Ornanong Moonthong 2006: Effect of Cassava Based Diet on Gut Fermentation Glutathione and Immunity in Growing Pig. Master of Science (Agriculture), Major Field: Animal Science, Department of Animal Science. Thesis Advisor: Associate Professor Uthai Kanto, M.S. 83 pages.
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A comparative study on the effects of corn or cassava as energy feed ingredients given either in mashed or pelleted form on humoral immunity, erythrocyte glutathione, T lymphocytes proliferation, luminal pH, and population of pathogenic and non-pathogenic bacteria as well as short chain fatty acids (SCFAs) in digesta collected at the end of the intestine was conducted in growing pig vaccinated with swine fever (SF) vaccine. Results showed that both energy feed ingredients and feeding forms have no influences on humoral immune response determined based on antibody titer against SF vaccine. Pigs fed cassava diet however tend to have higher erythrocyte glutathione levels ($P<0.06$) and T lymphocyte proliferation ($P<0.07$) compared to those fed corn diet. Pigs fed cassava diet as compared to those fed corn diet also have significantly lower luminal pH ($P<0.05$) and smaller population of pathogenic bacteria while having significantly larger population of non-pathogenic bacteria and yeast in digesta collected at the end of the intestine. SCFA concentrations in digesta collected at the end of the intestine were found not affected by the energy feed ingredients used in this study. The effect of feeding forms and the interaction between the energy feed ingredients and the feeding forms on every studied parameters were not statistically significant. The benefits of cassava feeding on disease resistance and health improvement in animals as being reported by farmers could be partly explained by these findings on T lymphocyte proliferation and erythrocyte glutathione responses as well as health-promoting enteric bacterial population in growing pigs.

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