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“Development on the margin”

Improved Feeding Strategy Increases the Efficiency of Indigenous Pig Production in Southwest China

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Abstract

In Xishuangbanna, a tropical mountainous region in Southwest China, agriculture is dominated by small-scale mixed farming in often isolated areas with poor infrastructure. Most important livestock species with regard to food production are pigs of predominantly local breeds. Diets mainly consist of banana pseudostem (BTR) harvested in the rainforest, corn, rice hulls, meal leftovers and grasses, depending on season. Growth performance of fattening pigs is very poor, making pig production inefficient. Optimising the feeding regimes would be one measure to increase the economic success of pig rearing. The objective of the present study was to investigate the effects of an improved diet on the growth performance of the local pig breed.

A feeding trial was carried out with 20 piglets bought from local farmers; the average weight was 16.4 kg (\pm 5.4). Sibling piglets were separated into two experimental groups. Group 1 received the traditional diet consisting of 70 % BTR and 30 % corn (fresh matter basis), while group 2 received an improved diet consisting of 46 % BTR and corn each plus 8 % soybean meal. The two groups were kept and fed in the same stable in different compartments for 88 days. Water was available *ad libitum*. The mean daily fresh matter intake of pigs in group 1 and 2 was 3.39 and 2.08 kg/d, while the dry matter intake (DMI) was 1.11 and 1.01 kg/d, respectively. Crude protein and NDF intake were 95 and 178 g/d in group 1 and 146 and 137 g/d in group 2. The intake of digestible energy was 21.0 and 23.3 MJ/d in group 1 and 2. Intake of all components was different between the groups ($p < 0.05$). The average weight gain was lower in group 1 (6.7 kg) than in group 2 (10.5 kg; $p = 0.065$), resulting in an average daily gain of 0.08 and 0.12 kg. The feed conversion rate (g DMI/g weight gain) was 14 and 8 in group 1 and 2.

These results show that already small improvements in diet composition can increase the efficiency of pig production in this region tremendously.

Keywords: Banana pseudostem, feeding strategy, local pig breed, Xishuangbanna