

AWN-PP-04

TITLE

EFFECTS OF DIETARY VITAMIN PREMIX LEVELS ON PHYSIOLOGICAL RESPONSES, BLOOD PROFILES AND REPRODUCTIVE PERFORMANCE IN GESTATING SOWS DIET

Hong Jun Kim¹

¹ *Seoul National University*

CONTENT

This study was conducted to evaluate the effects of dietary vitamin premix levels on physiological responses, blood profiles and reproductive performance in gestating sows. A total of 52 F1 multiparous sows (Yorkshire × Landrace) with average body weight (BW) of 223.49 ± 31.65 kg, average backfat thickness of 18.5 ± 4.9 mm, and an average parity of 6.38 ± 2.69 were allotted to one of 4 treatments considering BW, backfat thickness, and parity in a complete randomized design with 13 replicates. Treatments are 1) V1: commercial diet with vitamin requirement in NRC (2012), 2) V3: commercial diet with 3 times of vitamin requirement in NRC (2012), 3) V6: commercial diet with 6 times of vitamin requirement in NRC (2012), 4) V9: commercial diet with 9 times of vitamin requirement in NRC (2012). In lactation period, all sows were fed the same commercial lactation diet. As a result, backfat thickness tended to increase as higher levels of vitamin premix was provided to gestating sows ($P < 0.01$). The BW change of lactating sows was increased when sows were fed higher levels of vitamin premix ($P < 0.01$). The feed intake of lactating sows tended to decrease when sows were fed increasing levels of vitamin premix ($P = 0.06$). Different levels of dietary vitamin premix did not show any difference in the number of total born, born alive, and stillbirth piglets as well as BW of piglets. The blood concentration of serum 25(OH)D3 of sows at 90 day of gestation showed a linear increment as dietary vitamin premix increased ($P < 0.01$). Furthermore, the serum vitamin E level of sows during gestation was higher linearly as dietary vitamin premix increased ($P < 0.05$). Consequently, current vitamin requirement of NRC (2012) is enough for gestating sow and additional supplementation of vitamin premix in gestating diet did not show any beneficial response during gestation.