 ± 9.0	2.3 ± 9.0	3.3 ± 4.6

[1]Breeding age beef females on inventory.
[2]Beef calves around the time of weaning.
[3]Cull (market) beef cows sold.
[4]Cull (market) beef bulls sold.
[5]Multi = multiple industry segments were marked.

Table 8. Q7B. Mean (± standard deviation) number of animals on inventory within the last 12 months for survey respondents involved in the backgrounding/preconditioning, stocker/yearling, and feedlot sectors

		Sector			
No. of Animals	Overall	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Multi[4]
Backgrounded[1]	946.0 ± 5,605.4	697.7 ± 1,550.4	309.1 ± 1,107.8	1,583.9 ± 8,152.6	425.9 ± 809.1
Out on pasture[2]	827.2 ± 4,954.8	291.9 ± 672.8	496.5 ± 1,015.1	1,408.4 ± 7,235.0	208.1 ± 351.5
In a feedlot[3]	18,607.2 ± 128,521.1	357.6 ± 1421.1	128.5 ± 925.2	39,863.2 ± 187,732.0	8,796.9 ± 41,681.4

[1]Cattle in a backgrounding yard.
[2]Stocker or yearling cattle out on pasture.
[3]Cattle in a feedlot on a finishing diet.
[4]Multi = multiple industry segments were marked.

Table 9. Q7C. Mean (± standard deviation) number of animals on inventory within the last 12 months for survey respondents involved in the dairy industry

		Sector	
No. of Animals	Overall	Dairy	Multi[3]
Breeding age females[1]	125.9 ± 471.8	130.4 ± 237.1	1,525.5 ± 2,983.0
Heifers[2]	104.5 ± 263.4	116.2 ± 200.1	154.3 ± 213.1
Dairy bulls or steer calves	174.2 ± 800.9	31.1 ± 121.0	1,005.0 ± 1,727.7
Cull (market) cows sold	32.3 ± 141.3	31.4 ± 68.7	608.3 ± 1,032.1
Cull (market) bulls sold	6.3 ± 22.8	8.7 ± 26.4	1.3 ± 1.2

[1]Breeding age dairy females.
[2]Dairy heifers (birth to first calf).
[3]Multi = multiple industry segments were marked.

Respondents overall, and for the commercial cow/calf, backgrounder/preconditioner, and stocker/yearling operator, most often sold their cattle through a livestock market auction (39.6% overall), followed by selling cattle directly to the feedlot (26.9%, overall). Within the seedstock sector, the most common manner in which respondents sold their cattle was through a consignment or production sale (Table 10).

Table 10. Q8. Mean percentage of cattle (± standard deviation), among survey respondents, sold using different marketing methods, overall and by industry sector

		Sector (% of cattle)			
Method	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling
Consignment/production sale[1]	6.5 ± 19.0	30.1 ± 32.5	2.3 ± 11.0	1.6 ± 9.2	1.3 ± 8.0
Livestock market[2]	39.6 ± 42.2	25.3 ± 28.8	44.0 ± 43.8	35.0 ± 42.0	20.2 ± 34.9
Video, satellite, etc.[3]	6.3 ± 20.9	3.0 ± 12.9	7.8 ± 23.2	12.3 ± 28.5	0.6 ± 5.7
Direct – feedlot[4]	26.9 ± 39.8	17.1 ± 28.1	32.7 ± 43.1	31.8 ± 40.2	5.8 ± 20.1
Direct – packer	8.4 ± 25.1	2.6 ± 11.0	4.0 ± 16.5	7.2 ± 24.3	56.5 ± 40.1
Direct – consumer	7.8 ± 22.2	13.6 ± 26.5	5.6 ± 18.7	7.0 ± 23.9	14.4 ± 31.9
Other	2.7 ± 13.9	5.1 ± 16.3	4.6 ± 20.5	2.8 ± 15.9	1.4 ± 11.5

[1]A seedstock consignment or production sale.
[2]Livestock auction market.
[3]Video, satellite, telephone, or Internet auction.
[4]Direct sale (private treaty) to a feedlot or order buyer.

Overall, one-fourth of cattle producers that responded to this survey sold cattle through a special sale (i.e. preconditioned, weaned, graded, or special breed calf sale).

Table 11. Q9. Mean percentage (± standard deviation) of survey respondents that sold cattle in a special sale **(**preconditioned, weaned, graded, or special breed calf sale), overall and by industry sector

		Sector			
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling
% of Respondents (n = 3,653)	25.1	34.5	25.9	38.1	21.0

Table 12 shows the percentage of respondents who retained ownership of cattle in 2010. These frequencies represent the percentage of calf owners that retained ownership through the feedlot phase and owners of calves that retained heifers as replacement breeding animals. Overall, almost one-fourth of respondents retained some calves during 2010. As expected, a numerically

higher percentage of respondents who said they were dairy producers retained heifers than their counterparts in the beef industry (Table 13).

Table 12. Q10A. Mean percentage (± standard deviation) of animals retained by survey respondents in 2010, overall and in the seedstock, commercial cow/calf, backgrounding/preconditioning, stocker/yearling, and feedlot sectors

		Sector				
Animals retained (%)	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot
Stockers/backgrounders[1]	24.1 ± 39.3	16.6 ± 31.9	25.1 ± 39.9	36.0 ± 44.0	48.7 ± 48.1	11.3 ± 29.7
Feedlot cattle[2]	17.8 ± 34.4	11.3 ± 24.9	12.7 ± 29.7	17.2 ± 30.6	12.6 ± 31.4	69.2 ± 40.4
Replacement heifers[3]	8.4 ± 21.3	11.5 ± 24.8	8.7 ± 21.5	2.0 ± 8.0	5.6 ± 18.8	3.3 ± 13.7

[1]Beef stocker/backgrounder calves where ownership of calves was retained.
[2]Beef feedlot cattle.
[3]Replacement beef heifers developed by a custom heifer developer.

Table 13. Q10B. Mean percentage (± standard deviation) of male and female animals retained by survey respondents in 2010, overall and in the dairy industry

		Sector	
Animals retained (%)	Overall	Dairy	Multi[3]
Male calves[1]	8.4 ± 25.2	17.1 ± 34.3	0.0 ± 0.0
Female calves[2]	76.6 ± 39.4	84.5 ± 32.7	50.0 ± 70.7

[1]Male dairy calves on a calf ranch.
[2]Female dairy calves on a calf ranch.
[3]Multiple industry segments were indicated on the survey.

In the survey, respondents were asked, "When you hear the term "quality" in relation to the beef industry, what comes to mind?" They were provided with a 5-point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; and 5 = Strongly disagree. As seen in Table 14, traits with the lowest numerical mean were "producing beef that provides safe and wholesome beef" and "raising cattle and calves that are healthy." And, the traits with the highest numerical means were "USDA Quality Grade of Choice or Prime" and "producing cattle that allow others to be profitable." All traits had means less than 2.1, both overall and within the industry sectors; therefore, on average, respondents either strongly agreed or agreed that the term was synonymous with quality.

Table 14. Q11. Mean (± standard deviation) for agreement level for survey respondents on a scale of 1 to 5 for the question "When you hear the term "quality" in relation to the beef industry, what comes to mind?"[1]

Trait	Overall	Sector (%)					
		Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
USDA Quality Grade[2]	1.7 ± 0.8	1.7 ± 0.8	1.7 ± 0.8	1.5 ± 0.7	1.5 ± 0.7	1.5 ± 0.8	1.6 ± 0.7
Eating satisfaction[3]	1.4 ± 0.6	1.3 ± 0.6	1.4 ± 0.6	1.4 ± 0.5	1.4 ± 0.5	1.4 ± 0.6	1.6 ± 0.7
Safe and wholesome beef[4]	1.3 ± 0.6	1.4 ± 0.6	1.3 ± 0.6	1.2 ± 0.4	1.3 ± 0.6	1.3 ± 0.6	1.4 ± 0.6
Healthy cattle[5]	1.3 ± 0.7	1.4 ± 0.7	1.3 ± 0.6	1.3 ± 0.5	1.4 ± 0.6	1.4 ± 0.7	1.4 ± 0.7
Free from defects[6]	1.5 ± 0.7	1.5 ± 0.7	1.4 ± 0.7	1.4 ± 0.7	1.4 ± 0.6	1.4 ± 0.7	1.7 ± 0.8
Profitable cattle for you[7]	1.5 ± 0.8	1.6 ± 0.8	1.5 ± 0.8	1.5 ± 0.8	1.7 ± 0.9	1.7 ± 1.0	1.7 ± 1.0
Profitable cattle for others[8]	1.7 ± 0.9	1.6 ± 0.8	1.7 ± 0.9	1.6 ± 0.8	2.0 ± 1.1	1.8 ± 1.0	2.0 ± 1.1

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Tables 15, 16, 17, 18, 19, 20, and 21 show the frequency distributions for the specific rankings for the 1 to 5 scale indicating whether the respondent agreed or disagreed that the named trait was synonymous with quality overall and then by each individual industry sector. In all cases for all traits, the most frequent response was "strongly agreed."

Table 15. Q11. The frequency of responses among survey respondents to the question "When you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, overall

Trait	Ranking[1] (% of responses)				
	1	2	3	4	5
USDA Quality Grade[2]	50.6	37.3	9.0	2.3	0.8
Eating satisfaction[3]	67.5	28.3	2.9	0.7	0.6
Safe and wholesome beef[4]	74.3	21.5	3.0	0.5	0.7
Healthy cattle[5]	73.2	21.4	3.8	0.9	0.7
Free from defects[6]	64.6	28.0	5.4	1.3	0.8
Profitable cattle for you[7]	62.2	25.4	8.7	2.5	1.1
Profitable cattle for others[8]	50.7	31.7	13.0	2.8	1.8

[1]5-point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).

[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 16. Q11. The frequency of responses among survey respondents to the question "when you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was seedstock

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[1]	51.6	34.9	10.1	2.9	0.6
Eating satisfaction[2]	70.8	25.7	2.5	0.6	0.4
Safe and wholesome beef[3]	70.7	24.3	3.7	1.0	0.4
Healthy cattle[4]	66.9	26.1	5.3	1.0	0.8
Free from defects[5]	59.6	32.4	6.3	1.4	0.4
Profitable cattle for you[6]	58.6	28.3	9.2	3.1	0.8
Profitable cattle for others[7]	56.8	32.7	7.9	2.0	0.6

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 17. Q11. The frequency of responses among survey respondents to the question "when you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was commercial cow/calf

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[2]	48.2	39.8	8.8	2.3	0.8
Eating satisfaction[3]	66.4	29.4	2.7	0.8	0.7
Safe and wholesome beef[4]	74.6	21.7	2.6	0.6	0.6
Healthy cattle[5]	75.7	20.0	3.0	0.7	0.7
Free from defects[6]	65.7	27.6	4.7	1.2	0.8
Profitable cattle for you[7]	65.2	24.0	7.7	2.2	0.9
Profitable cattle for others[8]	51.4	31.4	12.7	2.7	1.8

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 18. Q11. The frequency of responses among survey respondents to the question "when you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was backgrounder/preconditioner

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[2]	57.8	32.2	10.0	0.0	0.0
Eating satisfaction[3]	68.1	28.6	3.3	0.0	0.0
Safe and wholesome beef[4]	75.6	24.4	0.0	0.0	0.0
Healthy cattle[5]	78.9	16.7	4.4	0.0	0.0
Free from defects[6]	70.0	23.3	3.3	3.3	0.0
Profitable cattle for you[7]	62.6	24.2	12.1	1.1	0.0
Profitable cattle for others[8]	55.8	29.1	11.6	3.5	0.0

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 19. Q11. The frequency of responses among survey respondents to the question "when you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was stocker/yearling operator

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[2]	55.4	39.2	3.6	1.2	0.6
Eating satisfaction[3]	64.9	33.3	1.8	0.0	0.0
Safe and wholesome beef[4]	77.6	18.8	3.0	0.0	0.6
Healthy cattle[5]	67.5	27.6	4.3	0.6	0.0
Free from defects[6]	62.6	30.7	6.1	0.6	0.0
Profitable cattle for you[7]	50.9	33.1	10.4	3.7	1.8
Profitable cattle for others[8]	38.2	38.2	15.4	2.9	5.2

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 20. Q11. The frequency of responses among survey respondents to the question "when you hear the term quality in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was feedlot

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[2]	56.4	32.3	8.3	1.7	1.4
Eating satisfaction[3]	77.0	18.5	3.1	0.7	0.7
Safe and wholesome beef[4]	79.3	17.2	2.1	0.3	1.0
Healthy cattle[5]	69.4	22.0	6.5	1.0	1.0
Free from defects[6]	67.7	24.6	5.6	1.1	1.1
Profitable cattle for you[7]	57.8	23.9	12.7	3.9	1.8
Profitable cattle for others[8]	47.5	29.1	17.7	4.3	1.4

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

Table 21. Q11. The frequency of responses among survey respondents to the question "when you hear the term "quality" in relation to the beef industry, what comes to mind?" on a scale of 1 to 5, whose primary segment was dairy

	Ranking[1] (% of responses)				
Trait	1	2	3	4	5
USDA Quality Grade[2]	54.8	33.3	11.1	0.7	0.0
Eating satisfaction[3]	50.0	41.5	7.7	0.8	0.0
Safe and wholesome beef[4]	67.7	24.4	7.9	0.0	0.0
Healthy cattle[5]	66.9	26.2	4.6	2.3	0.0
Free from defects[6]	50.0	35.2	13.3	1.6	0.0
Profitable cattle for you[7]	55.0	27.1	11.6	3.9	2.3
Profitable cattle for others[8]	42.1	31.0	19.1	3.2	4.8

[1] 5 point scale: 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]USDA Quality Grade of Choice or Prime.
[3]Producing beef that provides a high level of eating satisfaction to consumers.
[4]Producing beef that provides safe and wholesome beef.
[5]Raising cattle and calves that are healthy.
[6]Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.).
[7]Producing cattle that are profitable for you.
[8]Producing cattle that allow others to be profitable.

When asked "in what ways do you intentionally influence 'quality' as a beef producer", on an overall basis, the most common responses were: through "Preventative health care (i.e.

vaccination program)" and "use of good stockmanship and animal handling skills" (Table 22). A similar trend was found in all industry sectors. A high percentage of producers responded positively to each of the management practices on the list, thus demonstrating that cattle producers perform a host of management practices with the aim to enhance the quality and safety of beef.

"Implementation of my state's Beef Quality Assurance (BQA) protocols" was frequently cited (55.7%, overall) as a way in which respondents intentionally influenced the quality of beef. However, it was numerically lower than 6 other methods. Only 3.6% of respondents said that they "do not intentionally influence beef quality". A greater percentage of respondents, who indicated they were in the dairy segment, responded to this question by saying they do not influence beef quality (11.5%).

Table 22. Q12. Ways in which survey respondents intentionally influence "quality" as a beef producer, overall and by industry sector

		Sector (%)					
Method	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Genetics[1]	78.7	98.9	82.9	63.9	48.8	48.7	47.5
Preventative health[2]	89.1	94.2	88.4	93.8	92.2	85.9	81.3
Animal handling[3]	92.9	94.7	92.7	95.9	97.0	93.0	81.3
Best management practices[4]	84.0	90.2	82.3	92.8	86.7	85.9	74.1
Market targets[5]	50.1	61.3	47.8	61.9	55.2	58.1	19.4
Nutritional program[6]	85.3	92.1	83.9	90.7	87.9	90.3	72.7
Documentation[7]	66.2	79.3	64.9	68.0	59.5	64.4	51.1
BQA protocols[8]	55.7	63.4	53.0	65.0	55.8	68.1	28.1
Do not influence[9]	3.6	1.3	3.7	3.1	4.9	2.4	11.5
Other	2.2	4.3	1.7	2.5	1.7	3.0	0.0

[1]Genetic selection and breeding systems.
[2]Preventative health care (i.e. vaccination program).
[3]Use of good stockmanship and animal handling skills.
[4]Implementation of best management practices, including how vaccinations and antibiotics are administered.
[5]Matching management strategies to specific market targets.
[6]Implementation of a sound nutritional program.
[7] Documentation of management practices (possibly including age, source, etc.).
[8] Implementation of my state's Beef Quality Assurance (BQA) protocols.
[9]I do not intentionally influence quality.

When asked about following the withdrawal time for animal health products, over 95% of respondents said that they "always" or "usually" verify that they followed the proper withdrawal time. Over 93% of cattlemen within each sector of the cattle industry said they "always" or "usually" verify withdrawal times for cattle that have received an animal health product (Table

23). It should be noted that 2.0% of respondents overall indicated that they "never" verified withdrawal times for animal health products.

Table 23. Q13. Frequency at which survey respondents verify withdrawal times for animal health products, overall and by industry sector

		Sector (%)					
Frequency	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Always	85.8	89.9	84.4	85.3	85.5	92.3	81.0
Usually	9.8	7.8	11.0	10.5	8.4	3.7	12.0
Sometimes	2.4	1.5	2.3	1.1	4.8	2.4	5.6
Never	2.0	0.8	2.3	3.2	1.2	1.7	1.4

In several of the past NBQAs, it has been recommended that a larger percentage of cattle be individually identified. Of those responding to the current survey, 78.3% indicated they used individual tags to keep track of cattle receiving animal health products (Table 24).

Table 24. Q14. Methods of keeping track of withdrawal times and the percent of survey respondents who utilize them, overall and by industry sector

		Sector (%)					
Method	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Individual ID[1]	78.3	88.8	76.9	73.4	61.9	77.9	83.2
Animal in a group[2]	11.0	4.3	10.8	12.8	22.5	15.5	11.7
Tracking groups[3]	9.1	6.6	10.6	9.6	13.8	5.5	3.7
More than one	1.6	0.4	1.7	4.3	1.9	1.0	1.5

[1]By recording the individual ID.
[2]By identifying only animals in a group that are treated.
[3]By tracking groups of cattle where individuals within the group were treated.

One of the main BQA principles is for cattle producers to keep track of the use of animal health products with written records. Overall, of those responding to Q15, 73.6% of survey respondents said they always or usually use written records to track animals that have been given an animal health product (Table 25). However, it should be noted that 11.7% of respondents (overall) never used written records to track withdrawals. Further, the sector that indicated the use of written records at some level (always, usually, or sometimes) was highest (97.1%) among dairy respondents. In contrast, the highest rate of not tracking withdrawal times with written records occurred among stocker/yearling operators.

Table 25. Q15. Frequency at which survey respondents keep track of withdrawal times with written records, overall and by industry sector

		Sector (%)					
Frequency	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Always	46.7	49.4	42.4	52.2	39.9	66.6	59.3
Usually	26.9	29.5	28.0	21.7	28.8	17.4	24.3
Sometimes	14.8	13.4	15.9	19.6	12.9	10.2	13.6
Never	11.7	7.7	13.8	6.5	18.4	5.8	2.9

Table 26 shows what information producers collect when tracking animal health products used in cattle with written records. Of respondents to Q16, overall 48.1% said they collect all information recommended by the BQA program: brand name, route of administration, location of administration, expiration date, and serial/lot numbers on the product packaging.

Table 26. Q16. For survey respondents who answered always, usually, or sometimes to Q15 regarding written records, the percentage of respondents keeping certain **types of information** when an animal health product was given, overall and by industry sector

		Sector (%)					
Information	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Brand name[1]	94.7	95.7	93.5	91.7	92.5	97.9	97.5
Route of admin[2]	72.5	67.6	71.6	73.3	76.9	78.0	73.7
Location of admin[3]	61.8	56.5	63.6	61.4	69.4	65.4	37.0
Expiration date	52.6	51.1	55.5	64.4	45.6	48.1	28.8
Serial/lot number	48.1	46.2	50.9	61.4	43.3	45.6	17.6
Other	11.5	11.8	12.0	8.1	14.3	9.3	9.3

[1]Brand name of product.
[2]Route of administration (subQ, IM, IV, topical, etc.)
[3]Location of administration on the animal (neck, hip, etc.)

Another major BQA principle is that cattle producers should have a formal working relationship with a veterinarian – a veterinarian-client-patient relationship (VCPR). Almost 9 out of 10 (89.4%) of survey respondents said they had a working relationship with a veterinarian, with 87.5% of commercial cow/calf producers having a working relationship with a veterinarian (Table 27).

Table 27. Q17. Percent of survey respondents who had a working relationship with a veterinarian in regard to the use of animal health products, overall and by industry sector

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy
% of Respondents (n = 3,683)	89.4	96.8	87.5	88.8	87.4	93.0	92.3

Seventy-four percent of the overall respondents of Q18 ("Do you use any medications other than as directed on a drug product's label, without being directed to by a veterinarian?") indicated that they never use an animal health product in a manner other than what is described on the label without a veterinarian's direction (Table 28). Using the direction of a veterinarian when making a decision whether or not to use a certain animal health product is a principle taught by BQA educators. Among dairy producers, only 55.6% of respondents never used a medication off-label.

Table 28. Q18. Frequency distribution of responses regarding the use of medications other than as directed on a drug product's label without being directed by a veterinarian, overall and by industry sector

		Sector (%)					
Frequency	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy
Always	4.2	4.3	4.1	4.2	1.8	4.4	5.6
Usually	4.1	4.0	4.2	5.3	3.6	2.7	5.6
Sometimes	17.5	16.5	17.9	7.4	12.0	14.1	33.1
Never	74.2	75.2	73.9	83.2	82.6	78.9	55.6

Injection site management has been a cornerstone issue discussed in BQA trainings. It is taught that when both intramuscular (**IM**) and subcutaneous (**SubQ**) routes are allowed on the label, the preferred route of administration is SubQ. Consistent with this guideline, 84.2% of respondents said that their preferred route of administration was SubQ (Table 29).

Table 29. Q19. Percentage of survey respondents, overall and by industry sector, and their preferred route of injection for animal health products

		Sector (%)					
Route of	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy

administration							
IM[1]	15.8	14.3	14.5	16.3	12.1	15.2	51.8
SubQ[2]	84.2	85.7	85.5	83.7	87.9	84.9	48.2

[1]IM – intramuscular.
[2]SubQ - subcutaneous.

In addition, cattle producers are taught that the preferred location for injectable products is in the neck area of the animal (i.e. in front of the shoulder). Overall, 87.0% of respondents said their preferred location for injections was in front of the shoulder (neck). A similar percentage of respondents within each industry sector, except dairy, responded that they preferred to place injection in the neck area. Dairy industry respondents had the fewest producers indicating that they preferred to place injections in the neck area (46.4%).

Table 30. Q20. Preferred location of administration of animal health products on the animal, percentage of survey respondents, overall and by industry sector

		Sector (%)					
Injection location	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ Yearling	Feedlot	Dairy
Top of the hip	4.9	2.6	5.2	3.2	4.9	2.7	18.6
Lower rear leg	1.7	1.7	0.6	1.1	1.2	1.3	22.1
Caudal fold[1]	1.0	0.8	0.7	1.1	1.2	0.3	8.6
Along the topline[2]	0.7	0.6	0.7	0.0	0.0	0.7	1.4
Under front leg[3]	1.4	0.9	1.6	2.1	1.2	0.7	0.7
Front of shoulder (neck)[4]	87.0	91.3	88.0	88.4	87.2	91.0	46.4
Front of shoulder (dewlap region)[5]	3.3	2.1	3.3	4.2	4.3	3.3	2.1

[1]In the caudal fold (next to tail head).
[2]Along the topline, on either side of the backbone.
[3]Underneath the front leg.
[4]In front of the shoulder (in the neck).
[5]In front of the shoulder (in the dewlap region).

Another principle taught in BQA trainings is that electric prods should not be used as a primary driving aid. Overall, 98.4% of respondents said that they do not use an electric prod as their primary driving tool. A sorting stick was cited as the most common primary driving tool among respondents (51.9%; Table 31). Several respondents said that they did not use any driving tool when working cattle (15.3%). Forty percent of dairy respondents indicated that no driving tool

was used on their operations. Table 32 shows that 93.0% of the cattle producers responding to the survey never used an electric prod or used an electric prod on less than 10% of the cattle.

Table 31. Q21. Primary driving tool when working/sorting cattle, percentage of survey respondents, overall and by industry sector

		Sector (%)					
Driving Tool	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Electric prod[1]	1.6	0.4	1.8	2.1	1.8	1.0	4.3
Flag	6.0	3.6	6.3	5.3	10.4	7.7	2.9
Sorting stick	51.9	53.8	54.1	43.2	45.7	49.5	37.9
Rattle paddle	14.7	11.7	14.5	22.1	24.4	20.7	2.9
Cane	4.6	3.2	4.8	3.2	4.3	5.4	8.6
No driving tools[2]	15.3	21.6	12.8	20.0	9.8	10.7	40.0
Other	4.6	5.1	4.4	3.2	3.7	4.4	3.6
Multiple	1.4	0.8	1.4	1.1	0.0	0.7	0.0

[1]Electric prod (e.g. hot shot).
[2]I don't use any driving tools.

Table 32. Q22. Percentage of your cattle an electric prod (hot shot) is used as a driving tool in a typical day working cattle (processing or loading), overall and by industry sector

		Sector (%)					
Rate of electric prod use	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Don't use prod[1]	49.7	63.4	48.3	37.5	38.2	45.1	49.7
<10% of cattle	43.3	34.5	44.3	44.8	50.3	47.5	45.4
10-49% of cattle	6.0	1.9	6.4	16.7	10.3	6.4	1.4
50-74% of cattle	0.9	0.2	1.0	0.0	1.2	0.3	2.8
75-100% of cattle	0.1	0.0	0.0	1.0	0.0	0.7	0.7

[1]I don't use an electric prod.

Overall and for every industry sector, over 85% of respondents said that they "always" or "usually" have a routine set of diseases that they vaccinate cattle for in order to prevent future health problems (Table 33).

Table 33. Q23. Frequency distribution of responses to the question "Do you have a routine set of diseases that you vaccinate your cattle for, and standardized treatments for routine diseases (e.g. pneumonia, foot rot, pinkeye, calf scours, etc.)?", overall and by industry sector

		Sector (%)					
Frequency	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy

Always	65.4	76.8	62.5	69.5	65.1	65.3	62.0
Usually	21.8	17.7	22.7	27.4	22.9	18.9	25.4
Sometimes	7.8	3.6	8.9	2.1	9.6	8.8	8.5
Never	5.0	1.9	5.8	1.1	2.4	7.1	4.2

Putting treatment protocols in writing is a principle taught in BQA trainings. When asked whether they had written protocols of health treatments, 31.3% of the overall respondents said they had a written protocol (Table 34). Of those respondents that said they had written vaccination and treatment protocols, overall 97.7% of respondents said that they "always" or "usually" followed these written protocols (Table 35).

Table 34. Q24. Percentage of survey respondents who had their cattle health treatment protocols written down, overall and by industry sector

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 3,478)	31.3	33.4	26.9	38.3	27.5	52.2	36.0

Table 35. Q25. Frequency distribution of responses for following standard vaccination and treatment directions (including employees, family, friends, etc.) for their cattle, overall and by industry sector

		Sector (%)					
Frequency	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Always	76.5	79.8	76.4	78.7	78.0	78.6	58.5
Usually	21.2	18.7	21.5	21.3	20.8	19.3	29.6
Sometimes	1.8	0.8	1.6	0.0	1.3	1.8	8.9
Never	0.6	0.8	0.4	0.0	0.0	0.4	3.0

Overall and for each industry sector, over half of respondents said that they conducted trainings to familiarize their workers with their operation's health management plan (Table 36). Training people at the ranch or operation level is important to make sure that BQA principles are used when conducting the day-to-day operations.

Table 36. Q26. Percentage of survey respondents who conducted periodic training to familiarize others with their health management plan, overall and by industry sector

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 3,475)	52.8	53.3	50.1	54.7	54.7	68.8	51.1

Vaccinating and training calves to eat hay/grass/grain and drink water immediately after weaning can reduce potential stress on calves. Overall, almost 7 out of 10 respondents said that they vaccinated calves and trained calves to eat and drink out of bunks/buckets when weaning.

Table 37. Q27. Weaning management practices including getting them accustomed to bunks/waterers and vaccinating, percentage of respondents, overall and by seedstock and cow/calf sectors

		Sector (%)	
Method	Overall	Seedstock	Commercial cow/calf
Don't vaccinate or train[1]	9.3	3.2	10.7
Only vaccinate[2]	13.7	6.2	15.6
Only train to bunks/waterers[3]	7.2	2.6	8.4
Vaccinate and train[4]	69.9	88.0	65.3

[1]I don't vaccinate or train to bunks/waterers.
[2]I only vaccinate.
[3]I only train to bunks/waterers.
[4]I vaccinate and train to bunks/waterers.

Keeping calves past weaning before sending them to another location (such as to a stocker operation or feedlot) has been shown to reduce potential stress on cattle. Overall, 57.2% of respondents said that they kept calves greater than 40 days before shipping them off of their operation. Of commercial cow/calf operators that responded to the survey, 18.7% said that they shipped calves immediately after weaning (Table 38).

Table 38. Q28. Number of days they waited after weaning to ship the calves off their operation, percentage of survey respondents, overall and by seedstock and commercial cow/calf industry sectors

		Sector (%)	
Days	Overall	Seedstock	Commercial cow/calf
Immediately[1]	15.8	4.0	18.7

1-5	4.1	2.5	4.4
6-20	8.0	9.0	8.0
21-40	15.0	18.9	14.2
41-60	26.2	26.5	26.3
>60	31.0	39.2	28.4

[1]Immediately (shipped same day calves were weaned).

Training about BQA principles is essential in getting best management practices in place at the grassroots level. According to survey responses, 77.9% of all respondents attended an educational program that addressed BQA principles. Less than half (44.4%) of the dairy respondents attended an educational program that taught BQA topics (Table 39).

Table 39. Q29. Percentage of survey respondents who had ever been to, or participated in, an educational program that addressed how to avoid beef quality defects, injection site lesions, antibiotic and chemical residues, and other quality shortcomings in cattle and beef products, overall and by industry sector[1]

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 3,671)	77.9	87.6	76.8	76.8	78.3	83.1	44.4

[1]Percentage that responded "yes" to Q29.

Survey Q29 to 36 evaluated BQA educational programs and trainings. With the exception of the dairy industry, consistent percentages are found among each of the industry sectors with regard to BQA educational programs and training. For demonstrative purposes in discussing these tables, the focus will be in regard to the commercial cow/calf industry sector. When commercial cow/calf respondents were asked if they had ever heard of BQA, 85.0% said they had heard of BQA (Table 40). Of those commercial cow/calf respondents that had heard of BQA, 69.3% had attended a BQA training or completed an online training (Table 41). And, of those taking this type of BQA training, 78.1% of the commercial cow/calf producers said that a certificate of completion was offered at the BQA training that they attended (Table 42). Of those attending a BQA meeting in which a certificate was offered, 93.7% of the commercial cow/calf respondents said they received the certificate (Table 43).

Based on the total number of overall respondents that answered either "yes" or "no" to Q30 (Have you ever heard of BQA?), approximately 42.6% of those respondents said they had received a certificate of completion after attending a BQA training (based on the number of

respondents saying "yes" to Q33). Of the commercial cow/calf respondents that had attended a BQA training and received a certificate after attending, 66.1% responded that they had attended additional BQA-type meetings and 72.3% of those respondents indicated that they believed their certification was still valid (Tables 44 and 45). Among commercial cow/calf producers that at least attended a BQA-type training, 98.5% of those respondents stated that they followed best management practices consistent with BQA on their operation (Table 46).

Table 40. Q30. Percentage of survey respondents who had ever heard of Beef Quality Assurance (BQA), overall and by industry sector[1]

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 3,650)	86.8	95.2	85.0	92.6	87.3	91.6	72.1

[1]Percentage responding "yes" to Q30.

Table 41. Q31. Percentage of survey respondents who had ever attended a Beef Quality Assurance (BQA) meeting or training or completed an online training, overall and by industry sector[1]

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ Preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 3,050)	70.9	73.3	69.3	70.1	73.1	84.2	36.6

[1]Percentage responding "yes" to Q31. Percentage based on the number of respondents who said they had heard of Beef Quality Assurance. This is a continuation of Q30.

Table 42. Q32. Percentage of survey respondents who said that a certificate of completion was offered for attending the meeting, overall and by industry sector[1]

		Sector					
% of Respondents (n = 2,132)	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
No	9.3	8.4	10.3	11.5	3.9	6.3	17.7
Yes	78.6	77.7	78.1	82.0	78.6	84.2	64.7
I don't know	12.2	13.9	11.6	6.6	17.5	9.5	17.7

[1]Percentage based on the number of respondents who said they had attended a BQA training or completed training online. This is a continuation of Q31.

Table 43. Q33. Percentage of survey respondents who received a certificate of completion after attending a Beef Quality Assurance training, overall and by industry sector[1]

		Sector					
% of Respondents (n = 1664)	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
No	3.9	4.1	4.1	2.0	7.5	1.1	13.6
Yes	93.3	92.9	93.7	96.0	85.0	97.3	81.8
I don't know	2.8	3.0	2.2	2.0	7.5	1.6	4.6

[1]Percentage based on the number of respondents who said they had received a certificate of completion after attending the training. This is a continuation of Q32.

Table 44. Q34. Percentage of survey respondents who attended additional Beef Quality Assurance (BQA) meetings and received additional or updated certificates, overall and by industry sector[1]

		Sector					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
% of Respondents (n = 1,501)	67.8	65.3	66.1	77.1	73.9	73.3	72.2

[1]Percentage based on the number of respondents who said they had received a certificate of completion after attending the training. This is a continuation of Q32.

Table 45. Q35. Percentage of survey respondents whose most recent certificate was still valid (current within the last 3 years), overall and by industry sector[1]

		Sector					
% of Respondents (n = 1,532)	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
No	13.6	17.8	12.6	16.7	19.1	13.3	0.0
Yes	72.0	66.0	72.3	77.1	69.1	76.1	83.3
I don't know	14.4	16.2	15.1	6.3	11.8	10.6	16.7

[1]Percentage based on the number of respondents who said they had received a certificate of completion after attending the training. This is a continuation of Q32.

Table 46. Q36. Frequency that survey respondents felt they followed best management practices consistent with Beef Quality Assurance (BQA) on their operation, overall and by industry sector (n = 2129)[1]

	Sector (%)		
	Commercial	Backgrounder/	Stocker/

Frequency	Overall	Seedstock	cow/calf	preconditioner	yearling	Feedlot	Dairy
Always	66.5	68.1	66.1	63.9	56.0	72.7	44.1
Usually	31.9	31.1	32.4	32.8	42.0	26.5	47.1
Sometimes	1.6	0.9	1.5	3.3	2.0	0.5	8.8
Never	0.1	0.0	0.1	0.0	0.0	0.5	0.0

[1]Percentage based on the number of respondents who said they had attended a BQA-type training. This is a continuation of Q31.

When respondents were asked why they chose to follow best management practices consistent with BQA, overall 87.0% indicated because "it was the right thing to do" and 83.9% also responded because "I am committed to continuous improvement on my cattle operation" (Table 47). Thirty-five percent responded that they chose to follow best management BQA practices because they received a premium when they sold their cattle. Only 12% indicated that "the buyer of my cattle requires it."

Table 47. Q37. Percentage of survey respondents and the reason(s) they chose to follow best management practices consistent with Beef Quality Assurance (BQA), overall and by industry sector[5]

		Sector (%)					
Reason	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
The right thing[1]	87.0	86.4	86.1	90.3	93.0	89.9	80.6
Receive a premium[2]	35.4	31.0	38.8	41.9	34.0	28.1	19.4
Required by buyer[3]	12.0	8.6	12.8	11.3	11.0	15.4	8.3
Committed to improvement[4]	83.9	83.9	85.9	82.3	80.0	79.0	75.0
Other	4.3	4.5	4.2	0.0	6.0	4.1	3.0

[1]It's the right thing to do.
[2]I receive a premium when I sell my cattle.
[3]It's required by the buyer of my cattle.
[4]I am committed to continuous improvement on my cattle operation.
[5]Percentage based on the number of respondents who said they had attended a Bqa-type training. This is a continuation of Q31.

The reasons that a respondent who was once certified, but no longer is certified in a BQA program, were varied (Table 48). A common reason why respondents did not continue to stay certified was that certification was not required to participate. Also, 30.8% of the backgrounder/preconditioners said they were no longer certified because they did not have time.

Table 48. Q38. Reasons that survey respondents were BQA certified at one time, but were no longer certified, overall and by industry sector

Reason	Overall	Sector (%)[1] Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Wasn't valuable[2]	15.5	17.3	15.3	15.4	13.8	15.4	33.3
No financial incentive[3]	15.5	16.4	18.1	0.0	6.9	11.5	0.0
Not required to participate[4]	25.7	26.9	25.6	46.2	27.6	17.3	33.3
I don't have time	18.2	20.2	17.3	30.8	10.3	25.0	0.0
Costs too much[5]	12.8	14.4	12.5	15.4	13.8	11.5	0.0
Meetings aren't convenient or available[6]	2.0	2.9	2.0	0.0	3.5	1.9	0.0
Other	31.6	29.8	32.3	23.1	41.4	36.5	0.0

[1]Overall will not add up to 100% because each answer was analyzed individually and respondent could answer more than one.
[2]Getting re-certified wasn't valuable to me.
[3]There is no financial incentive for me to participate.
[4]It's not required for me to participate.
[5]It costs too much money.
[6]The meetings to get re-certified aren't convenient or available.

Table 49 shows the reasons why respondents that had heard about BQA had not become certified. Buyers were not asking for documentation that BQA procedures were used (36.7%, overall) and the meetings weren't convenient or available (35.5%, overall) were the most common responses.

Table 49. Q39. If a survey respondent had heard of BQA, reasons a survey respondent was not certified, overall and by industry sector

Reason	Overall	Sector (%) Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
I don't really know what BQA is[1]	13.4	11.3	13.3	14.8	16.7	12.9	17.9
No financial incentive[2]	23.9	25.8	23.2	25.9	21.4	25.8	28.4
Documentation not asked for[3]	36.7	48.3	33.4	48.2	42.9	33.9	37.3
Not required to participate[4]	28.4	31.8	25.8	33.3	26.2	25.8	47.8
I don't have time	24.8	25.2	25.5	29.6	21.4	19.4	26.9
Costs too much[5]	5.3	6.6	4.6	3.7	4.8	3.2	11.9
Meetings aren't convenient or available[6]	34.5	33.1	36.9	25.9	33.3	29.0	25.4

[1]I don't really know what BQA is.

[2]There is no financial incentive for me to participate.
[3]Buyers are not asking for documentation that BQA procedures were used.
[4]It's not required for me to participate.
[5]It costs too much money.
[6]The meetings aren't convenient or available.

Over one-third of participants of the survey were over 60 years of age, 19.5% were less than 40 years of age, and 84.2% of respondents were male (Table 52 and 53).

Table 52. Q40. Distribution ages among survey respondents, overall and by industry sector

		Sector (%)					
Age	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
<20	1.6	1.9	1.1	2.1	0.0	2.0	9.9
20-29	7.5	7.2	6.5	8.3	4.9	11.0	21.1
30-39	10.4	10.4	9.9	9.4	9.2	11.7	14.1
40-49	16.1	14.0	14.9	24.0	16.6	22.4	19.7
50-59	29.6	31.8	29.1	33.3	26.4	30.8	25.4
>60	34.9	34.7	38.5	22.9	42.9	22.1	9.9

Table 53. Q41. Percentage of survey respondents by sex, overall and by industry sector

		Sector (%)					
Sex	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Male	84.2	82.1	84.3	81.1	88.6	90.2	71.4
Female	15.8	17.9	15.7	19.0	11.5	9.8	28.6

In order to characterize respondents completing the survey, cattle producers were asked to indicate how strongly they agreed (or disagreed) with each of the seven statements. A 5-point scale was used (1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; and 5 = Strongly disagree; Tables 42 and 43). For overall responses, respondent mean ratings were in the "Strongly agree" category (less than 2) for the statements "my hope is to have my children continue farming/ranching on my operation" and "I regularly read articles or attend meetings or programs where new management practices are discussed" (Tables 54 to 64).

Table 54. Q42. Mean ratings (± standard deviation) among survey respondents for how strongly they agreed/disagreed with several statements using a 5-point scale, overall and by industry sector[1]

Statement	Overall	Sector (%) Seedstock	Comm cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Hope my children continue on my operation [2]	1.9 ± 1.1	2.0 ± 1.1	1.9 ± 1.1	2.0 ± 1.1	2.2 ± 1.1	1.9 ± 1.1	1.8 ± 0.9
Profitability is my greatest concern[3]	2.1 ± 0.9	2.2 ± 0.9	2.2 ± 0.9	2.0 ± 0.9	2.2 ± 0.8	1.9 ± 0.9	1.9 ± 0.9
Aggressive adopter of new practices[4]	2.0 ± 0.9	1.9 ± 0.8	2.1 ± 0.9	1.8 ± 0.9	2.0 ± 0.8	2.0 ± 0.9	2.2 ± 0.9
Current practices are economically sustainable[5]	2.1 ± 0.9	2.0 ± 0.8	2.1 ± 0.9	2.0 ± 1.1	2.0 ± 0.9	1.8 ± 0.8	2.2 ± 0.9
Wait to adopt new practices[6]	2.7 ± 1.1	2.9 ± 1.0	2.7 ± 1.1	2.8 ± 1.1	2.7 ± 1.1	2.7 ± 1.1	2.6 ± 1.0
Regularly read or attend meetings on new practices[7]	1.8 ± 0.8	1.7 ± 0.8	1.8 ± 0.8	2.0 ± 0.9	1.7 ± 0.8	1.8 ± 0.9	2.0 ± 0.9
Keep in contact with Extension Educators [8]	2.2 ± 1.1	2.2 ± 1.1	2.1 ± 1.1	2.3 ± 1.2	2.2 ± 1.1	2.4 ± 1.2	2.4 ± 1.2

[1]1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 55. Q42. Overall - Percentage of survey respondents and how strongly they agreed/disagreed with each of these statements, overall

Statement	Ranking[1] (%) 1	2	3	4	5
Hope my children continue on my operation [2]	46.7	22.9	22.9	3.9	3.5
Profitability is my greatest concern	23.6	46.9	22.4	5.9	1.2
Aggressive adopter of new practices[4]	29.1	45.4	19.7	5.0	0.8
Current practices are economically sustainable[5]	27.0	48.8	17.4	5.3	1.5
Wait to adopt new practices[6]	12.2	32.9	28.8	20.1	6.0
Regularly read or attend meetings on new practices[7]	42.2	42.8	10.5	3.4	1.2
Keep in contact with Extension Educators[8]	33.5	32.5	21.3	8.6	4.1

[1]1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.

[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 56. Q42. Percentage of survey respondents and how strongly they agreed/disagreed with each of these statements, seedstock sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation [2]	43.1	25.2	23.1	5.4	3.3
Profitability is my greatest concern[3]	21.7	47.9	23.0	5.8	1.7
Aggressive adopter of new practices[4]	36.5	44.2	15.3	3.8	0.2
Current practices are economically sustainable[5]	26.0	54.4	14.1	4.6	1.0
Wait to adopt new practices[6]	6.7	31.6	32.4	22.0	7.3
Regularly read or attend meetings on new practices[7]	46.2	40.4	10.2	2.5	0.8
Keep in contact with Extension Educators[8]	35.3	32.8	18.1	9.1	4.8

[1]1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 57. Q42. Percentage of survey respondents and how strongly they agreed/disagreed with each of these statements, commercial cow/calf sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation [2]	47.0	23.3	22.5	3.8	3.4
Profitability is my greatest concern[3]	22.2	47.1	23.2	6.4	1.1
Aggressive adopter of new practices[4]	26.4	46.0	21.2	5.6	0.8
Current practices are economically sustainable[5]	25.0	49.0	18.6	5.6	1.8
Wait to adopt new	13.1	32.9	27.8	20.3	5.9

practices[6]					
Regularly read or attend meetings on new practices[7]	41.4	44.5	9.7	3.2	1.1
Keep in contact with Extension Educators[8]	34.1	33.9	20.8	8.0	3.3

[1]1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 58. Q42. Percentage of survey respondents and how strongly they agreed/disagreed with each of these statements, backgrounder/preconditioner sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation [2]	44.2	20.0	27.4	4.2	4.2
Profitability is my greatest concern[3]	28.0	54.8	11.8	3.2	2.2
Aggressive adopter of new practices[4]	40.9	45.2	9.7	2.2	2.2
Current practices are economically sustainable[5]	35.5	40.9	12.9	6.5	4.3
Wait to adopt new practices[6]	11.8	33.3	28.0	20.4	6.5
Regularly read or attend meetings on new practices[7]	34.0	43.6	16.0	5.3	1.1
Keep in contact with Extension Educators[8]	29.0	36.6	17.2	10.8	6.5

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 59. Q42. Percentage of survey respondents and how strongly they agree/disagree with each of these statements, stocker/yearling sector

	Ranking (%)[1]

Statement	1	2	3	4	5
Hope my children continue on my operation [2]	34.0	27.8	30.9	2.5	4.9
Profitability is my greatest concern[3]	14.8	52.5	27.2	4.9	0.6
Aggressive adopter of new practices[4]	26.5	53.7	14.2	4.9	0.6
Current practices are economically sustainable[5]	33.1	44.8	16.6	3.7	1.8
Wait to adopt new practices[6]	13.5	35.0	28.2	18.4	4.9
Regularly read or attend meetings on new practices[7]	46.6	42.9	8.6	0.6	1.2
Keep in contact with Extension Educators[8]	33.3	28.4	26.5	7.4	4.3

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 60. Q42. Percentage of survey respondents and how strongly they agree/disagree with each of these statements, feedlot sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation[2]	52.3	19.5	21.6	2.8	3.8
Profitability is my greatest concern[3]	33.8	46.0	16.0	2.8	1.4
Aggressive adopter of new practices[4]	33.3	42.7	20.5	2.4	1.0
Current practices are economically sustainable[5]	37.2	47.9	12.2	2.4	0.4
Wait to adopt new practices[6]	11.1	36.2	28.7	19.0	5.0
Regularly read or attend meetings on new practices[7]	40.6	41.0	12.7	4.6	1.1
Keep in contact with Extension Educators[8]	27.2	28.3	26.2	11.1	7.2

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 61. Q42. Percentage of survey respondents and how strongly they agree/disagree with each of these statements, dairy sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation[2]	54.0	19.0	24.1	2.9	0.0
Profitability is my greatest concern[3]	38.2	37.5	19.9	4.4	0.0
Aggressive adopter of new practices[4]	24.6	41.3	27.0	6.4	0.8
Current practices are economically sustainable[5]	25.6	41.6	21.6	11.2	0.0
Wait to adopt new practices[6]	14.3	31.0	35.7	16.7	2.4
Regularly read or attend meetings on new practices[7]	38.4	33.6	21.6	5.6	0.8
Keep in contact with Extension Educators[8]	25.6	28.8	28.8	11.2	5.3

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 62. Q42. Percentage of survey respondents and how strongly they agree/disagree with each of these statements, other sector

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation[2]	46.8	19.5	24.7	2.6	6.5
Profitability is my greatest concern[3]	18.7	40.0	28.0	13.3	0.0

Aggressive adopter of new practices[4]	34.2	46.1	15.8	2.6	1.3
Current practices are economically sustainable[5]	21.3	49.3	24.0	5.3	0.0
Wait to adopt new practices[6]	6.7	24.0	33.3	29.3	6.7
Regularly read or attend meetings on new practices[7]	50.0	39.2	4.1	4.1	2.7
Keep in contact with Extension Educators[8]	44.6	28.4	18.9	6.8	1.4

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.
[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Table 63. Q42. Percentage of survey respondents and how strongly they agree/disagree with each of these statements, multiple sectors

	Ranking (%)[1]				
Statement	1	2	3	4	5
Hope my children continue on my operation[2]	75.0	10.7	3.6	3.6	7.1
Profitability is my greatest concern[3]	46.4	35.7	14.3	0.0	3.6
Aggressive adopter of new practices[4]	55.2	34.5	6.9	0.0	3.5
Current practices are economically sustainable[5]	53.6	39.3	0.0	7.1	0.0
Wait to adopt new practices[6]	15.4	34.6	26.9	11.5	11.5
Regularly read or attend meetings on new practices[7]	57.1	28.6	10.7	0.0	3.6
Keep in contact with Extension Educators[8]	39.3	14.3	28.6	7.1	10.7

1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree.
[2]My hope is to have my children continue farming/ranching on my operation.
[3]Profitability is my greatest concern on my operation.
[4]I consider myself to be an aggressive adopter of new production practices.
[5]I consider my current production practices to be economically sustainable.
[6]I tend to wait until I see how a new practice works for others before I adopt it.

[7]I regularly read articles or attend meetings or programs where new management practices are discussed.
[8]I keep in contact with University Extension Educators in my area to stay abreast of new production methods.

Industry publications (82.2%) and veterinarians (77.1%) were the most commonly cited source of information by respondents, overall and within each industry sector. A large percentage of respondents also received information from friends and neighbors, the Internet, extension agents, and producer meetings.

Table 64. Q43. Percentage of survey respondents and where they found answers to their questions

		Sector (%)					
Source	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Friends & neighbors	47.9	39.3	50.9	37.5	45.5	43.8	52.6
Industry publications[1]	82.2	86.5	83.1	80.2	81.8	76.4	70.1
Internet[2]	46.5	53.7	46.8	44.8	56.4	38.4	27.7
Extension Agent[3]	37.1	37.1	40.5	40.6	37.0	19.9	15.3
Producer meetings[4]	51.5	58.9	50.2	47.9	52.7	53.9	36.5
Local feed store[5]	20.4	16.0	22.7	14.6	17.0	16.5	15.3
Veterinarian	77.1	84.8	77.0	76.0	68.5	74.4	73.0

[1]Industry publications (weekly and monthly cattle newspapers, magazines, and newsletters).
[2]On the Internet via a search engine (e.g. Google, Yahoo, etc.).
[3]Calling and visiting with the local Extension County Agent.
[4]Face-to-face producer meetings.
[5]Employees of the local feed store.

In order to determine the impact of cattle producers attending a BQA-type education program, the adoption of BQA practices were compared between respondents who, in the survey, responded that they had, or had not ever, attended a BQA-type program (Q29: "Have you ever been to, or participated in, an educational program that addressed how to avoid beef quality defects, injection site lesions, antibiotic and chemical residues, and other quality shortcomings in cattle and beef products?").

Table 65 shows that adoption of certain BQA practices was higher for respondents who have attended a BQA-type education program. Respondents who attended a BQA-type training were more likely to use individual animal ID, keep written records, have a working relationship with a veterinarian, give injections in the neck area subQ, and train their workers on the ranch in BQA principles.

Table 65. Comparison of the responses from cattle producers who have and have not ever attended a BQA-type training (Q29)[1]

Trait	Survey Question Number	"Yes" Had attended BQA (%)	"No" Had NOT attended BQA (%)
Always or usually verify withdrawal time	13	97.1	90.2
Track and verify withdrawal with individual ID	14	81.0	68.4
Always or usually keep written records for withdrawal	15	77.4	59.9
Have a working relationship with a veterinarian	17	92.8	59.9
Preferred route of injection administration is subQ	19	88.3	69.2
Preferred location of injections is the neck area	20	90.1	72.6
Uses electric prod as a primary driving tool	21	1.3	2.9
Trains workers on the ranch or farm in BQA	26	57.9	33.2
Ship calves immediately after weaning	28	13.6	23.6

[1]Number of responses indicating "yes" or "no" to Q29 (Have you attended a BQA-type training?) yes, n =2,858; no, n,=,813.

Implications

Data from this study show that many cattle producers are engaged in practices consistent with BQA guidelines and principles on their operations. It is also evident that many cattle producers recognize that using BQA oriented management with their cattle is the right thing to do, and BQA is a tool that will help improve their cattle. Producer-level BQA training is a valuable tool to change the production practices of cattle producers. Continued educational efforts should add to the adoption of BQA principles. Continued development of on-farm/on-ranch educational tools regarding BQA will further enhance the adoption of BQA principles at the grassroots level.

Appendices

Appendix A.

Complete list of survey questions:

1. In which segment(s) of the beef production industry are you involved? (mark all that apply)

- □ Seedstock
- □ Commercial cow/calf
- □ Backgrounder/preconditioner
- □ Stocker/yearling
- □ Feedlot
- □ Dairy
- □ I am not a cattle producer
- □ Other (please specify): _____

If you are not a cattle producer, thank you for your time, you do not need to complete the rest of this survey.

2. In which segment do you primarily operate? (please choose only one)

- ○ Seedstock
- ○ Commercial cow/calf
- ○ Backgrounder/preconditioner
- ○ Stocker/yearling
- ○ Feedlot
- ○ Dairy
- ○ Other

3. What is your primary role in the cattle operation where you work?

- ○ Owner
- ○ Manager/herdsman
- ○ Owner, manager, and herdsman
- ○ Hired labor
- ○ Contract labor

4. Are cattle your primary source of income?

- ○ Yes
- ○ No

5. How many consecutive years have you been involved in the beef industry?

- ○ 1-3 yrs
- ○ 4-10 yrs
- ○ 11-25 yrs
- ○ 26-50 yrs
- ○ More than 50 yrs

6. What is the 5-digit zip code where your primary cattle operation is located?

_____

7. During 2010, what number of animals did you have in each of these categories?

Breeding age beef females	_____	head
Beef calves around the time of weaning	_____	head
Cull (market) beef cows that you sold	_____	head
Cull (market) beef bulls that you sold	_____	head
Cattle in a backgrounding yard	_____	head
Stocker or yearling cattle out on pasture	_____	head
Cattle in a feedlot on a finishing diet	_____	head
Breeding age dairy females	_____	head
Dairy heifers (birth to first calf)	_____	head
Dairy bull or steer calves	_____	head
Cull (market) dairy cows sold	_____	head
Cull (market) dairy bulls sold	_____	head

8. In 2010, what percent of your cattle sales occurred via: (These should equal 100%)

A seedstock consignment or production sale (bulls or females for breeding)	_____	%
Livestock auction market	_____	%
Video, satellite, telephone, or Internet auction	_____	%
Direct sale (private treaty) to a feedlot or an order buyer	_____	%
Direct sale to packer	_____	%
Direct sale to consumer	_____	%
Other (please specify): _____	_____	%

9. During 2010, were cattle from your operation sold through a "special sale" (i.e. preconditioned, weaned, graded, or special breed calf sale)?

- o Yes
- o No

10. During 2010, what percent of your operation's calves did you retain ownership in as:

Beef stockers/backgrounders	_____	%
Beef feedlot cattle	_____	%
Replacement beef heifers developed by a custom heifer developer	_____	%
Male dairy calves on a calf ranch	_____	%
Female dairy calves on a calf ranch	_____	%

11. When you hear the term "quality" in relation to the beef industry, what comes to mind? (1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree)

_____ USDA Quality Grade of Choice or Prime
_____ Producing beef that provides a high level of eating satisfaction to consumers
_____ Producing beef that is safe and wholesome
_____ Raising cattle and calves that are healthy

_____ Ensuring cattle under your care are free from defects (injection site blemishes, bruises, etc.)
_____ Producing cattle that are profitable for you
_____ Producing cattle that allow others to be profitable
_____ Other (please specify): _____

12. In what ways do you intentionally influence "quality" as a beef producer? (mark all that apply)

- □ Genetic selection and breeding systems
- □ Preventative health care (i.e. vaccination program)
- □ Use of good stockmanship and animal handling skills
- □ Implementation of best management practices, including how vaccinations and antibiotics are administered and if their use is recorded
- □ Matching management strategies to specific market targets
- □ Implementation of a sound nutritional program
- □ Documentation of management practices (possibly including age, source, etc.)
- □ Implementation of my state's Beef Quality Assurance (BQA) protocols
- □ We do not employ any methods to influence quality
- □ Other (please specify): _____

13. Does your operation verify that withdrawal times for animal health products (such as antibiotics, vaccines, or dewormers) have been met before cattle are marketed?

- ○ Always
- ○ Usually
- ○ Sometimes
- ○ Never

14. How does your operation keep track of livestock that have not cleared their drug withdrawal?

- ○ By recording the individual identification (i.e. ear tag number) of any animal that is treated
- ○ By identifying only the animals in a group that are treated with a special marking (extra ear tag, ear notch, chalk, or paint mark, etc.)
- ○ By tracking groups of cattle where individuals within the group were treated

15. Do you keep track of drug withdrawal information with written records?

- ○ Always
- ○ Usually
- ○ Sometimes
- ○ Never

16. When an animal health product is given to an animal, which of the following pieces of information are recorded and retained in the operation's records? (mark all that apply)

- □ Brand name of product
- □ Route of administration (subQ, IM, IV, topical, etc.)
- □ Location of administration on the animal (neck, hip, etc.)
- □ Expiration date
- □ Serial/lot number
- □ Other (please specify): _____

17. Do you have a working relationship with a veterinarian in regard to the use of animal health products for cattle under your care?

- Yes
- No

18. Do you use any medications other than as directed on a drug product's label, without being directed to by a veterinarian?

- Always
- Usually
- Sometimes
- Never

19. If you have the option of injecting an animal health product intramuscularly (IM, into-the-muscle) or subcutaneously (SubQ, under-the-skin), which do you do more often?

- Intramuscular (IM)
- Subcutaneous (SubQ)

20. When administering injectable products, where is your preferred site of administration on the animal? (please choose only one)

- Top of the hip
- Lower rear leg
- In the caudal fold (next to tail head)
- Along the topline, on either side of the backbone
- Underneath the front leg
- In front of the shoulder (in the neck)
- In front of the shoulder (in the dewlap region)

21. Which of these do you use as your primary driving tool when working/sorting cattle? (please choose only one)

- Electric prod (hot shot)
- Flag
- Sorting stick
- Rattle paddle
- Cane
- I don't use any driving tools
- Other (please specify): _____

22. In a typical day of working cattle (processing or loading), on what percentage of your cattle is an electric prod (hot shot) used as a driving tool?

- I don't use an electric prod
- Less than 10%
- 10-49%
- 50-74%
- 75-100%

23. Do you have a routine set of diseases that you vaccinate your cattle for, and standardized treatments for routine diseases (e.g. pneumonia, foot rot, pinkeye, calf scours, etc.)?

- Always
- Usually
- Sometimes
- Never

24. Is your plan for administering health treatments and protocols in writing?

- Yes
- No

25. Does everyone on your operation (including employees, family, friends, etc.) follow your standard vaccination and treatment directions?

- Always
- Usually
- Sometimes
- Never

26. Is any training conducted periodically to familiarize others (including employees, family, friends, etc.) on your operation with your health management plan?

- Yes
- No

27. When you wean your calves, do you vaccinate them and accustom them to feed bunks and waterers (preconditioning procedures) prior to sale?

- I don't vaccinate or train to bunks/waterers
- I only vaccinate
- I only train to bunks/waterers
- I vaccinate AND train to bunks/waterers

28. About how long after weaning do you ship your calves off of your operation?

- Immediately (they are shipped on the same day they are weaned)
- 1 to 5 days
- 6 to 20 days
- 21 to 40 days
- 41 to 60 days
- More than 60 days

29. Have you ever been to, or participated in, an educational program that addressed how to avoid beef quality defects, injection site lesions, antibiotic and chemical residues, and other quality shortcomings in cattle and beef products?

- Yes
- No

30. Have you ever heard of Beef Quality Assurance (BQA)?

- Yes → Go to next question
- No → Go to Q40

31. Have you ever attended a Beef Quality Assurance meeting or training or completed training online?

→ Go to next question

- Yes
- No → Go to Q39

32. Was a certificate of completion offered for attending the meeting?

- Yes
- No → Go to Q36
- I don't know

33. Did you receive a certificate of completion after attending the training?

- Yes → Go to next question
- No → Go to Q36
- I don't know

34. Have you attended additional meetings and received additional or updated certificates?

- Yes
- No

35. Is the most recent certificate that you received still valid (current within the last 3 years)?

- Yes
- No
- Don't know

36. Do you feel that you follow best management practices consistent with Beef Quality Assurance on your operation?

- Always
- Usually
- Sometimes
- Never

37. What are all the reasons you choose to follow best management practices consistent with Beef Quality Assurance on your operation? (mark all that apply)

- □ It's the right thing to do
- □ I receive a premium when I sell my cattle
- □ It's required by the buyer of my cattle
- □ I am committed to continuous improvement on my cattle operation
- □ Other (please specify): _____

38. If you were Beef Quality Assurance certified at one time, but aren't currently BQA certified, why is that the case (mark all that apply)?

- □ Getting re-certified wasn't valuable to me
- □ There is no financial incentive for me to participate
- □ Buyers are not asking for documentation that BQA procedures were used
- □ It's not required for me to participate
- □ I don't have time

- □ It costs too much money
- □ The meetings to get re-certified aren't convenient or available
- □ Other (please specify): _____

39. If you haven't been to a meeting about Beef Quality Assurance, what are the reasons why you aren't BQA certified? (mark all that apply)

- □ I don't really know what BQA is
- □ There is no financial incentive for me to participate
- □ Buyers are not asking for documentation that BQA procedures were used
- □ It's not required for me to participate
- □ I don't have time
- □ It costs too much money
- □ The meetings aren't convenient or available
- □ Other (please specify): _____

40. What is your age?

- ○ Under 20 years old
- ○ 20-29
- ○ 30-39
- ○ 40-49
- ○ 50-59
- ○ 60 or older

41. What is your gender?

- ○ Male
- ○ Female

42. Indicate how strongly you agree (or disagree) with each of the following statements? (1 = Strongly agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly disagree)

My hope is to have my children continue farming/ranching on my operation
_____ Profitability is my greatest concern on my operation
_____ I consider myself to be an aggressive adopter of new production practices
_____ I consider my current production practices to be economically sustainable
_____ I tend to wait until I see how a new practice works for others before I adopt it
_____ I regularly read articles or attend meetings or programs where new management practices are discussed
_____ I keep in contact with University Extension Educators in my area to stay abreast of new production methods

43. In general, how do you find answers to your questions about affecting beef quality (mark all that apply)

- □ Friends and neighbors
- □ Industry publications (weekly and monthly cattle newspapers, magazines, and newsletters)
- □ On the Internet via a search engine (e.g. Google, Yahoo, etc.)

- □ Calling and visiting with the local Extension County Agent
- □ Face-to-face producer meetings
- □ Employees of the local feed store
- □ Veterinarian
- □ Other (please specify): _____

II. Executive Summary

A. National Beef Quality Audit – 2011. Phase lll: Quality Enhancement by the Seedstock, Cow/calf, and Stocker Sectors

B. Researchers

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C. Background

The Beef Quality Assurance Task Force (**BQATF**) was formed in early 1986. The NCBA Beef Quality Assurance Program was initially patterned after the BQA Program of the Texas Cattle Feeders Association (**TCFA**). The TCFA BQA Program had as its objective – "To ensure that all cattle shipped from this feedlot are healthy, wholesome and meet FDA, USDA and EPA specifications" (Smith et al., 1997). Following this precedence, the subsequent BQA educational efforts have resulted in tremendous advancements in beef quality. The most striking evidence of the benefits of the BQA educational efforts is the reduction of injections site blemishes in the sirloin area of the beef carcass, which were dramatically reduced because of education efforts by BQA educators. Adoption and effectiveness of BQA has most often been evaluated by monitoring characteristics at slaughter (i.e. National Beef Quality Audits), in processing facilitates (i.e. Injection Site Blemish Audits), or in small local/regional surveys.

While these audits have provided a snapshot of a few defects that may occur at the cattle production sectors of the industry it does not directly measure the level of adoption of BQA production practices at the cow/calf seedstock, and stocker sectors of the cattle industry. A national survey is needed that specifically examines producer knowledge and implementation of BQA-related practices in the seedstock, cow/calf, and seedstock sectors.

D. Objective

The objective of this study was to assess BQA-related production and management practices that are currently being used by cattle producers throughout the beef production industry and provide a foundation from which to direct future educational initiatives to cattlemen to further enhance the safety and quality of beef and improve the competitiveness of beef products with consumers.

E. Methods

In order to survey BQA adoption and assess current management practices among cattle producers across the U.S., a survey consisting of 43 questions was developed. A committee of State BQA Coordinators and BQA educators, from across the U.S., were assembled to assist in developing the survey instrument. Cattle producers had access to the survey in an online format at the website www.cattlesurvey.com. Also, a written survey that mirrored the online survey was developed for the purpose to obtain responses at state, regional, and national cattlemen meetings. Surveys were collected online and in written form from April 2011 to February 2012. In total 3,755 surveys were completed. The survey included biographical information about the respondent of the survey (i.e. age, primary source of income, etc.), demographical information that characterized the type and size of cattle operation of the respondent, and information that quantified the respondent's knowledge of BQA principles and implementation of BQA practices. Statistical means and frequency distributions were analyzed both on an overall basis and within industry sectors (seedstock, commercial cow/calf, backgrounder/preconditioner, stocker/yearling, feedlot, and dairy).

F. Important Findings

A total of 3,755 cattle producers from 45 different states responded to the survey, with the majority of respondents characterizing themselves as commercial cow/calf operators (74.8%). Overall (83.9%), and within each industry sector, the vast majority of respondents had been working in the cattle industry for more than 10 years, and over 50% of responding cattle producers had more than 25 years of experience in their industry sector.

In the survey, respondents were asked "When you hear the term 'quality' in relation to the beef industry, what comes to mind"? They were provided a 5-point scale: 1 = Strongly agree; 2 =

Agree; 3 = Neutral; 4 = Disagree; and 5 = Strongly disagree. While almost all respondents, both overall and within industry sectors, agreed that each statement was related to quality, the traits with the lowest numerical mean (agreed with the most) were the 2 statements "producing beef that provides safe and wholesome beef" (1.3/5.0) and "raising cattle and calves that are healthy" (1.3/5.0).

When asked "in what ways do you intentionally influence 'quality' as a beef producer", on an overall basis the most common responses were through "preventative health care (i.e. vaccination program)" (89.1%) and "use of good stockmanship and animal handling skills" (92.9%). "Implementation of my state's Beef Quality Assurance (BQA) protocols" was frequently cited (55.7%, overall) as a way in which respondents intentionally influenced the quality of beef. However, it was numerically lower than 6 other methods. Only 3.6% of respondents said that they "do not intentionally influence beef quality". A greater percentage of respondents, who indicated they were in the dairy segment, responded to this question by saying they do not influence beef quality (11.5%).

When asked about following the withdrawal time for animal health products, over 95% of respondents said that they "always" or "usually" verify that they followed the proper withdrawal time. However, 2.0% of overall respondents "never" verify that they followed the proper withdrawal time. Overall, 78.3% of respondents used individual tags to keep track of cattle receiving animal health products. Although, 11.7% of respondents "never" keep track of withdrawal times with written records.

Another major BQA principle is that cattle producers should have a significant working relationship with a veterinarian (e.g. VCPR). Almost nine out of ten (89.4%) of all survey respondents said they had a working relationship with a veterinarian.

Injection-site management has been a cornerstone issue discussed in BQA trainings. In this survey, 84.2% of respondents said that their preferred route of administration was SubQ, which is taught as a BQA principle. Placing injections in the neck area is another BQA principle, and over 87% of respondents said their preferred location for injections was in front of the shoulder in the neck area.

When asked whether respondents had written protocols of health treatments, 31.3% of the overall respondents said they did have a written protocol. This is an area that needs to be improved upon, and increased educational efforts directed toward.

Overall and for each industry sector, over half of respondents said that they conducted trainings to familiarize their workers with their operation's health management plan. Training people at the ranch or operation level is important to make sure that BQA principles are implemented when conducting day-to-day operations. Developing and disseminating tools that owners and

managers can use on the ranch or farm to teach BQA principles should be a continued emphasis by state and national BQA educators.

Overall, 57.2% of respondents said that they keep calves greater than 40 days before shipping them off of their operation. Of commercial cow/calf operators that responded to the survey, 18.7% said that they ship calves immediately after weaning.

When commercial cow/calf respondents were asked if they had ever heard of BQA, 85.0% said they had heard of BQA. Of commercial cow/calf respondents that had heard of BQA, 69.3% had attended a BQA training or completed an online BQA training and, of those that completed a BQA training, 78.1% of commercial cow/calf producers said a certificate of completion was offered at the BQA training that they attended. Based on the total number of overall respondents that answered either "yes" or "no" to whether they had ever heard of BQA, approximately 42.6% of all respondents said they had received a certificate of completion after attending a BQA training. Of commercial cow/calf producers that at least attended a BQA-type training, 98.5% stated that they follow best management practices consistent with BQA on their operation.

When respondents were asked why they choose to follow best management practices consistent with BQA, 87% said because it was "the right thing to do" and 83.9% also responded because "I am committed to continuous improvement on my cattle operation."

A common reason why respondents did not remain BQA certified was that certification was not required to participate (25.7%, overall). Also, 30.8% of the backgrounder/preconditioners said they were no longer certified because they did not have time to complete the recertification. Overall 42.5% of respondents said that one of the driving forces for them to stay in the cattle business was the hope that their children would continue farming/ranching on their cattle operation.

The adoption of BQA practices were compared between respondents who, in the survey, responded that they had, or had not ever, attended a BQA-type program (Q29). Adoption of certain BQA practices was higher for respondents who had attended a BQA-type education program. Respondents who attended a BQA-type training were more likely to use individual animal ID, keep written records, have a working relationship with a veterinarian, give injections in the neck area subQ, and train their workers on the ranch in BQA principles.

G. Implications/Industry Impact

Data from this study show that many cattle producers are engaged in BQA principles on their operations. They also show that many cattle producers recognize that using BQA-oriented management practices with their cattle is the right thing to do, and BQA is a tool that will help

them improve their cattle. BQA education training is a valuable tool in changing the production practices of cattle producers. Continued educational efforts should add to the adoption of BQA principles. Continued development of on the ranch/farm educational tools regarding BQA will further enhance the adoption of BQA principles at the grass-roots level.

H. Tables

Of cattle producers who attended some type of BQA training, percentage of survey respondents who felt they always, usually, sometimes, or never followed best management practices consistent with BQA on their operation (n = 2,129)[1]

		Sector (%)					
	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
Always	66.5	68.1	66.1	63.9	56.0	72.7	44.1
Usually	31.9	31.1	32.4	32.8	42.0	26.5	47.1
Sometimes	1.6	0.9	1.5	3.3	2.0	0.5	8.8
Never	0.1	0.0	0.1	0.0	0.0	0.5	0.0

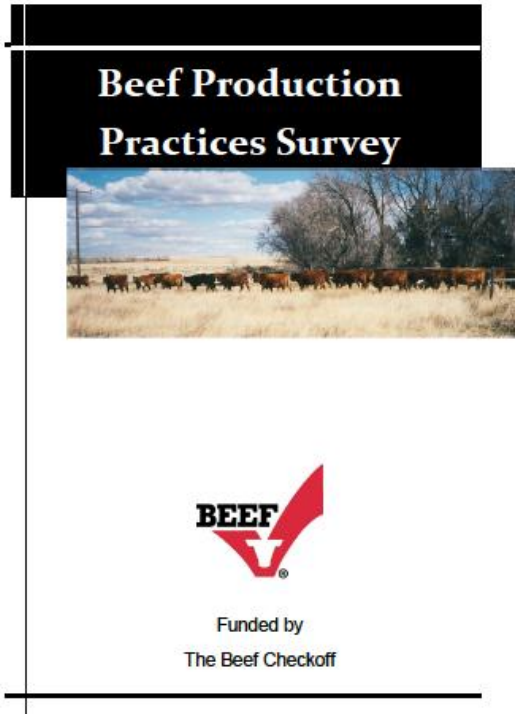
[1]Percentage based on the number of respondents who said they had attended a BQA-type training.

Of cattle producers who attended some type of BQA training, percentage of survey respondents and the reason they chose to follow best management practices consistent with BQA[1]

		Sector (%)					
Reason	Overall	Seedstock	Commercial cow/calf	Backgrounder/ preconditioner	Stocker/ yearling	Feedlot	Dairy
The right thing[2]	87.0	86.4	86.1	90.3	93.0	89.9	80.6
Received a premium[3]	35.4	31.0	38.8	41.9	34.0	28.1	19.4
Required by buyer[4]	12.0	8.6	12.8	11.3	11.0	15.4	8.3
Committed to improvement[5]	83.9	83.9	85.9	82.3	80.0	79.0	75.0
Other	4.3	4.5	4.2	0.0	6.0	4.1	3.0

[1]Percentage based on the number of respondents who said they had attended a BQA-type training.
[2]It's the right thing to do.
[3]I receive a premium when I sell my cattle.
[4]It's required by the buyer of my cattle.
[5]I am committed to continuous improvement on my cattle operation.

I. Photos


Beef Production
Practices Survey
BEEF
Funded by
The Beef Checkoff


BEEF
Beef Production
Practices Survey
Thank you for participating in this on-line survey of beef producers across the U.S. Please complete this survey on behalf of your cattle operation(s). This survey will only take 10-15 minutes to complete. Please refrain from using your web browser's back and forward buttons
Click Here to Take Survey
Goal: Our goal is to summarize production and management practices that are currently being used by cattle producers throughout the beef produciton industry.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