

SCRI Research Programme

1997-1998

SOAEFD funded research programme showing: SOAEFD 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/405/93	ROA Structure and function of the genomes of tobnaviruses (specifically tobacco rattle and pea early browning viruses), with particular reference to virus variation, transmission and pathogenicity	Robinson D J
SCR/421/94	ROA Biosynthetic control of fibre constituents during development and differentiation of fibre cells and genetic modification of these processes	Davies H V
SCR/422/94	ROA Processing of plant fibres by novel and environmentally acceptable methods	Davies H V
SCR/423/94	ROA Physiological and developmental regulation of plasmodesmata	Oparka K J
SCR/424/94	ROA Relating soil structure to biological function	Young I M
SCR/426/94	ROA Fundamental studies on longidorid and trichodorid nematode vectors in relation to the aetiology of nepo- and tobnaviruses which are transmitted to a range of arable and fruit crops	Brown D J F
SCR/427/94	ROA Characterisation of nematode cuticular surfaces of <i>Globodera</i> , <i>Heterodera</i> and <i>Meloidogyne</i> involved in pathogenesis	Robertson W M
SCR/428/94	ROA Investigate inheritance of low temperature sugar stability and develop effective selection strategies to produce superior potato germplasm for processing	Mackay G R
SCR/429/94	ROA Genetic architecture of diploid potatoes and production of enhanced germplasm	Bradshaw J E
SCR/432/94	ROA Integrated approaches for rapid and efficient gene transfer and characterisation in potato	Millam S
SCR/434/94	ROA Dissection of regulatory mechanisms governing invertase gene expression in potato	Machray G C
SCR/435/94	ROA To clone the <i>Hero</i> gene of tomato which confers resistance to potato cyst nematode by transposon tagging	Kumar A
SCR/444/95	ROA Low temperature stress in <i>Ribes</i> , <i>Rubus</i> and other woody genera	McNicol R J
SCR/445/95	ROA Collection and evaluation and genetic resources of <i>Rubus</i> , <i>Ribes</i> and <i>Fragaria</i>	McNicol R J
SCR/446/95	ROA Molecular study of genetic variation in plant parasitic nematodes in relation to virulence and plant resistance especially in relation to potato cyst nematodes (PCN) and root knot nematodes	Phillips M S
SCR/449/95	ROA Advanced information techniques for the study and management of vegetation systems	MacKerron D K L
SCR/450/95	ROA Variation and stability of traits governing plant development and resource capture in relation to environment and plant competition	Marshall B

SCR/451/95	ROA Genetic and environmental analysis of epidemics of <i>Erysiphe graminis</i> on barley and oats, <i>Phytophthora fragariae</i> on strawberries and raspberries and <i>Erwinia</i> spp. on potatoes	Newton A C
SCR/452/95	ROA Genetic architecture of tetraploid potatoes and production of enhanced germplasm	Bradshaw J E
SCR/454/95	ROA Structure of soil microbial and faunal communities, their interaction with vegetation and the relationship to soil processes and health	Griffiths B S
SCR/455/95	ROA DARE Dynamics and connectivity in discontinuous plant populations, using wild raspberry and feral oilseed rape as model systems	Crawford J W
SCR/456/95	ROA Genetics and ecophysiology of abiotic stress tolerance in <i>Hordeum vulgare</i> (barley) and <i>Arabidopsis thaliana</i>	Forster B P
SCR/457/95	ROA Development and evaluation of novel methodology involving modern chromatography and mass spectroscopy for stable isotopes and antinutritional, quality and other biologically active compounds	Christie W W
SCR/462/96	ROA Molecular mechanisms of plant virus replication and movement and the effects of resistance genes on these processes, using cucumoviruses and tobamoviruses as contrasting model systems	Palukaitis P F
SCR/464/96	ROA Biochemical and molecular control of carbohydrate metabolism and the modification of starch structure in potato	Davies H V
SCR/465/96	ROA Application and exploitation of molecular markers in barley genetics	Powell W
SCR/471/96	ROA Mathematical analysis of dynamics and scaling in heterogeneous and hierarchially coupled systems I: the soil/microbe complex	Crawford J W
SCR/478/96	ROA Physiological mechanisms underlying the environmental responses of crops in Northern Britain: stable isotope studies of carbon, nitrogen and water relations in barley and contrasting dicot model populations	Handley L L
SCR/479/96	ROA Maintenance, improvement, evaluation and exploitation of biodiversity in germplasm collections of potato	Bradshaw J E
SCR/481/96	ROA Evaluation, improvement, maintenance and exploitation of biodiversity in germplasm collections of brassicas for improved pest resistance (particularly cabbage and turnip root flies) and nutritional value	Birch A N E
SCR/482/96	ROA Detection, identification, genetic variation and ecology of virus and insect, mite and nematode pests and virus vectors, especially of soft fruit crops, and strategies for their effective control	Jones A T
SCR/483/96	ROA Soft rot erwinias and blackleg disease: aetiology, epidemiology and pathogenicity, selection of resistant potato cultivars and their mechanisms of resistance	Lyon G D
SCR/485/96	ROA Molecular and biological factors which control the transmission of luteoviruses (in particular potato leafroll virus) and potyviruses (in particular potato virus Y) by their aphid vectors	Mayo M A
SCR/486/96	ROA Identification and development of control strategies for fungal diseases of fruit crops, especially the use of specific enzyme inhibitors for control of <i>Botrytis cinerea</i> in fruit	Williamson B
SCR/487/96	ROA Mathematical analysis of dynamics and scaling in heterogeneous and hierarchially coupled systems II: complex biochemical networks	Crawford J W

SCR/494/97	ROA Genetic control of pathogenicity, host specificity and race structure at the molecular level in the fungal pathogens <i>Phytophthora infestans</i> , <i>Phytophthora fragariae</i> and related <i>Phytophthora</i> species	Duncan J M
SCR/495/97	ROA Transcriptional and post-transcriptional regulation of plant gene expression	Brown J W S
SCR/496/97	ROA Production of novel diagnostic reagents, in particular genetically engineered antibody-like proteins and investigation of their potential for use in research, biotechnology and diagnosis	Torrance L
SCR/497/97	ROA Studies on mechanisms of host gene-mediated and pathogen-derived transgene-mediated resistance to viruses to improve the deployment of new types of resistance for germplasm enhancement	Barker H
SCR/498/97	ROA Genetic modification of soft fruit and identification of tissue specific promoters for future gene targeting	McNicol R J
SCR/499/97	ROA Free radical processes in plants and plant-derived foods	Davies H V
SCR/500/97	ROA Analysis and disruption of the host-parasite interaction of the potato cyst nematode <i>Globodera pallida</i>	Jones J T
SCR/501/97	ROA Develop and operate methods for the detection and quantification of genetic resistance to a wide range of economically important fungal and bacterial pathogens of potato	Bradshaw J E
SCR/502/97	ROA Enabling technology for plant genome characterisation	Waugh R
SCR/503/97	ROA Produce and maintain pathogen-tested stocks of soft fruit cultivars and index for infection material imported into SCRI	Jones A T
SCR/416/93	FF Foodweb analysis of below ground ecosystems using natural abundance of stable isotopes	Handley L L
SCR/440/94	FF Investigation of <i>in vitro</i> splicing in plants and characterisation of snRNP and spliceosomal complexes	Brown J W S
SCR/443/95	FF Research into nutritional aspects of genetically manipulated potatoes, <i>Solanum tuberosum</i>	Mackay G R
SCR/458/95	FF Determining the origin and genetic structure of late blight outbreaks on Scottish seed and ware potatoes and assessing the hazard of sexual reproduction by <i>Phytophthora</i> to the seed industries of Scotland	Duncan J M
SCR/459/95	FF Development of tests to distinguish potato cultivars and their transgenic variants	Machray G C
SCR/461/95	FF Native Scots Pine: establishing a scientific basis for its conservation	Powell W
SCR/488/96	FF Modelling soil-water/structure functions to assess the efficiency of pesticides in agricultural soils against pathogenic nematodes	Young I M
SCR/504/97	FF Comparison of serological and PCR tests on dormant tubers and attempts to identify sources of virus in Scottish fields	Barker H
SCR/505/97	FF Molecular approaches to manipulate the development and composition of strawberry fruit	Davies H V
SCR/803/94	FF Fundamental studies to develop plant virus-like particles expressed in <i>Escherichia coli</i> as vaccine or therapeutic agents	Wilson T M A
SCR/805/94	FF Control of certain invertebrate pests of agricultural importance using gut membrane proteins as targets for antibodies	Fenton B

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.	Ritz K
SCR/815/94	FF Prediction of starch processing potential in relation to cereal and potato production under Scottish conditions.	Morrison I M
SCR/816/95	FF Phenotypic and genotypic bases of population dynamics in heterogeneous, species-rich grassland.	Squire G
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	Robertson W M
SCR/821/96	FF Exploitation of novel and known lectins in agricultural and biological research - an interdisciplinary approach to improve crop protection and productivity, animal (including human) welfare and health	Stewart D
SCR/822/97	FF The application of the free-living nematode <i>C. elegans</i> to the development of control procedures for nematode parasites of animals and plants	Jones J
SCR/823/97	FF Significance of physical heterogeneity for scaling of solute chemistry in soils from fine scale to subcatchment	Crawford J W