

COMPARATIVE ANALYSIS OF BEEF, BUFFALO AND BISON MEAT

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ABSTRACT

Nowadays, the consumption of bison meat is becoming more widespread worldwide. For the industry, this could lead to the emergence of a new market sector in the future. It is important to examine the extent to which the quality of its meat differs from that of the usual cattle or buffalo returning to the public consciousness.

Our measurements were performed on the loin of bison, buffalo, and cattle, including Angus cattle. Using the following test methods, we concluded the following conclusions:

- When comparing consumer prices per 100 grams of meats, it can be observed that the most expensive was bison meat and the cheapest was buffalo meat. The price difference was almost double. Although in our case the bison meat was further expensive, it was only available in portions and vacuum-packed.
- During instrumental color measurement: there was a large color stimulus difference between beef–buffalo meat and beef–bison meat. There was also a well noticeable difference between buffalo and bison meat.
- In instrumental hardness measurement: bison meat proved to be the hardest, approximately quintuply harder than beef, which proved to be the softest, and twice as hard as buffalo meat.
- During the cooking probe: the loss of buffalo meat proved to be the largest, followed by bison meat and beef meat, although the difference was negligible in the latter two, only 0.27%.
- In the roasting probe, the biggest loss was in roasting bison meat, followed by beef and buffalo meat.
- During the pressing probe, the highest loss was observed for beef meat (it was also significant for bison and buffalo meat).
- During the instrumental analytical analysis, we observed that the highest energy and fat content became the beef meat, in addition, the protein content was the most favorable. Bison meat had the lowest values.
- During the sensory evaluation, the most outstanding results were obtained from the bison meat, which received the most favorable evaluation in all respects, so based on the overall impression. The buffalo meat received good reviews in color and aroma, but it was too hard, and the taste was less than that of beef meat.

During our research, we concluded that bison meat may become a very popular product in Hungary in the future. There is a clear place for the consumption of both buffalo meat and bison meat in a health-conscious diet based on the measured results.

Keywords: beef meat, buffalo meat, bison meat, comparative analysis