



Curriculum vitae

1. **Name :** Mr. Anut Chantiratikul
2. **Academic position** Assistant Professor
3. **Office Address** Department of Agricultural Technology,
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4. Academic background

Year	Degree	Field	University
1991	Bachelor	Agriculture	Kasetsart
1995	Master	Agriculture	Kasetsart
2005	Ph.D.	Animal Nutrition	Universiti Putra Malaysia, Malaysia (SEARCA Scholarship)

5. Working Experiences

- | | |
|--------------|---|
| 1995-1996 | Lecturer: Sakol Nakorn Research and Training institute
Rajamangala Institute of Technology |
| 1997-2006 | Lecturer: Division of Animal Production Technology
Department of Agricultural Technology
Faculty of Technology, Mahasarakham University |
| 2006-2007 | Deputy Head of Department of Agricultural Technology |
| 2006-2007 | Mahasarakham University Farm Manager |
| 2006-2012 | Chairman of Master of Science in Animal Sciences Program |
| 2007-2009 | Administrative committee, Academic committee, Research and
academic
service of Faculty of Veterinary and Animal Sciences |
| 2008-2012 | Assistant Professor: Faculty of Veterinary and Animal Sciences |
| 2012-present | Assistant Professor: Division of Animal Science
Department of Agricultural Technology, Faculty of Technology
Mahasarakham University |

6. Academic outputs

6.1 Thesis

Chantiratikul, A. 1995. Plasma Mineral Profiles of Dairy Cows and Newborn Calves. M.Sc Thesis.



KasetsartUniversity, Bangkok.

Chantiratikul, A. 2004. Effect of Kenaf (*Hibiscus cannabinus*) as a Substitutive Feed on Lactating Dairy Cattle. Ph.D. Thesis. Universiti Putra Malaysia, Malaysia.

6.2 Books and Articles

Anut Chantiratikul. 2012. Dairy Production. Mahasarakham University Publishing, Mahasarakham.

Anut Chantiratikul. 2012. Dairy Herd Management. Department of Agricultural Technology. Faculty of Technology, Mahasarakham University.

Phupolpan, P. and **A. Chantiratikul**. 2010. Utilization of duckweed as protein source in poultry diets. MSU Journal of Science and Technology. 29 (1): 73-78 (in Thai).

Chantiratikul, A. 2008. Animal Nutrition. Establishment project of Faculty of Veterinary and Animal Sciences. Mahasarakham University. Mahasarakham (in Thai).

Chantiratikul, A. 2008. Adding omega-3 fatty acid and conjugated linolenic acid in beef's meat. MSU Journal of Science and Technology 26 (1): 88-97 (in Thai).

Rattanachumpu, M. and **A. Chantiratikul**. 2007. Effect of extruded soybean meal supplementation on conjugated linolenic acid in milk fat and milk yield in lactating cows. Dairy Cattle Journal. 3: 35-40 (in Thai).

Chantiratikul, A. 2006. Kenaf (*Hibiscus cannabinus*): an alternative forage protein for ruminants. Dairy cattle journal. 71: 7-11 (in Thai).

Chantiratikul, A. 2002. Dairy production: impact on environment and solutions. Animal Husbandry Journal. 56: 24-30 (in Thai).

Chantiratikul, A. 2001. Dairy Production Technology. Department of Agricultural Technology, Faculty of Technology. Mahasarakham University. Mahasarakham (in Thai).

6.3 Research outputs

6.3.1 Publications

Chinrasri, O., P. Chantiratikul, S. Maneetong, S. Chookhampaeng and **A. Chantiratikul**. 2013. Productivity and selenium concentrations in egg and tissue of laying quails fed selenium from hydroponically produced selenium-enriched kale sprout (*Brassica oleracea* var. *alboglabra* L.). Biological Trace Element Research. 155: 381-386. (Impact factor: 1.307)

Thosaikham, W., K. Jitmanee, R. Sittipout, S. Maneetong, **A. Chantiratikul** and P. Chantiratikul. 2014. Evaluation of selenium species in selenium-enriched pakchoi (*Brassica chinensis* Just var *parachinensis* (Bailey) Tsen & Lee) using mixed ion-pair reversed phase HPLC-ICP-MS. Food Chemistry. 145: 736-742. (Impact factor: 3.334)



- Maneetong, S., S. Chookhampaeng, A. Chantiratikul, O. Chinrasri, W. Thosaikham, R. Sittipout and P. Chantiratikul. 2013. Hydroponic cultivation of selenium-enriched kale (*Brassica oleracea* var. *alboglabra* L.) seedling and speciation of selenium with HPLC-ICP-MS. *Microchemical Journal*. 108:87-91. (Impact factor: 3.048)
- Chantiratikul, A.** O. Chinrasri, P. Pakmaruek, P. Chantiratikul, W. Thosaikham, W. Aengwanich. 2011. Responses of growing Japanese quails received selenium from selenium-enriched Kale sprout (*Brassica oleracea* var. *alboglabra* L.). *Biological Trace Element Research*. 144: 760-768. (Impact factor : 1.923)
- Pooponpan P., O. Chinrasri, S. Saenthaweesuk, **A. Chantiratikul**. 2011. Evaluation of metabolizable protein and metabolizable energy values of *Wolffia* meal (*Wolffia globosa* (L. Wimm.) in broilers. *International Journal of Poultry Science*. 10 (5):401-403.
- Chantiratikul, A.** and S. Chumpawadee. 2011. Effect of heat treatment on ruminal protein degradability of *Wolffia* meal (*Wolffia globosa* (L. Wimm). *Asain Journal of Animal Sciences* 5 (3):183-189.
- Chantiratikul, A.** and S. Chumpawadee. 2010. Protein requirement of Thai-indigenous heifers. *Khon Kaen Journal*. 38 (suppl.): 168-171.
- Chantiratikul, A.,** P. Pooponpan, S. Santhaweesuk, P. Chantiratikul, A. Sangdee, U. Maneechote, C. Bunchasak, O. Chinrasri. 2010. Effect of *Wolffia* meal (*Wolffia globosa* (L. Wimm.) as a dietary protein replacement on performance and carcass characteristics in broilers. *International Journal of Poultry Science* 9 (7): 664-668.
- Chantiratikul, A.,** P. Chantiratikul, A. Sangdee, U. Maneechote, C. Bunchasak, O. Chinrasri. 2010. Performance and carcass characteristics of Japanese quails fed diets containing *Wolffia* meal (*Wolffia globosa* (L. Wimm.) as a protein replacement for soybean meal. *International Journal of Poultry Science* 9 (6): 562-566.
- Chantiratikul, A.,** O. Chinrasri, P. Chantiratikul, A. Sangdee, U. Maneechote and C. Bunchasak. 2010. Effect of replacement of protein from soybean meal with protein from *Wolffia* meal (*Wolffia globosa* (L. Wimm.) on performance and egg production in laying hens. *International Journal of Poultry Science* 9 (3): 283-287.
- Sangdee, A., B. Wungkahad, U. Maneechote, P. Chantiratikul and **A. Chantiratikul**. 2010. Classification of Water meal by using chloroplast DNA sequencing. *Journal of Science and Technology Mahasarakham University*. 29 (3): 259-265.
- Chinrasri, O., P. Chantiratikul, W. Thosaikham, P. Atiwetin, S. Chumpawadee, S. Saenthaweesuk and **A. Chantiratikul**. 2009. Effect of selenium-enriched bean sprout and other selenium sources on productivity and selenium concentration in eggs of laying hens. *Asian-Australasian Journal of Animal Science* 22 (12): 1661-1666. (Impact factor : 0.579)
- Chantiratikul, A.** C. Chaikong, O. Chinrasri and P. Kangkun. 2009. Evaluation of Yield and Nutritive Value of Kenaf (*Hibiscus cannabinus*) at Various Stages of Maturity. *Pakistan Journal of Nutrition* 8 (7):



1055-1058.

Chantiratikul, A. S. Chumpawadee and P. Chantiratikul. 2009. Effect of dietary phosphorus on nutrient and phosphorus digestibility in Thai-indigenous x Brahman crossbred cattle. *Journal of Animal and Veterinary Advances*. 8 (8): 1555-1562. (Impact factor : 0.39)

Chantiratikul, A., S. Chumpawadee, W. Kanchanamayoon and P. Chantiratikul. 2009. Effect of dietary protein on nutrient digestibility and nitrogen metabolism in Thai-indigenous heifers. *Journal of Animal and Veterinary Advances*. 8 (2): 297-300. (Impact factor : 0.39)

Aengwanich, W., **A. Chantiratikul** and S. Pamok. 2009. Effect of seasonal variations on hematological values and health monitor of crossbred beef cattle at slaughterhouse in northeastern part of Thailand. *American-Eurasian Journal of Agricultural and Environmental Sciences* 5 (5): 644-648.

Pakdeenarong, N., P. Chantiratikul and **A. Chantiratikul**. 2009. Natural diet of the rice-field crab, *Esanthelphusa Dugasti* Rathbun, 1902 in rainy season. *KKU Science Journal* 37 (1): 49-55.

Chumpawadee, S., **A. Chantiratikul**, V. Rattanaphun, C. Prasert and K. Kookaew. 2009. Effect of dietary crude protein levels on nutrient digestibility, ruminal fermentation and growth rate in Thai-indigenous yearling heifers. *Journal of Animal and Veterinary Advances*. 8 (6): 1131-1136. (Impact factor : 0.39)

Chumpawadee, S., **A. Chantiratikul**, S. Sangtaweek. 2009. Effect of inclusion of cassava yeast as probiotic source on egg production and egg quality of laying hens. *International Journal of Poultry Science* 8 (2): 195-199.

Chantiratikul, A., O. Chinrasri and P. Chantiratikul. 2008. Effect of sodium selenite and zinc-L-selenomethionine on performance and selenium concentrations in eggs of laying hens. *Asian-Australasian Journal of Animal Science*. 21 (7): 1048-1052. (Impact factor: 0.579)

Chantiratikul, A., W. Aengwanich, O. Chinrasri and P. Chantiratikul. 2008. Plasma selenium concentration and glutathione peroxidase activity in red blood cell of laying hens fed sodium selenite or zinc-L-selenomethionine. *International Journal of Poultry Science* 7 (7): 692-695.

Chantiratikul, A., P. Atiwetin and P. Chantiratikul. 2008. Feasibility of producing selenium-enriched water lettuce (*Pistia stratiotes* L.). *Journal of Biological Sciences*. 8 (3): 644-648.

Suppaso P., S. Chumpawadee and **A. Chantiratikul**. 2008. Effect of dietary phosphorus on phosphorus utilization and excretion in Thai-indigenous heifers. *Asian Journal of Animal and Veterinary Advances* 3 (5): 363-368. (Impact factor : 0.869)

Chantiratikul, A., C. Chaikong, A. Nontong, S. Kongnak and P. Kenprom. 2007. Replacement of soybean meal with urea in beef diets. *Journal of Science and Technology MSU*. (Special issue): 69-74.

Chantiratikul, A., W. Boonsuree, R. Thopthong, S. Sumato, C. Chaikong and P. Chantiratikul. 2007. Mineral status in feed ingredients and plasma of native horses in Kosumpisai district, Maha



- Sarakham province. Journal of Science and Technology MSU. 26:227-232.
- Chumpawadee, S., **A. Chantiratikul** and P. Chantiratikul. 2007. Chemical compositions and nutritional evaluation of energy feeds for ruminant using *in vitro* gas production technique. Pakistan Journal of Nutrition. 6 (6): 607-612.
- Chumpawadee, S., **A. Chantiratikul** and P. Chantiratikul. 2007. Chemical compositions and nutritional evaluation of protein feeds for ruminant using *in vitro* gas production technique. Journal of Agricultural Technology. 3 (2): 191-202.
- Chantiratikul, A.**, J.B. Liang and Z.A. Jelani, 2006. Yield and chemical composition of kenaf (*Hibiscus cannabinus*) at different stages of maturity. Malaysian Journal of Animal Science. 11: 26-31
- Chumpavadee, S., **A. Chantiratikul**, W.Kongbuntad and S. Mattalad. 2002. Conditions of male dairy-calf raising in small farms in Maha Sarakham and Khon Kaen Provinces. Mahasarakham univ. J. 21(1): 11-20. (in Thai)
- Chumpavadee, S., **A. Chantiratikul** and S. Leethongdee. 2002. Effect of Corn silage chop length on feed intake, nutrient digestibility and body weight changes in crossbred beef cattle. Mahasarakham univ. J. 21(2): 29-35. (in Thai)
- Chumpavadee, S., **A. Chantiratikul** and W.Kongbuntad. 2001. Yield and chemical composition of Purple Guinea in saline soil area of Maha Sarakham province. Khon Kaen Agri. J. 29 (4): 223-227.
- Chantiratikul, A.**, P. Vijchulata, P. Chairetanayut and P. Harinsuit. 1999. Plasma mineral profile of newborn calves. Suranaree J. Sci. Technol. 7 : 52-63. (in Thai)
- Chantiratikul, A.** 1996. Constituent and immunoglobulin in colostrums of dairy cows. J. Dairy. 15 (5): 55-77. (in Thai)

6.3.2 Proceedings

- Chantiratikul, A.**, O. Chinrasri, D. Jaichong, T. Laodim, S. Changkhunthod, S. Chookhampaeng, S. Maneetong and P. Chantiratikul. 2013. Selenium concentrations in tissues of laying quails fed selenium from hydroponically produced selenium-enriched kale sprout (*Brassica oleracea* var. *alboglabra* L.). Agricultural Science Journal. 41 (suppl. 1): 111-114.
- Chinrasri O., W. Tavongsa, S. Punsai, A. Choklang and **A. Chantiratikul**. 2013. Substituting fish meal with fresh-water clam meal (*Chaimbertaria hainessiana*) in the diets of broiler. Agricultural Science Journal. 41 (suppl. 1): 299-302.
- Pakmaruek, P., O. Chinrasri, W. Aengwanich, P. Chantiratikul, S. Chookhampaeng, S. Maneetong and **A. Chantiratikul**. 2012. Utilization of selenium-enriched kale sprout (*Brassica oleracea* var. *alboglabra*) as selenium source in broiler diets. Mahasarakham university Journal of Science and Technology (Special issue): 105-110.
- Maneetong, S., P. Chantiratikul, S. Chookhampaeng, **A. Chantiratikul**, O. Chinrasri and K. Jitmanee. 2012. The production and selenium speciation of Se-enriched Kale seedling (*Brassica oleracea* var.



- alboglabra* L.). Mahasarakham university Journal of Science and Technology (Special issue): 174-180.
- Chinrasri O., **A. Chantiratikul**, P. Yodklaew, P. Sopistapong, A. Meechai, H. Jongthamhlang, W. Sainate and S. Aonsung. 2012. Effect of zinc glycine on productive performance, egg quality and zinc concentration in eggs of laying Japanese quails. Khon Kaen Agricultural Journal. 40 (supplement 2): 428-431.
- Chantiratikul, A.**, O. Chinrasri, P. Chantiratikul, W. Thosaikham, S. Maneethong and R. Sittiprot. 2012. Effect of selenium from selenium-enriched Kale sprout (*Brassica oleracea* var. *alboglabra* L.) on selenium accumulation in tissues of spent hens Khon Kaen Agricultural Journal. 40 (supplement 2): 295-298.
- Chantiratikul A., S. Maneetong, P. Chantiratikul, S. Chookhampaeng and O. Chinrasri. 2012. Effect of selenium-enriched Kale sprout (*Brassica oleracea* var. *alboglabra* L.) on egg production and egg quality in laying Japanese quails. Proceeding of the 1st Conference on Animal Nutrition and Environment (ANI-NUE 2012). 14-15 September 2012. Pullman Raja Orchid Holet, Khon Kaen, Thailand. P. 106-108 (Invited paper).
- Thosaikham, W., K. Jitmanee, R. Sittipout, S. Maneetong, A. Chantiratikul and P. Chantiraitkul. 2012. Ion-paired reversed phase HPLC-ICP-MS for selenium speciation analysis in Se-enriched yeast. Proceedings of the 6th Pure and Applied Chemistry International Conference. p.732.
- Chantiratikul, A.**, P. Poonpan, O. Chinrasri and C. Bunchasak. 2010 Utilization of Wolffia Meal (*Wolffia globosa* (L. Wimm.) as Protein Replacement for Soybean Meal in the Diets of Broiler. การประชุมนักวิจัยรุ่นใหม่พบเมธีวิจัยอาวุโส สกว. ครั้งที่ 10. 14-16 ตุลาคม 2553. โรงแรมฮอติเดย์อินน์ รีสอร์ท รีเจนท์ บีช.ชะอำ, จังหวัดเพชรบุรี.
- น. 251. **Chantiratikul, A.** and J.B. Liang. 2010. Physiological responses of imported purebred jersey heifers reared under hot climatic conditions. Proceeding of the 14th Animal Science Congress of the Asian-Australasian Association of Animal Production Societies, 23-27th August 2010, Taiwan.
- Chinrasri, O., P. Poonpan, C. Bunchasak and **A. Chantiratikul**. 2010. Effect of protein replacement from Wolffia meal (*Wolffia globosa* (L. Wimm.) on performance of broilers Proc. of the 14th Animal Science Congress of the Asian-Australasian Association of Animal Production Societies, 23-27th August 2010, Taiwan.
- Thosaikham, W., K. Jitmanee, **A. Chantiratikul**, R. Sittipout, S. Maneetong and P. Chantiratikul. 2010. Selenium extraction using mixture of pepsin and cellulose for selenium-enriched Chinese kale (*Brassica alboglabra* L.H. Bailey). Proceeding of Pure and Applied Chemistry International Conference (PACCON 2010), January 21-23, 2010, Ubon Ratchathani University, Ubon Ratchathani, p. 70.
- Maneetong, S., U. Maneechot, A. Chantiratikul, W. Thosaikham, R. Sittipout and P. Chantiratikul. 2010. Speciation and determination of selenium in selenium-enriched duckweed (*Lemna minor*) Proceeding of Pure and Applied Chemistry International Conference (PACCON 2010), January



21-23, 2010, Ubon Ratchathani University, Ubon Ratchathani, p. 162.

Chantiratikul A., O. Chinrasri and C. Bunchasak. 2009. Utilization of Wolffia Meal (*Wolffia globosa* (L). Wimm.) as Protein Replacement in Laying Hen Diets. The 2nd International Conference on Sustainable Animal Agriculture for Developing Countries. 8th-11th November 2009. Kuala Lumpur, Malaysia. pp. 225-226.

Pooponpan P., **A. Chantiratikul**, O. Chinrasri and S. Santhaweesuk. 2009. Evaluation of Metabolizable Energy of Wolffia Meal (*Wolffia globosa* (L). Wimm.) in Broilers. The 2nd International Conference on Sustainable Animal Agriculture for Developing Countries. 8th-11th November 2009. Kuala Lumpur, Malaysia. pp. 229-230.

Soychuta, S., S. Chumpawadee and A. Chantiratikul. 2009. Effect of fermentation periods and urea levels on chemical composition of cassava peel. The 2nd International Conference on Sustainable Animal Agriculture for Developing Countries. 8th-11th November 2009. Kuala Lumpur, Malaysia. pp. 198-199.

Chantiratikul A., O. Chinrasri, P. Chantiratikul, A. Sangdee, U. Maneechote and C. Bunchasak. 2009. Effect of replacement of protein from soybean meal with protein from water meal (*Wolffia globosa* (L). Wimm.) on productivity and egg quality in laying hens. การประชุมนักวิจัยรุ่นใหม่พบเมธีวิจัยอาวุโส สกว. ครั้งที่ 9. 15-17 ตุลาคม 2552. โรงแรมฮอติเดย์อินน์ รีสอร์ท ภูเก็ต บีช.ชะอำ จังหวัดเพชรบุรี. น. 583.

Chantiratikul, P. S. Maneethong, W. Thosaikham, U. Maneechote and **A. Chantiratikul**. 2009. Selenium speciation using HPLC-ICP-MS in selenium-enriched duckweed (*Lemna minor*). Proceeding of Colloquium Spectroscopicum International XXXVI, 30th August – 3rd September 2009, Budapest, Hungary. PM-96.

Meechai, P., P. Chantiratikul, U. Maneechote, A. Sangsri and **A. Chantiratikul**. 2009. Antioxidant activity and total phenolic contents of water meal (*Wolffia globosa*). Pure and Applied Chemistry International Conference. 14-16th January 2009. Naresuan University, Phisanulok, Thailand. pp. 250.

Thosaikham, W., P. Phansi, P. Chantiratikul, U. Maneechote and **A. Chantiratikul**. 2009. Determination of selenium content in watermeal (*Wolffia globosa*) supplemental sodium selenate using ICP-MS technique. Pure and Applied Chemistry International Conference. 14-16th January 2009. Naresuan University, Phisanulok, Thailand. pp. 151-152.

Chantiratikul, A. and S. Chumpawadee. 2008. Effect of dietary protein levels on nutrient digestibility and nitrogen utilization in Thai-indigenous heifers. Proc. of the 13rd Animal Science Congress of the Asian-Australasian Association of Animal Production Societies, 22-26th September 2008, Ha Noi, Vietman. p. 96.

Meechai, P., P. Chantiratikul, U. Maneechote, A. Sangsri and **A. Chantiratikul**. 2008. Antioxidant activity of acetone: methanol extract of water meal (*Wolffia globosa*). The 2nd International Conference on Natural Products for Health and Beauty, 17-19th December 2008, Naresuan



- University at Phayao, Phayao province, Thailand. Post B-46.
- Han Y., P. Paengkoum, X. Xianling, P. Na-Lampang and **A. Chantiratikul**. 2008. Supplementation of direct-fed microbes and Ca-salts of palm oil in dietary of growing goats. The 4th Animal Science Conference, 31st January 2008. Faculty of Agriculture, Khon Kaen University. p. 78-82.
- Chantiratikul, A.** and S. Chumpawadee. 2008. Protein requirement of yearling female Thai-indigenous cattle. Proceeding of International symposium: Establishment of a feeding standard of beef cattle and a feed database for the Indochinese peninsula, 6-7 August 2008, Khon Kaen, Thailand. p 90-92.
- Thosaikham W, P.Chantiratikul, **A. Chantiratikul**. 2007. Quantitative determination of selenium contents in plasma of laying hen using ICP-MS Technique. Proceeding of the Colloquium Spectroscopicum Internationale XXXV. 23rd-27th September 2007, Xiamen, China. p.54.
- Chantiratikul, A.**, O. Chinrasri, W. Aengwanich and P. Chantiratikul. 2007. Effect of Sodium Selenite and Zinc-L-selenomethionine on Egg Selenium Concentration in Laying Hens. Proc. of the First International Conference on Sustainable Animal Agriculture in Developing Countries. 27-29th September 2007, Kunming, China. p. 227-230.
- Wan Zahazi, M., M.S.Y. Nordin, M.A. Majib, N.M. Suparjo, C. Abu Bakar, M.S. Nor Ismail, M.I.A. Bakar, Z.A. Jelani, J.B. Liang, D. Saddul and **A. Chantiratikul**. 2006. Laboratory and field evaluation of potential feed resources in Malaysia. Improving Animal Productivity by Supplementary Feeding of Multinutrient Bolck, Controlling Internal Parasites and Enhancing Utilization of Alternate Feed Resources. IAEA-TECDOC-1495. IAEA, Vienna, Austria. p. 197-210.
- Chantiratikul, A.**, J.B. Liang, Z.A. Jelani, and J. Balcells. 2005. Ruminant degradability and intestinal digestibility of amino acid of kenaf in dairy steers. Proc. of the 9th Practical Animal Scientist Annual Conference, 17-19th February 2005, Sakon Nakhon Agricultural Research and Training Center, Rajamangala University of Technology Esan, Sakon Nakhon, Thailand. p. 90.
- Chantiratikul, A.**, J.B. Liang. 2005. Intestinal retention time of mobile bags in dairy steers. Proc. Of AHAT/BSAS International Conference. Volume 2, 14-18th November 2005, Khon Kaen, Thailand. p. P14.
- Chantiratikul, A.**, J.B. Liang, Z.A. Jelani and J. Balcells. 2005. Effects of substituting protein from soybean meal with protein from kenaf (*Hibiscus cannabinus*) on microbial nitrogen production in dairy heifers. Proc. of AHAT / BSAS International Conference. Volume 2, 14-18th November 2005, Khon Kaen, Thailand. p. P61.
- Liang, J.B., A.B. Salleh, and **A. Chantiratikul**. 2004. Effect of replacing alfalfa hay and/or soybean meal with kenaf in diet of lactating cows. Proc. of the 3rd Technical Review Meeting on the National Kenaf Research Project, 24-26 May 2004. Kelantan, Malaysia.
- Chantiratikul, A.**, J.B. Liang, Z.A. Jelani, and S. Ahmad. 2004. Substituting alfalfa hay with kenaf (*Hibiscus cannabinus*) in dairy heifer rations. Proc. of the 11th AAAP Animal Science Congress



volume III, 5-9th September 2004, Kuala Lumpur, Malaysia. p. 489-491.

Chantiratikul, A., J.B. Liang, Z.A. Jelani, and S. Ahmad. 2004. Effect of substitution of alfalfa hay and/or soybean meal-protein by kenaf on availability of amino acids in the mammary gland of lactating dairy cows. Proc. of the 11th AAAP Animal Science Congress volume II, 5-9th September 2004, Kuala Lumpur, Malaysia. p. 21-23.

Liang, J.B., P. Paengkoum, and **A. Chantiratikul**. 2003. Potential of kenaf as protein foliage for ruminant livestock. *In* International Conference on Animal Nutrition 2003, 3-5 March 2003. Putra Jaya, Malaysia.

Chantiratikul, A., J.B. Liang, J. Balcells, and Z.A. Jelani. 2003. Production and chemical composition of kenaf at various harvesting ages. Proc. 25th MSAP Annual Conference, 1-3 August 2003. Melaka, Malaysia. p. 50-51.

Chantiratikul, A., J.B. Liang, J. Balcells, and Z.A. Jelani. 2003. Ruminant dry matter disappearance of kenaf in dairy cattle. Proc. 25th MSAP Annual Conference, 1-3 August 2003. Melaka, Malaysia. p. 79-80.

Chantiratikul, A., S. Chumpavadee, S. Duengdara, and C.Kham-art. 2001. Reproductive performance of dairy cows in amphur Kantarawichai, Mahasarakham province. Proceeding of 2nd annual conference of Veterinary Medicine, 25-27 January 2001, Faculty of Veterinary Medicine, Khon Kaen university. Khon Kaen, Thailand. (in Thai)

Chantiratikul, A., P. Vijchulata, P. Chairetanayut and P. Harinsuit. 1999. Plasma mineral profile of preparturient and postparturient dairy cows I. Ca, P, Mg. The 36th Annual Conference, Kasetsart University, Bangkok, Thailand. (in Thai)

Chantiratikul, A., P. Vijchulata, P. Chairetanayut and P. Harinsuit. 1999. Plasma mineral profile of preparturient and postparturient dairy cows II. Cu, Zn, Fe, Mn. The 36th Annual Conference, Kasetsart University, Bangkok, Thailand. (in Thai)

Chantiratikul, A., C. Sankhong, S. Koonawoolittriron, P. sannarin, W. Sintala, C. Promkot, S. Nuchanart, and P. Pronanake. 1999. Study on using sugarcane bagasse in total mixed rations for dairy cows. The 16th annual conference, 22-24 January 1999, Rajamangala Institute of Technology, Khon Kaen, Thailand. p. 528-529. (in Thai)

Koonawoolittriron, S., C. Sankhong, **A. Chantiratikul,** P. Sannarin, W. Sintala, C. Promkot, S. Nuchanart and P. Pronanake. 1999. Study on reproductive and milk production performance of purebred and crossbred Holstein Friesian-Red Sindhi cows. The 16th annual conference, 22-24 January 1999, Rajamangala Institute of Technology, Khon Kaen, Thailand. p. 205-212. (in Thai)

7. Research projects

2000 –Effect of season and lactation number on certain reproductive performance
In dairy cows (Project leader)

2001 –Yield and chemical composition of guinea grass planted in saline (**Project member**)



- 2005 –Study on yield chemical composition and nutrient digestibility of kenaf (*Hibiscus cannabinus*) for ruminant feed (Project leader)
- 2006 - Study on selenium enriched egg production in laying hens (Project leader)
- 2006 -Chemical composition and nutritive value of tropical concentrate feedstuffs
Fund source: Japan International Research Center for Agricultural Sciences (JIRCAS)
(Project member)
- 2007 -Protein requirements for maintenance of Thai-indigenous yearling heifers
Fund source: Japan International Research Center for Agricultural Sciences (JIRCAS)
(Project leader)
- 2007 The production of selenium-enriched plants and its application in animal nutrition (Project leader)
- 2007 – Feasibility of producing selenium-enriched water lettuce (*Pistia stratiotes* L.) (Project leader)
- 2007 – Dietary phosphorus levels on phosphorus utilization and excretion in beef heifers (Project leader)
- 2008 -Protein requirements for growth of Thai-indigenous yearling heifers
Fund source: Japan International Research Center for Agricultural Sciences (JIRCAS)
(Project member)
- 2008-2010 - The production of water meal (*Wolffia* spp.) and its utilization as protein source in poultry diets (Project leader)
- 2009 Effect of dietary phosphorus levels on nutrient and phosphorus digestibility in Thai- indigenous x Brahman crossbred cattle (Project leader)
- 2009 -Protein and energy requirements for growth of Thai-indigenous heifers (2009)
Fund source: Japan International Research Center for Agricultural Sciences (JIRCAS)
(Project leader)
- 2010 - Decreasing ruminal protein degradability of Wolffia meal using heat treatment (Project leader)
- 2011- Utilization of selenium-enriched kale sprout (*Brassica oleracea* var. alboglabra L.) as selenium source in the diets of Japanese quail (Project leader)
- 2011- The production of selenium-enriched kale sprout (*Brassica oleracea* var. alboglabra L.) for animal feed industry (Project leader)
- 2012-13 - Efficacy of selenium from selenium-enriched kale sprout (*Brassica oleracea* var. alboglabra L.) in laying quails