

2.9.2 Livestock Farm

Member :	Professor	Iwaisaki, Hiroaki, D. Agric. Sci.
	Associate Professor	Kitagawa, Masayuki, D. Agric. Sci.
	Technical specialist	Murakami, Hiroaki
	Specialist Technical Staff	Matsuhira, Noriyasu
	Specialist Technical Staff	Nagase, Hiroshi
	Technical Staff	Yoshioka, Hidetsugu
	Technical Staff	Kitamura Shouko
	Technical Staff	Matsuyama, Takatsugu

A. Research Activities (2009.4-2010.3)

A-1. Main Subjects

a) Studies on improvement of feeding management for beef cattle and herbage production in the pasture

For improvement of reproductive performance of cows, prevention of diarrhea occurrence in suckling calves and improvement of performance in rearing calves, several studies are examined from respects of reproductive physiology, hygienic management and feeding management respectively. The conception rate has been gradually advanced by improvement of the site and duration time of insemination, reconsidering of the method of record in field note.

b) Fundamental studies on functional development in beef cattle and studies on soil characteristics in the pasture

In close corporation with related laboratories, bioavailability of vitamin C drugs, material cycle, mineral metabolism in cows, behavior analysis of grazing cattle, search for neuroprotective substances in cow placenta and nitrate-nitrogen budget in the pasture are examined. In the study of material cycle of these researches, the difference of N, P and K flow was cleared between the mutual production part of beef cattle compost and grass.

c) Studies on evaluation of byproducts of agriculture and food industries for feed resources and development of technology for feed utilization

From the estimation of feed value of several byproducts in the previous year, total mixed ration were prepared using formula feed, wheat straw and three kinds of byproducts. The palatability and fattening performance test were examined in 6 heifers. It was expected that

regional food byproducts were utilizable for feed in respects of dry matter intake and body weight gain.

A-2.Publications and presentations

a) Publications

Books

- Kitagawa, M. Chapter 6 Physiology and management of calf during raising. Science of calf(edited by Japanese Society for Clinical Infectious Disease in Farm Animals).pp.227-232. Chikusan Press, Tokyo, 2009(in Japanese)

Original Papers

- Okano, K., Ohkoshi, N., Nishiyama, A., Usagawa, T. and Kitagawa, M., Improving the nutritive value of madake bamboo, *Phyllostachys bambusoides*, for ruminants by culturing with the white-rot fungus *Ceriporiopsis subvermispora*. Anim. Feed Sci. and Technol.,152: 278-285, 2009
- Tabata, Y., Togo, D., Kitagawa, M., Oishi, K., Kumagai, H., Kume, S. and Hirooka, H., Nitrogen, phosphorus and potassium utilization and their cycling in a beef-forage production system. Anim. Sci.J., 80:475-485, 2009

Reports

- Kitamura, S.: Distinction of mother and calf by face in beef cattle. Reports of 12th study meeting of technical officials: 24-26. Graduate School of Agriculture, Kyoto University. 2009(in Japanese)
- Yoshioka, H. Murakami, H., Nagase, H. Kitamura, S. Matsuyama, T.: Trial of improvement about conception rate by field note. Reports of 12th study meeting of technical officials: 39-41. Graduate School of Agriculture, Kyoto University. 2009(in Japanese)

b) Conference and seminar papers presented

- The 59th Meeting of Kansai Society of Animal Science: 1 presentation
- The 111th Meeting of Japanese Society of Animal Science: 1 presentation
- The 112th Meeting of Japanese Society of Animal Science: 1 presentation

A-3.Off-campus activities

Membership in academic societies

- Kitagawa, Masayuki, D. Agric. Sci. : Japanese Society of Livestock Management (Councilor), Japan Society of Beef Cattle Science (Councilor), Animal Science Systems Society (Councilor), The Japan society for Meat Production(representative)

Research grants

2.Other Research Grants

- Japan Livestock Industry Association:Promotion Project for feed utilization of unused and low used resources :Kitagawa, Masayuki: Studies on evaluation of byproducts of agriculture and food industries for feed resources and development of technology for feed utilization

- Research Project for utilizing advanced technologies in agriculture, forestry and fisheries: Ieki, Hajime (Sharer: Kitagawa, M.):Development of bamboo pellet feed, utilizing digestibility improvement technology of woody feed by culturing with the white-rot fungus

B.Educational Activities(2009.4-2010.3)

B-1.On-campus teaching

a) Courses given

- Undergraduate level: Livestock Production Techniques and Practice I (Kitagawa),
Livestock Production Techniques and Practice II (Kitagawa et al),
Fundamentals for the Experiments for Bioresource Science
(Kitagawa et al)

- Graduate level: Feeding and Management for Beef Cattle (Kitagawa)

B-2.Off-campus teaching etc.

Part-time lecturer

- Kitagawa, Masayuki: The University of the Air (Special Lecture), Kyoto University of Education(Cultivation and Feeding Practice II), University of Shiga Prefecture (Recycle of Bioresources)

Open lectures, etc.

- Kitagawa, Masayuki: Updated teaching certificate courses, The Kyoto University Museum, "3 days course to turn into my favorite science teacher(Feel the cow's daily life)" Part-time lecturer

C.Other Remarks

- Kitagawa, Masayuki: Coucil for establishment of resource recycling pattern of animal

husbandry in Nantan region of Kyoto Prefecture (Member)