

2.8 FACILITIES

2.8.1 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.

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

<i>Staff</i>	<i>Director (Concurrent service), Professor</i>	<i>: Tanisaka, Takatoshi, Dr. Agric. Sci.</i>
	<i>Superintendent, Professor</i>	<i>: Yamada, Toshiaki, Dr. Agric. Sci.</i>
	<i>Associate Professor:</i>	<i>Kitajima, Akira, Dr. Agric. Sci.</i>
	<i>Assistant Professor :</i>	<i>Kataoka, Keiko, Dr. Agric. Sci.</i>
	<i>Assistant Professor:</i>	<i>Matsui, Tsutomu (~2005.9.30), Dr. Agric. Sci.</i>
	<i>Assistant Professor :</i>	<i>Teraishi, Masayoshi, Dr. Agric. Sci.</i>
	<i>Assistant Professor :</i>	<i>Fudano, Takashi, M. Agric. Sci.</i>
	<i>Assistant Professor :</i>	<i>Habu, Tsuyoshi, M. Agric. Sci.</i>
	<i>Assistant Professor :</i>	<i>Katsura, Keisuke (2005.11.1~), M. Agric. Sci.</i>
	<i>Technical Officials :</i>	<i>Kagata, Hisashi</i>
		<i>Wakahara, Hiroyoshi</i>
		<i>Yasuda, Mika (2005.4.1~)</i>
		<i>Konishi, Tsuyoshi</i>
		<i>Kishida, Fumio</i>
		<i>Matsuda, Masaru</i>
		<i>Morikita, Miki</i>
		<i>Sakakibara, Toshio</i>
		<i>Nishikawa, Kouji</i>
		<i>Kusumi, Kouji</i>
		<i>Nonaka, Katutoshi</i>
		<i>Nara, Noboru</i>
		<i>Okamoto, Norishige</i>
		<i>Wada, Ryouichi</i>

Minami, Hirohisa

Office workers : Nishiyama, Yukio (2005.4.1~)

Nishimura Motokazu (~2005.9.30)

Kakita, Akihiko (2005.10.1~)

Fujii, Sumie

Students and research fellows

Doctor's Program : (2)

Master's Program : (7)

Undergraduate : (2)

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

2.8.2 Livestock Farm

This farm is located in Kyotanba Town, Funai District, Kyoto Prefecture about 50km northwest of Kyoto City. Total area of this farm is about 16.5 ha(including 10.5ha of grassland)and there 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): Imai, Hiroshi, Dr. Agric. Sci.(~2006/2/28),

Kume, Shinichi, Dr. Agric. Sci.(2006/3/1~)

Associate Professor : Kitagawa, Masayuki, Dr. Agric. Sci.

Technical Officials : Matsuyama, Takatsugu

Technical Officials : Murakami, Hiroaki

Technical Officials : Nagase, Hiroshi

Technical Officials :Yoshioka, Hidetsugu

Technical Officials : Kitamura Shouko

Students and research Fellows

Research fellow of the Japan Society for the Promotion of Science: (1)

A. Research Activities (2005.4-2006.3)

A-1. Main subjects

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

For improvement of breeding efficiency of cows, the relationship between conception and serum concentration of vitamin A metabolites (retinol and β -carotene) on the day of artificial insemination was examined, and pregnancies were diagnosed by ultrasonography 40 days after artificial insemination. The *Solanum carolinense* is recently spreading in the pasture of Italian

ryegrass, therefore chemical control of it was investigated by the use of three kinds of herbicide, showing one of three was effective. 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, adipocyte differentiation in muscle (laboratory of animal breeding and genetics), bioavailability of vitamin C drugs (laboratory of nutritional science), material cycle(laboratory of animal husbandry resources), 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.

c) Studies on evaluation of effective culture of *Euglena* utilizing methane-fermentation digester and conversion of dried those into feed

In the methane-fermentation establishment utilizing livestock manure, treatment for large quantity of methane-fermentation digester is urgent subject. In corporation with another five research institutions, effective culture of *Euglena* utilizing methane-fermentation digester and conversion of dried those into feed are examined. In 2005, ingredient analysis of freeze-dried *Euglena* were conducted.

A-2. Publications and presentations

a) Publications

Original papers

Tabata Y., Kitagawa M., Inamura T., Ishida J. and Hirooka H.: Farm level nitrogen utilization and cycling in the mixed farming system of beef fattening and rice production. *Nihon Chikusan Gakkaiho* 76(3):321-330, 2005 (in Japanese)

Okano K., Kitagawa M., Sasaki Y., Watanabe T.: Conversion of Japanese red cedar(*Cryptomeria japonica*) into a feed for ruminants by white-rot basidiomycetes. *Anim. Feed Sci. Technol.*, 120: 235-243, 2005

Reports

Yoshioka, H., Matsuyama, T., Murakami, H., Nagase, H., Kitamura, S., Kitagawa, M., Ikeda, S. and Takayama, K.: Early diagnosis of pregnancy in cows by ultrasonography. Reports of study meeting of technical officials XI:35-39. Kyoto University. 2004 (in Japanese)

Kitamura, S.: Reproduction on Beef cattle. Reports of 8th study meeting of technical officials: 31-34. Graduate School of Agriculture, Kyoto University. 2005 (in Japanese)

Ikeda, S.: Topics on ovum of cow. Reports of 8th study meeting of technical officials: 35-38. Graduate School of Agriculture, Kyoto University. 2005 (in Japanese)

Yoshioka, H.: Rope working in the field of beef production. Reports of 8th study meeting of technical officials: 39-42. Graduate School of Agriculture, Kyoto University. 2005 (in Japanese)

Kitagawa, M.: Environmental load accompanied by animal production in our countries. Reports of 8th study meeting of technical officials: 51-54. Graduate School of Agriculture, Kyoto University. 2005 (in Japanese)

b) Conference and seminar papers presented

The 43th Annual Meeting of Beef Cattle 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)

Research grants

Research Grant of Japanese Science Promotion Society (JSPS): Scientific Research (B) “Studies on development and evaluation of environmentally sound animal production systems aiming to crop and animal integration” (Representative: Hirooka, H., Participant: Kitagawa, M.)

Accepted Research Project for Utilizing Advanced Technologies in Agriculture, Forestry and Fisheries “Evaluation of effective culture of Euglena utilizing methane-fermentation digester and conversion of dried those into feed” (Representative: Kitagawa,M.)

B. Educational Activities (2005.4-2006.3)

B-1. On-campus teaching

a) Course given

Undergraduate level: Livestock Production Techniques and Practice (Kitagawa)

Livestock Production Techniques and Practice II (Kitagawa)

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