Introduction by the Director

John R. Hillman

The Scottish Crop Research Institute (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, SCRI assumed managerial responsibility for the Scottish Agricultural Statistics Service (SASS), recently renamed Biomathematics & Statistics Scotland (BioSS), and received a transfer of posts from the former Macaulay Institute for Soil Research as recommended in the 1985 Department of Agriculture and Fisheries for Scotland (DAFS) Agricultural Research and Development strategy document.

Plants - promoting the creation and protection of wealth and the quality of life.

The Mission of SCRI is:

to sustain excellence and our international reputation for strategic research in crop, plant and related sciences, and to facilitate the application of new knowledge to end-user industries.

The Aims of SCRI are:

* to provide a major international centre for research of the highest quality on agricultural, horticultural and industrial crops important to northern Britain and the rest of the World, by sustaining a broad, yet fully integrated programme of fundamental, strategic and applicable research designed to contribute to, and complement other sectors of the UK science base;
* to increase fundamental knowledge in the biological sciences while improving crop quality, utility and value through the application of conventional and novel molecular genetic breeding techniques and improved agronomic practices, and by developing more sustainable, environmentally sensitive methods to protect crops from depredations by pests, pathogens and weeds;
* to create wealth and protect investment in our essential plant-based industries by exploiting the advantages and solving the problems of crop production in northern Britain while seeking to improve the quality of life and safeguard the global environment;
* to promote public awareness and understanding of relevant environmental and bioscience issues through technical and lay publications and targeted presentations;
* to encourage, train and reward staff with relevant skills in crop genetics, plant biotechnology and physiology, chemistry, plant pathology, biomathematics and environmental studies, agronomy and the field trialling of new crop varieties.

SCRI is a non-profit-making limited company established under the Companies Act, has charitable status and is a Non-Departmental Public Body because over 50% of the total funding is received as grant-in-aid from Scottish Office Agriculture, Environment and Fisheries Department (SOAEFD, formerly DAFS) and all members of the Governing Body are appointed by the Secretary of State for Scotland. Staff are not formally civil servants, but are members of the SOAEFD Superannuation Scheme, and SOAEFD 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 SOAEFD. The Pay and Grading System, and Staff and Management Codes are administered by the Biotechnology and Biological Sciences Research Council (BBSRC). The mission and aims of SCRI are presented in Table 1.

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 the range of complementary skills assembled at the Institute, from fundamental molecular genetics to glasshouse- and field-trialling of potential and finished varieties of crops, is not to be found elsewhere within any civil or private sector agri-business centre in the UK or Europe.

A broad multidisciplinary approach to fundamental and strategic research, and technology transfer are unique 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. See Figure 1 for management structure.

Genetics and enhanced breeding of selected crops, in an area of high phytosanitary standards, 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. Close 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 the commercial arm of the Institute, Mylnefield Research Services (MRS) Ltd (Managing Director, N W Kerby), 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.

SCRI also 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. SSCR achieves this by:

- organising interactive field walks and end-user/researcher discussion sessions;
- financing science-based advisory publications for the benefit of its members;
- stimulating crop-based sub-committees to support targeted research projects [*eg* breeding, selection and trialling, of spring malting barleys adapted to the Scottish climate];
- reinforcing SCRI representation with trade associations, Levy Boards, and other user-groups;
- administering 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 (Director, R A Kempton) 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.

Following the pattern of previous SCRI Annual Reports, this Report details only a small selection of the 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, the associated Friendly Society. Significant advances continue to be made in both fundamental and strategic science, with contributions to the protection and understanding of the environment. Discoveries are reported of direct and indirect benefit to agriculture, horticulture, forestry, land management and biotechnology. Dedicated and talented scientific and support staff in every department and section of the Institute, and BioSS, and MRS Ltd., account for our stature, successes and delivery of achievements. One important change introduced last year and applied to this and future SCRI Annual Reports is, with the exception of the publications listing, the transfer of reporting from the calendar to the financial year.

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 SOAEFD for their continu-

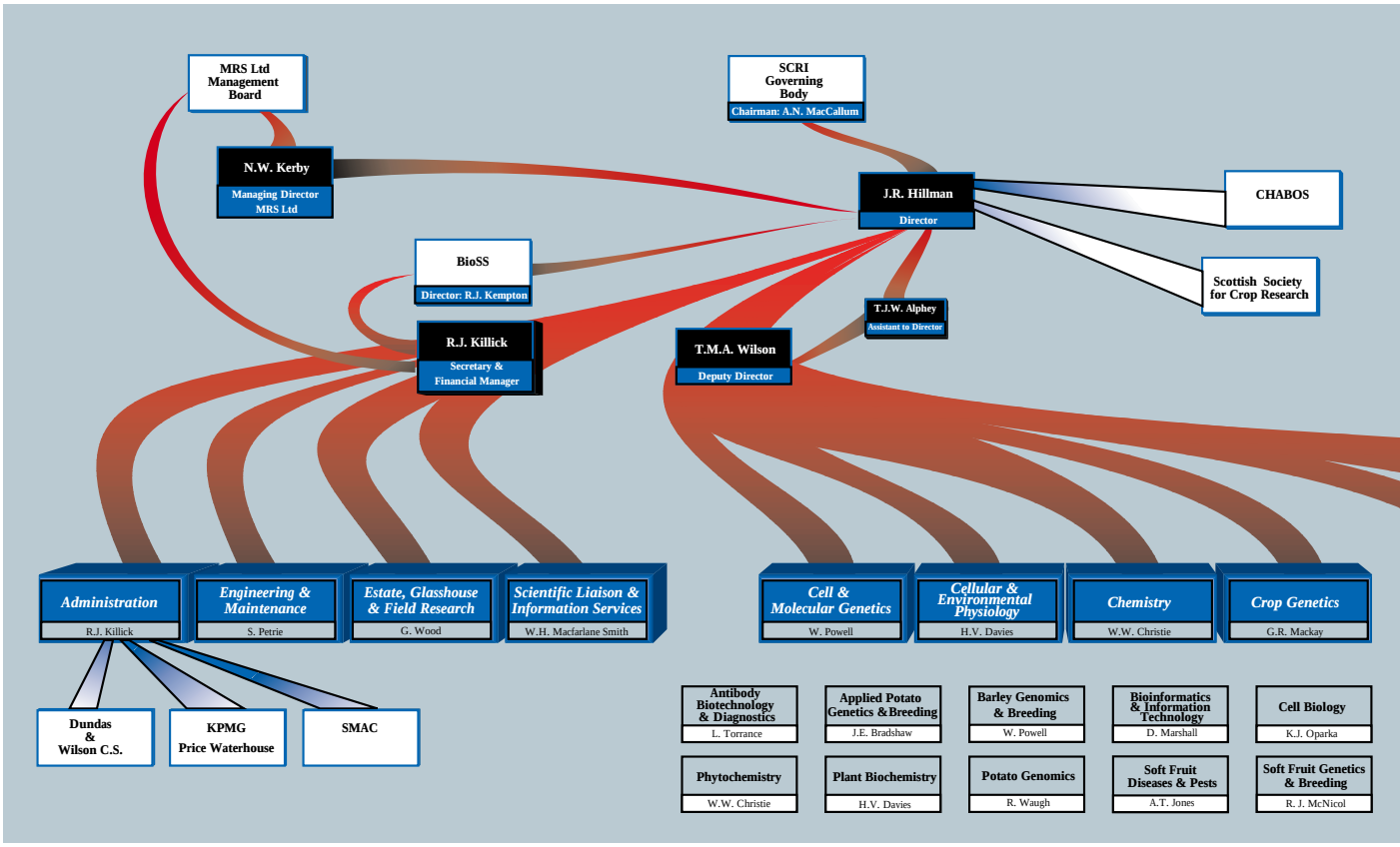

Figure 1 SCRI Departmental and Research Unit structure.

ing 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 remains buoyant in generally very difficult times for science in the UK, justifying its existence in every respect. We have every confidence in meeting future challenges. Scientifically and commercially, our prospects are outstanding.