

# The effect of source and level of dietary fiber on growth performance, backfat thickness and blood profiles of Lanyu pigs <sup>(1)</sup>

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## Abstract

The purpose of this experiment was to study the effect of source and level of dietary fiber on growth performance, backfat thickness and blood profiles of Lanyu pig. A total of 24 Lanyu pigs (initially 9 kg body weight and 11 weeks of age), half castrated and half female, were randomly assigned to three treatments and provided diets: 1) USDA 1160 diet referred to the United States miniature pig formula (USDA 1160) containing 5% alfalfa; 2) WB 10 diet containing 10% wheat bran (WB) and 3) WB 20 diet containing 20% wheat bran, for 12-week feeding trial. The trial incorporated protein and digestion design, with the three groups having the crude fiber content of USDA 1160, WB 10 and WB 20 as 3.56, 3.23 and 3.95%, respectively. All the pigs were weighed every three weeks for the measurement of growth performance. At the initiation, the sixth week and the 12<sup>th</sup> week -end of the experiment, backfat thickness and blood biochemical parameters were measured. Results showed that there was no difference on growth performance and increment of backfat thickness amongst treatments. For the blood profiles, pigs in the WB 20 group had higher ( $P < 0.05$ ) creatinine and lower ( $P < 0.05$ ) triglyceride (TG) than the USDA 1160 group at the end of the experiment. In addition, pigs in the WB 10 group also had lower ( $P < 0.05$ ) TG than the USDA 1160 group at the end of the experiment. Total protein (TP), blood urine nitrogen (BUN), glucose and cholesterol were not different amongst treatments. In summary, Lanyu pigs fed diet with 10 or 20% wheat bran could maintain normal growth without over deposition of backfat, which indicated wheat bran could be a fiber source for Lanyu pigs.

Key words: Backfat thickness, Crude fiber, Growth performance, Lanyu pigs.

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