

# Evaluation of the effect of dietary betaine supplementation on the reproductive performance of lactating sow rearing under different temperatures <sup>(1)</sup>

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## Abstract

The aim of this experiment was to evaluate the effect of dietary betaine supplementation on the reproductive performance of lactating sow and growth performance of piglets under hot climate. Experiment was a 2 × 2 factorial with 2 levels of betaine supplementation, 0 and 0.5%, under profiles of two temperatures constant 25°C and cyclic ambient temperature, 24-32°C. Sows were moved into lactating crate in different environmental chambers at the 3<sup>rd</sup>-5<sup>th</sup> day postfarrowing and nursed the piglets till 28 d when piglets were weaned. The body weights and backfat thickness change during lactation period, interval between weaning to estrus of sow, body weight gain and survival rate of piglet during lactating period were used to measure the effect of supplementing betaine under different temperature profiles. Result showed that sows raised under cyclic ambient temperature reduced its feed intake. There were longer ( $P < 0.05$ ) interval between weaning to estrus and increased respiration rate of sows under cyclic ambient temperature. No difference was observed on the weight gain of piglets during lactating period. The supplementation of betaine in sow diet did not have beneficial effect on the the body weights and backfat thickness change during lactating period, the interval between weaning to estrus of sow, body weight gain and survival rate of piglets during lactating period. In conclusion, there was no beneficial effect of dietary supplementation of betaine whether sows was raised under cyclic ambient temperature or constant ambient temperature.

Key words: Heat stress, Betaine, Reproductive performance.

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