

# CURRICULUM VITAE

Kensuke Kawamura

Last update on February 4, 2018

## Personal Data:

Name: Kensuke Kawamura

Date of Birth: 11. April 1977

Place of Birth: Yamaguchi, Japan

Nationality: Japanese

Address: 4-26-410-104 Matsushiro, Tsukuba, Ibaraki 305-0035, Japan

Tel: +81-90-6079-6103

E-mail: kamuken@affrc.go.jp (Main)

kamuken2002@gmail.com (Alternative)

URL: <http://kamuken.boo.jp/KawamuraK/index.html>

## Current Position

Researcher,

Social Sciences Division,

Japan International Research Center for Agricultural Sciences (JIRCAS)

## Education and professional training:

2016-present Researcher – Social Sciences Division, Japan International Research Center for Agricultural Sciences (JIRCAS)

2008-2016 Associate Professor – Graduate School for International Development and Cooperation (IDEC), Hiroshima University

2007-2008 Visiting Post-doctoral Researcher – AgResearch Grassland Research Centre  
[Supervisor] Mr. Keith Betteridge (Senior Researcher)

2006-2008 JSPS Research Fellow (PD) – Ecosystem Informatics Division, National Institute for Agro-Environmental Sciences  
[Supervisor] Dr. Yoshio Inoue (Senior Researcher, Leader of Research Group)

2005-2006 Visiting Post-doctoral Researcher – AgResearch Grassland Research Centre  
[Supervisor] Mr. Keith Betteridge (Senior Researcher)

2004-2006 JSPS Research Fellow (DC2) – River Basin Research Center, Gifu University  
[Supervisor] Professor Tsuyoshi Akiyama (Currently Professor Emeritus of Gifu University)

2002-2005 Ph.D. (Dr. of Agriculture) Gifu University – United Graduated School of Agricultural Science

2000-2002 Gifu University (M.S.) – Faculty of Agriculture

1996-2000 Graduated from Toyama University (B.S.) – Biological Sciences

1996 Graduated from Iwakuni High School

## Scientific skills

- ☐ Spatial modeling (GIS)
- ☐ System dynamic modeling and simulation

- Remote Sensing (airborne/satellite image processing)
- Tracking animal grazing behaviour with GPS and IT tools
- *In situ* Hyperspectral measurement and data processing
- Computing; proficient in: ERDAS IMAGINE, ArcGIS, ENVI/IDL, Matlab, MS Office, Adobe Photo Shop, R, Perl, C/C++, HTML, UML, Linux Shell

## Previous and Current Projects

1. Formation of food value chain through value addition of food resources for supporting sustainable rural development  
April 2016 – March 2022: JIRCAS Program C
2. Hyperspectral imaging system for real-time determination of protein content in single rice grain  
*February 2011 – March 2013: Collaborative study with SATAKE Co. Ltd.*  
This collaborative study is developing a real-time and non-destructive determination system for rice grain protein content using laboratory hyperspectral imaging. A part of the end-product from this study was patented in Japan (Hiroshima University & SATAKE Co. Ltd.)
3. Collaborative study between Japan – New Zealand for developing sustainable grazing system  
*April 2011 – March 2013: Japan (JSPS) – MSI (NZ) Joint Project*  
The program recognizes the importance of the spatial variability soil fertility and will provide a revolutionary yet simple tool to map this variation. This and other models developed here will be used to predict where critical source areas (CSAs) will be found so these diffuse source emissions can be targeted for mitigated.
4. Low-altitude remote sensing for precision grazing management  
*April 2011 – March 2013: JSPS Grant-in-Aid for Scientific Research (B)*  
The project aims to develop a technology for a cost effective monitoring system of herbage biomass and nutritive status of grazed pasture with low-altitude remote sensing technology (balloon, drone, etc).
5. Satellite remote sensing and GIS/GPS for sustainable use of Inner Mongolia grasslands  
*April 2000 – March 2005: Ph.D. study*  
The study was a Joint Research project between the River Basin Research Center, Gifu University and the Institute of Botany, Chinese Academy of Sciences on the Enhancement of Technology, for the Sustainable Utilization and Conservation of Inner Mongolia Steppe in China.
6. Others  
Contributed to develop the system dynamic model on Inner Mongolia grassland as a co-author in the paper published in the Ecological Modelling (Shiyomi et al. 2011). A part of this study has done by my Ph.D. research.

## Publications (Peer-reviewed)

1. Vongvichith, B., Morioka, S., **Kawamura, K.** and Mori, A. (2018.01) Factors influencing fish productivities of rice paddy aquaculture: a case study in Vientiane province, central Laos. *Japan Agricultural Research Quarterly (JARQ)*, Accepted.
2. Fan, X., **Kawamura, K.**, Guo, W., Xuan, T.D., Lim, J., Yuba, N., Kurokawa, Y., Obitsu, T., Lv., R., Tsumiyama, Y., Yasuda, T. and Wang, Z. (2018) A simple visible and near-infrared (V-NIR) camera system for monitoring the leaf area index and growth stage of Italian ryegrass. *Computers and*

3. Fan, X., **Kawamura, K.**, Xuan, T.D., Yuba, N., Lim, J., Yoshitoshi, R., Minh, T.N., Kurokawa, Y. and Obitsu, T. (2017) Low-cost visible and near-infrared (V-NIR) camera on an unmanned aerial vehicle (UAV) for assessing the herbage biomass and leaf area index in an Italian ryegrass field. *Grassland Science*, In press. doi: 10.1111/grs.12184/abstract
4. **Kawamura, K.**, Tsujimoto, Y., Rabenarivo, M., Asai, H., Andriamananjara, A. and Rakotoson, T. (2017) Vis-NIR spectroscopy and PLS regression with waveband selection for estimating the total C and N of paddy soils in Madagascar. *Remote Sensing*, 9(10), 1081. doi:10.3390/rs9101081
5. Lv, R., Eisabaghi, M., Obitsu, T., Sugino, T., Kurokawa, Y. and **Kawamura, K.** (2017) Effects of nitrogen fertilizer and harvesting stage on photosynthetic pigments and phytol contents of Italian ryegrass silage. *Animal Science Journal*, 88, 1513-1522. doi: 10.1111/asj.12810
6. Betteridge, K., **Kawamura, K.**, Costall, D., Ganesh, S., Luo, D., Koolaard, J. and Yoshitoshi, R. (2017) Intensive livestock farming on New Zealand hill country farms creates critical source areas of potential pollution. *Journal of Integrated Field Science*, 14, 77-87. <https://ci.nii.ac.jp/naid/120006342503>
7. Lim, J., **Kawamura, K.**, Yoshitoshi, R., Yayota, M. and Ogura, S. (2017) Hyperspectral assessment for legume content and forage nutrient status in pastures. *Journal of Integrated Field Science*, 14, 67-75. <https://ci.nii.ac.jp/naid/120006342502>
8. **Kawamura, K.**, Lim, J., Kurokawa, Y., Obitsu, T., Yayota, M. and Ogura, S. (2017) Monitoring spatial heterogeneity of pasture within paddock scale using a small unmanned aerial vehicle (sUAV). *Journal of Integrated Field Science*, 14, 61-66. <https://ci.nii.ac.jp/naid/120006342501>
9. Yayota, M., Doi, K., **Kawamura, K.**, Ogura, S. (2017) Monitoring foraging behavior in ruminants in a diverse pasture. *Journal of Integrated Field Science*, 14, 39-47. <https://ci.nii.ac.jp/naid/120006342498>
10. Jang, S.Y., Ogura, S., **Kawamura, K.**, Yayota, M., Yun, Y.S., Seong, H.J., Kim, S.W., Jeon, B.T. and Moon, S.H. (2017) Seasonal changes in forage and animal productivity of Korean native goats grazed at different forage type. *Journal of Integrated Field Science*, 14, 29-31. <https://ci.nii.ac.jp/naid/120006342496>
11. Ogura, S., Mizuno, H., Takamizawa, S., Yayota, M. and **Kawamura, K.** (2017) Nutritional characteristics of forbs and tree leaves and their contribution to animal production in species-rich vegetation. *Journal of Integrated Field Science*, 14, 23-27. <https://ci.nii.ac.jp/naid/120006342495>
12. Wang, Z., **Kawamura, K.**, Sakuno, Y., Fan, X., Gong, Z. and Lim, J. (2017) Retrieval of chlorophyll-*a* and total suspended solids using iterative stepwise elimination partial least squares (ISE-PLS) regression based on field hyperspectral measurements in irrigation ponds in Higashihiroshima, Japan. *Remote Sensing*, 9, 264. doi:10.3390/rs9030264
13. Yulianto, R., Xuan, T.D., **Kawamura, K.**, Lim, J.H., Yoshitoshi, R., Fan, X.Y. and Gong, Z. (2016) Abundance frequency of plant species as animal feeds to determine ideal cattle grazing. *International Letters of Natural Sciences*, 58, 70-76. doi: 10.18052/www.scipress.com/ILNS.58.70
14. Sultana, N., Igawa, T., Hasan, M., Alam, M.S., Islam, M.M., **Kawamura, K.** and Sumida, M. (2016) Genetic divergence of Asian *Hoplobatrachus* frogs and fine-scale population structure of *H. tigerinus*. *Genes & Genetic Systems*, 91, 217-227. doi: 10.1266/ggs.16-00006
15. Fan, X., **Kawamura, K.**, Lim, J., Yoshitoshi, R., Yuba, N., Lee, H.J., Kurokawa, Y. and Tsumiyama, Y. (2016) Spring growth stage detection in Italian ryegrass field using a ground-based camera system. *Grassland Science*, 62, 188-193. doi: 10.1111/grs.12122
16. Kurokawa, Y., Yamashita, R., Okita, M., Yoshitoshi, R., Sugino, T., Obitsu, T. and **Kawamura, K.**

- (2016) A comparison of plasma glucose and oxidative status in lactating dairy cows in summer and autumn. *Animal Science Journal*, Accept. doi:10.1111/asj.12548
17. Yoshitoshi, R., Watanabe, N., Yasuda, T., **Kawamura, K.**, Sakanoue, S., Lim, J. and Lee, H.J (2016) Methodology to predict the spatial distribution of cattle dung using manageable factors and a Bayesian approach. *Agriculture, Ecosystems and Environment*, 220, 135-141.
  18. Gong, Z., **Kawamura, K.**, Ishikawa, N., Inaba, M. and Alateng, D. (2015) Estimation of herbage biomass and nutritive status using band depth features with partial least squares regression in Inner Mongolia grassland, China. *Grassland Science*, 62, 45-54.
  19. Gong, Z., **Kawamura, K.**, Ishikawa, N., Goto, M., Wulan, T., Alateng, D., Yin, T. and Ito, Y. (2015) MODIS normalized difference vegetation index (NDVI) and vegetation phenology dynamics in the Inner Mongolia grassland. *Solid Earth*, 6, 1185-1194.
  20. Nguyen, V. O., **Kawamura, K.**, Trong, D. P., Gong, Z. and Suwandana, E. (2015) Temporal change and its spatial variety on land surface temperature and land use changes in the Red River Delta, Vietnam, using MODIS time-series imagery. *Environmental Monitoring and Assessment*, 7, 1-11.
  21. Lim, J., **Kawamura, K.**, Lee, H.J., Yoshitoshi, R., Kurokawa, Y., Tsumiyama, Y. and Watanabe, N. (2015) Evaluating a hand-held crop-measuring device for estimating the herbage biomass, leaf area index and crude protein content in an Italian ryegrass field. *Grassland Science*, 61, 101-108.
  22. Tanaka, S., **Kawamura, K.**, Maki, M., Muramoto, Y., Yoshida, K. and Akiyama, T. (2015) Spectral index for quantifying leaf area index of winter wheat by field hyperspectral measurements: A case study in Gifu prefecture, central Japan. *Remote Sensing*, 7, 5329-5346.
  23. Nara, I., **Kawamura, K.**, Suwandana, E. and Sakuno, Y. (2015) Monitoring land use and land cover effects on water quality in Cheung Ek lake using ASTER images. *American Journal of Environmental Sciences*, 11, 1-12.
  24. Kuzuhara, Y., **Kawamura, K.**, Yoshitoshi, R., Tamaki, T., Sugai, S., Ikegami, S., Kurokawa, Y., Obitsu, T., Okita, M., Sugino, T. and Yasuda, T. (2015) A preliminarily study for predicting body weight and milk properties in lactating Holstein cows using a three-dimensional camera system. *Computers and Electronics in Agriculture*, 111, 186-193.
  25. Yoshitoshi, R., Watanabe, N., Yasuda, T., **Kawamura, K.**, Sakanoue, S., Lim, J. and Lee, H.J. (2015) A preliminary study to predict the spatial distribution of dung from beef cattle in a slope-grazed pasture. *Grassland Science*, 61, 50-55.
  26. Watanabe, N., Sakanoue, S., Lee, H.J., Lim, J., Yoshitoshi, R. and **Kawamura, K.** (2014) Use of a hand-held crop growth measuring device to estimate forage crude protein mass of pasture. *Grassland Science*, 60, 214-224.
  27. Suwandana, E., **Kawamura, K.**, Arianti, D. (2013) Emerging trends in economic development and river quality in Banten province, Indonesia: One decade after decentralization policy implementation (2000-2010). *Octa Journal of Environmental Research*, 1, 270-282.
  28. **Kawamura, K.**, Watanabe, N., Sakanoue, S., Lee, H.J., Lim, J. and Yoshitoshi, R. (2013) Genetic algorithm-based partial least squares regression for estimating legume content in a grass-legume mixture using field hyperspectral measurements. *Grassland Science*, 59, 166-172.
  29. Yoshitoshi, R., Watanabe, N., **Kawamura, K.**, Sakanoue, S., Mizoguchi, R., Lee, H.J. and Kurokawa, Y. (2013.0) Distinguishing cattle foraging activities using an accelerometry-based activity monitor. *Rangeland Ecology and Management*, 66, 382-386.
  30. Ohtani, M., Kondo, T., Tani, N., Ueno, S., Lee, L.S., Ng, K.K.S, Muhammad, N., Finkeldey, R., Na'iem,

- M., Indrioko, S., Kamiya, K., Harada, K., Diway, B., Khoo, E., **Kawamura, K.** and Tsumura, Y. (2013) Nuclear and chloroplast DNA phylogeography reveals Pleistocene divergence and subsequent secondary contact of two genetic lineages of the tropical rainforest tree species *Shorea leprosula* (Dipterocarpaceae) in Southeast Asia. *Molecular Ecology*, 22, 2264-2279.
31. Suwandana, E., **Kawamura, K.**, Sakuno, T., Kustiyanto, E. and Raharjo, B. (2012) Evaluation of ASTER GDEM2 in comparison with GDEM1, SRTM DEM and topographic-map-derived DEM using inundation area analysis and RTK-dGPS data. *Remote Sensing*, 4, 2419-2431.
  32. **Kawamura K.** and Akiyama T. (2012) Review: Remote sensing for precision grassland management. *Journal of the Remote Sensing Society of Japan*, 32(4), 232-244. (In Japanese with English summary)
  33. Suwandana, E., **Kawamura, K.**, Sakuno, Y., Evri, M. and Lesmana, A.H. (2012) Hyperspectral reflectance response of seagrass (*Enhalus acoroides*) and brown algae (*Sargassum* sp.) to nutrients enrichment at laboratory scale. *Journal of Coastal Research*, 28(4), 945-952.
  34. Kondo, T., Crisp, M.D., Linde, C., Bowman, D.M.J.S., **Kawamura, K.**, Kaneko, S. and Isagi, Y. (2012) Not an ancient relic: the endemic *Livistona* palms of arid central Australia could have been introduced by humans. *Proceedings of the Royal Society B*, 279, 2652-2661.
  35. **Kawamura, K.**, Sakuno, Y., Tanaka, Y., Lee, H. J., Lim, J., Kurokawa, Y. and Watanabe, N. (2011) Mapping herbage biomass and nitrogen status in an Italian ryegrass (*Lolium multiflorum* L.) field using a digital video camera with balloon system. *Journal of Applied Remote Sensing*, 5: 053562. doi:10.1117/1.3659893
  36. Suwandana, E., **Kawamura, K.**, Sakuno, Y. and Kustiyanto, E. (2011) Thematic information content assessment of the ASTER GDEM: a case study of watershed delineation in West Java, Indonesia. *Remote Sensing Letters*, 3(5), 423-432.
  37. Lee, H.J., **Kawamura, K.**, Watanabe, N., Sakanoue, S., Sakuno, Y., Itano, S. and Nakagoshi, N. (2011) Estimating the spatial distribution of green herbage biomass and quality by geostatistical analysis with field hyperspectral measurements. *Grassland Science*, 57(3): 142-149.
  38. Suwandana, E., **Kawamura, K.**, Tanaka, K., Sakuno, Y. and Raharjo, P. (2011) *Escherichia coli* and biophysicochemical relationships of seawater and water pollution index in the Jakarta Bay. *American Journal of Environmental Sciences*, 7(3), 183-194.
  39. Suwandana, E., **Kawamura, K.**, Sakuno, Y. and Raharjo, P. (2011) Evaluating spatio-seasonal patterns of river- and groundwater quality in the city of Jakarta, Indonesia, using a pollution index. *Journal of Japan Agricultural System Society*, 27(3), 91-102.
  40. Shiyomi, M., Akiyama, T., Wang, S., Yiruhan, Ailikun, Hori, Y., Chen, Z., Yasuda, T., **Kawamura, K.** and Yamamura, Y. (2011) A grassland ecosystem model of the Xilingol steppe, Inner Mongolia, China. *Ecological Modelling*, 222, 2073-2083.
  41. **Kawamura, K.**, Watanabe, N., Sakanoue, S., Lee, H-J. and Inoue, Y. (2011) Waveband selection using a phased regression with a bootstrap procedure for estimating legume content in a mixed sown pasture. *Grassland Science*, 57, 81-93.
  42. Suwandana, E., **Kawamura, K.** and Soeyanto, E. (2011) Assessment of the heavy metals and nutrients status in the seawater, sediment and seagrass in Banten Bay, Indonesia and their distributional patterns. *Journal of Fisheries International*, 6, 18-25.
  43. **Kawamura, K.**, Mackay, A.D., Tuohy, M.P., Betteridge, K., Sanches, I.D. and Inoue, Y. (2011) Potential for spectral indices to remotely sense phosphorus and potassium content of legume-based pasture as a means of assessing soil phosphorus and potassium fertility status. *International Journal of Remote*

*Sensing*, 32, 103-124.

44. **Kawamura, K.**, Watanabe, N., Sakanoue, S., Lee, H-J., Inoue, Y. and Odagawa, S. (2010) Testing genetic algorithm as a tool to select relevant wavebands from field hyperspectral data for estimating pasture mass and quality in a mixed sown pasture using partial least squares regression. *Grassland Science*, **56**, 205-216.
45. Watanabe, N., Umemura, K., Sakanoue, S., Kozakai, T. and **Kawamura, K.** (2010) Utilization by cattle of a pasture including aged hilly sections. *Grassland Science*, **56**, 231-237.
46. **Kawamura, K.** and Akiyama T. (2010) Simultaneous monitoring of livestock distribution and desertification. *Global Environmental Research*, **14**(1), 29-36.
47. Akiyama, T. and **Kawamura, K.** (2010) Collaborative research of satellite monitoring of Xilingol steppe, Inner Mongolia. - Special Feature - International Studies in Natural Grasslands in East Asia. *Japanese Journal of Grassland Science*, **56**(1), 82-88. (In Japanese with English summary)
48. **Kawamura, K.**, Betteridge, K., Sanches, I.D., Tuohy, M.P., Costall, D. and Inoue, Y. (2009) Field radiometer with canopy pasture probe as a potential tool to estimate and map pasture biomass and mineral components: a case study in the Lake Taupo catchment, New Zealand. *New Zealand Journal of Agricultural Research*, **52**(4), 417-434.
49. Watanabe, N., Sakanoue, S., **Kawamura, K.** and Kozakai, T. (2008) Development of an automatic classification system of feeding behavior in cattle using accelerometer. *Grassland Science*, **54**(4), 231-237.
50. **Kawamura, K.**, Watanabe, N., Sakanoue, S. and Inoue, Y. (2008) Estimating forage biomass and quality in a mixed sown pasture based on PLS regression with waveband selection. *Grassland Science*, **54**(3), 131-145.
51. Inoue, Y., Miah, G., Kakaiya, E., Kaneko, K. and **Kawamura, K.** (2008) NDSI map and IPLS using hyperspectral data for assessment of plant and ecosystem variables - With a case study on remote sensing of grain protein content, chlorophyll content and biomass in rice -. *Journal of the Remote Sensing Society of Japan*, **28**(4), 317-330. (In Japanese with English summary)
52. Fukuo, A., Akiyama, T., Mo, W-H., **Kawamura, K.**, Chen, Z-Z. and Saito, G. (2008) Spectral detection of grazing degradation in the Xilingol Steppe, Inner Mongolia. *Journal of Integrated Field Science*, **5**, 29-40.
53. Evri, M., Akiyama, T. and **Kawamura, K.** (2008) Spectrum analysis of hyperspectral red edge position to predict rice biophysical parameters and grain yield. *Journal of the Japan Society of Photogrammetry and Remote Sensing*, **47**(2), 4-15.
54. Kanemoto, M., Tanaka, S., **Kawamura, K.**, Matsufuru, H., Yoshida, K. and Akiyama, T. (2008) Wavelength selection for estimating biomass, LAI, and leaf nitrogen concentration in winter wheat of Gifu prefecture using in situ hyperspectral data. *Journal of Japan Agricultural System Society*, **24**(1), 43-56.
55. Evri, M., Akiyama, T. and **Kawamura, K.** (2008) Coupling hyperspectral data with principle component regression (PCR) and partial least square regression (PLSR) to improve prediction accuracy of rice crop variables in Java Island. *Journal of Japan Agricultural System Society*, **24**(1), 31-42.
56. Evri, M., Akiyama, T. and **Kawamura, K.** (2008) Optimal visible and near-infrared waveband used in hyperspectral indices to predict crop variables of rice. *Journal of Japan Agricultural System Society*, **24**(1), 19-29.
57. Akiyama, T. and **Kawamura, K.** (2007) Grassland degradation in China: Methods of monitoring,

management and restoration. *Grassland Science*, **53**, 1-17.

58. **Kawamura, K.**, Akiyama, T., Yokota, H., Yasuda, T. and Umemura, K. (2006) Use of the bite counter on sheep for detecting the jaw movements. *Japanese Journal of Grassland Science*, **52**(3), 144-148. (In Japanese with English summary)
59. **Kawamura, K.**, Akiyama, T., Yokota, H., Yasuda, T., Tsutsumi, M., Watanabe, O. and Wang, S. (2005) Conservation and sustainable use of grassland ecosystems – Application of satellite monitoring and GPS/GIS -. *Japanese Journal of Ecology*, **55**, 327-335. (in Japanese)
60. Tsutsumi, M., **Kawamura, K.**, Sugiyama, M., Sato, S., Deguchi, Y., Sugawara, K., Sakanoue, S. and Itano, S. (2005) Estimating the Spatial Distribution of Available Biomass in Grazing Forests with a Satellite Image: A Preliminary Study. *Grassland Science*, **51**(2), 107-111.
61. **Kawamura, K.**, Akiyama, T., Yokota, H., Tsutsumi, M., Yasuda, T., Watanabe, O., Wang, G. and Wang, S. (2005) Monitoring of forage conditions with MODIS imagery in the Xilingol steppe, Inner Mongolia. *International Journal of Remote Sensing*, **26**, 1423-1436.
62. **Kawamura, K.**, Akiyama, T., Yokota, H., Tsutsumi, M., Yasuda, T., Watanabe, O. and Wang, S. (2005) Quantifying grazing intensities using geographic information systems and satellite remote sensing in the Xilingol steppe region, Inner Mongolia, China. *Agriculture, Ecosystems & Environment*, **107**, 83-93.
63. **Kawamura, K.**, Akiyama, T., Yokota, H., Tsutsumi, M., Yasuda, T., Watanabe, O. and Wang, S. (2005) Comparing MODIS vegetation indices (VIs) with AVHRR NDVI for monitoring the forage quantity and quality in Inner Mongolia grassland, China. *Grassland Science*, **50**, 33-40.
64. Akiyama, T., **Kawamura, K.** and Jia, S. (2005) Remote sensing ecology. *Japanese Agricultural Systems Society*, **20**(2), 153-159. (in Japanese with English summary)
65. **Kawamura, K.**, Akiyama, T., Yokota, H., Tsutsumi, M., Watanabe, O. and Wang, S. (2003) Estimation model for NOAA/NDVI changes of meadow steppe in Inner Mongolia, using meteorological data. *Grassland Science*, **49**(6), 547-554.
66. Akiyama, T. and **Kawamura, K.** (2003) Vegetation changes and land degradation of steppe in Inner Mongolia. *Japanese Agricultural Systems Society*, **19**(3), 12-22. (in Japanese with English summary)
67. Akiyama, T. and **Kawamura, K.** (2003) Quantitative understanding of grassland characteristics using several space-borne sensors. *Grassland Science*, **49**(3), 293-298. (in Japanese with English summary)
68. Akiyama, T. and **Kawamura, K.** (2003) Study of cloud cover ratio of Landsat-5 for the application on agriculture and forestry. *Journal of the Japan Society of Photogrammetry and Remote Sensing*, **42**(3), 29-34. (in Japanese with English summary)
69. **Kawamura, K.**, Akiyama, T., Watanabe, O., Hasegawa, H., Zhang, F., Yokota, H. and Wang, S. (2003) Estimation of aboveground biomass in Xilingol steppe, Inner Mongolia using NOAA/NDVI. *Grassland Science*, **49**(1), 1-9.
70. Sakai, T., Jia, S., **Kawamura, K.** and Akiyama, T. (2002) Estimation of aboveground biomass and LAI of understory plant (*Sasa senanensis*) using a hand-held spectro-radiometer. *Journal of the Japan Society of Photogrammetry and Remote Sensing*, **41**(2), 27-35. (in Japanese with English summary)
71. **Kawamura, K.**, Hashimoto, Y., Sakai, T. and Akiyama, T. (2001) Effects of phenological changes of canopy leaf on the spatial and seasonal variations of understory light environment in a cool-temperate deciduous broad-leaved forest. *Journal of the Japanese Forestry Society*, **83**(3), 231-237. (in Japanese with English summary)

## Presentation at International Conference/Symposium:

1. **Kawamura, K.**, Akiyama, T., Yokota, H., Tsutsumi, M., Watanabe, O. and Wang, S. "Quantification of grazing intensities on plant biomass in Xilingol steppe, China using Terra MODIS image" The ISPRS WG VII/6 International Workshop on Monitoring/Modeling Global Environment Change, as honor for the **Young Authors Award**, Kyoto, Japan, October 21 – 22, 2003.
2. Akiyama, T. and **Kawamura K.** "Methodology development using remote sensing, GIS and GPS for grassland management" The Japan-Korea-China Symposium on Grassland Agriculture and Animal Production. (Hiroshima University, Japan), March 24-25, 2004. *In: Proceeding of The Japan-Korea-China Symposium on Grassland Agriculture and Animal Production*, p 30-34.
3. Akiyama, T., **Kawamura, K.**, Yokota, H. and Wang, Y. "Grassland management using improved remote sensors and information technology" Grassland Science and Technology Innovation (Inner Mongolia Agricultural University, China), July 2004. *In: Proceedings of the 2nd symposium in the sixth term of Chinese grassland society and international grassland workshop*, p 68.
4. **Kawamura, K.**, Akiyama, T., Yokota, H., Inoue, M., Yasuda, T. and Wang, S. "Effects of grazing on seasonal changes of plant biomass in Xilingol steppe, China using Terra MODIS imagery" The 25th Asian Conference on Remote Sensing (Sheraton Chiang Mai Hotel, Chiang Mai, Thailand), November 22-26, 2004. *In: Proceedings of Proceedings of The 25th Asian Conference on Remote Sensing 2: p 1360-1365.*
5. Tanaka, S., Akiyama, T., Nomoto, S., Hamane, Y., **Kawamura, K.**, Tudsri, S., Tangtham, N. and Sooksathan, I. "Monitoring the effect of deforestation pressure on number of foggy days in northern Thailand using NOAA/NDVI." The 25th Asian Conference on Remote Sensing (ACRS). (Sheraton Chiang Mai Hotel, Chiang Mai, Thailand), November 22-26, 2004. *In: Proceedings of The 25th Asian Conference on Remote Sensing 1: p 806-811.*
6. Akiyama, T., **Kawamura, K.**, Yokota, H. and Chen, Z. "Grassland monitoring system for sustainable utilization in Inner Mongolia, China 1. Concept of real-time monitoring system and estimation of biomass using NOAA/NDVI" XX International Grassland Congress (Dublin, Ireland). June 26-July 1 2005.
7. **Kawamura, K.**, Akiyama, T., Yokota, H., Inoue, M., Yasuda, T., Watanabe, O. and Wang, Y. "Grassland monitoring system for sustainable utilization in Inner Mongolia, China 2. Real-time monitoring of grass and animal interaction using satellite data and GPS" XX International Grassland Congress (Dublin, Ireland). June 26-July 1 2005.
8. Yokota, H., **Kawamura, K.**, Akiyama, T., Inoue, M., Kondo, M., Kita, K. and Wang, Y. "Grassland monitoring system for sustainable utilization in Inner Mongolia, China 3. The estimation of herbage intake of sheep during grazing at the natural grassland" XX International Grassland Congress (Dublin, Ireland). June 1-July 1 2005.
9. Akiyama, T., **Kawamura, K.**, Yokota, H. and Chen, Z. "Real-time monitoring of grass and animal for steppe management in Inner Mongolia, China" The 26<sup>th</sup> Asian Conference on Remote Sensing (Hanoi, Viet Nam). November 7-11 2005.
10. Tanaka, S., **Kawamura, K.**, Maki, M., Goto, S., Akiyama, T., Matsufuru, H. and Yoshida, K. "Prediction of grain quality and yield of winter wheat using ground-based spectroradiometer data" The 26<sup>th</sup> Asian Conference on Remote Sensing (Hanoi, Viet Nam). November 7-11 2005.
11. Akiyama, T., **Kawamura, K.**, Yokota, H. and Chen, Z. "Real-time monitoring of grass and animal for steppe management in Inner Mongolia, China". *The 26th Asian Conference on Remote Sensing*, Hanoi,



Viet Nam, 7-11 November 2005.

12. Tanaka, S., **Kawamura, K.**, Maki, M., Goto, S., Akiyama, T., Matsufuru, H. and Yoshida, K. "Prediction of grazing quality and yield of winter wheat using ground-based spectroradiometer data". *The 26th Asian Conference on Remote Sensing*, Hanoi, Viet Nam, 7-11 November 2005.
13. **Kawamura, K.**, Akiyama, T., Yokota, H., Wang, Y. and Wang, S. "Satellite remote sensing, GPS, and GIS as tools for monitoring pasture mass/quality and grazing distribution at the Xilingol steppe of Inner Mongolia, China". *The 2nd China-Japan-South Korea Joint Symposium on Grassland Agriculture and Livestock Production*, Lanzhou University, China, 31 July - 6 August 2006.
14. **Kawamura, K.**, Mackay, A.D., Tuohy, M.P., Betteridge, K. and Sanches, I.D. "Visible-NIR reflectance spectroscopy as a potential tool for management of soil phosphorus fertility in legume-based pasture in New Zealand". *The 68th Annual Conference on New Zealand Grassland Association*, Otago University, New Zealand, 14-16 November 2006. In: *Proceedings of the New Zealand Grassland Association*, Vol. 68: p. 75-80.
15. Evri, M., Akiyama, T. and **Kawamura, K.** "Improving predictive capability of hyperspectral visible and near-infrared attributed to rice variables using genetic algorithm partial least square". *The 27th Asian Conference on Remote Sensing*, Kuala Lumpur, Malaysia, 12-16 November 2007.
16. Betteridge, K., **Kawamura, K.**, Costall, D., Carter, M., Hoogendoorn, C., Griffiths, W. and Inoue, Y. "Tools to determine impact of animal behaviour on nitrogen leaching and nitrous oxide emissions". *21st FLRC (Fertilizer and Lime Research Centre) Workshop*. Massey University, Palmerston North, New Zealand, 13-14 February 2008. In: *Proceedings of the Workshop "Carbon and nutrient management in agriculture"*, No. 21: p. 286-298. (ISBN: 0112-9902)
17. Fukuo, A., Akiyama, T., **Kawamura, K.**, Yokota, H. and Chen, Z.Z. "Monitoring of Inner Mongolia grassland using R/S, GIS and GPS". *6th International Symposium on Integrated Field Science - Understanding for each and integrated eco-system using remote sensing-*, Tohoku University, Sendai, 26-28 July 2008.
18. **Kawamura, K.**, Betteridge, K., Costall, D., Sanches, I.D., Tuohy, M.P. and Inoue, Y. "Hyperspectral canopy reflectance as a potential tool to estimate and map pasture mass and quality". *The 70th Annual Conference on the New Zealand Grassland Association*, Blenheim, New Zealand, 14-16 October 2008. In: *Proceedings of the New Zealand Grassland Association*, Vol. 70: p. 197-203.
19. **Kawamura, K.**, Betteridge, K., Sanches, I.D., Tuohy, M.P., Costall, D. and Inoue, Y. "Spectro-CAPP as a tool to estimate and map pasture biomass and mineral component in New Zealand". *The 29th Asian Conference on Remote Sensing*, Colombo, Sri Lanka, 10-14 November 2008.
20. Akiyama, T., **Kawamura, K.**, Fukuo, A., Saito, G. and Cheng, Z.Z. "Monitoring of desertification using spectral information in Inner Mongolia, China". *The 3rd Korea-China-Japan Joint Symposium on Grassland Agriculture and Livestock Production*, Konkuk University, Gwangjin-gu, Seoul, South Korea, 10-14 August 2009.
21. Lee, H.J., **Kawamura, K.**, Watanabe, N., Sakanoue, S. and Nakagoshi, N. "Hyperspectral canopy reflectance as potential tool to estimate and map pasture biomass and quality in a grazed pasture, Hokkaido, Japan". *URBIO2010*, Nagoya, Japan, 18-22 May 2010. In: *Proceedings of the 2nd International Conference of Urban Biodiversity and Design*, p 135.
22. Suwandana, E., **Kawamura, K.** and Nakagoshi, N. "Critical issues on green area, urban waste and coastal habitat degradation in Jakarta, Indonesia". *URBIO2010*, Nagoya, Japan, 18-22 May 2010. In: *Proceedings of the 2nd International Conference of Urban Biodiversity and Design*, p 138.

23. Wang, R.H., **Kawamura, K.** and Nakagoshi, N. "Urban heat island and landscape: linking spatiotemporal variations in surface temperatures to land-cover and socioeconomic patterns". URBIO2010, Nagoya, Japan, 18-22 May 2010. In: *Proceedings of the 2nd International Conference of Urban Biodiversity and Design*, p 140.
24. **Kawamura, K.**, Watanabe, N., Sakanoue, S., Lee, H.J., Lim, J. and Yoshitoshi, R. "Estimation of legume content in grass-legume mixtures from field hyperspectral measurement". The 32nd Asian Conference on Remote Sensing (ACRS). Taipei International Convention Center (TICC), Taipei, Taiwan, October 3-7, 2011. In: *Proceeding CD*.
25. Yoshitoshi, R., Watanabe, N., **Kawamura, K.**, Sakanoue, S., Lee, H.J. and Kurokawa, Y. "Monitoring grazing behavior of cattle with an accelerometry-based activity monitor and GPS". The 32nd Asian Conference on Remote Sensing (ACRS). Taipei International Convention Center (TICC), Taipei, Taiwan, October 3-7, 2011. In: *Proceeding CD*.
26. Lim, J., **Kawamura, K.**, Lee, H.J., Tachikawa, T., Yoshitoshi, R., Sakuno, Y., Kurokawa, Y. and Watanabe, N. "A hand-held crop measuring device for assessing spatial variability of herbage biomass and LAI in an Italian ryegrass field". The 32nd Asian Conference on Remote Sensing (ACRS). Taipei International Convention Center (TICC), Taipei, Taiwan, October 3-7, 2011. In: *Proceeding CD*.
27. Betteridge, K., Siva, G., Luo, D., **Kawamura, K.**, Costall, D. and Yoshitoshi, R. "A methodology for determining critical source areas in grazed hill pastures". The 25th Annual Fertilizer and Lime Research Centre Workshop. Massey University, Palmerston North, New Zealand, February 7-9, 2012.
28. Watanabe, N., Sakanoue, S. and **Kawamura, K.** "Utilization of an accelerometer for animal behavior research in grazing system". The 4th Japan-China-Korea Grassland Conference. Centrair Hall, Aichi, Japan. March 30 - April 1, 2012. In: *Proceedings of the 4th Japan-China-Korea Grassland Conference*, p 210-215.
29. Lim, J., **Kawamura, K.**, Lee, H.J., Tachikawa, T., Yoshitoshi, R., Sakuno, Y., Kurokawa, Y. and Watanabe, N. "Estimation of herbage biomass and quality in Italian ryegrass meadow field using genetic algorithm partial least squares (GA-PLS) regression with field hyperspectral measurements". The 4th Japan-China-Korea Grassland Conference. Centrair Hall, Aichi, Japan. March 30 - April 1, 2012. In: *Proceedings of the 4th Japan-China-Korea Grassland Conference*, p 232-233.
30. Lee, H.J., **Kawamura, K.**, Watanabe, N., Sakanoue, S., Sakuno, Y. and Nakagoshi, N. "Estimating green herbage biomass using ALOS/AVNIR-2 image in a mixed-sown pasture". The 4th Japan-China-Korea Grassland Conference. Centrair Hall, Aichi, Japan. March 30 - April 1, 2012. In: *Proceedings of the 4th Japan-China-Korea Grassland Conference*, p 230-231.
31. Shiyomi, M., Akiyama, T., Wang, S., Yiruhan, Chen, Z., Yasuda, T. and **Kawamura, K.** "A grassland ecosystem model for production forecast in the Xilingol steppe, Inner Mongolia". The 4th Japan-China-Korea Grassland Conference. Centrair Hall, Aichi, Japan. March 30 - April 1, 2012. In: *Proceedings of the 4th Japan-China-Korea Grassland Conference*, p 246-247
32. Lim J., **Kawamura, K.**, Yoshitoshi, R., Betteridge, K. and Costall, D. "Hyperspectral proximal sensing as a tool for estimating herbage biomass and forage nutrient status in grassland, New Zealand" Spatially Enabled Livestock Management Symposium 2012, Lincoln University, Christchurch, New Zealand, July 6, 2012.
33. Yoshitoshi, R., **Kawamura, K.**, Lim J., Betteridge, K., Ganesh, S. and Costall, D. "Comparison of models for estimating critical source areas of nitrogen in hilly grassland, New Zealand" Spatially Enabled Livestock Management Symposium 2012, Lincoln University, Christchurch, New Zealand, July 6, 2012.

34. **Kawamura, K.**, Watanabe, N., Sakanoue, S., Lim, J., Yothisothei, R. and Odagawa, S. "Herbage biomass and quality assessment in a mixed sown pasture from airborne based hyperspectral imaging". The 33rd Asian Conference on Remote Sensing (ACRS), Ambassador City Jomtien Hotel, Pattaya, Thailand, November 26-30, 2012. In: *Proceeding CD*.
35. Lim, J., **Kawamura, K.**, Yoshitoshi, R., Lee, H.J., Kurokawa, Y. and Watanabe, N. "A hand-held crop measuring device for estimating herbage biomass and LAI status in an Italian ryegrass field". The 33rd Asian Conference on Remote Sensing (ACRS), Ambassador City Jomtien Hotel, Pattaya, Thailand, November 26-30, 2012. In: *Proceeding CD*.
36. Yoshitoshi, R., **Kawamura, K.**, Lim, J., Watanabe, N., Sakanoue, S., and Yasuda, T. "A methodology for determining dung position in grazed hill pasture". The 33rd Asian Conference on Remote Sensing (ACRS), Ambassador City Jomtien Hotel, Pattaya, Thailand, November 26-30, 2012. In: *Proceeding CD*.
37. Gong, Z., **Kawamura, K.**, Ishikawa, N., Kimura, Y., Kyuno, W., Wulantuya and Hai, J. "Monitoring changes in 12 years Inner Mongolian grassland, China using SPOT VEGETATION images". The 33rd Asian Conference on Remote Sensing (ACRS), Ambassador City Jomtien Hotel, Pattaya, Thailand, November 26-30, 2012. In: *Proceeding CD*.
38. Aarons, R.S., **Kawamura, K.**, Perry, E. "Hyperspectral remote sensing technology as a tool for supporting precision management of dairy pasture". Spatially Enabled Livestock Management Symposium 2013, University of Sydney Centre for Carbon, Water and Food, Australia, September 26-27, 2013.
39. Yoshitoshi, R., Watanabe, N., **Kawamura, K.**, Sakanoue, S., Lim, J. and Yasuda, T. "Bayesian modeling for estimating cattle's dung position in pasture" The 22nd International Grasslands Congress (IGC), Sydney, Australia, September 15-19, 2013.
40. Gong, Z., **Kawamura, K.**, Ishikawa, N., Goto, M., Wulantuya and Hai, J. "Estimating spatial distribution of biomass changes in Inner Mongolia grassland by satellite imagery" The 34th Asian Conference on Remote Sensing (ACRS), Bali, Indonesia, October 23-24, 2013. In: *Proceeding CD*.
41. Aaron, S.R., Gourley, C.J.P., **Kawamura, K.** and Perry, E. "Improving soil management in Australian grazed dairy systems". The 9th International Symposium AgroEnviron, Goiania, Brazil, April 27-May 1, 2014. In: *Proceedings of the 9th International Symposium AgroEnviron*, p. 52-53.
42. Gong, Z., **Kawamura, K.**, Ishikawa, N., Goto, M., Wulantuya and Jing, H. "Monitoring phenology and vegetation dynamics in Inner Mongolia grassland using Terra MODIS imageries". The 5th China-Japan-Korea Grassland Conference, Changchun, China, August 20-24, 2014. In: *Proceedings of the 5th China-Japan-Korea Grassland Conference*, p. 44-45.
43. Lv, R., Obitsu, T., Sugino, T., Taniguchi, K., Kurokawa, Y. and **Kawamura, K.** "Effects of N fertilization levels and wilting periods on chemical composition and chlorophyll content of Italian ryegrass harvested at different stage" The 5th China-Japan-Korea Grassland Conference, Changchun, China, August 20-24, 2014. In: *Proceedings of the 5th China-Japan-Korea Grassland Conference*, p. 92.
44. Sazawa, K., Higuchi, K., Kuramitz, H., **Kawamura, K.** and Wada, N. "Color monitoring on alpine snowpack for evaluation of volcanic gas diffusion", The 4th International Symposium on the Arctic Research, Toyama International Center, Toyama, Japan, April 27-30, 2015.
45. Kraus, J., Trihamdani, A.R., Kubota, T., Lee, H.S. and **Kawamura, K.** "Comparison of land cover and land use data for urban climate modelling in Southeast Asian cities? A case study of Johor Bahru". The 9th International Conference (ICUC9) on Urban Climate jointly with 12th Symposium on the Urban

Environment, Toulouse, France, July 20-24, 2015.

46. Kraus, J., Trihamdani, A.R., Kubota, T., Lee, H.S. and **Kawamura, K.** "Interaction of Singapore and Johor Bahru on urban climate during monsoon seasons". The 9th International Conference (ICUC9) on Urban Climate jointly with 12th Symposium on the Urban Environment, Toulouse, France, July 20-24, 2015.
47. Lim, J., **Kawamura, K.**, Yoshitoshi, R., Kurokawa, Y. and Watanabe, N. "Growth status assessment from a hand-held crop measuring sensor in Italian ryegrass field". International Symposium on RCAS, Hiroshima University, July 30, 2015.
48. Yoshitoshi, R., Watanabe, N., **Kawamura, K.**, Sakanoue, S., Lim, J. and Yasuda, T. "A methodology for predicting cattle's dung position in pasture". International Symposium on RCAS, Hiroshima University, July 30, 2015.
49. Gong, Z., **Kawamura, K.**, Ishikawa, N., Goto, M., Wulantuya, and Jing H. "Plant phenology monitoring in Inner Mongolia grassland using Terra MODIS imageries". International Symposium on RCAS, Hiroshima University, July 30, 2015.
50. Fan, X., **Kawamura, K.**, Lim, J., Yoshitoshi, R., Yuba, N., Lee, H.J. and Kurokawa, Y. "Ground-based camera system for monitoring herbage biomass in Italian ryegrass field". International Symposium on RCAS, Hiroshima University, July 30, 2015.
51. Inaba, M., Gong, Z., Jing, H., **Kawamura, K.**, Goto, M., Kawada, K., Asano, A., Tajima, A. and Ishikawa, N. "Difference of phosphate absorptive coefficient in Siziwang and Xilingol in Inner Mongolia" UNESCO-APEID 2015 International Symposium on Agricultural Education for Sustainable Development (Ag-ESD Symposium 2015), University of Tsukuba, November 16-20, 2015.
52. Wang, Z., **Kawamura, K.** and Sakuno, Y. "Chlorophyll-a and total suspended solids estimation for irrigation ponds in Higashi-Hiroshima using hyperspectral measurement data". *International Symposium on Remote Sensing 2016*, International Convention Center Jeju, Jeju, Korea, April 20-22, 2016.
53. Indarto, J., Kaneko, S. and **Kawamura, K.** "Contesting mitigation effect of the certification of Sustainable Forest Management on deforestation: empirical evidence from Indonesia". *The 22nd International Sustainable Development Research Society (ISDRS) Conference*, Lisbon, Portugal, July 13-15, 2016.
54. Inaba, M., Gong, Z., Jing, H., **Kawamura, K.**, Goto, M., Asano, A., Tajima, A. and Ishikawa, N. "Effect of large-scale fertilization of phosphorus and nitrogen on grassland productivity and total phosphorus content in plant in Inner Mongolia, China". *Ag-ESD Symposium 2016*, University of Tsukuba, September 18-19, 2016.
55. Lim, J., **Kawamura, K.**, Yoshitoshi, R., Yayota, M. and Ogura, S. "Hyperspectral assessment for legume contents and forage nutrient status in pasture". The 14th International Symposium of Integrated Field Science, Tohoku University, November 26-28, 2016.
56. Betteridge, K., **Kawamura, K.**, Costall, D., Ganesh, S., Dongwen, L., Koolaard, J. and Yoshitoshi, R. "Intensive livestock farming on New Zealand hill country farms creates critical source areas of potential pollution". *The 14th International Symposium of Integrated Field Science*, Tohoku University, November 26-28, 2016.
57. Jang, S., Ogura, S., **Kawamura, K.**, Yayota, M., Yun, Y.S., Seong, H.J., Moon, S.H. and Jeon, B.T. "Seasonal changes in forage and animal productivity of Korean native goats grazed at different forage type". *The 14th International Symposium of Integrated Field Science*, Tohoku University, November

26-28, 2016.

58. Ogura, S., Mizuno, H., Takamizawa, S., Yayota, M. and **Kawamura, K.** "Nutritional characteristics of forbs and tree leaves and their contribution to animal production in species-rich vegetation", *The 14th International Symposium of Integrated Field Science*, Tohoku University, November 26-28, 2016.
59. **Kawamura, K.**, Lim, J., Yayota, M., Ogura, S., Jang, S.Y. and Moon, S.H. "Spatial heterogeneity in grazing pasture from small unmanned aerial vehicle (sUAV) with structure from motion (SfM) photogrammetry", *The 14th International Symposium of Integrated Field Science*, Tohoku University, November 26-28, 2016.

**\* Presentation at Japanese conference: +128**

## Honors and Awards

- April 2014: **Best Presentation Award for Young Researcher** (Co-Author) for Japanese Society of Grassland Science on the 2014 annual meeting, Miyazaki, Japan.
- November 2009: **Best Paper Award** (Co-Author) for the Remote Sensing Society of Japan.
- October 2008: **Young Author Award** for the Japanese Agricultural Systems Society on the 2008 Autumn meeting, Rakuno Gakuen University, Hokkaido, Japan.
- May 2008: **Best Presentation Paper Award** (Co-Author) for the Remote Sensing Society of Japan on the 44<sup>th</sup> Annual Meeting, Yokohama, Japan.
- March 2006: **Young Research Award** for the Japanese Society of Grassland Science.
- March 2006: **Best Poster Award** for the Japanese Society of Grassland Science on the 2006 annual meeting, Tsukuba, Japan.
- March 2005: **Best Poster Award** for the Japanese Society of Grassland Science on the 2005 annual meeting, Tokyo, Japan.
- October 2003: **Young Author Award** for the ISPRS WG VII/6 International Workshop on Monitoring/Modeling Global Environment Change, Kyoto, Japan.

## Grant

April 2003 – March 2004 (650,000 JPY)

The Sasakawa Scientific Research Grant from the Japan Science Society

April 2004 – March 2006 (1,900,000 JPY)

Research Fellowships of the Japan Society for the Promotion of the Science for Young Scientists (JSPS Research Fellow DC2, 09545), April 2004 ~ March 2006.

April 2006 – June 2008 (3,400,000 JPY)

Research Fellowships of the Japan Society for the Promotion of the Science for Young Scientists (JSPS Research Fellow PD), April 2006 ~ March 2009.

April 2008 – March 2010 (2,440,000 JPY)

Grant-in-Aid for Research Activity Start-up, the Japan Society for the Promotion of Science (JSPS)

April 2010 – March 2012 (4,550,000 JPY)

Grant-in-Aid for Young Scientist (B), the Japan Society for the Promotion of Science (JSPS)

April 2011 – March 2013 (5,000,000 JPY)

JSPS Bilateral Joint Projects (Japan – New Zealand), the Japan Society for the Promotion of Science (JSPS)

April 2014 – March 2016 (3,900,000 JPY)

Grant-in-Aid for Young Scientist (B), the Japan Society for the Promotion of Science (JSPS)

## **Professional Societies**

- ☐ Member: Ecological Society of Japan (ESJ)
- ☐ Member: Japanese Agricultural Systems Society (JASS)
- ☐ Member: Japan Society of Photogrammetry and Remote Sensing (JSPRS)
- ☐ Member: Remote Sensing Society of Japan (RSSJ)
- ☐ Member: Japanese Society of Grassland Science (JSGS)
- ☐ Member: New Zealand Grassland Association (NZGA)
- ☐ Member: The British Grassland Society (BGS)
- ☐ Member: Japanese Society of Animal Science (JSAS)
- ☐ Member: Japan Poultry Science Association (JPSA)

## **Language skills**

- ☐ Japanese (fluent; mother tongue)
- ☐ English (competent)
- ☐ Chinese (beginner's level)
- ☐ Korean (beginner's level)

## **References**

### **Professor Emeritus, Tsuyoshi Akiyama**

River Basin Research Center, Gifu University,  
1-1 Yanagido, Gifu 501-1193, Japan  
Tel: +81-29-836-7829  
E-mail: amx12438@mail2.accsnet.ne.jp

### **Mr. Keith Betteridge**

Senior Researcher  
AgResearch Limited  
Grasslands Research Centre  
Tennent Drive, Private Bag11008, Palmerston North, New Zealand  
Tel: +64-6-351-8053  
Fax: +64-6-351-8032  
E-mail: keith.betteridge@agresearch.co.nz