Mylnefield Research Services Ltd

N.W. Kerby

Mylnefield Research Services Ltd (MRS) was established in 1989 as the commercial arm of the Scottish Crop Research Institute (SCRI) to enhance competitiveness, understand and fulfil the needs of industry. MRS not only markets the resources and expertise of SCRI, but also undertakes near-market research and development. MRS places particular emphasis on developing partnerships and forging stronger relationships with customers.

MRS acts as the gateway to a variety of skills unique within the UK biological, agricultural and horticultural research services, ranging from fundamental studies on genetics, molecular biology and physiology, through agronomy and pathology, to glasshouse and field trials from a single site. As a technology transfer company, MRS is able to market the scientific expertise and resources of SCRI, and promotes the contribution of science and technology to wealth creation and the quality of life.

Innovation - the introduction of something new - is essentially the exploitation of new ideas, concepts and processes that generate competitive advantage. We aim to improve competitiveness and enhance the future prosperity of SCRI by reducing reliance on Government funding.

Responsibilities of MRS
- Marketing SCRI's scientific expertise
- Protecting and managing Intellectual Property (IP)
- Developing new markets for SCRI's and MRS's IP
- Licensing
- Providing an awareness of new funding opportunities
- Diversifying the funding base
- Assisting scientists in preparing research proposals
- Negotiating contracts
- Managing external contracts
- Promoting SCRI as a centre of scientific excellence

Mission Statement
Mylnefield Research Services Ltd will exploit commercially the scientific expertise and resources of the Scottish Crop Research Institute while protecting its charitable status and intellectual property.

Finance From the time of incorporation, MRS has been self-sufficient in providing its own accommodation and staffing, achieved without start-up funding, Government subsidy or venture capital.

MRS's major sources of income (1996-1997) are:-
- Contract research (47%)
- Collaborative research (45%)
- Royalties and licence fees derived from commercialising IP (3%)
- Analytical services and consultancy (5%)

Income generated from royalties and analytical services (e.g. Lipid Analysis Unit) is increasing, whereas income from collaborative research as a percentage of total income has and will continue to decline.

Contract research covers projects that are fully funded by a commercial partner to achieve specific targets and accounts for approximately 47% of the total income. Collaborative research projects are funded from the EU and governmental sources which include MAFF, DTI, DoE, The Scottish Office, and Research Councils, sometimes with additional support from industry. Collaborative research projects differ from contract research projects in that the research is often

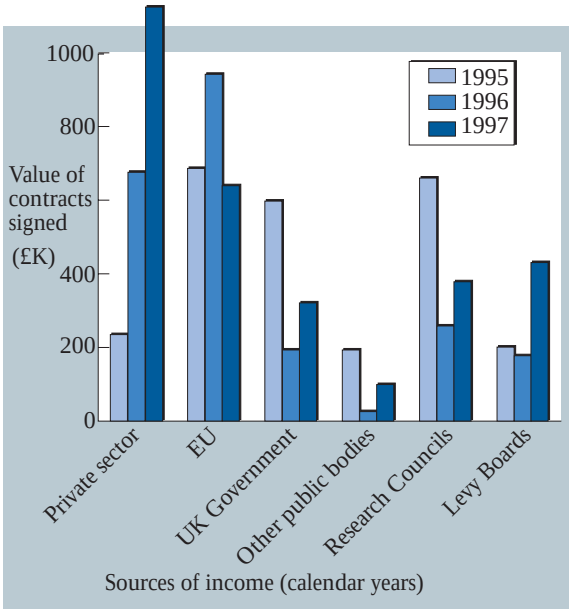

Figure 1 Collaborative and contract research awards.

conducted at more than one site and that the terms and conditions of the funding allow all the partners to exploit IP generated during the project. The portfolio of services that MRS can offer is complex and reflects SCRI's wide range of integrated activities.

The value of contracts from the private sector has steadily increased as we have successfully diversified the sources of funding (Fig. 1).

Since our first financial year (1992) income, which reflects business activity, has increased by 148% (Fig. 2). The rate of growth has slowed down but new measures and initiatives, introduced through investment and consolidation, will ensure that growth is sustained.

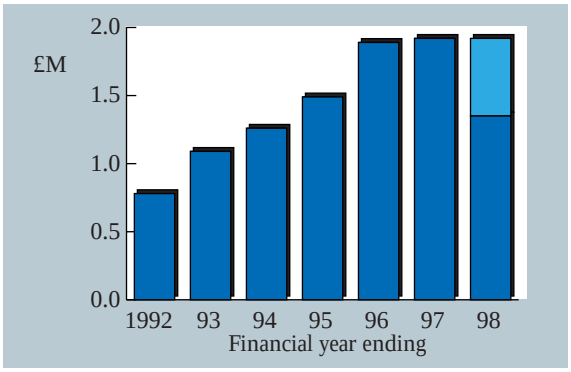

Figure 2 MRS Income.

Market Development The marketing action plan of MRS encompasses:-

- continuing to maintain favourable contacts with key customers
- expanding our global network of potential buyers
- prioritising areas where SCRI and MRS can demonstrate their greatest strength for income generation
- developing autonomous units with the ultimate aim of creating independent new companies

Internally, the objectives of MRS are to:

- work closely with SCRI scientists, networking to maintain effective communication
- develop new 'in-house' autonomous units providing commercial services
- realise commercial opportunities which might originate in SCRI or from the market
- protect and manage IP
- facilitate the writing and submission of research proposals

Project Management The active role that MRS takes in project management has been acknowledged and appreciated by our customers and has been an important factor in obtaining further funding from existing customers. Currently, MRS manages 4 DTI-LINK Schemes and 5 EU Projects.

By working closely with its customers, MRS more fully understands their needs and can identify potential areas of further collaboration. We facilitate the flow of information between projects. Where possible, and without compromising confidentiality, we identify synergies between existing projects and integrate academic disciplines to enable the customer to gain the greatest benefit from our combined (SCRI/MRS) resources and knowledge. This is evident by the range and number of industry consortia we have generated.

Protection, Management and Exploitation of Intellectual Property This is a particular strength of MRS. MRS's strategy is consonant with the 1993 Science White Paper *(Realising Our Potential - A Strategy for Science, Engineering and Technology* Cm2250) which emphasises the importance of wealth creation and technology transfer. SCRI has embraced the need for wealth creation and significant numbers of the staff are actively seeking protection for their innovative research. Frequently, MRS receives requests from other bodies for advice on IP and best practice for commercialising science and technology.

Lipid Analysis Unit A MRS Lipid Analysis Unit was established in October 1995, providing reliable routine analytical services, specialised analyses and contract research projects. The Unit employs one full-time and one part-time technician. It has a current annual turnover in excess of £63,000 with worldwide coverage from customers in the health food, confectionery, pharmaceutical and food industries. The Unit was awarded the ISO 9002 quality assurance standard in 1997, emphasising our commitment to quality. Since 1996, the Lipid Analysis Unit has successfully organised two 2-day courses on the chemistry and analysis of fatty acids. MRS has already begun advertising for the next course that will be held in September 1998.

Collaborative Research MRS places considerable emphasis on developing successful partnerships between the academic/research community of SCRI and Industry to provide wealth creation and to enhance our quality of life. This is exemplified by our participation in four new LINK projects commissioned during 1997.

What is LINK? LINK is the UK Government's principal mechanism for supporting collaborative research between UK industry and the science base. It

Country	Title	Inventor	Application No	Status
PCT European Belgium Switzerland France UK Canada Russia USA	ANTI-VIRAL MATERIAL	J M S Forrest D Stewart W E G Müller	PCT90/01638 90915787.7 BE90915787.7 CH90915787.7 FR90915787.7 GB90915787.7 CA2071546-4 RU5052241.14 US143500	National Phased Granted National Phase Granted Granted Granted Granted Pending Accepted Granted
PCT European USA Canada Australia New Zealand	SPLICEOSOMAL PROMOTER	J W S Brown G C Clark G G Simpson	PCT9501443 EP95922617.6 US750654 CA2192971 AU27449/95 NZ288283	National Phased Pending Pending Pending Pending Pending
PCT European Australia Canada New Zealand USA	METHOD FOR CHIMERIC PROTEIN	S N Chapman S P Santa Cruz K J Oparka T M A Wilson	PCT9502457 EP95394228.8 AU36598/95 CA2202761 NZ294014 US844045	Pending Pending Pending Pending Pending Pending
European	PHYTOPHTHORA PCR PRIMERS	A Dolan J M Duncan D E L Cooke	EP96303105.9	WTG Search
UK	POLLEN SPECIFIC PROMOTER	G C Machray P Hedley R Meyer A Maddison	9705694.9	Pending
PCT	CHIMERIC PSEUDOVIRUSES IN BACTERIA	T M A Wilson S N Chapman	PCT9701065	Pending
UK	METHOD (PHAGE TYPING)	I Toth	GB9809414.7	Preliminary Filing
UK	BARLEY MARKERS FOR ETHYL CARBAMATE PRODUCTION AND FERMENTABILITY	WTB Thomas W Powell J S Swanston	GB9805087.5	Pending

Figure 3 Patented SCRI technology (granted and pending).

aims to enhance the competitiveness of UK industry and quality of life through support for managed programmes of pre-competitive science and technology in market or technology sectors, and by encouraging industry to invest in further work leading to commercially successful products, processes, systems and services.

Marketing

MRS has adopted a wide variety of approaches to marketing the expertise of the Institute. These include organising face-to-face meetings with key personnel in the industrial, scientific and political sectors,

Trade Marks

Country	Trade Mark	Class/Classes	App/Regn No	Status	Renewal Date
UK	SCRI	Research, analytical and consultancy services in chemistry, biology and agriculture	2029548	Registered	04.08.2005
UK	MYLNEFIELD		2029550	Registered	04.08.2005
UK			2029551	Registered	04.08.2005
UK	MRS		2041244	Registered	13.10.2005
EU	OVERCOAT	Microorganisms, viruses and proteins in industry and agriculture	EUT000433078	Pending	
UK	OVERCOAT		2102099	Accepted	08.06.2006
USA	OVERCOAT		208908	Pending	
UK	DISCOVERY	Agricultural, horticultural and forestry products	2017679	Registered	18.04.2005

Figure 4 Trademarks.

giving presentations at seminars and workshops, and attending tradeshows, conferences and meetings in strategic areas of interest.

MRS has produced a number of promotional brochures that cover individual plant varieties, services available and general areas of interest. These brochures are mailed out to potential customers and made available to visitors to the Institute.

We recognise the importance, cost and complexity of successful marketing and market research. We are investigating new strategies to continue to diversify the funding base and attract new customers.

Premises

In June 1997, MRS moved into a purpose-built Portakabin. In addition to offices, filing rooms and toilets, the premises include a boardroom capable of seating up to 12 people with an adjacent kitchen, and

	Variety	PVR
Strawberry	Symphony	EU Switzerland
Raspberries	Glen MARS	EU
	Glen Lyon	UK
Blackberry	Loch Ness	UK France Netherlands USA (plant patent) Denmark
Blackcurrants	Ben Connan	USA (plant patent) UK
	Ben Tirran	USA (patent pending) France UK Denmark Netherlands
	Ben Loyal	UK
	Ben Alder	UK

	Variety	PVR
Potatoes	Buchan Glamis Brodie Stirling Brodick Kirrie Claret Othello Spey	EU
Brassicas	Invitation Brora Highlander Airlie Kenmore Virtue Interval Hot Stuff Massif Caledonian	UK

Figure 5 Plant variety rights.

LINK Scheme:	Biological Treatment of Soil and Water
Project Title:	Integrating Microbial Processes in Soil at Successive Scales
Duration:	48 months
Total Value:	£853,753
Partners:	Rhone Poulenc Agriculture Ltd., QuantiSci, MRS Ltd.
Principal Scientists:	Dr J Crawford, Dr I Young, Dr K Ritz

LINK Scheme:	Biological Treatment of Soil and Water
Project Title:	Novel Antibody-Like Particles for the Detection, Monitoring and Elimination of Pollutants in Water
Duration:	36 months
Total Value:	£555,340
Partners:	Yorkshire Water Services Ltd., Environmental Sensors Ltd., WRc plc, MRS Ltd.
Principal Scientists:	Dr Lesley Torrance

LINK Scheme:	Agro-Food Quality
Project Title:	A Genome Based Approach to Improving Barley for the Malting and Distilling Industries
Duration:	39 months
Total Value:	£567,386
Partners:	Home Grown Cereals Association, Advanta Holdings (UK) Ltd., Scotch Whisky Research Institute, MRS Ltd.
Principal Scientists:	Dr WTB Thomas, Prof W Powell

LINK Scheme:	Hort LINK
Project Title:	Genetic Modification of the Commercial Strawberry for Improved Disease Resistance
Duration:	33 months
Total Value:	£339,002
Partners:	Kentish Garden Marketing, Zeneca, MRS Ltd.
Principal Scientists:	Dr Julie Graham

has been in considerable demand for project management meetings, meetings with prospective customers and internal review meetings. Sponsorship has been obtained from a number of key customers to develop the area around the building into a recreational amenity to be enjoyed by all the staff of SCRI. Our thanks go to Darby Brothers, VHB, Greenvale Produce, John Hargreaves and Sons, and Sharpes International for their contributions to this facility.

Employees

In 1997, Dr Jonathan Snape joined MRS as Commercial Manager. A graduate of Cambridge and Birmingham Universities, Dr Snape has gained experience of technology transfer and research project management while working for Unilever in Japan. The administrative staff of MRS was further strengthened by the appointment of Lesley Beaton as Administrative Assistant. In 1997, the following scientists were employed by MRS; Sharon Canavan, Dr Wendy Craig, Dr Yuchao Han, Emily Cobb, Jonathan Tonberg and Sheena Rowbottom.

Acknowledgement

MRS could not operate without the full and generous support of SCRI staff. We fully acknowledge that our success is largely due to their innovative ability and quality.