THE INFLUENCE OF CATTLE BREED ON NUTRITIONAL VALUE AND MINERAL CONTENT OF MEAT

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Abstract. The aim of this study was to determine the mineral content in various breeds' cattle meat and its correlation with chemical meat quality indices. The concentrations of natrium, magnesium, calcium, nickel, copper, zinc, barium, selenium, and iron were determined by inductively coupled plasma mass spectrometry (ICP–MS) after microwave digestion. Different concentrations were found in meat of different cattle breeds and were notable for zinc, cuprum, calcium and barium. The highest coefficients of variation were found for natrium and they were not statistically significant. Statistically significant differences of chemical composition (dry matter, proteins, intramuscular fat, total ash) were found in different breeds' cattle meat ($P < 0.05 – P < 0.001$). A positive correlation between the amount of Fe and the amount of proteins and a negative correlation between the amount of Na, Mg, Cu and the amount of ash in the meat were determined. In conclusion, a precise determination of chemical content is very important for the essentials of human nutrition. Therefore, it is very important that the data of nutrients be regularly renewed and possible changes be observed with available data.

Keywords: nutritional value, mineral content, cattle, breed, meat