



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions
for the Sustainable Management
of Natural Resources”

Natural Farming for Small Pig Farms in Northern Thailand

KESINEE GATPHAYAK¹, SUPALERK LAIPRAWAT¹, T. APICHARTSRUNGKON¹, PONGPHAN NANTAKANG¹, CHRISTOPH KNORR²

¹*Chiang Mai University, Department of Animal Science, Thailand*

²*Georg-August-Universität Göttingen, Institute of Veterinary Medicine, Germany*

Abstract

The commercial pig production is nowadays the prevailing system in Thailand. Natural farming systems using local resources are, however, probably the better choice for small pig holders. We investigated in this study different animal feedstuffs to assess their efficiency in the Korean natural farming system Cho Han Kyu. Animals were kept at three smallholder farms in the provinces Chiangmai and Lumphun. Pigs were raised from 12 to 60 kg weight. The protein supplements were coarse soya bean meal (Crude Protein = CP of 12.97%), kitchen scraps (CP = 18.06%) or fermented feed with dried leucaena leaves (CP = 10.18%). No significant differences were found between the groups of pigs for the traits growth rate, feed consumption and feed conversion ratio (FCR).

In addition, a total of 30 crossbred animals (starting at 12 kg weight) were kept in three groups of 10 animals each. The aim was to assess possible differences in the production efficiency with respect to the farming system (natural versus commercial farming) and the type of feed:

- a) Group 1 (natural housing and fermented feed according to Han Kyu Cho's formulation; CP = 12.97%);
- b) Group 2 (natural housing and commercial feed without antibiotics; CP = 10.51%);
- c) Group 3 (commercial housing and commercial feed; CP of 22.96% to 14.80%).

The pigs were slaughtered at about 100 kg weights. There were no significant differences in the growth rate between the three groups. The highest average back fat thickness (2.8 inches) was recorded for group 2. The lowest carcass length (68 cm) was documented for animals belonging to group 1.

Blood and faeces samples were taken at four natural farms and at one commercial farm. No parasites or protozoa were detected. The complete blood count (CBC) was physiological for all investigated samples. Therefore, the composition of the litter was also investigated on the natural farms. Samples were taken before and after raising the pigs. The percentage of nitrogen and organic matter increased, but the percentage of phosphorus decreased during the raising on the four natural farms. However, the litter samples met the quality of good compost.

Keywords: Natural farming, Thailand, pigs