SCRI Research Programme
2002-2003

SEERAD funded research programme showing: SEERAD project number; Title (prefixed ROA for ROAMEd core-funded projects; FF for Flexible Fund projects); Scientific Project Leader. In addition to this list, there are research projects undertaken on behalf of various bodies, including other governmental bodies, commerce and levy boards.

SCR/525/99	ROA Interactions between the structure of soil habitats and biological processes	Bengough G
SCR/526/99	ROA Integrative mapping of the long arm of barley chromosome 5H	Thomas W T B
SCR/527/99	ROA Development of a graphical database for the visualisation of genotypic and phenotypic data in barley	Marshall D F
SCR/528/99	ROA Use of an accelerated marker assisted selection scheme to introgress novel variation for economically important traits into cultivated barley	Thomas W T B
SCR/536/00	ROA Development and application of chemical strategies to facilitate genetic and molecular marker studies of factors affecting quality traits in potatoes	Davies H V
SCR/537/00	ROA Biochemical approaches to define novel targets for the genetic improvement of malting barley	McDougall G J
SCR/538/00	ROA Optimising production and biodiversity of arable plants and invertebrates at patch and landscape scales. I. Arable plants	Squire G
SCR/539/00	ROA Self organisation of plant and canopy architecture in barley and feral brassicas: trade offs between production and defense	Squire G
SCR/540/00	ROA Genetics of cultivated potatoes	Bradshaw J E
SCR/541/00	ROA Genetic approaches to evaluation and utilisation of soft fruit germplasm	Brennan R
SCR/542/00	ROA Consequences of soil biodiversity for the functioning and health of agricultural soils in relation to C cycling dynamics and resilience	Griffiths B S
SCR/544/00	ROA Consequences of soil biological diversity for the functioning and health of agricultural soils in relation to N cycling processes. I. Soil microbial diversity and nitrification/denitrification processes	Wheatley R
SCR/545/00	ROA Detection, diversity and epidemiology of important viruses and their vectors in berryfruit crops and strategies for their effective control	Jones A T
SCR/546/00	ROA Development and use of molecular markers to study the epidemiology of late blight (*Phytophthora infestans*) of potato in Scotland	Cooke D
SCR/547/00	ROA Biodiversity in the antioxidant status and composition of Rubus and other soft fruit germplasm	Stewart D
SCR/549/00	ROA Characterisation of molecular interactions between soft rot erwinias and potato	Lyon G D
SCR/551/00	ROA Post-transcriptional control of gene function	Brown J W S
SCR/552/00	ROA Barley 'deletion' mutation grid	Waugh R
SCR/554/00	ROA Protein-protein interactions and the role of virus proteins in disease processes	Torrance L

SCR/557/01	ROA Targeted long-distance transport of macromolecules in plants	Oparka K
SCR/558/01	ROA Resistance to potato viruses: exploitation of host gene resistance and transgenic resistance to study resistance mechanisms and to develop resistant germplasm	Barker H
SCR/559/01	ROA Molecular biology of potato leafroll virus: aphid transmission and the establishment of infection in host plants	Barker H
SCR/560/01	ROA Molecular bases of resistance and susceptibility in potato and barley	Birch P R J
SCR/561/01	ROA Molecular bases of pathogenicity in potato cyst nematodes, *Xiphinema index* and *Phytophthora infestans*	Jones J
SCR/562/01	ROA Genetics of seedling root traits in barley	Forster B
SCR/563/01	ROA Conservation and utilisation of the Commonwealth Potato Collection	Mackay G R
SCR/564/01	ROA A gene map of the interval between GP21 and GP179 on potato linkage group V	Bryan G
SCR/565/01	ROA Identification and characterisation of bacterial artificial chromosome (BAC) clones from gene rich regions of the barley genome	Waugh R
SCR/566/01	ROA Produce and maintain pathogen-tested stocks of Rubus, Ribes and Fragaria germplasm and index for infection material imported into SCRI	Jones A T
SCR/571/01	ROA Ecological management and biotechnology	Squire G
SCR/572/01	ROA Computational biology	Marshall D F
SCR/573/01	ROA Functional analysis of novel genes from potato and barley	Lacomme C
SCR/574/01	ROA Development and application of metabolic profiling technologies to enhance the understanding of metabolic and developmental processess in plants	Deighton N
SCR/575/01	ROA Enhancing food quality and nutritional value through multidisciplinary approaches which exploit genetic and molecular diversity	Taylor M
SCR/576/01	ROA Sequence diversity and horizontal genomics (targeted gene discovery)	Waugh R
SCR/577/01	ROA Molecular plant diversity and germplasm resources	Waugh R
SCR/578/01	ROA Parallel gene expression technologies supporting the discovery of plant and pathogen genes important to agriculture and biotechnology	Machray G C
SCR/580/02	ROA Suppression of gene silencing by virus proteins	MacFarlane S
SCR/581/02	ROA Cell and tissue engineering in barley and potato	Machray G C
SCR/583/02	ROA Variation in pathogenicity in *Globodera* spp. in relation to host resistance	Phillips M S
SCR/584/02	ROA Approaches to regulate the L-ascorbic acid content of commercially important plants	Viola R
SCR/585/02	ROA Genetics of cultivated diploid potatoes	Bradshaw J E
SCR/586/02	ROA Cell-to-cell trafficking of macromolecules in plants	Oparka K J

SCR/587/02	ROA Optimising production and biodiversity of arable plants and invertebrates at patch and landscape scales. II. Invertebrates	Fenton B
SCR/588/02	ROA Consequences of soil biological diversity for the functioning and health of agricultural soils in relation to N cycling processes. II. Carbon and nitrogen fluxes among major plant and soil pools, using natural abundance stable isotopes	Scrimgeour C
SCR/516/97	FF Genetic mapping and molecular cloning of novel sources of resistance to Globodera pallida	Waugh R
SCR/522/98	FF Development of Rubus genotypes with transgenic resistance to raspberry bushy dwarf virus	Jones A T
SCR/555/00	FF Cereal transcriptome resources	Waugh R
SCR/556/00	FF Comparison of the molecular bases of pathogenicity in the model oomycetes Peronospora parasitica and Phytophthora infestans through a genomics approach	Birch P R J
SCR/568/00	FF Significance and mechanisms of landscape-scale gene flow	Ramsay G
SCR/569/00	FF Phytophthora diseases of soft fruit: determining their prevalence and the source of new outbreaks in Scotland	Duncan J M
SCR/570/00	FF Mechanical properties of primary cell walls by micro-stretching in vivo	Bengough A G
SCR/579/01	FF Development of robust, broad basedQTL maps to improve barley breeding	Thomas W T B
SCR/582/01	FF Cloning of avirulence genes from the oomycete plant pathogens Peronospora parasitica and Phytophthora infestans	Birch P R J
SCR/589/02	FF Novel methodologies and tools for the analysis of germplasm collections	Marshall D
SCR/808/94	FF Development of molecular biological and physiological techniques in studies of the interaction between microbes, nutrient cycling and vegetation among a range of agriculturally important pastures, to enable scaling from microcosm to field. + Phase 2.	Ritz K
SCR/818/95	FF Genetic engineering of crop plants for resistance to insect and nematode pests: effects of transgene expression on animal nutrition and the environment	Jones A T
SCR/823/97	FF Significance of physical heterogeneity for scaling of solute chemistry in soils from fine scale to subcatchment	Bengough G
SCR/824/97	FF Efficacy studies on a plant virus-based expression system and on alternative delivery routes for peptides and proteins with pharmaceutical, therapeutic and related uses for improving animal health, nutrition and welfare	Brown J W S
SCR/832/99	FF Identification and assessment of nutritional relevance of antioxidant compounds from soft fruit species	Davies H V
SCR/833/00	FF Microsatellites as population genetic markers	Powell W
SCR/834/01	FF Assessment of plant germplasm for bioactive molecules	Ramsay G

SCR/835/01	FF Genomic sequencing and proteomic analyses of the potato pathogenErwinia carotovora subsp. Atroseptica (Eca) and the animal pathogen Chlamydophila abortus (Ca)	Toth I
SCR/837/01	FF Biodiversity: taxonomy, genetics and ecology of Sub-arctic willow Scrub	Russell J
SCR/901/02	FF Soil stability and resilience: the interplay between biological and physical recovery from stress	Griffiths B S
SCR/902/02	FF Functional characterisation of appressorial infection stage-specific proteins from Phytophthora infestans	Birch P R J