

# SCRI Research Programme

ongoing as at 1 October 2009

The research programme is commissioned by RERAD (Scottish Government: Rural and Environment Research and Analysis Directorate) and a variety of other funders. The list contains the body that awarded the grant and the title of the project and, in the case of RERAD, the commissioning number.

## RERAD Core – Programme 1

Workpackage 1.1	Barley Genetics
Workpackage 1.2	Potato Genetics
Workpackage 1.3	Soft Fruit Genetics & Pathology
Workpackage 1.4	Barley Pathology
Workpackage 1.5	Potato Pathology
Workpackage 1.7	Sustainable Crop Systems

## RERAD Contract Research Funding

SCR/849/08	Support for additional knowledge exchange activities.
SCR/918/07	Genomics-assisted dissection of barley morphology and development.
SCR/919/07	<i>Dickeya dianthicola</i> – a threat to Scottish seed potatoes.
SCR/921/09	Cell wall lignin programme: manipulating lignin to improve biofuel conversion of plant biomass.
SCR/927/09	Emerging threat to Scottish potato production posed by <i>Dickeya solani</i> .
BSS/037/08	Scottish badger survey.
BSS/845/06	Epidemiology, population, health and infectious disease control.

## External research contracts

Biotechnology and Biological Sciences Research Council (CSI)	Optimising wheat grain shape for improved processing quality.
BBSRC (CSI)	Exploiting the <i>Phytophthora infestans</i> genome to identify gene targets for sustainable potato protection.
BBSRC (CSI)	The establishment and application of a forward genetic resource for the development of efficient breeding strategies in grass and cereals.
BBSRC LINK	Association genetics of UK elite barley.
BBSRC LINK	Role of inoculum sources in <i>Rhynchosporium</i> population dynamics and epidemics on barley.
BBSRC (via University of Dundee)	LoLa: What are the roles of oomycete RXLR effectors in the establishment of plant disease?
BBSRC (via University of Birmingham)	LoLa: Meiosis in barley: manipulating crossover frequency and distribution.
Bioforsk	Systems experiments.



Bioforsk	Plant metabolites for healthy plants and healthy people.
British Council	Analysis of the interaction between the pine wood nematode <i>Bursaphelenchus xylophilus</i> and the maritime pine <i>Pinus pinaster</i> .
British Ecological Society	Climate change in the underworld: how elevated CO <sub>2</sub> affects root–herbivore interactions.
Carnegie Trust	Trophic cascades in a changing climate: the impact of elevated CO <sub>2</sub> on above– and below–ground interactions.
Carnegie Trust	The role of bacterial secondary symbionts of cabbage aphids on aphid-parasitoid interactions in Scotland.
Centre for Ecology & Hydrology (via Department for Environment Food and Rural Affairs (Defra))	Use of 'UKCIP08 scenarios' to determine the potential impact of climate change on the pressures/threats to soils in England and Wales.
Commercial	Brassica breeding.
Commercial	Soft fruit analysis.
Commercial	Potato breeding.
Commercial	Blackcurrant breeding.
Commercial	Lipid analysis.
Commercial	Barley analysis.
Commercial	Soil and water conservation.
Defra/Home-Grown Cereals Authority (HGCA)	GREENGRAIN: Genetic reduction of energy use and emissions of nitrogen in cereal production (LINK).
Defra LINK (via ADAS)	TRAMLINES: Practical cost-effective techniques to reduce pollution from tramlines in combinable crops: a field and catchment scale evaluation.
Defra LINK (via SAC)	CORACLE: Control of Ramularia leaf spot in a changing climate.
Defra/RERAD	Integrated pest and disease management for high quality protected raspberry production.
Estacion Experimental de Aula Dei, CSIC, Spain	Immunogold localisation of antioxidant proteins in legume nodules.
European Union (EU)	EURASNET: European alternative splicing network.
EU	EU-SOL: High quality solanaceous crops for consumers, processors and producers by exploration of natural biodiversity.
EU	BIOEXPLOIT: Exploitation of natural plant biodiversity for the pesticide-free production of food.
EU	DEVELONUTRI: Development of high throughput approaches to optimise the nutritional value of crops and crop-based foods.
EU	GENBERRY: European small berries.
EU	SPICY: Smart tools for prediction and improvement of crop yield.
EU	<i>Triticeae</i> Genome: Genomics for <i>Triticeae</i> improvement.
EU	PLAPROVA: Plant production of vaccines.
EU	BrainHealthFood: Bioactive compounds from blackcurrant processing waste for brain health.
EU	Meiosys: Systematic analysis of factors controlling meiotic recombination in higher plants.
EU Marie Curie	Role of arbuscular mycorrhizal fungi on the accumulation of radiocaesium by plants.
EU Marie Curie	Managing insecticide resistance in aphids in Scotland.

European Science Foundation	Exploiting genomics to understand plant-nematode interactions.
Food and Environment Research Agency	Identification and reduction of risks posed by Potato Ring Rot disease to the Scottish potato industry.
French National Institute for Agricultural Research (INRA)	Global change at the microbial scale – effects of climate change on microbial decomposition and modulation of physical structure of soil.
HGCA	Fungicide performance information for barley growers.
Horticultural Development Council (HDC)	Developing techniques to manage raspberry leaf and bud mite in tunnel produced raspberry.
International Maize and Wheat Improvement Center CIMMYT	Genomic dissection of tolerance to drought stress in wild barley.
Medical Research Council (via University of Dundee)	New geotechnical approaches to soil biological processes.
Ministerio de Educacion y Cienca (CICYT) in Spain	Study of the effect of the treatment with methyl jasmonate on the bioformation of chiral volatile compounds in vegetal foods.
Nairns	Knowledge transfer partnership.
Natural Environment Research Council (via University of Stirling)	Microbial diversity in Antarctic soils.
Norwegian Research Council	Metabolic profiling of <i>Rubus</i> (cloudberry and raspberry): effect of inheritance and environment on phytochemicals beneficial to human health and the identification of viable targets for nutritional enhancement.
Potato Council Ltd	Independent variety trials.
Potato Council Ltd	GB late blight populations: monitoring and implications of population changes.
Potato Council Ltd	Informing management of potato diseases through epidemiology and diagnostics.
Potato Council Ltd	Aphids and virus transmission in seed potato crops.
RERAD	Whole genome and interaction transcriptome sequencing of the barley pathogen <i>Rhynchosporium secalis</i> . (SCR/922/08)
RERAD	Study of the epidemiology of <i>Phytophthora ramorum</i> and <i>Phytophthora kernoviae</i> in managed gardens and heathland in Scotland.
RERAD/Defra/Potato Council Ltd	Sequencing the ‘gene space’ of potato chromosome IV, comparative analysis with tomato and development of a gene-based mapping platform. (SCR/920/08)
RERAD/GSK (HortLink)	Development of high profile germplasm for UK production of blueberries.
RERAD/HDC (HortLink)	Developing breeding and selection tools to reduce spoilage of soft fruits and wastage in the supply chain.
RERAD/Rothamsted International LINK	Producing low acrylamide risk potatoes.
Rothamsted International	Selecting indigenous phosphate solubilising fungi ( <i>Aspergillus</i> , <i>Penicillium</i> ) for crop improvement in nutrient deficient soils of Cameroon. (African Fellowship)
Royal Society	Genetic control of lateral root development stimulated by rhizosphere nematodes.
Royal Society	Transcript profiling of meristem activation in potato using the POCI microarray.
Royal Society	A novel caspase-like protease for plant programmed cell death (PCD).
Royal Society of Edinburgh	RSE/Scottish Executive Personal Fellowship.



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Rural Development Administration of Korea	Development of manipulation techniques of plant viruses for the development of multiple virus resistant horticultural crops.
Scottish Enterprise	Additive-free treatments for shelf-life extension of minimally processed foods.
Scottish Enterprise	Improving transformation efficiency in barley using a novel method that protects <i>Agrobacterium</i> -mediated gene transfer from attack by caspases.
Scottish Enterprise	A platform enabling technology to characterise plants for their therapeutic potential: anti-inflammatories from <i>Capsella</i> as a model.
Scottish Funding Council (SFC)	Scottish Bioinformatics Research Network (SBRN) maximising bioinformatics infrastructure for Scottish Health, Agriculture and Industry.
Swedish University of Agricultural Science	Characterisation of efficient symbionts via microbial isolation and root nodule structure: a comparison of N <sub>2</sub> -fixing legumes from an island (Scotland) with those from a continental ecosystem (Sweden).
Teagasc	Development of metabolomics based methods to benefit marker assisted breeding in perennial ryegrass.