

# Mylnefield Research Services Ltd

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Mylnefield Research Services (MRS) Ltd, the wholly-owned commercial subsidiary of SCRI, celebrated its twentieth anniversary in 2009. It was established in 1989 by Professor John Hillman, the then Director of SCRI, to enhance competitiveness, understand and fulfil the needs of industry and maximise the value of SCRI intellectual assets and resources. Agricultural food production has changed radically over this period and the underpinning research has seen significant advances. The need for SCRI to be able to convert its excellent science into commercial products and services that meet industrial and societal needs, while stimulating economic development, has never been

more acute. MRS has consistently generated profits that are reinvested in SCRI. The formation of a new research institute comprising SCRI and the Macaulay Land Use Research Institute in 2011 will ensure we are well positioned to meet the global challenges of food and energy security and climate change.

The twentieth anniversary of MRS was celebrated at the Director's summer soir  e on the lawn at SCRI in August when local dignitaries, key stakeholders, past and present employees and directors enjoyed an evening of fine food (including potatoes and fruit bred by MRS and its partners) and entertainment.



Dr Nigel Kerby with Mr Murray Thomson and Mr Peter Berry.

MRS uses a diverse range of routes to commercialise SCRI expertise and intellectual property (IP), including: Spin out companies, for example EnPrint Ltd.; Joint Ventures, for example Danasia Berry (Beijing) Corporation; collaborative research projects for example long-term breeding contracts with GlaxoSmithKline and Greenvale AP Plc; licensing, for example we have granted 473 licences to plant varieties bred at SCRI; sale of products, for example barley molecular markers, plant virus antibodies; analytical services for example stable isotope analysis, lipid analysis; field and glasshouse services, for example supply of high-health plants, trialling new agrochemicals; consultancy, for example statistical services from BioSS.

#### Finances

The turnover of MRS was £1.9 million in 2008/2009.

MRS transferred £0.9 million to the SCRI Group, including £225k of Gift Aid. As in previous years, contract research (45%) was the biggest contributor to income, followed by royalties (26%) and analytical services (20%). In addition, MRS retained £91k (after tax) to increase significantly company reserves for future investments,

#### Knowledge transfer and exploitation

In March 2009, Dr Richard Gregson joined the MRS team. Richard, a trained patent examiner with a PhD in chemistry, is employed by Genecom and seconded to MRS with the sole aim of generating income from the commercialisation of SCRI's IP and resources. Genecom also provide funds to develop commercial ideas and in 2009, a project led by Dr Wolfram Meier-Augenstein was approved to develop methodologies to determine the authenticity of Scotch whisky using stable isotopes.

#### Analytical services

The early part of 2009 saw difficult trading conditions for Mylnefield Lipid Analysis. The impact of the financial crisis and the resultant recession saw a reduction in plantings of oil seed crops for use in health foods and nutraceuticals, and a major customer in the pharmaceutical sector closed its UK office and terminated its contracts with MRS. The second half

of the year saw business pick up again, and following investment in a new TLC machine that attracted new customers, October 2009 was the most successful month to date for the business.

In addition, MRS was audited by the Medical and Healthcare products Regulatory Authority (MHRA) and can now operate to Good Clinical Practice. MRS is now working towards obtaining Good Manufacturing Practice and Good Laboratory Practice accreditation and has retained the services of Marilyn Emery Consultants to assist in this process.

Under the leadership of Dr Wolfram Meier-Augenstein, the stable isotope analysis business has shown steady growth that has necessitated the investment in new equipment and extra technical assistance. This business has been branded as Mylnefield Isotope Signatures and new marketing material and a website ([www.isotopesignatures.com](http://www.isotopesignatures.com)) have been developed. It is anticipated that combining increased marketing effort with extra analytical capacity will increase sample throughput and lead to further growth in 2010.



The launch of the spin-out company EnPrint©. From left to right: Dr Keith Winton, Dr Rayne Longhurst, Dr Tim Daniell and Dr David M Roberts.

#### Associated businesses

EnPrint Ltd was established in April 2009 with a £150k investment from the Genomia Seed Fund. EnPrint are developing laboratory-based analytical services for analysing complex populations of microorganisms based on methods pioneered by Dr Tim Daniell and reduced to practice by Dr David Roberts. These techniques have attracted considerable interest from



environment agencies and water companies in the UK and elsewhere in Europe. The challenge in 2010 will be to convert this interest into commercial contracts and raise sufficient finance to enable the company to develop a sustainable range of services.

MRS has a 10% stake in a cooperative joint venture, Danasia Berry (Beijing) Corporation Limited. 2009 saw the production of 57 tonnes of fruit in the Hairau district of Beijing and the establishment of new plantations. In addition, there has been a change in emphasis

from summer fruiting varieties to primocane and

significant investments in the infrastructure of farms and juvenile plants. Trials of SCRI 'Glen' varieties were established in 2009 and experiments on overwintering cane to protect from severe frosts were initiated. It is early days for this venture but MRS and our Danish partners – Berrifine Corporation and the Industrialisation Fund for Developing Countries (IFU) – are determined to increase both the quality and quantity of products through selecting appropriate varieties, extension services, transferring new technologies (for example protected cropping and drip irrigation) and training.

### Human Resources

MRS attained a Bronze Award for its Investors in People submission. This accolade is testament to the commitment and dedication of all MRS staff. Of course, there is always room for improvement and in 2010 we will be looking at new ways to improve.

### Plant breeding

MRS's commitment to plant breeding was evidenced by the employment of two new PhD plant breeders. Vanessa Young (potatoes) and Hazel Bull (cereals) will be undergoing rigorous training over the next five years

to ensure that MRS has access to plant breeders with the skills required to exploit fully the data generated by genomics. It is anticipated that in 2010 an additional PhD plant breeder focused on soft fruit will be recruited.

A new raspberry breeding consortium was established in 2009 that has guaranteed funding for raspberry breeding for at least the next five years. The consortium comprises the Scottish Government, the Horticultural Development Company and most of the major raspberry propagators, growers and marketing groups in the UK. For the first time this breeding programme will utilise molecular markers developed at SCRI by Dr Julie Graham and her team. It is hoped that these developments will lead to a new generation of raspberry varieties that build on the market leading 'Glen' series of raspberries.



Finlay Dale (right) with John Bradshaw.

Following the retirement of Dr John Bradshaw in April, Dr Finlay Dale was seconded to MRS for 50% of his time in recognition of his commitment to delivering eight potato breeding programmes. Two major potato breeding programmes with McCain Potato and Greenvale AP were renewed in 2009. The potato breeding team was strengthened by the appointment of Jane Robertson. Two blackcurrant breeding programmes (one fresh, one processing) were ably managed by Dr Rex Brennan and look poised to deliver exciting new varieties in the coming years.

### Licensing and royalties

Royalty income in 2008/2009 was the highest ever at £498k driven mainly by income from the raspberry



Loch Tay

variety Glen Lyon in Spain and Glen Ample in the UK and elsewhere in Europe. Income from blackberries showed strong growth following the release of Loch Tay and income from potatoes showed a steady increase due to the popularity of the new 'Vales' varieties marketed by our long-standing partner Greenvale AP Plc.

In 2009, three new potato varieties (Inca Bella, Chinchá and Tabitha) were admitted on to the National List and two new varieties were submitted for National List Trials. EU Plant Variety Rights were applied for in relation to three varieties of blackcurrants, one potato variety and two varieties of the catch crop *Solanum sisymbriifolium*. Following the success of the arrangement to collect

royalties from Glen Lyon in Spain, in late 2009 MRS concluded an agreement with the Spanish company Eurosemillas to act as agent for MRS raspberries and blackberries in Spanish and Portuguese speaking countries around the world.

#### Contract research

Despite the recession, income from contract research managed to grow by 18%. This is despite one potato breeding company going into administration and several potential major collaborations being put on hold pending more favourable economic conditions. Although many SCRI scientists contributed to this impressive performance, special mention should be made of Dr Alison Lees (potato pathology), Dr Julie Graham (soft fruit genetics) and Dr Derek Stewart (food quality).

#### Acknowledgements

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