

## REFERENCES

- Aiken, F. C. 1976. Sodium and potassium in nutrition of mammals. Technical communication of the commonwealth bureau of nutrition No. 26.
- Arambel, M. J., Wiedmeier, R. D., Clark, D. H., Lamb, R. C., Bomam, R. L., and Walters, J. L. 1988. Effect of sodium bicarbonate and magnesium oxide in an alfalfa-based total mixed ration fed to early lactating dairy cattle. J. Dairy Sci. 71: 159-163.
- ARC Agricultural Research Council. 1980. Nutrient Requirements of Farm Livestock. No. 2. Ruminant. pp. 213-216. London: Her Majesty's Stationary Office.
- AOAC Association of Official Analytical Chemists. 2001. Official methods of analysis. 17<sup>th</sup> edition. Assoc. Offic. Anal. Chem. Washington, DC.
- Bartels, H., Boemer, M., and Heirli. 1972. Serum creatinine determination without deproteinization. Clin. Chim. Acta. 37: 193-194.
- Belibasakis, N. G. and Triantos, A. 1991. Effects of sodium carbonate on milk yield, milk composition, and blood components of dairy cows in early lactation. J. Dairy Sci. 74: 467-472.
- Belli, F. R. 1995. Perception of sodium and sodium appetite in farm animals. In Phillips, C. J. C. and Chiy, P. C. (eds.), Sodium in agriculture, pp. 82-90. London: Chalcombe Publications, Canterbury.

- Ben-Ghedalia, D., Miron, J., and Yosef, E. 1996. Apparent digestibility of minerals by lactating cows from a total mixed ration supplemented with poultry litter. J. Dairy Sci. 79: 454-458.
- Canale, C. J. and Stokes, M. R. 1988. Sodium bicarbonate for early lactation cows fed corn silage or hay crop silage-based diets. J. Dairy Sci. 71: 373-380.
- Chaiyabutr, N., Preuksagorn, S., Komolvanich, S., and Chapongsang, S. 2000. Comparative study on the regulation of body fluids and mammary circulation at different stages of lactation in crossbred Holstein cattle feeding on different types of roughage. J. Anim. Physiol. And Anim. Nutri. 83: 74-84.
- Clive, J. C., Phillips, C. J. C., Chiy, P. C., David, R. A., and Olav, K. 2000. Effects of sodium fertilizers and supplements on milk production and mammary gland health. J. Dairy Res. 67: 1-12.
- Cunningham, J. G. 2002. Textbook of Veterinary Physiology 3<sup>rd</sup> edition. In Thomas, H. (ed.), Gastrointestinal physiology and metabolism, pp. 265-281. New York: W.B. Saunders Company.
- Erwin, E. S. 1961. Volatile fatty acid analysis of blood and rumen fluid by gas chromatography. J. Dairy Sci. 44: 1768-1771.
- Escobosa, A., Coppock, C. E., Rowe, L. D., Jenkins, W. L., and Gates, C. E. 1984. Effects of dietary sodium bicarbonate and calcium chloride on physiological responses of lactating dairy cows in hot weather. J. Dairy Sci. 67: 574-584.

- Fettman, M. J., Chase, L. E., Benticnk-Smith, J., Coppock, C. E., and Zinn, S. A. 1984. Restricted dietary chloride with sodium bicarbonate supplementation for Holstein cows in early lactation. J. Dairy Sci. 67: 1457.
- Harper, M. E., Willis, J. S., and Patrick, J. 1997. Handbook of nutritionally essential mineral elements. In O'Dell, B. L. and Sunde, R.A. (eds.), Sodium and chloride in nutrition, pp. 93-116. New York: Marcel Dekker.
- Hays, V. W. and Swenson, M. J. 1993. Dukes' physiology of domestic animals. 11<sup>th</sup> edition. In Swenson, M. J. and Reece, W. O. (eds.), Minerals and bones, New York: Cornell University Press, Ithaca.
- Henry, P. R. 1995. Bioavailability of nutrients for animals. In Ammerman, C. B., Baker, D. H. and Lewis, A. J. (eds.), Sodium and chloride bioavailability, New York: Academic Press.
- Houpt, T. R. 1993. Dukes' physiology of domestic animals. 11<sup>th</sup> edition. In Swenson, M. J. and Reece, W. O. (eds.), Water and electrolytes, New York: Cornell University Press, Ithaca.
- Kennelly, J. J. 2000. Nutritional factors influencing yield and composition of milk. [online]. Available from: <http://www.afns.ualberta.ca/drtc/dp472-5n.htm>
- Kemp, A. 1964. Sodium requirement of milking cows: Balance trials with cows on rations of freshly mown herbage and on winter rations. Netherlands J. Agri. Sci. 12: 263-280.
- Kilmer, L. H., Muller, L. D., and Wangsness, P. J. 1980. Additions of sodium bicarbonate to rations of pre- and postpartum dairy cows. J. Dairy Sci. 63:2026.

- Kohn, R. A. and Dunlap, T. F. 1998. Calculation of the buffering capacity of bicarbonate in the rumen and in vitro. J. Dairy Anim. Sci. 76:1702-1709.
- Link, K. R. J. and Olson, W. G. 1985. The effects of deleting supplemental sodium chloride from the diet on milk production and electrolyte concentrations in serum and urine. J. Dairy Sci. 68 (Supplement): Abstract No. 135.
- McDowell, L. R. 1985. Nutrition of grazing ruminants in warm climates. Academic Press, New York.
- McDowell, L. R. 1995. Minerals in animal and human nutrition. Academic Press, San Diego. pp. 78-114.
- Morris, J. G. 1980. Assessment of sodium requirements of grazing beef cattle: A Review. J. Dairy Sci. 105: 595.
- Nester, K. E., Hemken, R. W., and Harmon, R. J. 1988. Influence of sodium chloride and potassium bicarbonate on udder edema and selected blood parameters. J. Dairy Sci. 71: 366-372.
- Newbold, C. J., Thomas, P. C., and Chamberlain, D. G. 1989. A note on the effects of the method of inclusion of sodium bicarbonate and diet composition on the intake of diets based on silage by dairy cows. Anim. Prod. 48: 611.
- NRC Nutrition Research Council. 1980. Nutrient Requirements of Dairy Cattle. revised 5<sup>th</sup> edition. Natl. Acad. Sci. Washington, D.C.
- NRC Nutrition Research Council. 1989. Nutrient Requirements of Dairy Cattle. revised 6<sup>th</sup> edition. Natl. Acad. Sci. Washington, D.C.

- NRC Nutrition Research Council. 2001. Nutrient Requirements of Dairy Cattle. revised 7<sup>th</sup> edition. Natl. Acad. Sci. Washington, D.C.
- OAE Office of Agricultural Economic. 2004. Agricultural statistics of Thailand crop year 2003/04. Agri. Stat. No. 401. Bangkok.
- Oba, M. and Allen, M. S. 2003. Effects of intraruminal infusion of sodium, potassium, and ammonia on hypophagia from propionate in lactating dairy cows. American Dairy Sci. 86: 1398-1404.
- O'Connor, A. M., Beede, D. K., and Wilcox, C. J. 1988. Lactational response to dietary magnesium, potassium, and sodium during winter in Florida. J. Dairy Sci. 71: 971-981.
- Renkema, J. A., Senshu, T., Gaillard, B. D. E., and Brouwer, E. 1962. The activity of the intestinal wall of the cow in sodium homeostasis. Netherlands J. Agri. Sci. 10: 52-57.
- Rogers, J. A., Muller, L. D., Davis, C. L., Chalupa, W., Kronfeld, D. S., Karcher, L. F., and Cummings, K. R. 1985. Response of dairy cows to sodium bicarbonate and limestone in early lactation. J. Dairy Sci. 68: 646-660.
- Rose, D. B. 2001. Clinical physiology of acid-base and electrolyte disorders. New York: McGraw-Hill.
- Sanchez, W. K., Beede, D. K., and Cornell, J. A. 1994. Interaction of sodium, potassium, and chloride: effects on lactation, acid-base, and mineral metabolism. J. Dairy Sci. 77: 1661-1669.

- Sanchez, W. K. and Beede, D. K. 1997. Interactions of sodium, potassium, and chloride on lactation, acid-base status, and mineral concentrations. J. Dairy Sci. 77: 1661-1675.
- SAS<sup>®</sup> User Guide: Statistics, Version 7.1 Edition. 1996. SAS Institute Inc., Cary, NC.
- Schneider, P. L., Beede, D. K., and Wilcox, C. J. 1984. Influence of dietary sodium and potassium bicarbonate and total potassium on heat-stressed lactating dairy cows. J. Dairy Sci. 67: 2546-2557.
- Schneider, P. L., Beede, D. K., and Wilcox, C. J. 1986. Responses of lactating cows to dietary sodium source and quantity and potassium quantity during heat stress. J. Dairy Sci. 69: 99-117.
- Tilak, R. D. 1998. Principal role of minerals and vitamins as it applies to animal nutrition. In Mineral and vitamin metabolism. [online] Available from: [www: cc.usu.edu](http://www.cc.usu.edu).
- Tucker, W. B. and Hogue, J. F. 1990. Influence of sodium chloride or potassium chloride on systemic acid-base status, milk yield, and mineral metabolism in lactating dairy cows. J. Dairy Sci. 73: 3485-3493.
- Tucker, W. B. 1992. Sodium bicarbonate or multielement buffer via diet or rumen: effects on performance and acid-Base status of lactating cows. J. Dairy Sci. 75: 2409-2420.
- Tucker, W. B., Aslam, M., Lema, M., Shin, I. S., Ruyet, L. P., Hogue, J.F., Buchanan, D. S., Miller, T. P., and Adams, G. D. 1992. Sodium bicarbonate or multielement buffer via diet or rumen: effects on performance and acid-base status of lactating cows. J. Dairy Sci. 75: 2409-2420.

- Umpapol, H. 2001. Enhancing milk production performance of Australian Friesian-Sahiwal crossbred dairy cows under heat stress conditions in Thailand. Thesis of degree of philosophy doctor (Animal Science). Department of Animal Husbandry. Kasetsart University.
- Underwood, E. J. 1981. Mineral nutrition of livestock. 2<sup>nd</sup> edition. United Kingdom: Commonwealth Agricultural Bureaux.
- Van Soest, P. J., Robertson, J. B., and Lewis, B. A. 1991. Methods for dietary fiber, neutral detergent fiber, and nonstarch polysaccharides in relation to animal nutrition. J. Dairy Sci. 75: 3583-3597.
- Vicini, J. L., Cohick, W. S., Clark, J. H., McCutcheon, S. N., and Bauman, D. E. 1988. Effects of feed intake and sodium bicarbonate on milk production and concentrations of hormones and metabolites in plasma of cows. J. Dairy Sci. 71: 1232-1238.
- West, J. W. 1998. Buffers - What and When to Use. [online]. Available from: <http://www.wcds.afns.ualberta.ca/Proceedings/1998/ch20.htm>
- West, J. W., Coppock, C. E., Nave, D. H., LaBore, J. M., Greene, L. W., and Odom, T. W. 1987. Effects of potassium carbonate and sodium bicarbonate on rumen function in lactating Holstein cows. J. Dairy Sci. 70: 81-90.
- West, J. W., Haydon, K. D., Mullinix, B. G., and Sandifer, T. G. 1992. Dietary cation-anion balance and cation source effects on production and acid-base status of heat-stressed Cows. J. Dairy Sci. 75: 2776-2786.

Wikipedia. 2006. The free encyclopaedia. [online]. Available from:

<http://www.en.wikipedia.org>.

Williams, C. H., David, D. J., and Iismaa, O. 1962. The determination of chromic oxide in feces samples by atomic absorption spectrophotometer. J. Agric. Sci. (Camb.) 59: 381-385.



ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



## BIOGRAPHY

Miss Kanjanat Sootthiluck was born on November 12, 1971 in Bangkok, Thailand. She graduated from the Faculty of Agriculture, Kasetsart University. She received the Bachelor degree of Science of the Agriculture in 1994. She worked at Pharmacia F.E. Zuellic (Thailand) Co., Ltd., in the position of Medicine Sales Representative during July 1994 – June 1995. At Alpha Vet Co., Ltd., she worked in the position of Technical Sales Representative during July 1995 – September 2000. And during October 2000 – March 2002, worked in the same position at Nana Vet Co., Ltd.



ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย