

# Introduction by the Director

John R. Hillman



® The Scottish Crop Research Institute (SCRI) is a non-profit company limited by guarantee, and is a registered charity. The programme of research is funded, in the main, by the Scottish Executive Environment and Rural Affairs Department (SEERAD), together with grants and sponsorship from external sources. The Institute operates from land owned by and rented from the Scottish Ministers, and the majority of the buildings and equipment used by the Institute are funded by capital grant from SEERAD. The relationship between the Institute and SEERAD is set out in the Department's Management Statement and this, along with the Department's Financial Memorandum, sets out the main terms and conditions attaching to the provision of grant-in-aid and capital funding, reflecting the special relationship between SEERAD and the Institute. The Management Statement designates the Institute Director as Accounting Officer, with all the responsibilities that attach to that position, and requires the Institute to apply the Biotechnology and Biological Sciences Staff Code for all staff. SEERAD approval is required for the Corporate Plan, the Business Plan (including the financial and manpower budget), major capital expenditure, the appointment of all senior staff at band 3 and above, including the appointment of the Institute Director and the funding of early retirements and redundancies. Staff are not formally civil servants, but are members of the Scottish Executive Rural Affairs Department Superannuation Scheme, 1999. The Institute may not set up, or dispose of, subsidiary companies without the permission of SEERAD and may not dispose of any grant-funded assets without the permission of SEERAD.




® As Accounting Officer, the Institute Director is accountable to the Accountable Officer of the Institute's sponsoring Department (SEERAD) and is responsible for preparing accounts in accordance with relevant directions issued by SEERAD and for arranging for these accounts to be audited in accor-


dance with the relevant provisions of the Management Statement and Financial Memorandum issued by SEERAD. The responsibilities also include ensuring that: (a) the financial management procedures and systems of the Institute are operated correctly and with propriety; (b) they promote the efficient and economic conduct of business; (c) there are adequate safeguards against misuse, wasteful, or fraudulent use of monies including an effective system of internal audit; (d) value for money from public funds is secured; (e) spending proposals are appraised carefully; (f) all expenditure is related to the achievement of clearly defined objectives, firm targets, and effective performance measures, as set out in the Institute's Corporate Plan; (g) there is close observance of the delegated authorities set out in the grant-in-aid Management Statement or Financial Memorandum or terms and conditions attached to capital grant. As Accounting Officer, the Institute Director must be satisfied that, throughout the year, SEERAD funds have been applied in accordance with all conditions relating to those funds.





® Following publication in June 2001 of the Scottish Executive report *Public Bodies: Proposals for Change*, the Institute, along with the other four Scottish Agricultural and Biological Research Institutes (SABRIs), was declassified as non-departmental public body on 31<sup>st</sup> March 2003. Since that date and the loss of NDPB status, SCRI is termed a public-sector research establishment or government-sponsored research institute. The Institute continues to be funded by SEERAD but the Scottish Ministers are no longer responsible for the appointment of the Chairman or the Governing Body members. These changes required alterations to the Institute's Memorandum and Articles of Association, which were approved by the Governing Body on 24 March 2003. In addition, new appointment procedures for Governing Body members have been set out in an Appointment Code of Practice, which is based


upon the Commissioner for Public Appointments Code of Practice for Ministerial Appointments to Public Bodies. The Code sets out the desired composition of the Governing Body, along with a framework for the appointments of members that a) aims to provide a clear and concise guide to ensure a fair, open, and transparent appointments process that produces a quality outcome and can command public confidence, and b) is designed to ensure that the Governing Body is representative of the Institute's research programmes, its end-user interests, and stakeholder groups. This code was approved by SEERAD and adopted by the Governing Body on 16 April 2003.

 The Institute's Memorandum and Articles of Association contain references to the powers of the Scottish Ministers, in addition to the specific conditions noted in the Management Statement. The Institute requires the approval of the Scottish Ministers to alter the Memorandum and Articles of Association, to apply for and accept any grants of money or property, to acquire any patent rights, and to borrow or invest funds. The approval of the Scottish Ministers is also required for the disposal of any surplus, following the winding up or dissolution of the Institute.

 The Institute is committed to the implementation of Corporate Governance, which requires the highest standards in the three key areas of openness, integrity, and accountability. The Governing Body has a Code of Practice to guide the conduct of its members and has established the appropriate procedures and remits to ensure adherence to these standards.

 The Mission of SCRI is:  
"To be Europe's leading centre for strategic and applied research into plant and crop-based bioscience, and related environmental sciences, creating knowledge, added-value and new products to benefit the food, drink, agriculture and related industries, the bioindustries, and the environment".

 Our specific strategic objectives to achieve this Mission are given in Table 1.

 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.

## Science

- Be an internationally recognised centre of excellence in plant and crop bioscience and products.
- Establish partnerships in key strategic research areas that are fundamental to the long-term vision for the Institute, which will include developing our links with universities and other related bodies.

## Knowledge and Technology Transfer & Exploitation

- Be an internationally successful model for knowledge transfer and for the spin-out and exploitation of scientific research at the Institute.

## Finance and Physical Resources

- Develop new funding and commercialisation relationships facilitated by an effective and responsive system of financial control.
- Provide a scientific, administrative and physical infrastructure that enables and supports high-quality, innovative, basic, strategic, and applied research.

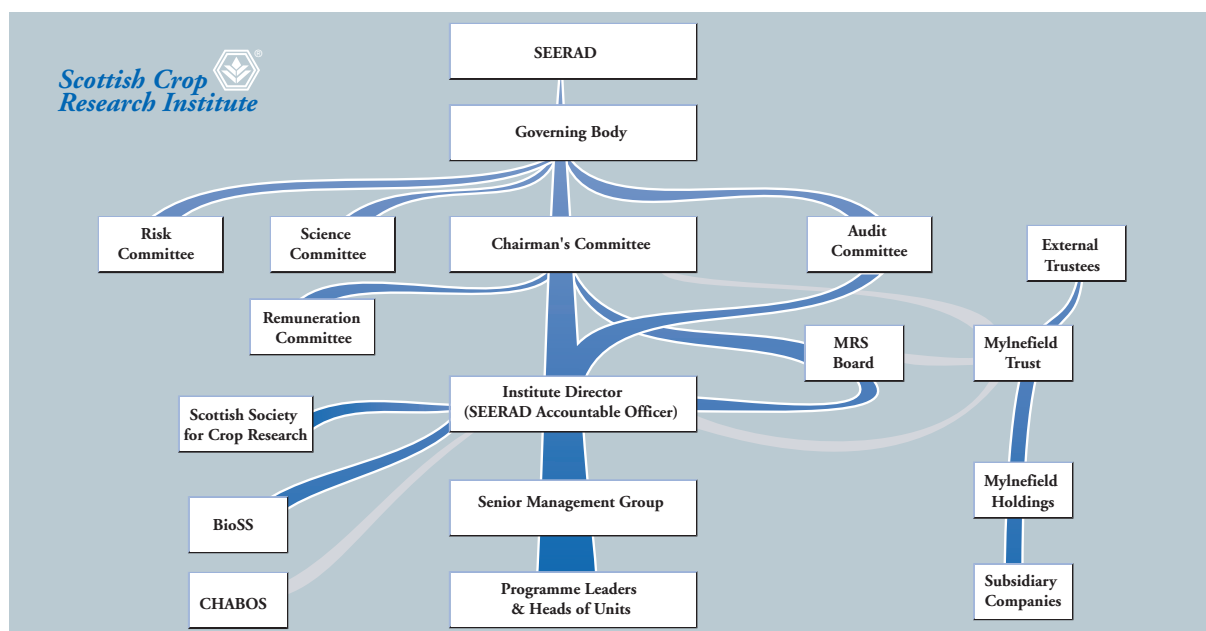
## Impact and Image

- Raise our profile and promote public awareness and understanding of relevant bioscience and environmental issues to assist informed public debate.

## Human Resources

- Promote the recruitment and development of staff to the highest international standards to deliver the strategic science and commercialisation programmes.

**Table 1.** SCRI Strategic Objectives



**Figure 1** SCRI company and committee structure.

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 three Themes and nine inter-related research Programmes. Management structures are regularly reviewed to ensure maximum effectiveness of the research at SCRI.

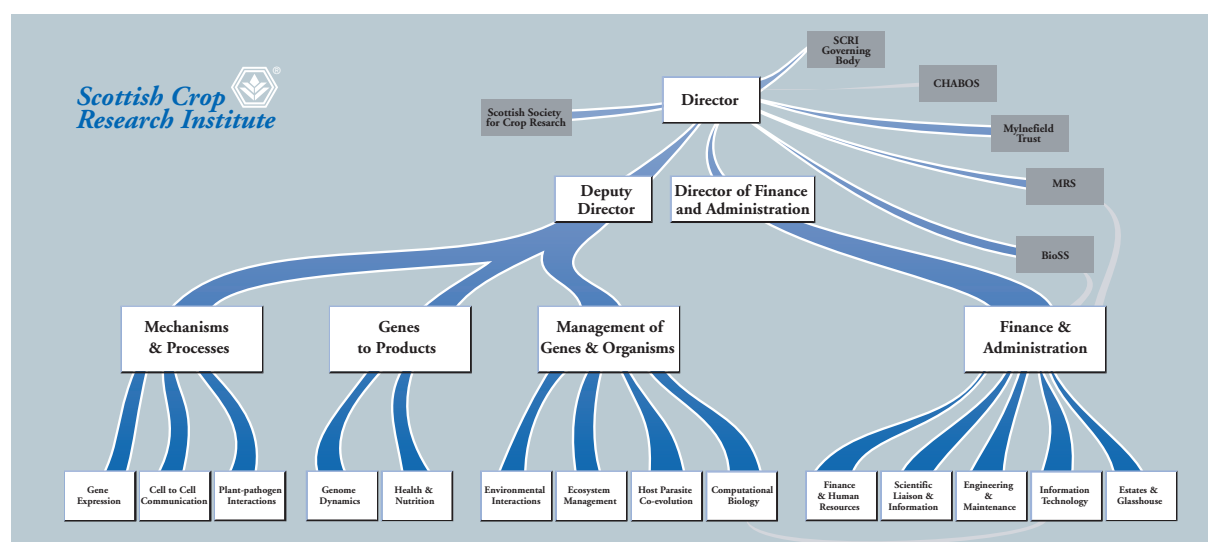
The SCRI research programmes are peer-reviewed at many levels. Each year, the 'core' programme of research comprising a number of projects is assessed by the Agricultural and Biological Research Group of SEERAD. All new projects are appraised by advisers prior to commissioning, the progress of the research projects is reported annually and, ultimately, final reports are produced for evaluation.

Every four years, SEERAD commissions the appointment of a Visiting Group to review the work of the Institute. The next Visiting Group is due May 2003 and in preparation for that visit documentation covering Quality of Science, Knowledge

Transfer and Exploitation, and End Use Relevance has been submitted to three Assessment Panels. The Institute looks forward to the Visiting Group exercise and the opportunity to demonstrate the exciting research work undertaken at SCRI.


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. Memoranda of Understanding have been signed with a number of universities and organizations locally and overseas. Synergistic liaisons with other institutes, universities, and colleges in the UK and overseas are also integral to the scientific




**Figure 2** Institute management structure.


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 Mylnfield Research Services (MRS) Ltd, the commercial arm of the Institute, are successful in gaining competitive research contracts from government departments and agencies, statutory 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 Mylnfield Trust was registered; the Trust will support scientific research at SCRI by making gifts, grants, loans, or payments to the Institute subject to meeting its objectives. Also in February 2000, Mylnfield Holdings Ltd was established. Mylnfield Holdings Ltd 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.

 In the two years to 31 March 2003, the Institute has spent over £5 million on capital equipment, which has allowed it to upgrade its glasshouses, controlled environment, and laboratory facilities, and invest in sophisticated analytical equipment. This, along with further funding to replace another glasshouse in 2004, has enhanced the

Institute's ability to bid for competitive funding, has raised its international competitiveness, and has enabled the development of additional research programmes. The Institute is also continuing to develop proposals for the possible setting up of a Science Park at its Mylnfield site. The Institute is undertaking discussions with the relevant parties but will require the consent of SEERAD prior to any agreements being concluded.


 The Institute has also invested in quality management systems, receiving accreditation under the ISO9001:2000 standard in October 2002, and has initiated an Institute-wide information and document management system, including a comprehensive upgrade of the Institute's intranet and web site, for implementation by August 2003. In addition, Mylnfield Research Services Limited (MRS) is now operating to Good Laboratory Practice Standard (an international standard) in the Lipid Unit. Staff have also received several awards including the Jones Bateman Cup awarded to R. M. Brennan for achievements in fruit breeding and the Scottish Horticultural Medal awarded to J. R. Hillman for services to horticultural science. K. J. Oparka was also promoted to Individual Merit Promotion Band 2 in July 2002. SCRI is accredited under the Investors in People scheme.


 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 a 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. SCRI contributes 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 SEERAD for their continuing support of, and demonstrable commitment to, our research programme and to our development. 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. The Institute continues to remain buoyant in generally difficult times for science and agriculture in the UK, justifying its existence in every respect. We are confident that we shall continue to develop and thrive.