

## INFLUENCE OF BEDDING ON BEHAVIOR AND REPRODUCTIVE EFFICIENCY OF PREGNANT SOWS

### INFLUÊNCIA DA CAMA SOBRE O COMPORTAMENTO E EFICIÊNCIA REPRODUTIVA DE PORCAS GESTANTES

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Ensuring animal welfare in the production chain has been an ever-present requirement in commercial relationships among producer and export markets. The use of bedding is indicated as a means of facilitating the comfort and welfare of animals, and affords an opportunity which can express their most common behaviors. Thus, we aimed here to assess the effects of wood shaving bedding in group-housed pregnant sows kept in two housing systems (collective and combined) regarding to behavioral pattern, lesions and reproductive efficiency. The experiment was conducted using 216 animals, which were assigned to four treatments. In each treatment, 54 females were subdivided into three replicates of 18 animals each. Treatments were arranged in a 2x2 factorial (two housing systems and two types of flooring). The housing systems tested included the breeding in collective pens (CP) and collective cage (CC) after 28 days of gestation, preceded by cages. Two types of floors were used in experiments, being concrete floor (CF), and the second, a concrete floor covered with wood shavings bed of 25 cm thick (CFB), making the following treatment combinations: CPCF, CPCFB, CCCF and CCCFB. The behavioral variables were recorded on 7 stages throughout gestation, at fixed times (7:30 am, 12:00 pm and 16:00 pm), totaling 18 observation days. In addition to the behavioral assessments, the abiotic variables, temperature, relative humidity and specific air enthalpy were also recorded. The analysis of lesions were performed one week after the collective housing through counting the number of lesions, its severity level and localization in the body of the animals. We also recorded the number of piglets born alive, stillborn, mummified and the average birth weight. The females kept in an environment covered by a bed of shavings had higher standing posture frequencies (20.9 and 31.4% for CCCFB and CCCF and 20.6 and 39.2% for CPCFB and CPCF, respectively). Furthermore, the use of bedding decreased the incidence of oral stereotypies (12.30 and 6.02% to CCCF and CCCFB, and 8.07 to 5.69% and CPCFB and CPCF) and the number of injuries found in the head, palette/neck and back/flank of the sows. The models designed for analyzing the production rates have shown that the variables gestation length, number of piglets born alive and stillborn were not affected by treatments. On the other hand, the number of mummified was higher in the treatment CPCF regarding to the CCCFB. However, the presence of bedding alters the activity of the animals, reducing the incidence of injuries from aggression, as a consequence of benefits of the welfare conditions established. In general, the production results suggest a technical feasibility of doing the sows gestation totally in collective boxes, according to the positive traits obtained in the welfare conditions.

Keywords: environmental enrichment, swine, welfare.