MINERAL MATERIAL AND VITAMINS INFLUENCE ON PHYSICAL MEAT CHARACTERISTICS

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Summary. The article presents the data of experiment conducted with fattened Lithuanian DRED and Heleford crossbred bulls averaging 400 kg of weight. One month prior to slaughter they were given 2.4 and 6 g of vitamin E per day. The influence of this vitamino n meat colour, water holding and meat softness was also measured. The influence of different concentration vitamin C, calcium and natrium chloride solutions on meat pH, meat hardness, meat colour and water holding was measured 24 and 48 hours after insertion of these materials in to meat. Vitamin E was found to influence meat colour and its stability. The coefficient of meat extinction in the animals given 6 g of vitamin E was 5.9% higher ($P<0.05$)than that in animals which were not given the vitamin.During the next two days meat colourr of animals in this group changed insignificantly, whereas the coefficient of meat extinction increased by 8% ($P<0.05$) in animals not given the vitamin. Meat of the animals given vitamin E was by 15.2% ($P<0.05$) softer than that of the animals not given the vitamin. Experiments with 6 to 8 year old cows indicate that by inserting vitamin C, calcium and natrium chloride 2 and 6% concentration solutions amounting to 5% of meat weight, an increase in meat pH stability was obtained. The most significant influence on meat hardness was made by 6% calcium chloride solution. It decreased meat hardness by 37.5% ($P<0.05$). Mineral materials and vitamin C used in the experiment had positive influence on meat colour, its stability and increased water holding capacity.

Keywords: meat, meat color, meat hardness, meat water holding capacity, vitamin E, vitamin C, natrium chloride, calcium chloride, bull, cows.