

VII

岩手大学大学院連合農学研究科/ サスカチュワン大学農業生物資源学部植物科学分野 教員一覧

List of Professors at the United Graduate School of
Agricultural Sciences, Iwate University/
Plant Sciences Department, College of Agriculture
and Bioresources, University of Saskatchewan

1. Outline of Divisions at Each Specialty/List of Professors Qualified as Major Advisors

* Please note that professors who will retire within three years cannot be a major adviser for the entire duration of the degree.

Major : Bioproduction Science

Specialty : Plant Production

Basic and applied studies on production and utilization of a wide range of plant resources, including agricultural crops. Basic studies on physiology, ecology and genetics, and applied studies such as production, preservation and breeding technologies are also conducted using plant resources through both conventional and advanced techniques such as biotechnology.

Professor (Affiliate)	Field of Research	
	Department	Description
ARAKAWA, Osamu(H)	Pomology	Physiology of tree growth and fruit quality
ISHIKAWA, Ryuji(H)	Plant Genetics and Breeding	Functional genomics of rice genes
ITO, Daiyu(H)	Pomology	Orchard meteorological ecology and fruit tree cultivation technology
KASAI, Minobu(H)	Plant Physiology	Physiological studies on the regulation of photosynthetic metabolism and assimilate partitioning
KAWASAKI, Michio(H)	Crop Science	Analysis of mechanism on the formation of the yield and quality in food crops
KANG, Dong-Jin(H)	Crop Science	Morphological and physiological studies for tolerance mechanisms in crops under environmental stressful conditions
SENDA, Mineo(H)	Plant Molecular Genetics	Molecular suppressive mechanism of seed pigmentation in yellow soybean
MAEDA, Tomoo(H)	Vegetable Crop Science	Studies on relationship between cultural condition and contents of phytochemicals in vegetables
KURODA, Eiki(I) (Retirement (March 2019))	Crop Science	Analysis of the dry matter production process and yield formation in the high-yielding rice plants
KOMORI, Sadao(I)	Pomology	Fruit tree breeding and development of breeding technology in apple
SHIMONO, Hiroyuki(I)	Crop Science	High crop productivity under a changing climate
SHONO, Hiroshi(I)	Agricultural Informatics	Theoretical and applied studies on remote sensing and image measurement of state of plant growth
TAKAHATA, Yoshihito(I) (Retirement (March 2019))	Plant Breeding	Theoretical and applied studies on plant breeding by biotechnology
TATSUZAWA, Fumi(I)	Olericultural and Floricultural Science	Study of new color flower breeding
TSUKAZAKI, Hikaru(I)	Plant Breeding	Genetics and breeding in vegetables
YAMASAKI, Atsushi(I)	Horticulture	Developmental physiology of vegetable crops, especially flower initiation and bulb formation
EGASHIRA, Hiroaki(Y)	Plant Resources	Revaluation and utilization of wild plants and localized crops traditionally used
SASANUMA, Tsuneo(Y)	Plant Breeding and Genetics	Plant breeding and genetics on Triticeae species, safflower and other higher plants
TAIRA, Satoshi(Y)	Fruit Science	Physiology of fruit development, maturation, and utilization
NISHIZAWA, Takashi(Y)	Horticulture	Physiological disorder and environmental physiology of horticultural crops
FUJII, Hiroshi(Y)	Crop Production Science	Studies on environmentally conscious agriculture of rice plant
MURAYAMA, Hideki(Y)	Postharvest Physiology	Studies on postharvest physiology and technology of agricultural crops
MORI, Shizuka(Y)	Crop Production Science	Relationship between stable production of paddy-rice and environmental factors

Note: (I) : Iwate University (H) : Hirosaki University (Y) : Yamagata University

Specialty : Animal Production

Basic and applied studies on production, rearing, and improvement of livestock and laboratory animals are carried out. Basic studies on production, breeding, and feed nutrition of livestock as well as genetics, breeding, and feeding management of laboratory animals are also conducted through both conventional and advanced technologies such as genetic engineering and embryo development engineering.

Professor (Affiliate)	Field of Research	
	Department	Description
MATSUZAKI, Masatoshi(H)	Animal Feeding	Nutritional physiology and feed evaluation for ruminant livestock
KAWAMOTO, Hidenori(I)	Forage Science	Studies on forage conservation and evaluation
KITA, Kazumi(I)	Animal Nutrition	Nutritional regulation of protein turnover and growth factor
SANO, Hiroaki(I) (Retirement (March 2020))	Animal Nutrition and Physiology	Nutrient metabolism and its control in ruminants
SAWAI, Ken(I)	Animal Reproduction	Reproductive biotechnology of domestic animals
TSUIKI, Mikinori(I)	Grassland Ecology	Environmental impact assessment of grassland
TOUNO, Eiko(I)	Forage Science	Studies on forage conservation and evaluation
NISHIMUKAI, Megumi(I)	Animal Physiology	Study on the Physiological effect of functional phospholipids
MATSUBARA, Kazuei(I)	Animal Breeding and Reproduction, Reproductive Immunology	Study of super-early pregnancy factor and utilization of animal heredity resource
MURAMOTO, Takayuki(I)	Meat science	Physical and chemical characteristics and nondestructive evaluation of meat
URAKAWA, Shyuji(Y)	Feed Science	Studies on production and distribution of rice whole crop silage and rice grain
KIMURA, Naoko(Y)	Animal Reproductive Biology, Animal Biotechnology	1) Molecular reproduction and development in mammals 2) Sex control in animals
HORIGUCHI, Kenichi(Y)	Animal Management	Study on cyclic domestic animal management system

Specialty : Biological Ecology Control

This section focuses on basic and applied studies of physiology, ecology, heredity, variation and the evolution of organisms that negatively affect bioproduction. This section conducts research and study on the relationships between harmful and useful organisms, various factors affecting these relationships, and controlling methods of harmful organisms. In addition, the effects of soil, fertilizers and agricultural chemicals on bioproduction, ecology and environment and their controlling factors are also studied.

Professor (Affiliate)	Field of Research	
	Department	Description
AOYAMA, Masakazu(H)	Soil Science	Dynamics of organic matter in soil environment
SANO, Teruo(H)	Plant Pathology	1) Molecular structure, pathogenesis and host specificity of viroid (RNA pathogen) 2) Diagnosis and control of plant virus and viroid diseases
SUGIYAMA, Shuichi(H) (Retirement (March 2020))	Plant Ecology	Plant-microbe interactions
TANAKA, Kazuaki(H)	Mycology	Studies on taxonomy and phylogeny of microfungi
TONOUCHI, Akio(H)	Environmental Microbiology	Studies of environmental microorganisms
ISOGAI, Masamichi(I)	Plant Pathology	Function of genes encoded by genomes of plant viruses
SAHARA, Ken(I)	Applied Molecular Entomology	Cytogenetical genome comparison in insect through fluorescence in situ hybridization mapping of orthologous genes
SUZUKI, Yuji(I)	Plant Nutrition and Physiology	Molecular physiology of photosynthesis in vascular plants
TAKEDA, Takumi(I)	Plant Biochemistry	Functional analyses of proteins and genes during plant growth
YOSHIKAWA, Nobuyuki(I)	Plant Pathology	Structure and function of the genomes of the viruses isolated from fruit trees
KAKU, Nobuo(Y)	Applied Microbiology	Analysis and application of microbial function
KOBAYASHI, Takashi(Y)	Phytopathology	Plant disease control using disease forecasting system and remote sensing
TAWARAYA, Keitaro(Y)	Plant Nutrition and Soil Science	Mechanism of phosphorus uptake and utilization of mycorrhiza
CHENG, Weiguo(Y)	Plant Nutrition and Soil Science	Studies on carbon and nitrogen dynamics in plant-soil ecosystems with global change
HASE, Shu(Y)	Plant Pathology	Study on biological control of plant diseases
YASUDA, Hironori(Y) (Retirement (March 2020))	Animal Ecology	Biological control of pest insects

Major : Bioresources Science**Specialty : Biomolecular Function**

This section focuses on basic studies on the functions, physiological mechanisms, the genetic controls of living organisms and biomolecular function and also their applied studies including natural products chemistry and biotechnology such as DNA recombination techniques.

Professor (Affiliate)	Field of Research	
	Department	Description
USHIDA, Chisato(H)	Molecular Biology	Functional RNomics, Function and structure of ncRNAs
SAKAMOTO, Kimitoshi(H)	Biochemistry	Analysis of energy metabolism founded on redox enzymes
SONOKI, Tomonori(H)	Applied Microbiology	Characterization and application of microbial function for sustainable production of chemicals
HASHIMOTO, Masaru(H)	Natural Product Chemistry	Isolation and structural determination of novel natural products
HAMADA, Shigeki(H)	Enzymology	Analytical and applied studies on metabolic production mechanisms in plant and microbe
HIMENO, Hyouta(H)	Biochemistry, Molecular Biology	Structure and function of RNA, Molecular mechanism of the translation system
MORITA, Eiji(H)	Cell Biology	Molecular mechanisms of viral replication organelle biogenesis
YOSHIDA, Takashi(H)	Enzymology	Structure and function of enzymes acting on carbohydrates, and their application
KIMURA, Ken-ichi(I)	Chemical Biology	Chemical and biological study on bioprobes derived from natural resources
NISHIYAMA, Ken-ichi(I)	Biomembrane Biogenesis	Molecular mechanisms underlying protein transport across biomembranes
MIYAZAKI, Masao(I)	Biochemistry	Molecular basis of olfactory systems in mammals
YAMASHITA, Tetsuro(I)	Biochemistry	Biochemistry of enzymes in animal cells
KOSEKI, Takuya(Y)	Applied Enzymology	Functional and analysis and applied studies on plant cell wall-degrading enzymes
SHIONO, Yoshihito(Y)	Natural Products Chemistry	Studies on bioactive natural products from microorganism
MURAYAMA, Tetsuya(Y)	Bioorganic Chemistry	Chemical studies on the important substance contained in plants

Specialty : Cellular Genomics

This section focuses on basic and applied studies on surveys, analyses, database building and preservation of undeveloped genetic resources in cold areas, as well as studies on functions of genomes and cells during development, differentiation and environmental responses by living organisms based on genomic information. This section conducts basic research and instruction on genomic studies for quantitative and qualitative improvements of biotic production as well as for environmental conservation making full use of methods of basic biology, systems biology and bioinformatics.

Professor (Affiliate)	Field of Research	
	Department	Description
AKADA, Shinji(H)	Plant Molecular Biology	Molecular mechanisms underlying environmental responses in legume and beech
KASHIWAGI, Akiko(H)	Experimental Evolution	Experimental evolutionary studies on RNA bacteriophage
KURO-O(KATAKURA), Masaki(H)	Molecular Cytogenetics	Analyses of genetic diversities in vertebrates
KOBAYASHI, Kazuya(H)	Developmental & Reproductive Biology	Switching mechanism of reproductive modes in planarians
SASABE, Michiko(H)	Plant Cell Biology	Molecular mechanisms regulating plant cell division and cell differentiation
NISHINO, Atsuo(H)	Animal Physiology	Molecular physiology on the regulation of locomotion in marine invertebrates
FUKUZAWA, Masashi(H)	Developmental Biology	Functional analysis of transcription factors involved in morphogenesis
YOKOYAMA, Hitoshi(H)	Developmental and Regenerative Biology	Organ-level regeneration in vertebrates, especially in amphibians
ITO, Kikukatsu(I)	Systems Biology	Thermoregulation in plants
UEMURA, Matsuo(I)	Plant Physiology	Physiological and molecular biological studies on cold adaptation in plants
KAWAMURA, Yukio(I)	Plant Physiology	Responses of plants to low temperature stresses
SAITOH, Yasushi(I)	Molecular Cell Biology	Cell proliferation control under different environmental conditions
TAKAHASHI, Hideyuki(I)	Plant Metabolism and Physiology	Mechanism and engineering of plant metabolism
NISHIHARA, Masahiro(I)	Plant Molecular Breeding	Basic and applied biotechnology for plant molecular breeding
RAHMAN, Abidur(I)	Plant Molecular Physiology	Molecular regulation of plant hormones during growth and development
OIKAWA, Akira(Y)	Metabolic Biochemistry	Physiological and Biochemical studies of metabolism
TOYOMASU, Tomonobu(Y)	Biochemistry	Studies on molecular mechanisms of biosynthesis and signal transduction of terpenoids
MITSUHASHI, Wataru(Y)	Plant Biochemistry	Study on plant somatic embryogenesis

Specialty : Food Science

The target of this section is "food" for our existence and healthy life and also for the products of the primary industry. This section focuses on food function, nutrition and processings, where the section conducts basic and applied studies using advanced research methods at the molecular level as well as chemical and engineering methods.

Professor (Affiliate)	Field of Research	
	Department	Description
IWAI, Kuniyoshi(H)	Food Functional Science	Study on physiological function and ingredients in regional food materials, and pharmacokinetics of polyphenols
MAEDA, Hayato(H)	Food chemistry	Screening of food and drug stuffs preventing common diseases and its application
KOIDE, Shoji(I)	Postharvest Technology	Development of new technology for storage of agricultural products and its sanitary food control
SHIMOI, Hitoshi(I) 〈Retirement (March 2019)〉	Applied Microbiology	Molecular biology of sake yeast
SUGAWARA, Etsuko(I) 〈Retirement (March 2019)〉	Cookery Science	Formation and degradation of the aroma components in foods by cooking and processing
TSUKAMOTO, Chigen(I)	Food Chemistry	Improvement of functionality and taste characteristics of soy-foods
NAGASAWA, Takashi(I) 〈Retirement (March 2020)〉	Nutritional Biochemistry	1) Protein synthesis and degradation in skeletal muscle and its regulation by food 2) Anti-diabetic effects of food
MIURA, Makoto(I)	Food Chemical Engineering	Theoretical and applied studies on food processing, preservation and quality evaluation
YANO, Akira(I)	Research of Health Functions of Foods	Basic research of food materials for the health promotion, directed to the development of functional foods
NAGAI, Takeshi(Y)	Food Processing	Studies on the development of efficient use and processing technology for food resources
WATANABE, Masanori(Y)	Biomass and Microbial Resource Utilization	Development of biorefinery technology of agricultural residues for energy production

Major : Regional Environment Creation

Specialty : Regional Resources and Environmental Economics

Basic and applied studies on farming, livestock, forestry, fishery industries and rural resources including environment and culture are carried out.

Specifically, the following subjects are conducted: 1) the historical and socioeconomic analyses of industries and resources, 2) the development plan, institution and organization control in rural communities including fishing village, and 3) the relationships with other industries as well as with international cooperation.

Professor (Affiliate)	Field of Research	
	Department	Description
ISHITSUKA, Satoshi(H)	Food Economics	Expansion of marketing strategic in food industry
IZUMIYA, Masami(H)	Agricultural Marketing	Economic analysis of waste biomass recycling
KINOSHITA, Yukio(I)	Farm Management and Agricultural Economics	Farm growth management, international comparison of institution for water management in agriculture
SATO, Kazunori(I) 〈Retirement (March 2020)〉	Agricultural Economics	Agricultural products distribution system and cooperative marketing
NONAKA, Akihisa(I)	Agricultural Economics	Theoretical studies and analysis on latest re-production structure of rural economy
HIYANE, Akira(I)	Forest Planning Environmental Education	1) The history of forest working system in Japan national forest 2) The evaluation method of environmental education
YAMAMOTO, Shinji(I)	Forest Policy	Studies on human dimension of forest management
IEKUSHI, Tetsuo(Y)	Environmental Accounting	Environmental Accounting for Farm Management
IWAHANA, Michiaki(Y) 〈Retirement (March 2019)〉	Environmental Geography	Study on the environment and development of mountain village
OZAWA, Wataru(Y)	Agricultural Economics	Study on management efficiency / Study on consensus-building of rural area
SUMITA, Tsuyoshi(Y)	Agricultural Economics	Study on managerial growth of paddy farming

Specialty : Agricultural and Environmental Engineering

The focus is on the sciences of improving and maintaining rural areas aiming for sustainable food production and living environments with beautiful landscapes; fertile farmland, sufficient water and diversified environment. Basic and applied research and studies are carried out on the science of water and soil which are the basic factors of regional environments, engineering and planning methods such as irrigation and drainage, rural areas development, the recovery of countryside ecosystems, and mechanical engineering and biological methods such as agricultural energy, biomass, farm machinery and facilities.

Professor (Affiliate)	Field of Research	
	Department	Description
IZUMI, Mattashi(H)	Irrigation, Drainage and Hydraulic Engineering	Hydraulic design of hydraulic facilities and water requirement
ENDO, Akira(H)	Agricultural Land Engineering	1) Inorganic nitrogen cycle and percolation discharge in the agricultural land 2) Development of measurement tool for the agricultural soil environment
SASAKI, Choichi(H)	Agricultural Land Engineering	Studies on the influence of percolation pattern in seepage water on several phenomena in a layer
ZHANG, Shu Huai(H)	Agricultural Machinery	1) Applications of image processing technology for agriculture 2) Non-destructive measurements for agricultural product's quality
FUJISAKI, Hiroyuki(H)	Rural Planning	Studies on sustainable rural development, especially for farm land consolidation, rural tourism, and so on
MORI, Hiroshi(H)	Agricultural Facilities Engineering	Functional Performance Evaluation in Foundation Ground and Soil Structure by Numerical Analysis
YE, Xujun(H)	Agricultural Machinery	1) Application of remote sensing technology in Agriculture 2) Development of quality evaluation technologies for agricultural products using optical sensing
KURASHIMA, Eiichi(I)	Hydrology	Research on watershed runoff relevant to heat transfer at the air-ground interface
SATTA, Naoya(I)	Environmental Engineering	Experimental and theoretical studies on transport of elements in water-soil system
TAKEDA, Jun-ichi(I) (Retirement (March 2020))	Agricultural Machinery	Automation for agricultural systems
HIROTA, Jun-ichi(I) (Retirement (March 2020))	Rural Planning	Rural planning and rural development
YAMAMOTO, Kiyohito(I)	Agricultural Facility Engineering	Change in mechanical behavior of brittle material due to degradation
ANNAKA, Takeyuki(Y)	Soil Physics	Mechanism of moisture and solute movement in soils
OKUYAMA, Takehiko(Y)	Geoenvironment	Survey of underground environment
KATAHIARA, Mitsuhiko(Y)	Agricultural Machinery	Studies on labor saving technique of open field vegetables by agricultural machinery
WATANABE, Toru(Y)	Water Environment Engineering	1) Environmental pollution and its impact on human health 2) Water quality management for sustainable water utilization

Specialty : Regional Resources and Environmental Management

Basic and applied studies on ecological mechanisms of the biospheres composed of forests, farmlands, grasslands, oceans, animals and plants are carried out. Technical methods aiming at sustainable use of natural resources and the environment as well as management of regional resources are also developed. In analysis, field science including forest science, erosion control engineering and biology are mainly used.

Professor (Affiliate)	Field of Research	
	Department	Description
AZUMA, Nobuyuki(H)	Ecology, Ecological Engineering	Ecology of fishes and birds, Conservation and restoration of ecosystem
IKEDA, Hiroshi(H)	Evolutionary Ecology	Studies on the evolution and the community of invertebrates
ISHIDA, Kiyoshi(H)	Forest Ecology	Ecology and conservation biology of forest plants
HIGAKI, Daisuke(H) (Retirement (March 2019))	Erosion Control Engineering, Engineering Geomorphology	Mountain watershed management, landslide hazard management
IRASAWA, Michiya(I)	Erosion Control Engineering	1) Study for technique on prevention of soil erosion 2) Study for hydrological characteristic in the forest and technique of revegetation
KOFUJITA, Hisayoshi(I)	Wood Chemistry	Theoretical and applied studies on structure and function of natural organic compound
SEKINO, Noboru(I)	Wood-based Material	Production technology and utilization of wood-based composites
TATSUKAWA, Shiro(I)	Forest Engineering	Theoretical and applied studies on harvesting system of forest resources
HARASHINA, Koji(I)	Landscape Ecology and Resource Management	Studies on restructuring for sustainable regional ecosystems
ASHITANI, Tatsuya(Y)	Forest Resource Utilization	Chemical utilization of forest resources
ENARI, Hiroto(Y)	Wildlife Ecology	Theoretical and applied sciences on ecology and management of forest mammals
TAKAHASHI, Koetsu(Y) (Retirement (March 2019))	Forest Products	Study of chemical component and its utilization on trees
HAYASHIDA, Mitsuhiro(Y)	Forest Ecology	Ecology of forest community and conservation of biodiversity
MORI, Shigeta(Y)	Whole-plant Ecology	Whole-plant physiological ecology including roots from seedlings to giant trees
YOSHIMURA, Kenichi(Y)	Forest Ecology	The mechanism of tree growth and mortality using ecophysiological methodology
LOPEZ CACERES, Maximo Larry(Y)	Climate Change	Study on the effect of climate change on forest ecosystems

2. サスカチュワン大学農業生物資源学部植物科学教員一覧

List of Professors at Plant Sciences Department, College of Agriculture and Bioresources, University of Saskatchewan

詳細は下記サスカチュワン大学ウェブページにて確認すること。

Please refer to the following website for more details.

<http://agbio.usask.ca/faculty-and-staff/all-faculty-and-staff.php>

Yuguang Bai (Professor and Dept. Head)
Research : Grassland and forest ecology, seed and seedbed ecology, reclamation.
Sabine Banniza (Professor)
Research : My research is focused on the area of pulse crop pathology with particular emphasis on problems in Saskatchewan. The overarching theme of my research program is to study the biology of fungal and bacterial pathogens and their interaction with host plants. The ultimate goal of my research is to gain a better understanding of strategies employed by these pathogens to successfully invade and colonize pulse crops, and to exploit this knowledge for the purpose of developing successful breeding and disease management strategies. In order to achieve this goal, my research program follows a hierarchical approach, covering aspects from the field level down to the microscopic and molecular level.
Aaron Beattie (Assistant Professor)
Research : Barley and Oat Breeding
Kirstin E. Bett (Professor)
Research : Pulse crop genomics and dry bean breeding.
Bill Biligetu (Assistant Professor)
Research : perennial forage breeding and genetics
Helen Booker (Associate Professor)
Research : The main goals of the flax breeding and genetics program are to increase the area of adaptation where flax can be grown successfully in Canada and provide better genetics for improved agronomic performance and seed quality for the industrial, human health, and animal nutrition markets. To inform the breeding of flax, my research program centres around understanding the genetics of traits of economic importance in flax. Specifically, I aim to identify crop characteristics associated with improved agronomic performance and germplasm with novel traits and to explore various breeding methods and genetic tools, such as molecular markers to facilitate the transfer of new traits into new cultivars and breeding lines.
R. H. (Bob) Bors (Assistant Professor)
Research : Breeding fruit crops adapting them for northern conditions and mechanical harvesting.
Rosalind A. Bueckert (Professor)
Research : Crop growth and yield response to environmental factors. Yield formation processes in field crops.
Ravindra (Ravi) N. Chibbar (Professor and Canada Research Chair in Crop Quality)
Research : Biochemical and molecular characterization of the genetic determinants of grain quality in cereal and pulse crops. Application of structural and functional genomics strategies for grain quality improvement.
Katelyn Congreves (Assistant Professor)
Research : Horticulture, sustainable soils + vegetable crops
Bruce E. Coulman (Professor)
Research : Breeding, genetics and management of perennial forage crops.
D. Brian Fowler (Professor)
Research : Conservation production systems and production, management, genetics and breeding of winter wheat and rye.
Gordon R. Gray (Professor)
Research : The metabolic regulation/interaction of photosynthetic and respiratory processes in response to abiotic stresses (low temperature and high-light) are examined. Approaches combining biochemical, physiological and molecular genetic techniques are utilized in the model plant Arabidopsis with the goal of enhancing plant stress tolerance.

Pierre J. Hucl (Professor)
Research : Genetics and breeding of bread wheat for the short-season areas of Western Canada. Evaluation of alternative wheats and annual canarygrass.
Leon Kochian (Professor)
Research : Trace Metal + roots, molecular biologist
H. Randy Kutcher (Associate Professor)
Research : Integrated pest management program applied to plant diseases of cereals (wheat, barley, oats), canaryseed and flax. Focus of the program is to integrate varietal resistance, fungicides and agronomic strategies to control stripe rust, fusarium head blight and leaf spot diseases of cereals, leaf mottle of canaryseed and fusarium wilt of flax.
Eric Lamb (Associate Professor)
Research : Mechanisms structuring plant community diversity and composition Plant-soil interactions Plant competition Methods for summarizing and analyzing complex ecological data
Curtis J. Pozniak (Professor)
Research : Genetics, breeding, production and management of durum and high yielding wheat.
Sean Prager (Assistant Professor)
Research : Entomology
Martin Reaney (Professor)
Research : Biofuels, Crop utilization
Tim Sharbel (Associate Professor, Global Institute for Food Security (GIFS) Research Chair in Seed Biology)
Research : My research program identifies apomictic factors in naturally-occurring asexual plant populations using molecular evolutionary and "omics" approaches. These factors are analysed in wild populations to test evolutionary hypotheses regarding the evolution of sex. They pursue technology development to transform these factors into model and crop plants.
Steve J. Shirtliffe (Professor)
Research : Field crop agronomy, weed ecology
Karen K. Tanino (Professor)
Research : My specialization is plant and cell abiotic stress physiology, and the interactions of plants with the environment. My research interests include the influence of frost and chilling on annual crops, increasing seed germination synchrony and rates, plant epigenetics, influence of temperature on vegetative bud dormancy and cold hardiness in woody plants; acclimation and cold stress responses on a single cell level using FTIR-synchrotron technology; salt and drought stress resistance in potato; Northern vigour (latitudinal) responses in horticulture crops.
Bunyamin Tar'an (Associate Professor)
Research : Breeding, genetics and management of chickpea
Albert (Bert) Vandenberg (Professor and NSERC Industrial Research Chair)
Research : Genetics, breeding, production and management of dry bean, lentil, fababean and special crops.
Tom D. Warkentin (Professor)
Research : breeding and genetics of pulse crops, particularly field pea with emphasis on improvements in grain yield, plant architecture, disease resistance and seed quality.
Doug R. Waterer (Associate Professor)
Research : My area of specialization is the agronomy of horticultural/medicinal crops. My research interests include: crop improvement through standard breeding and molecular techniques, micro-climate modification, integrated pest management and various other aspects of the agronomy of potatoes, vegetable crops, spice crops and medicinal plants.
Christian (Chris) Willenborg (Assistant Professor)
Research : The overarching goal of my research program is to optimize weed management in agricultural systems. To achieve this, our research aims both to improve our understanding of the basic biological and ecological principles that govern weed population dynamics and to develop highly efficacious weed control technologies. To accomplish this, we conduct both basic and applied research in the following areas : Efficacy of herbicides in field crops Herbicide recommendations for weed control Integrated weed management Biological and ecological constraints on weed population and community dynamics Crop-weed interactions; plant interactions