



Beef Quality Assurance



Beef Industry Progress through National Beef Quality Audits

Initiated in 1991, the Beef Checkoff-funded National Beef Quality Audit (NBQA) has provided the industry a meaningful set of guideposts and measurements relative to the quality conformance of the U.S. beef supply. In total, five audits have been conducted with the most recent in 2011. Based on the principle that successful management depends on accurate measurement, the NBQA provides an industry-wide scorecard to provide direction for improving quality and value across all sectors. The NBQAs identify those shortfalls and non-conformance issues the industry must address in order to increase profitability through improved beef demand. The five audits completed over the last 20 years show the industry has made substantial progress in improving beef quality. Nevertheless, to continue to meet consumer expectations, the industry must take advantage of opportunities for further improvements.

Funded by the Beef Checkoff, the first NBQA was conducted in 1991 with the goal of establishing baselines for present quality shortfalls and identifying targets for desired quality levels by the year 2001. The audit consisted of three phases: 1) face-to-face interviews with packers, restaurateurs, purveyors and retailers; 2) slaughter floor and cooler audits; and 3) a strategy workshop involving industry specialists who assigned a dollar value to the problem areas. In the final analysis, carcass non-conformities in the beef industry cost approximately \$279.82 for every steer/heifer slaughtered in the United States during 1991.

1991 Significant Findings

- Purveyors, retailers and restaurateurs were most concerned about excessive trimmable fat (up to 1-inch fat trim before 1991 on boxed beef). Expectations were that ¼-inch or less trim would become the new standard for boxed beef by 1993.
- Packer-buying criteria was seen to be shifting from the present “dressing percentage” (yield of carcass weight from the live animal) to a new “red meat yield” (yield of ¼-inch trimmed boxed beef from the live animal).
- The packers’ concern for hide defects ranked 8.29 on a 10-point scale for problem severity. The issues identified included butt brands, side brands, shoulder brands, mud damage, and other hide damage due to mange, lice, ticks, flies, mosquitoes, etc.
- Thirty-one percent of cattle audited by the packing plant had horns, which are shown to be responsible for high levels of bruising. Most prevalent in the higher-priced cuts, bruising accounted for a \$1 per animal loss to the industry.
- Thirty-five percent of Choice cattle and more than 50 percent of the Select cattle were Yield Grade (YG) 1 or 2. Nearly 40 percent of audited carcasses fell into the YG3 category.
- More than half of the cattle in the study graded Choice, nearly 37 percent were Select, 2.3 percent were Prime, and 8 percent graded Standard and “hard-boned.” These statistics did not match the industry’s Quality Grade consist.
- To make improvements in the future, the Strategy Workshop participants agreed on four specific industry objectives: 1) attack waste, 2) enhance taste, 3) improve management, and 4) control weight.

QUALITY DEFECT

LOSS PER STEER/HEIFER

WASTE - \$219.25

Excess external fat	\$111.99
Excess seam fat	\$62.94
Beef trim corrected to 20%	\$14.85
Muscling	\$29.47

TASTE - \$28.81

Palatability	\$2.89
Marbling	\$21.68
Maturity	\$3.80
Gender	\$0.44

MANAGEMENT - \$27.26

Hide defects	\$16.88
Carcass pathology	\$1.35
Liver pathology	\$0.56
Tongue infection	\$0.35
Injection sites	\$1.74
Bruises	\$1.00
Dark cutters	\$5.00
Grubs, blood splash, calloused ribeyes and yellow fat	\$0.38

WEIGHT - \$4.50

Carcass weight (625 - 825)	\$4.50
----------------------------	--------

TOTAL

\$279.82

1995

As in the previous audit, **NBQA 1995** was based on the recognition that the U.S. beef industry cannot manage its quality problems until it can measure them. NBQA 1995 showed evidence of factors in which producers were beginning to move the needle.

2000

The third audit, **NBQA 2000**, suggested that U.S. beef producers had made progress in helping improve beef quality in several areas, including injection site lesions, herd health, and managing genetics for reduction of fat. In fact, the incidence of injection site lesions was not even in the top ten areas of concern for purveyors, restaurateurs, and retailers in 2000 after being the second most serious concern to packers, purveyors, restaurateurs and retailers in 1991. The 2000 audit showed a 22.8 percent improvement (\$30.96) from 1995 to 2000 in value-losses due to waste, taste, and management.

Quality Defect	NBQA 1995	NBQA 2000
Waste	\$47.76	\$43.41
Taste	\$38.30	\$23.14
Management	\$45.16	\$40.14
Weight	\$4.66	\$8.23
TOTAL	\$135.88	\$114.92

2005

The **2005 NBQA** was the fourth to be conducted since the original audit in 1991. The intention of this fourth effort was to establish a new benchmark for shortfalls in beef cattle quality and identify new targets for desired quality levels. This benchmark would be used as a tool in creating Beef Quality Assurance educational efforts through 2010.

2005 Significant Findings

- Among the successes found in the 2005 Audit, based on the interviews of both end-users and the producers themselves, were improved microbiological safety of beef, improved cattle genetics, fewer injection site lesions and beef of higher quality.
- By 2005, the perception of U.S. beef flavor in foreign markets was rated either excellent (70 percent) or very good (30 percent), and U.S. beef tenderness was rated very good (100 percent).
- Tenderness and implants jumped in importance as a quality challenge for packers in 2005, while the lack of uniformity and heavy carcass weights were areas in which they believed the industry had not made enough progress.
- Purveyors, retailers, and restaurateurs all said *E. coli* O157:H7 was an issue for their customers/consumers and lack of marbling was the greatest quality challenge, but restaurateurs ranked “hormone residues” of higher importance to their patrons.
- Companies reported a higher percentage of USDA Prime and Choice in 2005 than in 1995, but Yield Grades were similar, with higher percentages of YG4 and YG5.
- More carcasses had “no bruises” in the 2005 audit than in any of the previous ones.
- To make improvements in the future, the Strategy Workshop participants agreed on specific objectives that would increase the likelihood of the industry providing product attributes that meet consumer expectations and thereby, expanding marketing opportunities in domestic and global markets. In addition, the Strategy Workshop participants recognized the need to strengthen the connection among all beef chain segments through increased communication and targeted educational programs.

The **2011 NBQA** was the most comprehensive industry assessment ever conducted with focus expanded to include not only the physical attributes of beef but also other, more sweeping issues, such as food safety, sustainability, animal well-being, and the disconnect between agricultural producers and consumers. The quality challenges identified as needing industry attention indicate the broader issues that now face the industry and require attention.

Quality Challenges

Ranked according to priority, 1991 to 2011

1991	1995	2000	2005	2011
External Fat	Overall Uniformity	Overall Uniformity	Traceability	Food Safety
Seam Fat	Overall Palatability	Carcass Weights	Overall Uniformity	Eating Satisfaction
Overall Palatability	Marbling	Tenderness	Instrument Grading	How and Where Cattle Were Raised
Tenderness	Tenderness	Marbling	Market Signals	Lean, Fat, and Bone
Overall Cutability	External and Seam Fat	Reduced Quality Due to Use of Implants	Segmentation	Weight and Size
Marbling	Cut Weights	External Fat	Carcass Weights	Cattle Genetics

Source: NBQA

2011 Significant Findings

- Terminology about quality among segments is not standardized which makes communications with consumers about quality more difficult.
- The audit found consumers want to know more about the beef they consume, how the cattle are raised and where they come from. The industry must do a better job of telling its story.
- The importance of food safety was shown to be increasing.
- Instrument grading was not found to be notably different than human cooler grading.
- The number of cattle individually identified with visual tags jumped from 38.7 percent in 2005 to 50.6 percent in 2011.
- The audit found increased percentages of carcasses grading USDA Choice and Prime.
- Nearly 90 percent of cattle producers had a working relationship with a veterinarian and more than 98 percent of cattlemen interviewed said they do not use an electric prod as their primary driving tool.
- At the time of NBQA 2011, 87 percent of cattle producers had heard of Beef Quality Assurance
- Participants in the 2011 Strategy Workshop identified a number of priorities to address food safety, animal health, eating quality, and to optimize value and eliminate waste. To read the Executive Summary of the 2011 NBQA, go to www.bqa.org.



Funded by
The Beef Checkoff

©2013 Cattlemen's
Beef Board and
National Cattlemen's
Beef Association
May be reproduced for
educational purposes.