

BRITISH BEET RESEARCH ORGANISATION

Research Projects since 2000

GROUP 1 - GENETIC TECHNOLOGIES, CROP IMPROVEMENT, VARIETIES			
Project No.	Duration/ Completion Date	Project Title	Contractors
00/11	2 years 31 st March 2002	A drought tolerance screen for existing beet varieties - adding value to NIAB trial results	Broom's Barn Research Station
00/41	4 years 31 st March 2004	NIAB Independent Variety Trials	NIAB and British Sugar plc
02/16	4 years 31 st March 2006	Biotechnological approach to improved control of quality, pest and disease traits in sugar beet	Broom's Barn Research Station
02/17	4 years 31 st March 2006	Improving the drought tolerance of sugar beet	Broom's Barn Research Station
02/18	1 year 31 st March 2003	Extension of the BRIGHT Botanical and Rotational Implications of Genetically Modified Herbicide Tolerance project (99/24)	Broom's Barn and Morley (TAG)
04/11	4 years 31 st March 2008	Sugar Beet Independent Variety Trials	NIAB and British Sugar plc
06/20	4 years 31 st March 2010	Evaluating genes for controlling premature bolting & root rot diseases in sugar beet	Broom's Barn Research Station
06/22	1 year 31 st March 2007	Selection methods for the improvement of drought tolerance and water use efficiency in sugar beet	Broom's Barn Research Station
06/23	4 years 31 st March 2010	Using multi-environment variety trial data to screen for drought tolerance	Broom's Barn Research Station
07/14	4 years 31 st March 2011	Physiology-based selection methods for improving sugar beet productivity under water-limited conditions	Broom's Barn Research Station
08/01	4 years 31 st March 2012	Sugar beet variety trials 2008-2012	NIAB, British Sugar plc and Broom's Barn
09/22	2 years 31 st March 2011	Varietal differences in crown size and greater recovery of crown material at harvest	British Sugar plc
09/26	2 years 31 st March 2011	Early-sown bolting trials to characterise varietal bolting	British Sugar plc

GROUP 2 - DIRECT ENVIRONMENTAL IMPROVEMENT

Project No.	Duration/ Completion Date	Project Title	Contractors
00/02	3 Years 31 st March 2003	Field evaluation of chitin pelleted seed for pest and disease control in sugar beet	ADAS High Mowthorpe and British Sugar plc
00/04	4 years 31 st March 2004	Agronomic strategies and the Economics of Organic Sugar Beet Production	ADAS Terrington, British Sugar plc and Silsoe
01/06	4 years 31 st March 2006	Evaluation of minimal tillage and the 'Aqueel' soil management systems as components of environmentally-benign sugar beet production	British Sugar plc and Morley Research Centre (TAG).
01/18	Project in limbo	Demonstration of Headland Management Options to Enhance the Environment Around UK sugar beet fields	Broom's Barn Research Station, British Sugar plc and UAP
01/19	2 years 31 st March 2003	Energy and Environment Impact Assessment for Sugar Beet Production Systems	Broom's Barn Research Station and University of Hertfordshire
02/19	1 year 31 st March 2003	Optimising beet seedling establishment, weed control, yield and profitability in non-plough tillage systems: a review	Broom's Barn Research Station
02/20	1 year 31 st March 2003	Avoiding pollution in water courses by controlling run-off and water erosion from sugar beet land: A review	Broom's Barn Research Station
02/25	1 year 31 st March 2003	Competition review: Recent progress in sugarcane research, breeding and production practice by major sugar exporters	Broom's Barn Research Station
03/12	2 years 31 st March 2005	Novel weed management options to provide in-field benefits to the environment	Broom's Barn Research Station
03/13	2 years 31 st March 2005	The value of the sugar beet crop and headland set-aside in beet fields for birds and the farm environment	Broom's Barn Research Station, British Sugar plc, BTO and RSPB.
05/11	4 years 31 st March 2009	Management of sugar beet to enhance biodiversity and increase availability of food for birds	Broom's Barn Research Station and British Trust for Ornithology
07/25	3 years 31 st March 2010	Strip Tillage - a new concept sugar beet production	The Arable Group and British Sugar plc

GROUP 3 - PHYSIOLOGY & RESPONSE TO INPUTS & ENVIRONMENT

Project No.	Duration/ Completion Date	Project Title	Contractors
00/12	4 Years 31 st March 2004	Physiology of beet growth during autumn	Broom's Barn Research Station
00/14	6 months 30 th September 2000	Precision agriculture in beet rotations: a continuation in 2000	Broom's Barn Research Station, Silsoe and British Sugar plc
00/25	4 Years 31 st March 2004	Establishing the potassium requirements of modern, high-yielding sugar beet crops for yield and beet quality	British Sugar plc and Rothamsted Research
00/26	4 Years 31 st March 2004	Predicting changes in the sugar content of delivered beet during the processing campaign	British Sugar plc and Broom's Barn
00/39	3 Years 30 th September 2003	High resolution meteorological data to support improved decision-making and increased profitability in sugar beet production	CSL, Broom's Barn and British Sugar plc
02/05	1 Year 31 st March 2003	Review of the interactions of nutrients in the growth, productivity and quality of sugar beet	Rothamsted Research and British Sugar plc
03/04	3 years 6 months 30 th September 2006	Sulphur Fertilizer for Sugar Beet	Broom's Barn Research Station and Rothamsted Research.
03/26	4 years 31 st March 2007	Re-evaluation of the model to predict the level of crop bolting from temperature information	British Sugar plc
04/06	2 years 31 st March 2006	Benchmarking beet production performance: a decision support system for individual growers	Broom's Barn Research Station and British Sugar plc
04/14	2 years 31 st March 2006	Effects of sodium and triazole fungicides on yield and quality on soils of different K index	British Sugar plc and Rothamsted Research
05/23	3 years 31 st March 2008	Analysis of the causes of recent changes in beet amino-N and alkalinity	British Sugar plc, Broom's Barn Research Station and Armstrong Fisher Ltd
05/25	1 year 31 st March 2006	Factory estimates of K in beet tissue water for monitoring the K status of soils	British Sugar plc
06/25	2 years 31 st March 2009 (extended to March 2010)	Benchmarking Grower's Production to the Potential Yield set by the Environment	Broom's Barn Research Station and British Sugar plc
07/21	2 years 30 th June 2008	Improving recommendations and advice for N use in sugar beet	British Sugar plc and Broom's Barn Research Station
09/03	1 year 31 st March 2010	Inputs/outputs - effects of increased input costs on crop profitability	Broom's Barn Research Centre

GROUP 4 - PEST , DISEASES & WEEDS

Project No.	Duration/ Completion Date	Project Title	Contractors
00/07	4 years 31 st March 2004	Control of late season foliar diseases	Broom's Barn Research Station
00/08	1 year 31 st March 2001	Biological control of seedling diseases	Broom's Barn Research Station
00/08a	1 year 31 st March 2003	Foliar disease trials	Broom's Barn Research Station
00/08b	2 years 31 st March 2004	Pathogenicity of rhizomania 'P' type	Broom's Barn Research Station
00/27	2years 31 st March 2002	The promotion of alternative herbicide strategies (e.g. FAR) for sugar beet to UK growers	British Sugar plc
00/37	2 years 31 st March 2002	Development of a field test kit for the detection of rhizomania in sugar beet crops	CSL
00/38	3 years 31 st March 2003	An investigation of novel methods for the control of Polymyxa betae, the vector of rhizomania	CSL
00/47	3 years 31 st March 2003	Evaluation of 'FAR' techniques for weed control in sugar beet	Morley (TAG) and British Sugar plc
00/60	5 months 31 st August 2000	Survey of foot rot problems in sugar beet	Broom's Barn Research Station
01/01	4 years 31 st March 2005	Population and Insecticide Resistance Dynamics in Aphid Vectors of Beet Viruses	Rothamsted Research
01/03	2 years 31 st March 2004	Development of practical guidelines for cost-effective inter-row weed control	ADAS Turrington and British Sugar plc
01/14	2 years 31 st March 2003	Potential for exploiting cultivar characteristics to reduce root rotting	NIAB
01/21B	4 years 31 st March 2005	Monitoring and management of resistance to neonicotinoids and other insecticides in <i>Myzus Persicae</i>	Rothamsted Research and Broom's Barn Research Station
01/21C	2 years 31 st March 2003	Efficacy and environmental impact of neonicotinoid seed treatments	Broom's Barn Research Station and British Sugar plc
01/22	4 months 28 th February 2002	Modelling the effects of stewardship and imports on the spread of rhizomania in the UK	University of Cambridge
02/22	1 year 31 st March 2003	Review of weed removal in relation to environmental objectives	Broom's Barn Research Station
03/01	1 year 31 st March 2004	Evaluating the incidence and spread of rhizomania from British Sugar factory tarehouse data	Rothamsted and British Sugar plc

03/05a	4 years 31 st March 2007	Interactions between beet viruses , their vectors and hosts I. Aphid monitoring and infectivity studies	Broom's Barn Research Station and British Sugar plc.
03/05b	4 years 31 st March 2007	Interactions between viruses, their vectors and hosts II. Virus variability and its implications for future resistant varieties	Broom's Barn Research Station and British Sugar plc.
03/06	4 years 31 st March 2007	The Monitoring and Control of Rhizomania in the UK	Broom's Barn Research Station
03/07	4 years 31 st March 2007	Improved disease resistance in sugar beet	Broom's Barn Research Station
03/11	2 years 31 st March 2005	Potential of novel neonicotinoid insecticide seed and spray treatments for control of pests including sporadic pests	Broom's Barn Research Station and British Sugar plc.
03/18	2 years 31 st March 2005	Herbicide options for control of weed beet in the rotation	Broom's Barn Research Station.
03/20	3 years 31 st March 2006	Synchronised granule application	British Sugar plc
03/22	3 years 31 st March 2006	Herbicide programmes - simple and safe programmes	British Sugar plc, Broom's Barn Research Station and Morley Research Centre.
03/23	2 years 31 st March 2005	Development of a weed puller for mechanical weed and weed beet control	British Sugar plc
03/25	1 year 31 st March 2004	Evaluation of the cost of rhizomania on-farm and production of a disease spread guide	British Sugar plc
04/01	4 years 31 st March 2008	Optimising yield benefits from Triazole and Strobilurin fungicides	Broom's Barn Research Station and British Sugar plc
05/13	1 year 31 st March 2006	Chemical blocking of seed set in weed beet	Broom's Barn Research Station
05/14	4 years 31 st March 2009	Optimising virus yellows control by monitoring aphid dynamics, infectivity and insecticide resistance	Rothamsted Research with Broom's Barn
05/31	2 years 31 st March 2007	2005 Rhizomania Survey	British Sugar plc
07/12	4 years 31 st March 2011	Monitoring and control of sugar beet pathogens	Broom's Barn Research Station and British Sugar plc
08/16	2 years 31 st March 2010	Pest and Disease Decision Support System	British Sugar plc
09/01	4 years 31 st March 2013	Optimising virus yellows control by monitoring population dynamics, virus content and insecticide resistance of aphids	Rothamsted Research
09/09	4 years 31 st March 2013	Exploitation of fungicides for foliar disease control	Broom's Barn Research Centre and British Sugar plc

GROUP 5 - HARVEST, HANDLING & STORAGE

Project No.	Duration/ Completion Date	Project Title	Contractors
00/22	3 years 31 st March 2003	Minimising sugar losses from breakage and bruising caused by beet handling systems between harvesting and processing.	British Sugar, CTM Harpley Engineering and Attachments Ltd
02/24	3 years 31 st March 2005	Frost protection for beet in the field: an alternative to post-harvest storage on farms	Broom's Barn Research Station and British Sugar plc
02/26	3 years 31 st March 2005	Long term beet storage	Broom's Barn Research Station, British Sugar plc and ADAS
04/02	1 year 30 th June 2005	Supplying beet for biofuel for 8 months of the year: A desk study	Broom's Barn Research Station and British Sugar plc
04/05	3 years 31 st March 2007	Modelling beet storage conditions and their impact on beet deterioration	Broom's Barn Research Station
04/15	4 years 31 st March 2008	Factors influencing crown size and height in sugar beet and the implications for crown tare	British Sugar plc
05/10	1 year 31 st March 2006	In-field frost protection of sugar beet	Broom's Barn Research Station
05/26	1 year 31 st March 2006	Performance evaluation of precision sugar beet drills	British Sugar plc
05/29	2 years 31 st March 2007	Safe methods of applying protective sheeting to beet clamps	British Sugar plc
06/05	3 years 31 st March 2009	Seed rates for the new sugar regime	British Sugar plc and Broom's Barn Research Station
06/06	2 years 31 st March 2008	Maximizing deliveries of freshly-lifted beet throughout the extended harvesting campaign	British Sugar plc and Broom's Barn Research Station
06/07	2 years 31 st March 2008	Post-harvest storage losses of different varieties in clamp	British Sugar plc
08/08	3 years 31 st March 2011	GAP - analysis of discrepancies between yield potential and yield delivered	British Sugar plc and Broom's Barn

GROUP 6 - TECHNOLOGY TRANSFER

Project No.	Duration/ Completion Date	Project Title	Contractors
00/16 - Now part of 02/08	4 years	The Plant Clinic at Broom's Barn	Broom's Barn Research Station
00/21 - Now 02/08	4 years	A co-ordinated and structured programme of information and technology transfer for UK sugar beet growers	British Sugar, Broom's Barn and Morley (TAG)
00/28 - Now 02/08		To publish the British Sugar Beet Review	British Sugar plc
00/56 - Now 02/08	3 years	Education role for sugar beet	Morley (TAG)
00/61 - Now 02/08	4 years	Co-ordination of the BBRO Education Programme	Broom's Barn Research Station
00/99 - Formerly 96/01	6 months 30 th September 2000	Decision support system to optimise use of Nitrogen	Rothamsted Research
02/08	4 years 31 st March 2006	A new, fully co-ordinated programme of information and technology transfer for the UK sugar beet crop	British Sugar plc, Broom's Barn Research Station and Morley Research Centre
06/15	4 years 31 st March 2010	A new, fully co-ordinated programme of information and technology transfer for the UK sugar beet crop	British Sugar plc and Broom's Barn Research Station
06/24	2 years 31 st March 2009 (extended to 31 st December 2009)	Creating a field experiment database for data mining	Broom's Barn Research Station