

REACTIVITY IN BEHAVIORAL TEST AND IMPACT IN THE STRESS INDICATORS IN SWINE

REATIVIDADE EM TESTE COMPORTAMENTAL E IMPACTO NOS INDICADORES DE ESTRESSE DE SUÍNOS

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The swine is constantly exposed to potential numerous stressors related to physiological changes that impact on the muscles during production, transport and slaughter. Studies have demonstrated the relationship between behavioral and physiological measures of stress in swine at slaughter and subsequent effects on meat quality. One way to study this relationship is through behavioral tests. The test “Y maze” is used especially to determine the relationship of aversion front the different procedures for handling. The objective of this study was to test the effectiveness of Y-maze to detect behavioral differences that allow categorizing crossbred pigs in groups of high and low reactivity, and the relationship between physiological parameters and muscle. Two experimental trials were conducted. In the first trial, 40 females were used to test the sound stimuli in the maze, categorized as "aversive" or "not aversive." The experiment considered the variables as significant to categorization in groups of reactivity: number of times the animal enters into each arm (NEA); time of main arm (TMA); time in initial main arm (TIMA) and total time of stay in each arm (TTSA). There was no effect of type sound stimulus for reactivity categorization ($P>0.05$). In the second trial forty eight animals (24 females and 24 males) were identified as animals with high (HR) or low reactivity (LR) and submitted to two handling in pre-slaughter, a tranquil (T) and other stressful (S). The first management consisted of minimal handling of animals, with the support of management board for conducting pigs. The stressful management used shocks, applied with electric stick, in the posterior region of the animal, at an average interval of five minutes, thirty minutes before the slaughter. Subsequently, the animals were subjected to collect samples for laboratory analysis. The trials pointed to the possibility of reactivity categorization by Y maze test, regardless of the sound stimulus used. The physiological measures examined were not affected by divergent reactivity ($P>0.05$), even in pre-slaughter differentiated situations. Surface body temperature was higher for the S pre-slaughter handling ($P<0.05$), indicating difference in the activity of animals. The reactivity determined by the Y-maze test does not determine changes in physiological measures of stress related to transformation of muscle into meat. The pre-slaughter handling may change the physiological response of the animal regardless of the reactivity determined by the behavioral test.

Keywords: maze, reactivity, stress.

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