2.9 FACILITIES

2.9.1 Experimental Farm

Experimental Farm was first established in the north part of Kyoto Campus in 1924, and its head office was then moved to Takatsuki City, Osaka in 1928. It consists of four groups : Paddy Field, Pomology, Vegetative Crop Science and Kosobe Conservatory in Takatsuki Farmstead.

The Experimental Farm provides the Subject on Agricultural Technology and Farm Practice, and some lectures, seminar and experimental works to educate undergraduate and graduate students.

The Laboratory of Plant Production Control was also established in the Experimental Farm in 1998. Its teaching staffs and special students are making research works on Plant Production Control Science.

The Experimental Farm is also used for an experimental field to make cooperative research works with outside researchers, and for a plant resorce conservation field.

Kyoto Farmstead being another group of Experimental Farm in the north part of Kyoto Campus, locates in Kitashirakawa, Sakyoku, Kyoto City. It is mainly used for an experimental field of Division of Agronomy and Horticultural Science.

Staff	***Director (Concurrent service),***	***Professor***	***: Yonemori, Keizo, Dr.Agric.Sci.***
	Director	***Professor***	***: Kitajima, Akira, Dr.Agric.Sci.***
		Associate Professor:	***Nakazaki, Tetsuya, Dr.Agric.Sci. (2008.10-)***
		Assistant Professor :	***Kataoka, Keiko, Dr.Agric.Sci.***
		Assistant Professor :	***Teraishi, Masayoshi, Dr.Agric.Sci. (-2008.11)***
		Assistant Professor :	***Fudano,Takashi, Dr.Agric.Sci.***
		Assistant Professor :	***Habu,Tsuyoshi, Dr. Agric.Sci.***
		Assistant Professor :	***Katsura,Keisuke, Dr.Agric.Sci.***
		Technical Staffs	***: Konishi, Tsuyoshi***
			Sakakibara, Toshio
			Kagata, Hisashi
			Nonaka, Katutoshi
			Okamoto, Norishige
			Nishikawa, Kouji
			Kusumi, Kouji
			Wada, Ryouichi
			Minami, Hirohisa
			Wkahara, Hiroyoshi
			Nara, Noboru
			Kishida, Fumio
			Matsuda, Masaru
			Naito, Mika (née Yasuda)
			Kurosawa, Tkashi

Administrative Staffs: *Nomura Akira*
Kakita, Akihiko
Fujii, Sumie
Part-time Staff *Umemoto, Chiyomi*

Students and research fellows

Doctor's Program : (2)
Master's Program : (3)
Undergraduate : (4)

Please refer to Laboratory of Plant Production Control in Division of Agronomy and Horticultural Science for details.

2.9 FACILITIES

2.9.2 Livestock Farm

This farm is located in Kyotanba Town, Funai District, Kyoto Prefecture about 55km northwest of Faculty of Kyoto University. About 160 beef cattle are raised, including reproductive cow, calf and fattening cattle. Main activities of this farm are, a) to do experiments concerning practical and basic research for the improvement of animal (especially beef) production techniques and systems, and b) to provide exercise course concerning farm animal and grassland management and beef production for undergraduate students.

Staff ***Professor (Concurrent service): Kume, Shinichi, Dr. Agric. Sci.***
Associate Professor : Kitagawa, Masayuki, Dr. Agric. Sci.
Technical Officials : Matsuyama, Takatsugu
Technical Officials : Murakami, Hiroaki
Technical Officials : Matsuhira, Noriyasu
Technical Officials : Nagase, Hiroshi
Technical Officials :Yoshioka, Hidetsugu
Technical Officials : Kitamura Shouko
Research fellow: (1) JSPS Postdoctoral fellow for foreign researchers: (1)

A. Research Activities (2008.4-2009.3)

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 rearig calves, several studies are examined from respects of reproductive physiology, hygienic management and feeding management respectively. It was in particular confirmed that pregnancies were diagnosed by ultrasonography 40 days after artificial insemination. The Solanum carolinense is recently spreading in the pasture of Italian ryegrass, therefore the effect of seeding Sudangrass in the pasture was continuously examined on growth of the weed.

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

In corporation with related laboratories, bioavailability of vitamin C drugs (laboratory of nutritional science), material cycle (laboratory of animal husbandry resources), mineral metabolism in cows (laboratory of animal physiology and functional anatomy) behavior analysis of grazing cattle (graduate school of informatics), search for neuroprotective substances in cow placenta (graduate school of pharmaceutical sciences) and nitrate-nitrogen budget in the pasture (laboratory of Soil Science) are examined. Feeding several doses of vitamin C drugs in cows were in particular examined. It was cleared that dose responses of vitamin C drug were observed in plasma VC concentration and urinary VC/CR ratio(CR:creatine).as well as in fattening cattle.

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

Fifteen samples of feed resources were presented from 11 food industries. These samples were analyzed for nutritional feed components. It was estimated that total annual production weight of TDN and DCP were 2,104 and 836 metric ton respectively. It was considered that prepations of mixted ratios were possible for beef cattle, dairy cattle and pig by combination of 5 feed resources from 11.

A-2. Publications and presentations

a) Publications

Books.

Kitagawa M. and Tabata Y.:Chapter3 Resources recycling and assessment of environmental effect, Development and evaluation of environmentally sound animal production systems aiming to crop and animal integration (edited by Hirooka et al), pp. 51-71, Nourintoukeisyuppan, Tokyo, 2009 (in Japanese)

Original papers

Kume S, Numata K, Takeya Y, Miyagawa S, Ikeda S, Kitagawa M, Nonaka K, Oshita T, Kozakai T：Evaluation of urinary nitrogen excretion from plasma urea nitrogen in dry and lactating cows. Asian-Aust.J.Anim.Sci. 21;1159-1163, 2008

Reports

Matsuyama,T.: Changes of beef production in livestock farm and improvement of meat quality by reconsideration of eeding management systems. Reports of 11th study meeting of technical officials: 35-37. Graduate School of Agriculture, Kyoto University. 2008 (in Japanese)

Nagase, H. Matsuyama,T., Murakami, H., Matsuhira, N. Yoshioka, H. and Kitamura, S.: Beef production in livestock farm. Reports of 11th study meeting of technical officials: 38-44. Graduate School of Agriculture, Kyoto University. 2008 (in Japanese)

b) Conference and seminar papers presented

IGC-IRC Congress: 1 presentation

The 110th Meeting of Japanese Society of Animal Science: 1 presentation

A-3. Off-campus activities

Membership in academic societies (roles)

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

Research grants

Kitagawa, M:Monbukagakusho Research Grant: Grant-in-Aid for Scientific Research (B) Studies on development and evaluation of environmentally sound animal production systems aiming to crop and animal integration (Head: Hirooka, Sharer: Kitagawa),

Kitagawa, M:JSPS Postdoctoral Fellowship for foreign researchers Studies on vitamin C nutrition in various conditions of beef cattle(Head: Kitagawa).

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

(Head: Kitagawa).

B. Educational Activities (2008.4-2009.3)

B-1. On-campus teaching

a) Course 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)

B-2. Off-campus teaching, etc

Part-time lecturer

Kitagawa, M.: The University of the Air (Special Lecture)

Kitagawa, M.: Kyoto University of Education(Cultivation and Feeding Practice Ⅱ)