Abstract

The presence of the PSE (pale, soft and exudative) condition in porcine carcass causes high economic losses to the meat industry. The PSE appearance depends on many variables, some of which are intrinsic of the animal, and others are related to transportation conditions to the slaughterhouse. The aim of the present study was to determine if there is or not an association between some of the above mentioned variables and the PSE condition. The studied variables were: genetic, sex, food, weight, time of fasting, time of transportation, density, temperature and humidity during transportation, type of truck, resting time, dorsal fat, carcass efficiency and carcass weight losses. Carcasses of commercial genetic pigs (n = 474) were tested and semimembranous muscle pH was done at 45 minutes (pH45 ) and then at 24 h post-sacrifice, using IQ 200 Scientific Instruments®, with an ISFET® type probe. Test of principal components of GLM with contrast test of Tukey with 95% of significance, and univariate and divariate frequencies distribution was applied. The results demonstrate that there was highly significant association (p<0.01) between pH45 and variables as density, food, type of truck, genetic and the resting time. The sex and the time of transportation also had significant association (p<0.05), but only with pH45 . Additionally, differences between genetic, sex (highest values of pH45 to males) and food (p<0.05) were found. Also, there were interactions between: sex - fasting, sex - food, sex - resting and sex - transportation (p<0.05). According to the results, PSE condition is not a unicausal phenomenon and consequently it needs an integral managment.

Keywords
Carcass, pork, pH, PSE, quality, swine.