

Defra contracts at HRI

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#	ref	Project	Dates	UKP
	3 CE0406	<i>Integrated control of pests of cereals and other field crops - spatial dynamics of spiders (prev. PI0318)</i>	1991 2000	£421,000
	18 HH0903SFV	Genetic improvement of broccoli.	1994 1999	£1,078,316
	19 HH0904SFV	<i>Genetic improvement of lettuce.</i>	1994 1999	£897,604
	20 HH0905SFV	Genetic improvement of carrot.	1994 1999	£438,694
	21 HH0906SFV	<i>Genetic improvement of onion and leek.</i>	1994 1999	£464,877
	283 LK0416	The development of a sustainable system for the prevention of root disease in recirculating hydroponic crops	1994 1999	£363,657
	6 FT0225	<i>Investigation of textural quality development and post harvest softening in cox's orange pippin apples.</i>	1995 1999	£164,360
	33 HH1008SBU	To determine the genetic and physiological basis of `absolute` resistance to narcissus basal rot in wild species.	1995 1999	£185,311
	78 HH1404SFV	<i>`Nutrient utilisation growth and development of field vegetables under reduced input conditions.`</i>	1995 1999	£573,427
	79 HH1405SFV	To devise methods of improving the utilization of nitrogen in crop debris by subsequent crops.	1995 1999	£373,416
	87 HH1510TSF	<i>To determine the environmental and nutritional parameters controlling flower initiation and development in ...</i>	1995 1999	£190,540
	96 HH1605SBU	To develop a model of narcissus scheduling by determining meteorological and cultural factors which affect uniformity and timing in the production of bulbs and flowers	1995 1999	£203,976
	103 HH1713SFV	<i>Studies of the epidemiology of leek rust and foliar fungal pathogens of vegetable brassicas towards the development of systems to forecast the incidence and severity of diseases</i>	1995 1999	£311,759
	104 HH1716STF	To improve the detection diagnosis and epidemiological knowledge of chaf fruit disease pear decline and virus diseases of top fruit	1995 1999	£398,661
	105 HH1718SMU	<i>The biology and epidemiology of fungal pathogens and competitors of the mushroom.</i>	1995 1999	£407,952
	106 HH1723SFV	Studies of the biology and epidemiology of foliar fungal pathogens of alliums	1995 1999	£286,759
	110 HH1727SBU	<i>`Neck rot of Narcissus (Fusarium oxysporum Penicillium spp. Botrytis spp.): aetiology and epidemiology.`</i>	1995 1999	£163,181
	111 HH1729TFV	Sclerotinia on field grown lettuce.	1995 1999	£412,503
	134 HH1813SFV	<i>Biological control of Allium white rot.</i>	1995 1999	£346,759
	135 HH1815SFV	To determine how to exploit the main parasitoids of the cabbage root fly for use in systems of integrated pest...	1995 1999	£566,952
	151 HH1916STF	<i>To provide an improved basis for pest management of top fruit pests.</i>	1995 1999	£646,272
	156 HH1927SFV	Integration of epidemic development models in Brussel sprouts.	1995 1999	£286,759
	284 LK0429	<i>Integrated pest management of leaf miner pests of protected tomato crops</i>	1995 1999	£219,612
	304 OF0118T	Optimisation of nitrogen mineralisation from winter cover crops and utilisation by subsequent crops.	1995 1999	£220,120
	7 GC0110STF	<i>EU Prunus network</i>	1996 1999	£24,471
	9 GC0112SFV	`Developing functional links between vegetable brassica genetic resources molecular genetics and crop improvement.`	1996 1999	£180,000
	34 HH1010STF	<i>`To isolate identify and characterise the genes involved in imparting textural qualities to post-harvest fruit.`</i>	1996 1999	£309,489
	35 HH1011STF	To determine the genetic contribution to biochemical and physical measures associated with major sensory components.	1996 1999	£310,808
	107 HH1724SPC	<i>The biological suppression of root disease in hydroponic crops with nutrient recirculation.</i>	1996 1999	£228,989
	108 HH1725STF	`Epidemiology of brown rot blossom rot and bitter rot on apple.`	1996 1999	£335,851
	109 HH1726SHN	<i>Epidemiology of powdery mildews on roses and other HONS species.</i>	1996 1999	£244,255
	112 HH1733SHN	Potential of slow sand filters for control of fungal pathogens in recirculation systems	1996 1999	£183,191

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#	ref	Project	Dates		UKP
113	HH1734SFV	<i>To devise techniques to optimise the efficiency of insecticide use on field vegetables.</i>	1996	1999	£305,319
136	HH1822SFV	The identification and characterisation of insect pathogenic fungi for the biological control the lettuce root aphid and root feeding Diptera as a component of integrated pest management systems on field vegetablecrops	1996	1999	£213,723
137	HH1823STF	<i>To identify means of improving the performance of baculoviruses against pests of apple and other hort crops.</i>	1996	1999	£406,383
138	HH1824SMU	Entomopathogenic nematodes in the control of mushroom phorids and cabbage rootfly.	1996	1999	£500,510
139	HH1825SFV	<i>Identification and characterisation of bacterial toxins for use in the control of insect pests in horticulture.</i>	1996	1999	£305,319
152	HH1921SHO	To identify and develop practical relevant systems of pest control on dwarf hops.	1996	1999	£479,425
153	HH1924TFV	<i>Pest thresholds for the treatment of carrot fly.</i>	1996	1999	£302,924
154	HH1925SFV	Measurement of crop losses in Brussels sprouts resulting from infection by dark leaf spot as a model system...	1996	1999	£162,659
155	HH1926SFV	<i>Measurement of crop losses in leeks and onions resulting from infection by leek rust and leaf blight as model systems for the development of crop losspredictive systems for onions and leeks.</i>	1996	1999	£152,659
166	HH2007SFV	To identify and exploit optimal weeding times in competitive field vegetables and potato crops.	1996	1999	£488,510
168	HH2009SFV	<i>To determine the effect of strategies of herbicide use on the sensitivity of weed populations in field vegetable crops</i>	1996	1999	£167,925
298	OC9508	Rooting cuttings of recalcitrant woody ornamental species by creating gibberellin-enriched juvenile-like growth.	1996	1999	£254,147
299	OC9510	<i>A knowledge based assessment of rapeseed oil as a pesticide</i>	1996	1999	£243,261
326	WD0208	Propagation of farm woodland trees by somatic embryogenesis with particular reference to Wild Cherry (Prunus avium L.)	1996	1999	£120,058
327	WD0214	<i>Use of gibberellins to rejuvenate mature farm woodland trees and improve vegetative propagation and vigour</i>	1996	1999	£72,000
328	WD0216	To study the physiology of farm woodland seeds to provide a basis for improving seed viability and longevity	1996	1999	£314,000
4	CE0409	<i>Identification of a synergistic complex of natural enemies for biocontrol of aphids on cereals (HRI co. pro)</i>	1996	2000	£106,000
8	GC0111SFV	EU Genetic Resources Allium project	1996	2000	£72,000
140	HH1826SPC	<i>The role of crop host plants in systems of biological control in protected edible crops.</i>	1996	2000	£551,925
167	HH2008SFV	To quantify seed germination and seedling emergence characteristics of some important weeds of vegetable crops..	1996	2000	£360,905
281	HP0211	<i>Factors influencing the development of Buds on growing seed tubers into stems in the ware potato crop</i>	1996	2000	£235,000
305	OF0126T	Conversion to organic field vegetable production.	1996	2000	£506,544
42	HH1018SSF	<i>Modifying quality related genes in strawberry.</i>	1996	2001	£273,156
300	OC9518	The significance of nursery inoculum sources in apple canker epidemiology.	1996	2001	£409,977
312	PA1710	<i>Improving pesticide spraying techniques for tree crops</i>	1997	1999	£521,832
329	WD0218	Module raised seedlings (continuation of WD0211)	1997	1999	£52,000
330	WD0219	<i>Vegetative propagation (continuation to WD0212)</i>	1997	1999	£266,000
331	WD0220	Genetic improvement of woodlands (continuation of WD0213)	1997	1999	£264,000
332	WD0221	<i>Rejuvenation of wild cherry and ash by tissue culture (continuation of WD0215)</i>	1997	1999	£84,000

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	333 WD0222	Technology interaction to ease the uptake of genetically improved wild cherry by farmers	1997 1999	£42,610
	22 HH0908SMU	<i>Mushroom strain improvement through genetic engineering technology.</i>	1997 2000	£513,603
	36 HH1012SHN	Develop techniques for the genetic improvement of HNS (cont. HH1001SHN).	1997 2000	£437,055
	38 HH1014SSF	<i>Genetic improvement of raspberry (cont. of HH1005SSF).</i>	1997 2000	£314,230
	40 HH1016STF	Genetic improvement of pome fruit.	1997 2000	£852,544
	41 HH1017STF	<i>Genetic improvement of stone fruit (cont. of HH1004STF).</i>	1997 2000	£316,069
	55 HH1209SHN	Elucidating and improving the role of auxin at all stages in the propagation of HNS cuttings	1997 2000	£477,507
	56 HH1210SHN	<i>The mechanism of wound-auxin interaction involved in the rooting of HNS cuttings</i>	1997 2000	£261,859
	57 HH1211SHN	Stomatal dysfunction and other factors involved in weaning HNS cuttings.	1997 2000	£357,360
	58 HH1212SFV	<i>Soil physical characteristics and their impact upon pre- emergence seedling growth in vegetable crops.</i>	1997 2000	£456,052
	59 HH1213SFV	To identify physiological and biochemical factors which influence seed vigour in vegetable crops (cont of HH1207SFV)	1997 2000	£194,084
	64 HH1317SPC	<i>To determine yield and environmental differences in tomato growth in small scale versus commercial houses.</i>	1997 2000	£319,045
	65 HH1318SPC	Optimising the aerial environments for protected ornamental crops.	1997 2000	£319,045
	66 HH1320SPC	<i>The effects of root environment on the production of protected crops.</i>	1997 2000	£314,269
	67 HH1321SPC	Physiological responses of protected crops to root-induced stress	1997 2000	£436,862
	68 HH1322SPC	<i>Effects of the environment on calcium in relation to tomato and pepper yield and quality.</i>	1997 2000	£546,079
	72 HH1326SPC	Optimisation of aerial environments for edible crops.	1997 2000	£298,752
	88 HH1521SPC	<i>Understanding the control and use of temperature manipulation for the regulation of height and improvement of quality in ...</i>	1997 2000	£231,052
	89 HH1522SPC	Manipulation of the nutrition of AYR Chrysanthemums in hydroponic culture.	1997 2000	£191,003
	98 HH1614STF	<i>To develop a physiological understanding of rootstock effect on growth cropping and fruit quality in apple and cherry.</i>	1997 2000	£533,314
	114 HH1735SMU	Determination of the variation in the development and multiplication of mushrooms sciarids when reared	1997 2000	£200,245
	115 HH1736SSF	<i>Establishment of forecasting models for blackcurrant gall mite migration and blackcurrant leaf midge phenology.</i>	1997 2000	£138,631
	157 HH1928SSF	Integrated control of Botrytis and powdery mildew on strawberry.	1997 2000	£277,262
	158 HH1929SSF	<i>‘Crop damage sampling and treatment thresholds for blossom weevil and capsids and selective control methods for ...’</i>	1997 2000	£243,052
	159 HH1930SHO	Integrated pest management of damson hop aphid on dwarf hops.	1997 2000	£277,262
	171 HH2114STF	<i>Investigation into improving storage of horticultural produce by control of ethylene metabolism.</i>	1997 2000	£306,013
	255 HL0101LPC	The optimisation of tomato fruit quality (Proposal 5).	1997 2000	£178,878
	257 HL0106LFV	<i>The impact on onion skin quality of bulb scale and skin development (proposal 9).</i>	1997 2000	£107,802
	258 HL0109LTF	Improving consistency of cropping in sweet cherries (prop 6)	1997 2000	£132,470
	261 HL0117LSF	<i>Molecular methods for virus detection in fruit plants (Prop 37)</i>	1997 2000	£190,799
	285 LK0434	Decision support system to design whole farm rotations to optimise available N use in mixed arable and horticulture	1997 2000	£184,116
	301 OC9606	<i>Ecology and control of flea beetles in linseed</i>	1997 2000	£242,418
	302 OC9618	Extensions to software tool for construction and code generation of interlinked models.	1997 2000	£240,155

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303	OC9619	<i>Development of a biosensor system for the assessment of horticultural produce quality.</i>	1997	2000	£243,834
316	PL0521	Soil structure and the adsorption and degradation of pesticides	1997	2000	£225,000
317	PL0523	<i>The effect of rainfall patterns on pesticide leaching and viability of stochastic modelling for risk quantification</i>	1997	2000	£180,000
256	HL0102LPC	The efficient use of light in bedding plant production (proposal	1997	2001	£157,538
262	HL0126LMU	<i>Development of Odour-free mushroom composts by modifying organic and inorganic nitrogen sources (Prop 180)....</i>	1997	2001	£295,986
37	HH1013SSF	Genetic improvement of strawberry (cont. HH1002SSF).	1997	2002	£708,965
39	HH1015SHO	<i>Genetic improvement of hops (cont. of HH1006SHO)</i>	1997	2002	£747,873
260	HL0114LFV	White Cabbage: reducing losses from internal disorders and improving supply (Prop 15).	1997	2002	£288,146
120	HH1746SFV	<i>Detection methods for pythium (particularly cavity spot of carrots and other ornamental pathogens).</i>	1998	1999	£85,000
172	HH2115STF	Technology transfer of rot risk assessment.	1998	1999	£20,046
287	NT1211	<i>Project to organise a workshop to disseminate the results of MAFF research on the efficiency of nitrogen fertiliser use</i>	1998	1999	£20,000
289	NT1523	Studies of microbial and chemical factors affecting nitrogen release from crop residues	1998	1999	£60,415
334	WD0223	<i>Farm woodlands research: fungus control in acorns; demonstration plantings of cherry; cherry microsatellites</i>	1998	1999	£40,371
69	HH1323TPC	The control of tomato fruit growth.	1998	2000	£220,028
90	HH1524SOF	<i>Development of a framework for prediction the productivity quality and availability of outdoor flower crops.</i>	1998	2000	£155,925
286	LK0438	Development of a decision support system for nitrogen fertiliser application in soil grown glasshouse crops.	1998	2000	£158,476
315	PH0159	<i>Plum pox virus diagnosis in the roots of dormant plum trees</i>	1998	2000	£44,920
324	WD0125	Improving the root development of broadleaf seedlings following outplanting	1998	2000	£136,169
43	HH1021SBU	<i>Development of somatic embryogenesis for clonal propagation and transformation of Narcissus</i>	1998	2001	£175,341
70	HH1324TPC	Environmental influences on flowering in protected ornamentals.	1998	2001	£443,186
71	HH1325SMU	<i>Control of mushroom initiation by manipulation of the casing microflora and microenvironment.</i>	1998	2001	£221,808
91	HH1525SHN	To determine the environmental and cultural factors involved in flower initiation and development in <i>Lavendula angustifoli</i>	1998	2001	£277,083
92	HH1526SSF	<i>To determine the influence of temperature and genetic factors on the development of inflorescences in strawberry.</i>	1998	2001	£204,077
100	HH1616SPC	Modification of chrysanthemum growth habit thorough genetic manipulation.	1998	2001	£228,172
125	HH1753STF	<i>Genetics of <i>Venturia inaequalis</i> in relation to breeding for resistance.</i>	1998	2001	£307,821
128	HH1758SPC	Epidemiology of viruses of protected crops.	1998	2001	£311,595
130	HH1760SFV	<i>Spear rot of Calabrese: Characterisation of the causal organism and disease epidemiology.</i>	1998	2001	£123,892
146	HH1833THN	Development of a strategic approach for the biological control of pests on HNS.	1998	2001	£295,972
149	HH1839TPC	<i>A strategic framework for developing biological control of pests on protected ornamental crops.</i>	1998	2001	£520,415
160	HH1933STF	Strategies of integrated pest and disease management in apple to reduce pesticide use.	1998	2001	£230,158
162	HH1937SSF	<i>Strategic studies on mite aphid and capsid pests of strawberry and potential biocontrol agents.</i>	1998	2001	£308,071

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	174 HH2117SMU	Regulation of mushroom quality-loss and senescence: nitrogen metabolism and up-regulated genes.	1998 2001	£223,936
	175 HH2118STF	<i>Integrated control of new storage rot problems in apples and pears.</i>	1998 2001	£153,781
	176 HH2119SSF	Control of transgene expression in strawberry.	1998 2001	£206,398
	177 HH2120TTF	<i>Expanding the potential of the UK stone fruit industry by the use of modern storage technology.</i>	1998 2001	£246,847
	178 HH2121TFV	Long-life broccoli.	1998 2001	£215,409
	288 NT1214	<i>Studies of on-site crop residue management strategies to control N losses to the environment</i>	1998 2001	£236,215
	318 PL0526	Microbial degradation of pesticides in soil	1998 2001	£290,230
	16 HH0813SHB	<i>Screening pathogens for the biocontrol of Varroa jacobsoni.</i>	1998 2002	£410,231
	118 HH1744SFV	Black rot of Brassicas: Epidemiology.	1998 2002	£183,729
	144 HH1831SFV	<i>Biological control of viruses of field vegetables.</i>	1998 2002	£352,964
	259 HL0110LFV	Genetic modification of Brassica oleracea for resistance to turnip and cauliflower mosaic viruses.	1998 2002	£180,956
	263 HL0129LBU	<i>Narcissus Leaf Diseases: Forecasting and control of white mould and smoulder (Prop 188)</i>	1998 2002	£261,702
	264 HL0131LFV	Climatic effects on the vernalization and curd growth of winter cauliflower and subsequent fluctuations in supply.	1998 2002	£177,796
	10 GC0116SFV	<i>To support the genetic resources unit (needed as a base collection and for use in vegetable research)</i>	1998 2003	£933,165
	266 HL0134LPC	Robust product design and prediction for post-harvest pot plant quality and longevity.	1998 2003	£158,619
	5 FS26110	<i>Determination of nitrate in spinach to test the effectiveness of the UK Codes of GAP for spinach</i>	1999 1999	£29,850
	28 HH0915SFV	A first step to `smart` plants; isolating nutrient- responsive promoters.	1999 1999	£10,003
	81 HH1409SHN	<i>Development of a standardised protocol for assessing mycorrhizal dependency for different host-fungus combinations for ornamentals and establishment of an open web site.</i>	1999 1999	£18,000
	82 HH1410SPC	The influence of laboratory sampling and extraction procedures on nitrate content of butterhead lettuce.	1999 1999	£7,000
	131 HH1763SX	<i>Review the potential impact of withdrawal of organophosphorous and carbamate insecticides on control of hort pests.</i>	1999 1999	£12,974
	252 HH9918SFV	Development of HORIS CD-ROM manuals for allium.	1999 1999	£34,555
	25 HH0912	<i>Functional analysis of genes expressed in post harvest broccoli</i>	1999 2000	£22,000
	44 HH1022STF	Genetics of texture in post-harvest apples.	1999 2000	£130,000
	47 HH1025SX	<i>Developing software for linkage analysis in polyploid rosaceous species</i>	1999 2000	£7,500
	53 HH1032SHN	Further development of software for linkage analysis in polyploid rosaceous species	1999 2000	£10,485
	83 HH1411	<i>Development of readily accessible database framework for collection of data on nutrient response of field vegetables</i>	1999 2000	£20,000
	97 HH1611	Non-destructive quality assessment in apple and potato	1999 2000	£22,000
	124 HH1752	<i>Modelling the within-field distribution of carrot fly</i>	1999 2000	£9,500
	248 HH9910	Novel crops: the potential for UK production	1999 2000	£15,000
	249 HH9911	<i>Development of a new HORIS CD-ROM on cherry</i>	1999 2000	£35,626
	250 HH9912	Development of the allium CD-ROM to include leeks	1999 2000	£16,538
	251 HH9913	<i>Cut flowers: production of an outdoor flower crop manual on CD-ROM</i>	1999 2000	£30,750
	253 HH9920S	Promotion of software for building simulation models - technology transfer workshops for the scientific community	1999 2000	£10,000
	323 RG0120	<i>Inventory of models for developing a framework for GM crop risk assessment</i>	1999 2000	£8,000

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#	ref	Project	Dates	UKP
336	WD0225	Identifying molecular markers for wood quality in wild cherry	1999 2000	£39,661
99	HH1615SBU	<i>To develop a model of narcissus scheduling by determining meteorological and cultural factors which affect uniformity</i>	1999 2001	£101,250
126	HH1754STF	Detection diagnosis and epidemiology of top fruit viruses.	1999 2001	£200,325
268	HL0138LFV	<i>Application of beneficial microorganisms to seeds using priming techniques.</i>	1999 2001	£129,001
269	HL0140LFV	Composting of onion and other vegetable wastes with with particular reference to control of Allium white rot.	1999 2001	£186,001
335	WD0224	<i>Bacterial canker of cherry (Prunus avium): biology epidemiology and resistance</i>	1999 2001	£173,270
337	WD0226	Genetic improvement of wild cherry for farm woodlands	1999 2001	£273,544
338	WD0227	<i>Practical tree rejuvenation to reduce propagation costs and increase confidence in rejuvenated wild cherry planting stock</i>	1999 2001	£70,849
339	WD0228	Work towards improving the availability efficient use and performance of farm woodland tree seeds	1999 2001	£200,558
340	WD0229	<i>To promote the successful uptake of improved wild cherry clones for use in farm woodlands</i>	1999 2001	£30,651
45	HH1023SX	Genetic characterisation and genomic organisation of factors affecting fruit texture.	1999 2002	£276,026
80	HH1408SFV	<i>Nutrient supply growth and development of field vegetables.</i>	1999 2002	£524,978
116	HH1742SFV	Forecasting diseases of allium crops.	1999 2002	£255,642
117	HH1743SFV	<i>Estimation of spatial variation in wetness in Brussels sprout canopies.</i>	1999 2002	£288,642
119	HH1745TFV	Sclerotinia in field grown lettuce.	1999 2002	£406,589
122	HH1749SHN	<i>Epidemiology of downy mildew on HNS.</i>	1999 2002	£253,050
123	HH1751SX	Identification of indicators of microbial suppression of oomycete pathogens.	1999 2002	£640,152
127	HH1756SMU	<i>Fungal pathogen competitors of mushrooms.</i>	1999 2002	£237,563
129	HH1759SFV	Studies on the transmission of foliar fungal pathogens of vegetable brassicas for the prediction of disease risk.	1999 2002	£310,780
141	HH1828SFV	<i>Biological control of allium white rot.</i>	1999 2002	£262,052
143	HH1830SFV	Biocontrol of cabbage root fly by release of predators.	1999 2002	£306,671
148	HH1835SMU	<i>Interactions of entomopathogenic nematodes and mushroom sciarid flies.</i>	1999 2002	£503,998
161	HH1935SHO	Adapting pest management strategies for novel growing methods with a perennial crops (dwarf hops).	1999 2002	£369,067
164	HH1941STF	<i>Complexity stability and variability in arthrop populations in perennial crops.</i>	1999 2002	£332,017
169	HH2010SFV	To determine the effect of strategies of herbicide use on the sensitivity of weed populations in field vegetable crops	1999 2002	£173,696
307	OF0177	<i>Growth and competition model for organic weed control</i>	1999 2002	£58,281
308	OF0179	Desk study to apply knowledge developed for conventional horticulture to control of pests in organic vegetables	1999 2002	£89,179
46	HH1024SBU	<i>Breeding for resistance to narcissus basal rot.</i>	1999 2003	£201,315
121	HH1748TBU	Narcissus Neck Rot: biology epidemiology and control.	1999 2003	£168,224
142	HH1829SFV	<i>Identification and characterisation of novel toxins for use in the control of insect pests in horticulture.</i>	1999 2003	£429,179
145	HH1832SFV	Fungal control of diptera.	1999 2003	£328,410
147	HH1834STF	<i>Improved viral bioinsecticides for the control of apple pests.</i>	1999 2003	£531,379
265	HL0132LHN	Improving the control and efficiency of water use in container-grown hardy ornamental nursery stock.	1999 2003	£330,627
270	HL0142LFV	<i>Improving the quality and shelf life of cut salad products.</i>	1999 2003	£364,256
306	OF0166	Economic and agronomic feasibility of organic vegetable seed production in the UK and subsequent seed quality	1999 2003	£230,208

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	23	HH0910SFV	<i>New techniques for genetic improvement of horticultural brassicas.</i>		1999 2004 £1,323,082
	24	HH0911SFV	Genetic improvement of lettuce.		1999 2004 £841,013
	26	HH0913TFV	<i>DNA markers in onion improvement.</i>		1999 2004 £332,312
	27	HH0914TFV	DNA markers in leek improvement.		1999 2004 £313,327
	267	HL0136LSF	<i>Integrated use of soil disinfectant and microbial/organic amendments for the control of soil borne diseases and.....</i>		1999 2008 £766,076
	84	HH1412SFV	In corporation of the N response model N-ABLE within the GRIME modelling system		2000 2001 £39,229
	101	HH1618STF	<i>Technology transfer for apple varieties</i>		2000 2001 £120,000
	150	HH1842SPC	A strategic framework to investigate multi-natural enemy approaches to spider mite control in protected crops		2000 2001 £40,162
	254	HH9921S	<i>Programme manager</i>		2000 2001 £18,300
	313	PA1721	Improving pesticide spraying techniques for tree crops		2000 2001 £359,182
	30	HH0916SFV	<i>Population genetics of vegetable downy mildew fungi in relation to breeding resistance.</i>		2000 2002 £217,985
	271	HL0148LFV	CAULICUT: Selective mechanical harvesting of cauliflowers.		2000 2002 £390,558
	290	NT2310	<i>Long term effects of on-site strategies to control losses of crop residue nitrogen to the environment.</i>		2000 2002 £62,076
	29	HH0915SMU	Molecular analysis of integrative transformants of the mushroom		2000 2003 £343,209
	48	HH1026SHN	<i>Conventional and biotechnological genetic improvement of hardy nursery stock</i>		2000 2003 £380,279
	49	HH1027SSF	Genetic development of raspberry with improved pest and disease resistance		2000 2003 £329,092
	50	HH1029STF	<i>Genetic improvement of top fruit by development and application of molecular markers</i>		2000 2003 £748,042
	51	HH1030STF	Genetic improvement of cherries and plums including the development of marker-assisted selection		2000 2003 £325,158
	60	HH1214SHN	<i>To identify and overcome constraints to efficient and consistent production of HNS in the UK: (A) Rooting of cuttings</i>		2000 2003 £644,019
	61	HH1215SHN	To identify and overcome constraints to efficient and consistent production of HNS in the UK: (B) development of liners		2000 2003 £351,212
	62	HH1217SFV	<i>Vegetable seedling establishment</i>		2000 2003 £425,589
	63	HH1218SFV	Seed vigour in vegetable crops		2000 2003 £208,066
	73	HH1329SPC	<i>Environmental optimisation and predictable production of protected edible crops</i>		2000 2003 £381,746
	74	HH1330SPC	Energy efficient production of ornamentals		2000 2003 £341,923
	132	HH1765SMU	<i>Determination of the interaction between mushroom phorids (<i>Megaselia halterata</i>) and various cultivable fungi</i>		2000 2003 £212,270
	163	HH1939SSF	Pheromones of strawberry blossom weevil and European tarnished plant bug and control in strawberry crops		2000 2003 £190,538
	165	HH1942SSF	<i>Exploiting natural enemies in Integrated Pest Management in blackcurrant crops</i>		2000 2003 £92,269
	170	HH2011SFV	To quantify weed seed persistence production and dormancy in vegetable crops		2000 2003 £379,937
	274	HL0160LFV	<i>Integrated control of slugs in horticulture</i>		2000 2003 £269,702
	282	HP0216	<i>Physiological basis of sprout growth in potato tubers: the roles of dormancy and apical dominance</i>		2000 2003 £199,915
	319	PL0542	<i>Spatial and temporal variation in factors determining the leaching potential of pesticides in soil</i>		2000 2003 £307,352
	325	WD0133	Identify constraints in soil conditions and light determining biodiversity of ground flora in woodlands of different ages		2000 2003 £284,845

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#	ref	Project	Dates		UKP
	1 AR0301	<i>Natural enemies for enhanced biocontrol of cereal pests</i>	2000	2004	£312,393
	11 GC0122SFV	<i>EU GenRes 105 Carrot project: matching funds</i>	2000	2004	£95,768
	12 GC0123SFV	EU GenRes 112 Brassica including <i>B. carinata</i> project: matching funds	2000	2004	£63,844
	52 HH1031SSF	<i>Tissue and plastid targeted transgene expression in a perennial plant strawberry</i>	2000	2004	£393,734
	75 HH1331SPC	Towards a physiological understanding of juvenility a strategic element in scheduling seed-raised ornamentals	2000	2004	£419,459
	93 HH1528SPC	<i>Cut flowers: enhancement of quality in low energy production system by management of pre-harvest factors</i>	2000	2004	£362,201
	133 HH1766SFV	Genetic variability in insect populations in relation to host plant specificity	2000	2004	£673,854
	272 HL0149LFV	<i>Parsnip Yellow Fleck Virus: Development of a disease management strategy</i>	2000	2004	£154,979
	273 HL0150LOF	Varieties and integrated pest and disease management for organic apple production (LINK)	2000	2005	£284,636
	94 HH1529SPC	<i>Artificial neural networks for plant quality</i>	2001	2002	£25,538
	95 HH1530SPC	Chlorophyll fluorescence spectral discrimination by artificial neural network methods	2001	2002	£9,851
	182 HH2304SMU	<i>Epidemiology of new disease problems including mushroom virus x</i>	2001	2002	£236,549
	221 HH3502SFV	Changes in gene expression profiles under nutrient deficiency	2001	2002	£44,624
	233 HH3706STF	<i>Examination of gusA transgene expression in the fruit of transgenic apple plants driven by plant promoters</i>	2001	2002	£29,398
	234 HH3707SFV	Establishing the basis for MAS of salad genotypes with different discolouration potential	2001	2002	£16,500
	291 NT2502	<i>An evaluation of WELL_N and 7th edition of RB209 for providing advice for good fertiliser practice in NVZ areas</i>	2001	2002	£24,473
	292 NT2504	Desk study to evaluate the practical benefits and constraints of fertiliser placement	2001	2002	£21,948
	293 NT2505	<i>Desk study to assess the potential for N and P pollution from glasshouse production in England and Wales</i>	2001	2002	£27,858
	311 OF0401	Changes to soil quality indicators following conversion to organic vegetable production	2001	2002	£62,706
	341 WD0231	<i>Technology interaction to underpin the commercialisation of Wildstar</i>	2001	2002	£18,027
	342 WD0232	Replicates of experiments in practical tree rejuv. to reduce propagation costs and incr. conf. in clonal wild cherry stock	2001	2002	£36,880
	343 WD0233	<i>Improving the availability efficient use and performance of farm woodland tree seeds</i>	2001	2002	£103,231
	344 WD0234	Bacterial canker of cherry: biology epidemiology and resistance with particular reference to identification of isolates	2001	2002	£87,585
	345 WD0235	<i>Genetic improvement of wild cherry for farm woodlands with particular reference to planting out and resistance testing</i>	2001	2002	£144,650
	76 HH1332SPC	Root signalling	2001	2003	£376,808
	102 HH1619	<i>Best practice guides for UK pear production</i>	2001	2003	£130,171
	185 HH2307SPC	Studies on the economic impact of Pepino mosaic virus	2001	2003	£179,247
	31 HH0917SFV	<i>Assessment of the molecular diversity of resistance genes within vegetable brassica genetic resource collections</i>	2001	2004	£255,210
	77 HH1334SMU	Determining the physiological and genetic mechanisms of initiation to control mushroom population densities	2001	2004	£242,564
	86 HH1414SFV	<i>Development and validation of dynamic model of nitrate uptake and accumulation in lettuce to inform policy and practice</i>	2001	2004	£276,128
	179 HH2201SHN	The control of flower induction during the propagation of herbaceous perennials	2001	2004	£291,111

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#	ref	Project	Dates		UKP
180	HH2301SSF	<i>Preliminary studies of the genetics of host-pathogen interactions in strawberry powdery mildew</i>	2001	2004	£160,316
181	HH2302STF	Pathogen fitness in fungal systems without major gene resistance using <i>Venturia inaequalis</i> as a model system	2001	2004	£259,539
183	HH2305SSF	<i>Interactions among phytophagous mites and naturally occurring and introduced predatory mites</i>	2001	2004	£326,517
184	HH2306SX	Bacterial pathogen epidemiology using lux/gfp markers	2001	2004	£346,944
190	HH2501SFV	<i>Horticultural brassics: development of economic thresholds for aphids and caterpillars</i>	2001	2004	£245,996
191	HH2502STF	Towards zero pesticides on apples	2001	2004	£309,510
192	HH2503STF	<i>Detection and epidemiology of fruit viruses</i>	2001	2004	£277,031
195	HH2604STF	Storage rots in plums and cherries	2001	2004	£154,852
196	HH2605NOF	<i>Development of molecular diagnostic tools to improve quality in cut flowers</i>	2001	2004	£377,439
197	HH2606STF	Identify the mechanisms of a naturally-occurring heritable trait for reduced ethylene production in apple fruits	2001	2004	£494,252
314	PA1732	<i>Pesticide application rate adjustment to the crop environment (PACE) for fruit spraying with an axial fan sprayer</i>	2001	2004	£519,899
320	PL0550	Microbial degradation of pesticides	2001	2004	£310,635
32	HH0918SFV	Broad Spectrum Disease Resistance	2001	2005	£448,295
54	HH1033SBU	<i>Improving the efficiency of varietal development for the UK Narcissus industry</i>	2001	2005	£324,438
173	HH2116SMU	Mushroom quality-loss after harvest - causes and control	2001	2005	£397,220
187	HH2401SX	<i>The movement of pests and natural enemies in biocontrol systems</i>	2001	2005	£614,949
188	HH2402SX	Combining natural enemies for more effective biological control	2001	2005	£350,991
189	HH2403SX	<i>A modular modelling framework for biological control in horticultural crops</i>	2001	2005	£334,985
194	HH2603STF	The potential for manipulating the orchard microflora to control storage rot fungi	2001	2005	£208,399
231	HH3704SBU	<i>The physiology and manipulation of terminal and lateral bulb units in narcissus</i>	2001	2005	£281,792
85	HH1413SHN	Bedding plant nutrition: implications for productivity and quality	2001	2006	£447,163
199	HH3105SFV	<i>Role of Insecticide resistance in <i>Nasonovia ribisnigri</i> in reducing or changing the effectiveness of host plant resistance</i>	2002	2002	£18,059
222	HH3503SX	Further development of the MORPH model delivery system	2002	2002	£15,350
237	HH3712SPC	<i>A desk study of heat pulse effects on a tomato crop</i>	2002	2003	£29,806
294	NT2601	Alternative nitrogen-containing fertiliser materials	2002	2003	£256,733
295	NT2602	<i>A scoping study to assess the feasibility of increasing the efficiency of use of nitrogen-based fertilisers</i>	2002	2003	£185,669
346	WD0501	The improvement of broadleaved trees for sustainable farm woodlands	2002	2003	£100,769
232	HH3705SMU	<i>Understanding production and picking variability</i>	2002	2004	£79,798
244	HH3802	Cherrybyte: Web-based information system to promote the benefits of UK bio-science to the general public	2002	2004	£59,493
322	PS2302	<i>Acceptability of pesticide effects on non-target species</i>	2002	2004	£143,750
193	HH2602SFV	Molecular and biochemical characters of post harvest quality in brassicas	2002	2005	£539,903
201	HH3108TTF	<i>A new strategy to control tortricid pests in the orchard using baculovirus and pheromones</i>	2002	2005	£392,921
208	HH3204SFV	Integrated of biological control agents for sustainable control of <i>Allium</i> white rot	2002	2005	£293,606
211	HH3212SPC	<i>Epidemiology of viruses of protected crops</i>	2002	2005	£391,523

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#	ref	Project	Dates	UKP
	213 HH3217TFV	The development of a generic disease management system to control downy mildew in transplanted vegetable crops	2002 2005	£397,514
	217 HH3401SFV	<i>To determine the effect of strategies of herbicide use on sensitivity of weed populations</i>	2002 2005	£455,239
	280 HP0140	Blemish diseases of potatoes - physiology and biochemistry of skin set and skin netting	2002 2005	£316,868
	17 HH0819SHB	<i>Fungal control of Varroa jacobsoni (destructor)</i>	2002 2006	£383,802
	209 HH3205SFV	The mild-strain concept for the biological control of viruses of field vegetables	2002 2006	£444,053
	210 HH3207SX	<i>Role of microbiota in suppression of oomycete pathogens</i>	2002 2006	£970,737
	230 HH3701SX	Genetic Characterisation and genomic organisation of factors affecting fruit texture	2002 2006	£509,752
	186 HH2309SMU	<i>Mushroom Virus X</i>	2002 2007	£913,525
	206 HH3201SSF	Genetic improvement of strawberry for sustainable production in the UK	2002 2007	£1,103,805
	207 HH3202SHO	<i>Sustainable hop production in the UK</i>	2002 2007	£1,468,219
	220 HH3501SFV	Nutrient supply growth and development of field vegetables	2002 2007	£869,225
	347 WD0502	<i>Local provenance and native stock for farm woodlands</i>	2002 2007	£474,617
	216 HH3226SPC	Studies on the economic impact of Pepino mosaic virus	2003 2003	£138,407
	219 HH3403SX	<i>Desk study : The impact of herbicides on weed abundance and biodiversity</i>	2003 2003	£57,450
	225 HH3603SPC	Improving the efficiency of PC in winter through the use of low energy light intensity long day lighting	2003 2003	£98,937
	242 HH3719SX	<i>Desk Study on Flowering</i>	2003 2003	£19,741
	310 OF0333	Arbuscular mycorrhizal fungi in organic systems	2003 2003	£77,813
	13 GC0131	<i>One year extension to support the Genetic Resources Unit as a base collection and for use in vegetable research</i>	2003 2004	£231,706
	14 GC0133	Documentation and maintenance of genetic resources	2003 2004	£165,395
	224 HH3505SFV	<i>Nutrient requirements of horticultural crops</i>	2003 2004	£173,045
	238 HH3713	Desk study on winter chill in fruit	2003 2004	£62,783
	243 HH3720SX	<i>Mineral and nutritional content of produce</i>	2003 2004	£88,030
	245 HH3807	Demonstration of Pest and Disease Forecasting and User Requirements Analysis for Future Model Delivery	2003 2004	£37,938
	246 HH3809SX	<i>Biometrics website project</i>	2003 2004	£68,955
	247 HH3810SBU	A Best practice Guide for UK Narcissus Production	2003 2004	£54,961
	296 NT2603	<i>The behaviour of some different fertiliser-N materials - Initial field experiments</i>	2003 2004	£1,047,548
	321 PS2206	Time-dependent sorption processes in soil	2003 2004	£139,820
	212 HH3215TFV	<i>Forecasting Sclerotinia disease in field grown lettuce</i>	2003 2005	£441,033
	239 HH3715SHN	Developing a route map for rooting competency	2003 2005	£304,097
	297 NT2605	<i>The behaviour of some different fertiliser-N materials - Main experiments</i>	2003 2005	£2,789,531
	198 HH3103TTF	Development of approaches to aphid control: chemical ecology and natural enemies	2003 2006	£406,916
	200 HH3106SMU	<i>Pest Resistance in Mushroom Crops: Evaluating Agaricus arvensis and Aragicus subrufescens against phorid flies</i>	2003 2006	£240,700
	202 HH3114TTF	Semiochemicals in the management of apple leaf midge	2003 2006	£104,493
	203 HH3115TSF	<i>IPM methods for blackcurrant gall mite and leaf midge: synthesis validation and implementation in UK commercial blackcurrant production</i>	2003 2006	£140,606
	205 HH3117TFV	Aphid control in Lettuce and Brassica crops	2003 2006	£220,167
	214 HH3220SMU	<i>Characterisation of the interaction between Verticillium fungicola and Agaricus bisporus</i>	2003 2006	£545,418

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#	ref	Project	Dates	UKP
	215 HH3222SPC	Epidemeology and control of verticillium wilt in protected crops	2003 2006	£421,236
	275 HL0163LMU	<i>Improving the Efficiency and Environmental Impact of Mushroom Composting</i>	2003 2006	£250,380
	309 OF0329	Using weeds to reduce pest insect numbers in organic vegetable crops - a desk study (CTE0202)	2003 2006	£87,897
	2 AR0703	<i>The Defra Oilseed Rape Genetic Improvement Network - OREGIN</i>	2003 2007	£896,500
	218 HH3402SX	A genomic approach to the ecology and evolution of seed dormancy	2003 2007	£658,203
	236 HH3711SFV	<i>Molecular Approaches to Improved Seedling Establishment</i>	2003 2007	£596,732
	276 HL0165LFV	Sustainable improvement of vegetable quality water and nutrient use efficiency using dynamic fertigation	2003 2007	£683,616
	277 HL0167LFV	<i>Improved Crop Health and Establishment using Beneficial Micro-Organisms</i>	2003 2007	£234,500
	348 WD0503	Developing broadleaved trees for sustainable farm woodlands	2003 2007	£245,611
	226 HH3604STF	<i>Development of a molecular map for top fruit rootstocks and extension of the portfolio of markers to include cider traits</i>	2003 2008	£938,242
	235 HH3709SHN	Techniques and breeding lines for the genetic improvement of hardy nursery stock	2003 2008	£470,583
	240 HH3716SSF	<i>Developing new high quality varieties of raspberries which will crop over an extended season</i>	2003 2008	£893,575
	241 HH3717STF	Extending the season of stone fruit by breeding late-ripening cherries and early-ripening plums	2003 2008	£470,625
	204 HH3116TFV	<i>Thrips control on outdoor allium crops</i>	2004 2006	£111,767
	223 HH3504SPO	Sustainable phosphorous fertilisation of potatoes (Potato CHIPS)	2004 2008	£569,007
	227 HH3608TX	<i>Identification of genetic markers for water use effecinecy in horticultural crops</i>	2004 2008	£993,771
	15 GC0135	Maintenance of Vegetable Gene bank at HRI-W	2004 2009	£1,346,936
	228 HH3609TX	<i>Partial root drying: delivering water saving and sustainable high quality yield into horticulture</i>	2004 2009	£1,117,553
	278 HL0174LFV	Companion Planting for Pest Control in Field Crops	2005 2009	£202,932
	229 HH3612STF	<i>Innovative labour reducing systems for sustainable growing of perennial tree fruits</i>	2005 2010	£144,623
	279 HL0176LFV	Integrated Allium white rot control using composts and Trichoderma viride	2006 2009	£311,010
Total = £105,105,389				

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