Abstract

Sixteen pregnant sows were used. The experimental design was completely randomized with a 2x2 factorial scheme consisting of two housing systems (individual cages and collective pens) and two diets (low [2.67%] and high [13.14%] level of crude fiber). Physiological, behavioral, environmental, and hormonal parameters were studied. In addition, the following productive and reproductive parameters were evaluated: weight gain, feed intake, feed conversion of the sow and piglets, number of piglets born dead and alive, number and weight at weaning, and backfat thickness of sows. Pregnant sows reared in collective pens and fed a high-fiber diet exhibited better physiological responses, indicating greater comfort and better animal welfare. The environmental variables were close to the comfort zone of the animals. In addition to providing a more comfortable environment, housing pigs in collective pens reduced stereotypy, permitting the sows to express a more natural behavior. The high-fiber diet did not interfere with female productive performance. Tifton hay can therefore be indicated as an alternative for the formulation of sow diets to improve animal welfare.

Keywords

Swine, animal welfare, environmental enrichment, housing systems.