



The 6th International Science, Social Sciences,
Engineering and Energy Conference

This is to certify that

Dr.Nonthasak Piamphon

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Engineering and Energy Conference (I-SEEC 2014)
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(Viboon Pensuk, Ph.D.)
Chair
I-SEEC 2014

(Nattitep Pitaksanurat, Ph.D.)
President
Udon Thani Rajabhat University



Message from the I-SEEC 2014 Chairman

The I-SEEC Conference was initiated by Rajamangala University of Technology Isan, Sakonnakhon Campus in December 2008. This year is the 6th I-SEEC, and the number of papers to be presented increases every year. This may be due to a stronger network between researchers among universities both in Thailand and internationally. The areas of research include science and technology, social sciences, engineering and energy. The abstracts of all research papers published in this Khon Kaen Agriculture Journal (Supplement Issue) are comprised of Agricultural Science and Biotechnology. After a standard peer review of the journal, full manuscripts will be published as electronic files in the online journal. We hope that the conference will disseminate the progress of significant research, aid in sharing new technology, and help expand professional networks.

We thank the Faculty of Agriculture, Khon Kaen University for allowing us to distribute our research work in the Khon Kaen Agriculture Journal (Supplement Issue). This will help make our work more useful.

We wish to express our sincere thanks for the financial support of our co-hosts for this conference: the Office of the Higher Education Commission, Rajabhat Universities - Loei, Sakon Nakhon, Nakhon Ratchasima, Chiang Rai and Pibulsongkram. We very much appreciate the contributions of all of the participants to the conference. We also would like to thank the Organizing Committee Members for their continuous efforts to make this conference a great success. Grateful acknowledgement should be given to the keynote and invited speakers who have made the conference more significant and fruitful. We look forward to seeing more academic cooperation in the future.

Kind Regards
Viboon Pensuk, *Ph.D.*
The 6th I-SEEC 2014 Chair



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Feed intake, digestibility and blood parameters as influenced by *Aspergillus niger* or *Saccharomyces cerevisiae* fermented Napier grass (*Pennisetum purpureum*) mixed with fresh cassava root for beef cattle

**Nonthasak Piamphon^{1*}, Chalong Wachirapakorn², Pariwat Pornsopin³,
Pichetpong Sotawong⁴ and Pongsatorn Gunun⁵**

Abstract: This experiment was to investigate the effect of *A. niger* and *S. cerevisiae* on fermented Napier grass mixed with fresh cassava root (NC) on the blood biochemistry, blood enzymes, hematological and nutrient digestibility of feed in beef cattle. Four female beef cattle (350±14 kg) were randomly assigned according to a 4×4 Latin square design. The cattle were fed with four dietary treatments with Napier grass (Control), Non-microbial fermented NC (F-NC), *A. niger* fermented NC (AF-NC) and *S. cerevisiae* fermented NC (SF-NC). All animals were given their respective treatments *ad libitum*. The results revealed that dry matter (DM) intake and nutrient intake were increased ($P<0.01$) in animals given AF-NC and SF-NC. Nutrient digestibility was significantly affected by AF-NC and SF-NC ($P<0.01$). Moreover, NH₃-N and glucose concentrations increased ($P<0.05$) when cattle were fed AF-NC, whereas the blood enzymes and hematological parameters were not altered among any treatments ($P>0.05$). Based on this experiment, it could be concluded that *A. niger* and *S. cerevisiae* fermented NC could improve feed intake, nutrient digestibility and blood biochemistry in beef cattle.

Keywords: fresh cassava chip, *S. Cerevisiae*, *A. Niger*, blood biochemistry, digestibility, beef cattle

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