

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>Professor</i>	<i>: Yamada, Toshiaki, Dr. Agric. Sci.</i>
	<i>Associate Professor:</i>	<i>Kitajima, Akira (2004.4.1 ~), Dr. Agric. Sci.</i>
	<i>Instructor</i>	<i>: Kataoka, Keiko, Dr. Agr. Sci.</i>
	<i>Instructor</i>	<i>: Matsui, Tsutomu, Dr. Agric. Sci.</i>
	<i>Instructor</i>	<i>: Teraishi, Masayoshi, Dr. Agric. Sci.</i>
	<i>Instructor</i>	<i>: Fudano, Takashi, M. Agric. Sci.</i>
	<i>Instructor</i>	<i>: Habu, Tsuyoshi, M. Agric. Sci.</i>

Students and research fellows

Master's Program: 6

Undergraduate : 1

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 Tanba Town, Funai District, Kyoto Prefecture about 50km northwest of Kyoto City. Total area of this farm is about 16.5 ha and there about 150 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.*
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 (2004.4-2005.3)

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), voice spectra analysis (laboratory of Agricultural Process Technology), 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.

A-2. Publications and presentations

a) Publications

Original papers

Sakoyama, R., Taniguchi, Y., Kitagawa, M., Yamada, T., and Sasaki, Y.: Comparison of age-dependent expression patterns of *C/EBP* family and *PPAR γ* in *Musculus longissimus* between Japanese Black and Holstein breeds. *Nihon Chikusan Gakkaiho* 75; 527-533, 2004 (in Japanese)

Reviews

Ikeda S., Kitagawa M., Imai H. and Yamada M.: The roles of vitamin A for cytoplasmic maturation of bovine oocytes. *J. Reproduction and Development*, 51; 23-35, 2005

Kitagawa M.: Japanese feeding standard for horses (2004 Equine research institute, Japan racing association). p49-52, Animal media Inc., Tokyo, 2004 (in Japanese)

Yano, H., Hirai, S. and Kitagawa, M.: Recent advances in research for nutritional physiology of beef cattle. Proceedings of Japanese Society for Animal Nutrition and Metabolism 48: 79-104, 2004 (in Japanese)

b) Conference and seminar papers presented

The 29th International Conference on Animal Genetics : 1 presentation

The 41th Annual Meeting of Beef Cattle Science: 1 presentation

The 104th Meeting of Japanese Society of Animal Science: 4 presentations

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)

B. Educational Activities (2004.4-2005.3)

B-1. On-campus teaching

a) Course given

Undergraduate level: Livestock Production Techniques and Practice (Kitagawa)

Livestock Production Techniques and Practice II (Kitagawa)