National Beef Quality Audit

2010/11 Beef Carcass Audit Fact Sheet

A Fact Sheet for the Canadian Beef and Cattle Industry

About the National Beef Quality Audit

The National Beef Quality Audit (NBQA) was first undertaken in 1995 with the intent to measure quality defects which could be managed primarily through the efforts of cattle producers. The current 2010/11 audit is the third to be completed and has occurred 12 years following the second audit in 1998/99. In addition to benchmarking quality parameters, the NBQA supports the development of strategies to reduce the incidence of defects. The ultimate objective of the NBQA is to enhance the quality and safety of Canadian beef while increasing the profitability of the Canadian beef and cattle industry.

Processing Floor and Cooler Audits

Carcass information was collected during the fall of 2010, and the winter and spring of 2011 from processing plants in eastern and western Canada. Data were collected from observations made on approximately 35,000 carcasses. The sample selected represents approximately 1% of the annual slaughter during the study period.

Three technicians were located on the processing floor to collect data during slaughter. Observations were made immediately after stunning, following removal of the hide and on the offal collection table. In the cooler a certified grader and a second technician recorded measurements on the chilled carcass.

Comparisons to Prior Audit

To measure progress made since the 1998/1999 audit, comparisons of the frequency of defects as well as their cost were made. When comparing costs it is important to note that while efforts were made to compensate for changes in labour rates and industry practises, significant change has occurred since 1999. As such, the economic values and comparisons made to the prior audit are estimates.

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Processing Floor Audit

Tag

Tag is the manure and mud on the hide of the animal. Tag damages the hide and may increase the risk of contamination of the carcass during removal of the hide. Eight-five percent of steers and heifers had tag throughout the year, with tag on 20.6% of the cows and bulls. In comparison to the 1999 beef quality audit, the number of animals that had no tag in 2011 was roughly half the 1999 level. This variance is due possibly to the weather condition differences between the two periods. Tag cost the beef industry $8.17/head* on average or $26.1 million in 2011 versus $30.6 million in 1999. These costs are a result of hide damage, trim losses and increased labour costs at the packing plant.

Horns

Horns cause economic losses from bruising, head condemnations, and extra labor in the packing plant. The audit found that 87.5% of fed and 89.4% non-fed cattle in the 2011 audit were polled. Less than 3% of the cattle had full horns. The % polled cattle is approximately 20% higher in fed and non-fed cattle in 2011 compared to the 1999 audit, which is an improvement. Processors lost $192,535 in 2011 (or $0.06/head*) versus $106,003 ($0.032/head) in 1999 due to extra labour costs for knocking off the horns. Although the industry loss in 2011 exceeded that in 1999, the increase was a result of increase in labor costs and not horn prevalence, as the defect improved from 1999 to 2011.

* Total costs in this fact sheet are expressed over all types of cattle (fed and non-fed combined).

Body Condition Score (BCS)

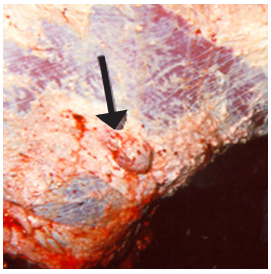
The amount of condition on cattle (1 = very thin to 5 = grossly fat) was assessed after hide removal. Fed and non-fed cattle had higher body condition scores than in previous audits. None of the fed cattle were very thin in 2011, and the average fed cattle body condition score ranged from 4.09 in the spring to 4.47 in the fall. Four per cent or less of the non-fed cattle had a BCS of 5 and the average score for non-fed cattle was 2.4 in the fall, 2.8 in the winter and 3.0 in the spring.

Livers

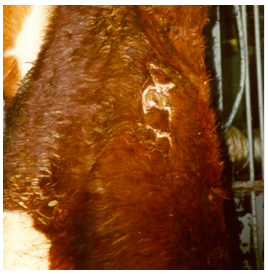
The occurrence of A+ livers was much higher in the 2011 audit for fed and non-fed cattle than in the 1999 audit. In 2011, 9.9% of livers scored A+ compared to 2% in 1999 for all cattle. In feedlot cattle this may be due to changes in feeding practices, such as the feeding of wheat, which may increase the risk of grain overload which leads to liver abscesses.

The % of livers for human consumption in 2011 was similar to the 1999 audit; however, there were more condemned livers relative to pet food livers in the 2011 audit. This may be due to the higher percentage of abscessed livers in 2011. The economic loss from liver discounts is estimated at $9.36/head* for all cattle, for a total industry loss of $29.9 million. This compares to an industry loss of $8.8 million in 1999.

Injection Site Lesions



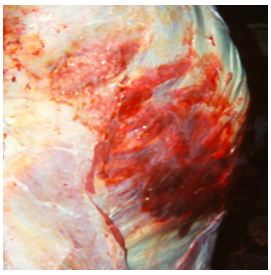
The occurrence of surface injection site lesions in fed cattle in the 2011 audit was lower than in non-fed cattle, .56% versus 7.34%. This may reflect the conditions under which cattle are sold. The majority of fed cattle sold are healthy, finished cattle from feedlots which have not been recently treated with any vaccine or drug. On the other hand, non-fed cattle are typically cull cattle that are being railed for disease or poor performance. The occurrence of surface injection site lesions in fed cattle in 2011 is similar to the 1999 audit but the 2011 audit showed higher occurrence in non-fed cattle compared to 1999. Injection site lesions cost the industry $0.21/head* or $662,950 in 2011. Internal injection site lesions were not studied in the 2010/11 audit so comparisions on this aspect to the 1999 audit were not possible.



Brands

In 2011, 5.4% of the fed cattle had hip brands, 3.4% had rib brand and less than 1% had a shoulder brand. This represents a significant decrease in branding since 1999 when more than 25% of the fed cattle had rib, hip or shoulder brands. In 2011, 59.78% of all brands observed were located on the hip, 37.36% on the rib and 2.86% on the shoulder for fed cattle. Multiple brands were observed on less than .1% of fed cattle in 2011, down from more than 8% in 1999. The economic loss to the industry as a result of hide damage due to branding for all cattle was $0.88/head* or total $2.8 million. This total compares to $15.8 million in 1999.

Bruising



In 2011, bruises were observed on 34% of the fed cattle carcasses, compared to approximately 50% in 1999. Approximately 8% of these carcasses had more than one bruise. In 2011 (similar to 2009) 72.3% of the fed cattle bruises were minor resulting in minimal trim; 23.9% were major requiring an estimated 1.5 pounds of trim; and 3.8% were critical, resulting in over 3 pounds of trim and similar to the 1999 audit. Approximately half of the critical bruises on fed cattle were on the loin. Eighty-six percent of the non-fed cattle had some bruising, with the majority of the critical bruises on the loin and the minor and major bruising on the round. The economic loss to the industry in 2011 due to bruises on the carcasses was estimated at $2.10/head* or $6.7 million.

Condemnations

In 2010, the Canadian Beef Grading Agency (CBGA) reported that 0.25% of all carcasses slaughtered were condemned. This compares to the 1999 audit reporting 0.3% carcass condemnation. The 2011 economic loss due to carcass condemnation is estimated at $3.44/head* or $11.0 million.

Although data was very limited, it was estimated that 3.8% of heads and tongues were condemned, resulting in an economic loss of $521,680 and $1,032,569*, respectively. This compares to a head and tongue condemnation rate of 5% in 1999.

Carcass Cooler Audit

Hot Carcass Weights

Target carcass weights established by packers in 2010/11 were 600-925 pounds. The industry average weights as reported by the Canadian Beef Grading Agency (CBGA) for steers was 846 pounds and heifers 778 pounds. In the 2010/11 audit 86.6% of the fed cattle fell within the target weight category; this compares to 57.4% reported in the 1999 audit. In the 2010/11 audit, fed cattle off-weight carcasses resulted in a loss of $63.3 million or $24.57/ head*. The wider target weight range in the current audit contributed to reduced costs when compared with $41/ head or $111 million in the 1999 audit.

Ribeye Area

On average, rib-eye areas for youthful cattle in the 2010/11 audit were 91.5 ± 12.70 cm^2. These findings suggest a slight increase with respect to the 1998/99 audit where steers had a rib-eye area of 91 cm^2 and heifers were 90 cm^2.

Carcass Yield

The average lean meat yield of fed cattle in the 2010/11 audit was estimated at 58.7%, very similar to the 1999 audit where steers and heifers both averaged 58.9%. In 2010/11, CBGA reported that 52.4% percent of the A Grade fed cattle had a yield grade of Canada 1, 33.5% had a yield grade of Canada 2, and 14.2% had a yield grade of Canada 3. This compares with 1998 CBGA averages of 66.8%, 26.1% and 7.1%, respectively.

Quality Grade

CBGA reported .07% of youthful animals as B1 (devoid of marbling) in 2010/11. This is lower than 1998 where approximately .6% of fed cattle were B1. The decrease in B1 carcasses was influenced by a more tolerant minimum fat standard being introduced. For all A grade cattle in 2010/11, CBGA reported 1 .2% Prime, 52.5% AAA, 43.4% AA, and 2.8% A. This compares to the 1998 CBGA averages of 0.4% Prime, 34.1% AAA, 55.2% AA and 10.3% A.

Dark Cutters

There was an overall increase in the number of dark cutters in 2010/11 compared to 1998/99 – 1.28% versus .84% of youthful cattle. Continued monitoring of dark cutters in future years will be undertaken to assess trends.

Conclusions:

The 2010/11 audit indicates some improvements have been made by the Canadian beef industry since the 1998/1999 audit. The prevalence of horns, brands, bruises, condemnations, and off-weight cattle have decreased. Improvement in the carcass quality grade and rib-eye areas were also realized since the 1998/99 audit.

Progress on these biological traits translates to a decrease in overall conomic losses for the Canadian beef industry.

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