

## FELLOWSHIPS AWARDED FOR 2009

(N.B.: for confidentiality reasons, no names of individuals are given in this list)

Research Fellow's Nationality	Home Institution	Destination Country	Host Laboratory	Duration of Fellowship (weeks)	Proposed Studies
USA	USDA-Agriculture Research Service	NZL	AgResearch Limited	8	Novel endophytes were developed to provide the attributes of the wild-type endophytes in sustaining productive growth of perennial ryegrass stands, but without the toxic alkaloids that cause ryegrass staggers and a disruption of thermoregulation in cattle and sheep. Doppler ultrasound technology has potential to measure blood flow response to toxicants. This new technology will be used to determine if vasoconstriction and reduced blood flows occur in sheep grazing novel endophyte ryegrass.
GRC	Aristotle University of Thessaloniki	GBR	Scottish Agricultural College	12	Post-genomic analysis of milk production, fertility and energy balance of dairy cattle
USA	USDA-ARS	CHE	Swiss Federal Institute of Technology Zurich	19	Both EU and the US are using trees as a green technology tool for protecting our natural resources from harmful trace elements, e.g., boron (B). However, quantitative information is lacking for identifying hybrid poplar clones that tolerate excessive B in poor quality waters/soils. Hence, our study on "Evaluation of hybrid poplar tree tolerance to irrigation with high boron waters" will identify specific hybrid poplar trees that can be used for managing excessive B in our living environment.
CAN	Université de Sherbrooke	CZE	Soil Biology Institute of the Academy of Sciences of the Czech Republic	8	Investigating how earthworms could mitigate soil methane (CH <sub>4</sub> ) production in manure-amended soils.
GRC	Democritus University of Thrace	NLD	Institute for Biodiversity and Ecosystem Dynamics (IBED) - University of Amsterdam	12	Multiple pest control by a generalist predator: the case of <i>Amblyseius swirskii</i> as a biological control agent of the thrips <i>Frankliniella occidentalis</i> and the whitefly <i>Trialeurodes vaporariorum</i>
IRL	University College Dublin	USA	Louisiana State University	12	Develop novel healthcare product for animal fasciolosis to reduce flukicide residues in animal products
HUN	Faculty of Agricultural and Food Sciences, University of West Hungary	FIN	Department of Applied Biology, University of Helsinki	5	Improved screening procedures for selection of faba bean and pea plants against abiotic stresses
CZE	Biology Centre ASCR	CAN	Université de Sherbrooke, Département de biologie	10	Risk assessment of development the ATB-resistance-reservoir in agricultural soils cyclically fertilized by livestock waste
USA	USDA Forest Service, PNW Research Station	JPN	Hokkaido University	6	Integrating Sustainable Forestry Management and Ecosystem Services to Enhance Forest Stewardship: We describe key ecosystem services provided by temperate forests including forest products, water, carbon, and species conservation. We evaluate forestry management to sustain these services and specifically assess the role that mixed conifer-broadleaf forests in northern Japan and southeast Alaska play to improve biodiversity, create complex forest structures, and enhance forest sustainability.
DEU	Technische Universität München	AUS	School of Agricultural and Resource Economics; The University of Western Australia	12	Analyzing the Effect of Risk and Uncertainty on Optimal Tillage and Nitrogen Fertilizer Intensity: Recommendations for Sustainable Crop Production
ESP	CSIC	USA	Southwest Watershed Research, Agricultural Research Service, U.S.D.A.	3	Enhancing the quantification and monitoring of soil loss and sediment transfer by water erosion within and outside rangeland and cropland areas using innovative sediment tracers.
USA	USDA-ARS	NLD	Wageningen University - Center for Water and Climate	13	Evaluation of large aperture scintillometer as a tool for validating regional evapotranspiration maps

## FELLOWSHIPS AWARDED FOR 2009

(N.B.: for confidentiality reasons, no names of individuals are given in this list)

Research Fellow's Nationality	Home Institution	Destination Country	Host Laboratory	Duration of Fellowship (weeks)	Proposed Studies
CAN	University of Western Ontario	DEU	Zentrum fur Molekularbiologie der Pflanzen (ZMBP)	24	Genomic approach to development of new pest control strategies: plant resistance mechanisms to <i>Tetranychus urticae</i> , major pest in agriculture with new genomic resources
USA	USDA ARS	FRA	INRA Sophia-Antipolis Agrobiotech	3	Small RNA expression in the Arabidopsis- <i>Phytophthora parasitica</i> host-pathogen system, a model for other <i>Phytophthora</i> diseases
USA	US Dept. of Agriculture, Agricultural Research Service	AUS	Department of Primary Industries and Fisheries	8	Evaluation of anti-cattle tick vaccine candidates selected by bioinformatic and proteomic analyses of a cattle tick expressed gene database.
USA	The University of Arizona	NZL	(1) Victoria University Wellington, (2) NIWA Christchurch	12	Improving Distributed Watershed Modeling to Understand Hydro-Ecological Impacts of Land Use Change and Enhance Sustainability of Water Management
USA	Michigan Technological University	ESP	University of València	16	Organic matter management and sustainability of soil fertility in agricultural, shrubland, and forest soils of eastern Spain.
CAN	Agriculture & Agri-Food Canada	AUS	University of Sidney	26	Disease prevention of vascular plant pathogens for sustainable food production Disease prevention derived from advances in understanding host-pathogen interactions has proven highly successful. Research will focus on three destructive vascular plant diseases found worldwide: 1) An infectious clone and diagnostics to a double-stranded DNA pararetrovirus will be developed; 2) A single-stranded RNA luteovirus infectious clone will help dissect infection and silencing responses; 3) Resistance
ITA	Università del Piemonte Orientale	USA1	Montana State University	3	Research of a species specific way to immuno-label aero-dispersed propagules of fungal plant pathogens, exploiting the IgE class antibody present in the serum of an allergic individual. Results should be implemented into a previously developed technique, relying on flow cytometry, for the routine detection of aero-diffused particles.
USA	US Dept Agriculture, Agricultural Research Service	GBR	Oxford University	10	Genomics-aided discovery of a novel gene cluster for a nematode repellent factor in <i>Pseudomonas fluorescens</i>
JPN	National Agriculture and Food Research Organization	USA	University of California, Davis	26	Development of a heat transfer model to assess the effects of land use and management on the thermal environment in a crop canopy under conditions of global warming.
GBR	The Macaulay Land Use Research Institute	USA	Department of Ecosystem Science and Management	3	The influence of changing rainfall levels on the long term storage of carbon in savanna soil.
GBR	Land Economy and Environment Research Group, Scottish Agricultural College	NZL	Agresearch	4	Evaluating the feasibility of emissions trading in agriculture: what can Europe learn from New Zealand? Precise subject: inventory measurement of emissions from agricultural systems and their reporting for use in the development of emissions trading in agriculture
USA	USDA ARS Southwest Watershed Research Center	ESP	Department of Earth Physics and Thermodynamics	20	Innovative Approaches to Map Plant and Soil Water Status: Vegetation Fluorescence and Multi-Source Data Integration
FRA	Institut National de la Recherche Agronomique	USA	Purdue University	2	Management of water resources of agricultural watersheds has emerged as an environmental priority due to the effects of land use on runoff and pollutant transport. This study aims to compare various modeling approaches for planning and management of water utilization.

## FELLOWSHIPS AWARDED FOR 2009

(N.B.: for confidentiality reasons, no names of individuals are given in this list)

Research Fellow's Nationality	Home Institution	Destination Country	Host Laboratory	Duration of Fellowship (weeks)	Proposed Studies
JPN	National Agriculture and Food Research Organisation, National Institute of Animal Health	CZE	Institute of Microbiology, Academy of Sciences of the Czech Republic	10	The subject of my research is to develop an easy and reliable method to detect and genotype the single nucleotide polymorphisms (SNPs) of Toll-like receptors (especially, TLR4 and TLR5) among pig breeds in Czech using a real-time PCR based technology and its utilization toward the control of Salmonella enterica serovar Typhimurium (ST) infection in pig.
USA	USDA-ARS	AUS	The Univeristy of Queensland	8	Determining Research Needs for Testing and Deployment of GM Sorghum
HUN	Research Institute for Animal Breeding and Nutrition	CAN	Department of Biomedical Sciences, University of Guelph	26	„Genetic markers of fertility in relation to heat stress“ The planned project will focus on cattle fertility problems in relation to climate change and heat shock. Using molecular genetic methods, we aim to investigate and develop molecular markers in spermatozoa with a potential of new selection tools for breeders.
USA	USDA	JPN	National Institute for Agro-Environmental Sciences; Carbon and Nutrient Cycles Division	8	This project will address Theme 1 The Natural Resources Challenge of accurate determination of greenhouse gas (GHG) emissions of nitrous oxide (N2O), methane (CH4), and carbon dioxide (CO2) from land applied with animal manure. Animal agriculture contributes to the total anthropogenic GHG emissions. These soil emissions have far-reaching environmental impacts including stratospheric ozone destruction, global warming, and ecosystem degradation. Therefore, research is needed to quantify the effect
GRC	Agricultural University of Athens, Faculty of Animal Science and Hydrobiology	USA	USDA, Agricultural Research Service, Animal Parasitic Diseases Laboratory	26	Developing a surveillance system for Trichinella reservoir hosts to support international certification programs.
NLD	Institut National de la Recherche Agronomique	GBR	Environmental Change Institute, Oxford University Centre for the Environment	5	Towards Climate Neutral Farming. An investigation of the feasibility and consequences of modest to very ambitious objectives for the mitigation of greenhouse gas emissions by agriculture.
NLD	Wageningen University	USA	Utah State University	13	Spatial process-based modelling for improved understanding and management of ecosystem services in agro-ecosystems, in particular biological pest control
JPN	Hokkaido university	ITA	Stazione Sperimentale per l'Industria delle Conserve Alimentari	10	Production of additive-free meat products. Investigating into the mechanism leading to good colour dried pork meats without the use of nitrite and nitrate.
FRA	Agrocampus Ouest	CAN	AGRICULTURE AND AGRI-FOOD	26	Development of a soil indicator for animal cropping systems: A comparison of two regions, Brittany (France) and Quebec (Canada)
NZL	University of Auckland	ESP	IMIDA-Acuicultura, Consejería de Agricultura y Agua de la Región de Murcia	5	Resolving Bottlenecks to Developing the Sustainable Aquaculture of Octopus
DEU	Christian Albrechts University	USA	Department of Agronomy	4	Protein quality of different forage legumes growing in contrasting environments
CAN	Agriculture and Agri-Food Canada	CHE	CABI Europe - Switzerland	26	Improving Methodology for Evaluating Non-target Species for Assessing Risk of Candidate Agents for Biological Control of Arthropod Pests
AUS	University of Western Australia	FRA	INRA, Dijon	12	Evolution, biochemical and molecular studies on herbicide resistant weeds. Overall objective aimed at minimising adverse impacts of herbicide resistant weed evolution.