GENERAL REPORT

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Continued appraisal of all aspects of agricultural research and development in the United Kingdom, coupled with the restructuring of institutes in the Agricultural and Food Research Service (AFRS) and the general climate of rigorously enforced financial controls, provided an interesting backdrop to the changes that took place at SCRI during 1987. The year was essentially one of substantial change and new challenges.

In April there were three important initiatives that extended the remit of the Institute. Firstly, the Scottish Agricultural Statistics Service (SASS) was established as a special unit under the administration of SCRI to provide an integrated statistical service for the five Scottish Agricultural Research Institutes (SARIs) and the three Scottish Agricultural Colleges (SAC). SASS is centred in the King's Buildings, University of Edinburgh, incorporating the staff formerly employed there by the Agricultural and Food Research Council (AFRC) Unit of Statistics in addition to groups of statisticians in Aberdeen, Ayr and Dundee. Under the leadership of the Director, R. A. Kempton, the Service rapidly demonstrated the value of a unified statistical consultancy network covering advice to scientists, new areas of application, modelling and training. Several organisations placed contracts with SASS in its first year of existence. The second initiative was the establishment of new multidisciplinary programmes on roots and soil microbiology. Thirteen staff members joined the Institute from the former Macaulay Institute for Soil Research at Aberdeen to work in these environmentally related programmes which involve five science departments. For the third initiative, the Departments of Cereal Breeding and Physiology and Crop Production embarked on a new programme on the physiology and genetics of arable legumes.

Further development of the scientific base of the Institute occurred towards the end of the year when the Tissue Culture and Cytology Unit at Pentlandfield was transferred to Mylnefield and substantially enlarged to form a separate Department headed by W. Powell within the Plant Breeding Division. This department has special responsibility to carry out investigations on gene transfer systems, restriction fragment length polymorphism, transposon tagging and the control of cellular differentiation, as well as devising systems for plant regeneration from cells and tissues.

The privatisation of the National Seed Development Organisation (NSDO), which marketed state-bred cultivars from institutes in the AFRS,

created a need for alternative marketing arrangements for potential cultivars and plant breeding material from SCRI. As a condition of sale to the private sector, all SCRI cultivars with National List / Plant Variety Rights status, or in the process of attaining such status at the time of the NSDO sale, were transferred to NSDO so that neither the Department of Agriculture and Fisheries for Scotland (DAFS) nor SCRI has access to revenue from these cultivars. Discussions about new marketing arrangements were held with DAFS and in response to a press release several companies submitted proposals for the commercial development of plant material derived from the SCRI breeding and genetics programmes. In the interim, SCRI, jointly with DAFS, continued to enter potential cultivars of its mandate crops for statutory testing.

A detailed analysis of scientific and administrative computing requirements in the SARIs and SAC was carried out by a sub-committee of the DAFS Joint Management Board (JMB), taking into account the close relationships that exist with the Edinburgh University Computing Service (EUCS) and the AFRC. Implementation of the main recommendation of the JMB to use EUCS for the support of computing services in the Scottish System will take place in the new year.

Development of the Mylnefield site was a feature of 1987. A two-storey modular laboratory and office block at the west end of the Virology/ Zoology wing of the main building was completed in March. By the end of the year on a site between the Hughes building and the boiler house a large laboratory and office block, containing a much-needed seminar room, awaited final commissioning checks prior to occupation in early 1988 by staff from the Departments of Cereal Breeding, Chemistry, Data Processing, Physiology and Crop Production, and Tissue Culture. Site levelling at the north-west part of the campus preceded the erection of four seedling houses which will eventually form part of the potato breeding and genetics glasshouse complex. Negotiations for the installation of additional glass-house and header-house facilities for the Mycology and Bacteriology Department were at an advanced stage, and detailed discussions were under way with DAFS on the final stage of the protracted transfer from Pentlandfield involving the construction for the Potato Breeding Department of the remainder of their glasshouse and header-house complex and a combined crop-handling, laboratory and office building on a site adjacent to the main car park.

Until a tract of land suitable for the cultivation of seed potatoes to the highest phytosanitary standards becomes available within relatively close proximity to Mylnefield, the Blythbank operations south of Edinburgh will be retained. Nevertheless, DAFS has been notified of our intention to withdraw completely from Pentlandfield and The Murrays farm in 1989, subject to satisfactory progress in the final phase of the amalgamation building programme. Bearing in mind the inconvenience of operating on

split sites, the use of temporary accommodation and the disruption caused by moving to new laboratories, the drawn-out amalgamation has not depressed scientific output as was feared when the fusion of the Scottish Horticultural Research Institute and the Scottish Plant Breeding Station to form SCRI began in 1981. I commend the staff for their patience, adaptability and co-operation, and DAFS for their vision and support despite restricted capital resources.

In March, B. D. Harrison was elected Fellow of the Royal Society in recognition of his major contributions to plant virus research. This prestigious award to the Head of the Virology Division signals the scientific strength of plant virology at SCRI and the pivotal role of Professor Harrison. Molecular biological and genetic engineering technologies are now employed in most of the research of the virologists, and are being rapidly incorporated into the other science departments.

Many of the problems afflicting agricultural research and development relate directly to the over-production of a relatively narrow range of agricultural commodities. This distortion of farming is caused by selective subsidies arising from the Common Agricultural Policy of the European Economic Community and it gives rise to disproportionately large political, economic and environmental impacts, no matter if the surpluses may in the fullness of time prove to be a transient feature of food production in the western world. Some aspects of applied research and development contribute to the enhancement of productivity and there is pressure from various sources for the direct beneficaries of this short-term work — the farmers, food processors and associated industries, the retail trade — to help finance it. Special mention must be made of those levy boards based on plant commodities, notably the Potato Marketing Board, the Home-Grown-Cereals Authority and the Horticultural Development Council. They have demonstrably recognised the value of, and need for, research and development by investing in selected programmes in the AFRC, the Agricultural Development and Advisory Services, SAC and SARI during difficult times for farming. Funding out of the public purse of long-term agricultural research at the basic and strategic levels is crucial for proper exploitation of modern physical, chemical and, in particular, biological technologies that can now revolutionise the genetic relationships between organisms, their responses to and effects on the environment, and their structure and biochemistry. We are at the threshold of redesigning plants and microorganisms in the service of mankind.

The Priorities Board for Research and Development in Agriculture and Food has a remit covering the whole of the publicly funded agricultural and food research and development activity sponsored by DAFS, the Ministry of Agriculture, Fisheries and Food, the Department of Agriculture in Northern Ireland, and the AFRC. Its terms of reference are to advise the UK Agriculture Ministers and the Chairman of the AFRC on priorities for

the allocation of their research and development budgets. In June, the second Priorities Board report was released giving recommendations for budget allocations that lend support for the changes introduced to the SCRI research programmes.

The late Professor John L. Jinks was an eminent scientist who as Professor of Genetics at Birmingham University published numerous influential papers on biometrical genetics and supervised a stream of post-graduate research students, some of whom were appointed to SCRI. As Secretary of the AFRC, he was an outstanding leader in extremely difficult times. Even when he was very ill he introduced major changes to the direction of the AFRC, responding in a constructive way to the harsh financial climate in which agriculture and many areas of science have to survive and flourish. His untimely death in 1987 was deeply felt by his many friends at SCRI. The announcement in December that Professor W. D. P. Stewart would be appointed on 1 January 1988 as a successor to Professor Jinks was welcomed by the scientific community and especially by SCRI. Professor Stewart, the Boyd Baxter Professor of Biology in the University of Dundee, is a member of our Governing Body. He is a prominent scientist with all the necessary attributes to ensure the successful evolution of the AFRC in fostering basic research in the life sciences and related environmental sciences.

Members of staff were saddened by the death in January of Peter R. Massalski, a respected young colleague and friend who, in his three years at SCRI, had made an increasing impact on research which used monoclonal antibodies to investigate problems in plant virology. His lively personality and unfailing helpfulness will be missed by many but the progress he made will be of great value to his successors.

The Institute depends upon the help and co-operation of others, either individuals or organisations, without whose assistance the work would be greatly handicapped. The assistance takes the form of the DAFS core funding and the helpfulness of the DAFS staff, grants from government agencies, local authorities and commercial companies, contracts, donations, farmers who generously make their land available for experiments, scientists with other organisations working on collaborative ventures, and the Scottish Society for Crop Research. SCRI is most grateful to all its collaborators and very appreciative of the help that they give.

External finance

Agricultural Genetics Company	£31,648
Anglia Canners	£250
BASF United Kingdom Ltd	£400
Beecham Foods	£5,225
British Council	£500
British Crop Protection Council	£2,387