

Introduction by the Director

John R. Hillman



The Scottish Crop Research Institute (SCRI) is a non-profit-making limited company established under the Companies Act, has charitable status, and is classified as a Non-Departmental Public Body because over 50% of the total funding is received as grant-in-aid from the Scottish Executive Rural Affairs Department (SERAD), formerly the Scottish Office Agriculture, Environment and Fisheries Department. All members of the Governing Body are appointed by

the First Minister, formerly the Secretary of State for Scotland. Staff are not formally civil servants, but are members of the Scottish Executive Rural Affairs Department Superannuation Scheme, 1999. SERAD also funds any redundancies, the site, and much of its fabric and capital equipment. There is also a Management Statement and Financial Memorandum embodying the formal relationship with SERAD. The Pay and Grading System, and Staff and Manage-


The Mission of SCRI is:

“To sustain excellence and our international reputation for strategic research into plant, crop and environmentally related sciences of particular importance to Scotland and of wider international relevance, bringing added value and new opportunities for the benefit of industry and other end users”.

To achieve this Mission, SCRI aims


- to be an international centre of excellence in plant and environmental science and to contribute fundamental knowledge of plant/crop systems to the UK and international science base;
- to provide a scientific and administrative infrastructure that supports high-quality, innovative, basic and strategic research;
- to improve the utility and value of plant and crop species, in particular, our mandate crops – barley, potato and soft fruit, to improve agricultural efficiencies and offer options to achieve profitability;
- to establish critical masses in key strategic areas that are connected to a long-term vision;
- to develop more sustainable, environmentally sensitive and systems-based approaches to minimise inputs and maximise product quality and safety;
- to create value-added opportunities in our plant, crop, and environment-related industries by developing the technologies and knowledge required to sustain and to improve international competitiveness;
- to promote public awareness and understanding of relevant bioscience and environmental issues to assist informed public debate;
- to recognise excellence and encourage training and rewards to staff to ensure the success of the science programme;
- to provide a stimulating environment for research endeavours and student training;
- to sustain a dedicated technology-transfer operation that promotes and facilitates collaboration with global industry;
- to meet end-user needs.

ment Codes are administered by the Biotechnology and Biological Sciences Research Council (BBSRC).

SCRI was established in 1981 by an amalgamation of  the Scottish Horticultural Research Institute (SHRI, founded at Invergowrie, Dundee in 1951) and the Scottish Plant Breeding Station (SPBS, founded at East Craigs, Edinburgh in 1921). In 1987, the Institute assumed managerial responsibility for Biomathematics & Statistics Scotland (BioSS), formerly the Scottish Agricultural Statistics Service.


SCRI is a major international centre for basic, strategic and applied research on agricultural, horticultural and industrial crops and on the underlying biological processes common to all plants. It is the only such institute in Scotland and Northern Britain, and the range of complementary skills assembled at the Institute, from fundamental molecular genetics to glasshouse- and field-trials, with exploitation of the SCRI-based international genetic resources in a region of high phytosanitary conditions, is unique within the UK.

The science is optimised by a matrix management system comprising four divisions and nine inter-related research units. Management structures are regularly reviewed to ensure maximum effectiveness of the research at SCRI.


During the past year, the Institute has completed a  major Science Strategy Review. The review team:

- assessed the quality, novelty, focus and timeliness of current and projected research objectives and their relevance to SCRI's position within Scottish, UK and International plant science communities;
- examined the management of science within the Institute, including the effectiveness of communication and synergies within and between the various research groupings;
- made recommendations on the future research direction and integration of research activities. Wealth-creating potential and industrial relevance were considered high-priority targets.

The review took into account views of staff, senior management, the Governing Body and SERAD.

The SCRI research programmes are peer-reviewed at many levels. Each year, the 'core' programme  of research comprising a number of projects is assessed by the Agricultural and Biological Research Group, formerly the Research, Education and Advi-


sory Services Unit of SERAD. New projects are appraised by advisers prior to commissioning, progress is monitored annually and, ultimately, a final report is produced for evaluation.


Every four years, SERAD commissions BBSRC to  appoint a Visiting Group to review the work of the Institute. A Visiting Group took place in November 1998. The Visiting Group carried out a scientific audit of the quality and conduct of SCRI's core research programme and related work, and assessed SCRI's effectiveness in managing its resources to meet the needs of users and beneficiaries of research, and the Institute's strategic plans for the future development of its scientific programme.

Remarks published in the Report of the Visiting Group included:


- the VG was impressed by the quality of research at SCRI;
- overall, SCRI's productivity was similarly impressive;
- the calibre of SCRI's staff was considered to be good and the VG identified several outstanding individuals.


The Report made a number of constructive recommendations to guide the continuing development of the Institute. A response to the Report was forwarded to SERAD along with an implementation programme. That programme has been initiated within the past year and most of the Visiting Group recommendations implemented.

A broad multidisciplinary approach to fundamental  and strategic research, and technology transfer, are special strengths of SCRI. Our programmes span the disciplines of genetics and breeding, molecular and cellular biology, biotechnology, plant pathology (bacteriology, entomology, mycology, nematology and virology), plant physiology and cell biology, environmental science, plant chemistry and biochemistry, agronomy, molecular ecology, vegetation dynamics, bioremediation, serology, physics, mathematics, bioinformatics and statistics. Genetics and enhanced breeding of selected crops, and biotechnology, lie at the core of all our substantial research, development and training programmes.

The breadth and depth of knowledge, technical expertise, and infrastructural resources available at  SCRI attract extensive contracts and consultancies from, and foster collaborations with, numerous academic and corporate organisations around the


world. Synergistic liaisons with other institutes, universities and colleges in the UK and overseas are also integral to the scientific growth, development and validation of the Institute's research activities. New links are being forged continuously, as well as existing contacts being developed and strengthened.


 SCRI and Mylnefield Research Services (MRS) Ltd, the commercial arm of the Institute, are successful in gaining competitive research contracts from government departments and agencies, Levy Boards, grower organisations, international agencies, the European Union, commercial companies, local government, and some Charities, Research Councils and Trust funds, although we are largely excluded from submitting applications to the latter three sources.


 In February 2000, the Mylnefield Trust was registered. The objectives of the Trust are:

- to promote research and scientific work in the life, environmental and related sciences, in particular production of agricultural, horticultural and forestry crops, methods of limiting or eradicating pests and diseases, wood sciences and biomathematics, methods of increasing production or growth, improving cultivation and research into improved cultivars;
- to promote the dissemination of such research.

The Trust will support scientific research at SCRI by making gifts, grants, loans or payments to the Institute subject to the above objectives being met.


 Also in February 2000, Mylnefield Holdings Ltd was established. Mylnefield Holdings Ltd which is wholly owned by the Mylnefield Trust, is legally separate from SCRI and MRS Ltd but will obtain licences to SCRI technology and other necessary third-party technology that will enable it to establish spin-out companies. The new company will transfer money to SCRI and MRS Ltd through royalty and/or milestone payments.


 SCRI provides the base and secretariat for The Scottish Society for Crop Research (SSCR), a registered Friendly Society formed in 1981 by the amalgamation of The Scottish Society for Research in Plant Breeding and The Scottish Horticultural Research Association.


 The SSCR provides an important link between SCRI research scientists and farmers, growers, processors and other interested companies in the private sector.


The Society:


- organises interactive field walks and end-user/researcher discussion sessions;
- finances science-based advisory publications for the benefit of its members;
- stimulates crop-based sub-committees to support targeted research projects ;
- reinforces SCRI representation with trade associations, Levy Boards, and other user-groups;
- administers the biennial Peter Massalski Prize to the most promising young scientist at SCRI.

 SCRI is one of five Scottish Agricultural and Biological Research Institutes (SABRIs: Scottish Crop Research Institute; Hannah Research Institute; Macaulay Land Use Research Institute; Moredun Research Institute; Rowett Research Institute); and together with the Royal Botanic Garden, Edinburgh; the Scottish Agricultural College (SAC); the Scottish Agricultural Science Agency (SASA); the Fisheries Research Services; and Forestry Commission Research Agency, comprise the Committee of Heads of Agricultural and Biological Organisations in Scotland (CHABOS).


 BioSS was established to cover the biomathematical and statistical needs of the five SABRIs and SAC. High-level consultancy, training and research inputs from BioSS give a major advantage to the SABRI and SAC research programmes, as well as to the work of SASA and several other bodies for whom it carries out contracts.

 This Report details only a small selection of the recent research achievements of SCRI, BioSS and MRS Ltd, briefly describes the commercial rôles and successes of MRS Ltd, and summarises the important linking rôle of SSCR. Significant advances continue to be made in both fundamental and strategic science, with contributions to the protection and understanding of the environment. In the past years, SCRI has contributed to the debate on genetically modified crops, providing independent and unbiased information on this important subject. Discoveries are reported of direct and indirect benefit to agriculture, horticulture, forestry, land management and biotechnology. Dedicated and talented scientific and support staff in the Institute, BioSS, and MRS Ltd, account for our stature, successes and delivery of achievements.

 Details of the annual accounts, Corporate Plan, health and safety provisions, and the SCRI/MRS quality assurance arrangements are available on request.

 On behalf of the staff and Governing Body, it is a pleasure once again for me to acknowledge with gratitude the staff of SERAD for their continuing support of, and demonstrable commitment to, our research programme and to our development. Regardless of the enormous pressures upon them in recent years, they function rigorously, openly and fairly, as always, to the highest professional standards of British public service. Grants, contracts, donations, advice and joint participation in our activities from the SSCR, other government departments and their agencies, non-governmental agencies, our sister

CHABOS institutions and BBSRC institutes with whom we coordinate our research, grower levy boards, local and regional authorities, commercial companies, farmers and other individuals, and learned societies, are also warmly appreciated.

 SCRI continues to remain buoyant in generally difficult times for science in the UK, justifying its existence in every respect. We have every confidence in meeting future challenges. Scientifically, technologically and commercially, our prospects are outstanding.

