

GENERAL REPORT

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In a year characterised by increasing public awareness of food standards and the quality of the environment, per capita world food production declined by 1.6%. Population growth, a sustained improvement in the economic performance of most nations, and a decrease in the area of cultivated land continued to place heavy demands on agricultural efficiency regardless of the vagaries of the weather. Research and development (R&D) activities in the non-medical life sciences were directed towards meeting social, political and economic expectations as well as fundamental scientific principles. Long-term economic projects and prospects of perturbations in the global climate served to emphasise the central role of biological research of the kind carried out in SCRI and other institutes in the Agricultural and Food Research Service (AFRS), and numerous disciplines were increasingly brought to bear on the major biological problems. Internationally, the age of the biologist was perceived by the scientific community to be well under way, with molecular biology occupying a high profile.

Within Europe, public and political opinions of the effects of the Common Agricultural Policy of the European Economic Community were focused for the most part on unwelcome changes to the countryside and expensive food surpluses/stockpiles. New policies were therefore formulated on subsidies, quotas, set-aside land, extensification, restrictions on pesticides and nitrogenous fertilizers, and reappraisals of R&D priorities. The relevant major research issues under active consideration at SCRI were pollution, reductions in xenobiotic inputs, implications of global warming with attendant climatic changes, production and release of genetically manipulated organisms, working gene-banks and germplasm collections, plant breeding, novel crops, crops for industrial processing, new pests and diseases, improvements in the efficiency of production of food and non-food agricultural commodities, soil processes, food quality, and relationships between agriculture and the natural flora and fauna. With 1992 in mind, there was intense activity in preparing proposals for coordinated national and international research programmes.

Profound changes were initiated in the funding and direction of agricultural and horticultural R&D in the UK public sector. Following a review of near-market R&D, the 'Barnes' Review, in organisations funded by the Department of Agriculture and Fisheries for Scotland (DAFS) and

the Ministry of Agriculture, Fisheries and Food (MAFF), a meeting was held in August involving civil servants, representatives of the agricultural industries, and senior staff from the Agricultural Development and Advisory Service of MAFF, the Agricultural and Food Research Council (AFRC), the Scottish Agricultural Colleges (SAC), and the Scottish Agricultural Research Institutes (SARIs). Various projects were identified as possible areas for transfer to industry funding. At the time, it was stressed that the lists of topics selected, their costings, the phasing of reductions in governmental funding and the very definition of 'near-market' were not fixed. The prospect of a precipitate withdrawal of funding during a time when SCRI was in the final stage of reorganising its research programmes and establishing new links with industry was both daunting and unsettling. However, Lord Sanderson of Bowden, Minister of State at the Scottish Office, addressed the Directors of the SARIs and the Principals of SAC at a meeting in November. He discussed SARI and SAC financing in the light of the Barnes Review, stressing seven main points, *viz.* (i) Government fully understands the basis of the anxiety and uncertainty in State-funded R&D organisations and has listened closely to the various views expressed; (ii) the need for R&D is accepted, and the science budget across all Government departments has been increased; (iii) value for money is a prerequisite; (iv) past achievements and the quality of the research base in Scotland is recognised; (v) there will have to be a transfer of funding of near-market R&D to the private sector which benefits directly from that work and in so doing give rise to much closer cooperation between R&D bodies and industry — State funds are for the support of fundamental and strategic research; (vi) the transition period would be difficult for all involved and allowance for this would be made; (vii) work in areas of the public interest and the environment would continue to receive support.

The outcome of the meeting and the subsequent Joint Management Board meeting with DAFS was that the provisional SCRI budget for the financial year 1989-1990 would be more or less the same as that in 1988 so wage and overhead cost increases would have to be absorbed. Preparation of a new DAFS strategy document of agricultural R&D will take place before projections can be given of SAC and institute funding post-1990.

During the year, a working group was set up to advise Ministers and the Chairman of the AFRC on the rationalisation of facilities for horticultural R&D in England, Wales and Scotland. Mr E. J. G. Smith, Deputy Secretary of MAFF and member of Council of AFRC chaired a group comprising representatives of AFRC, DAFS, MAFF, the Department of Education and Science (DES), and the chairman of the Horticultural Development Council and the Apple and Pear Development Council. SCRI submitted papers to the Committee and two Governing Body members, Mr J. A. Inverarity and Professor D. Boulter, attended one of the meetings. Horticultural research in the AFRC- and DAFS-funded

organisations has been extensively rationalised in recent years, but is nonetheless regarded as an area of work with a substantial near-market component. At SCRI, horticulturally related science is intimately linked with other areas of strategic work, and the Institute is recognised as an international centre of excellence and achievement in specific areas of the biology of soft fruit and ornamental species. There are important questions to be addressed about the management in times of severe budgetary constraint of various areas of agricultural and horticultural R&D. It is clear that the loss of expertise in some established, conventional areas of botanical science is becoming a noteworthy constraint. Of more concern is the extent to which scientific advances now depend on the input of a vast array of biological, physical, chemical and mathematical disciplines by committed individuals. This has implications in the interactions between institutes and universities, as well as the involvement of growers, grower organisations, food processors, retailers and chemical/pharmaceutical companies in setting objectives and funding near-market work. Enactment of the recommendations of the Smith working group may well provide a test-bed for gauging the success of integrating private industry with research in the public domain.

Enhanced coordination of the activities of ADAS, AFRC, SAC and SARIs, particularly in respect of contracts, was evidenced by the operation of a concordat based on the SCRI/SAC/ASS-East Craigs concordat. In addition, four commodity quartets were established as sub-committees of the Strategic Quintet which oversees coordination between the R&D bodies. I chaired the Crop Production Quartet and attended meetings of the Strategic Quintet, and Professor Innes was a member of the Horticultural Quartet.

On Friday 8 July, Lord Sanderson formally opened the new laboratory and office block that now bears his name. The following day was the Institute Open Day and in all respects it was a success. Around 1,700 visitors inspected the work of SCRI. The many compliments received about the staff and facilities, in addition to the favourable publicity, made the event very worthwhile. I thank the staff for their effort and commitment. Two other major building projects (Mycology glasshouse and headerhouse extension and Potato Genetics crop handling building) were on schedule for completion in early 1989 and two new projects (Potato Genetics main glasshouse-headerhouse complex and laboratory block) were put in train for starting at the end of the financial year. Plans for withdrawing all staff from Pentlandfield by that time were also drawn up, in parallel with preparations for closing the Murrays Farm.

Mr N. D. Anderson, Secretary of SCRI and its Governing Body, featured in the New Year Honours list with the award of an OBE. His outstanding dedication to the effective administration of the Institute and his non-vocational involvement in charitable works are recognised throughout the AFRS. In August he retired after 23 years service and the Institute appointed Dr R. J. Killick, formerly Assistant to the Director, in his stead.

Professor W. D. P. Stewart, F.R.S., Boyd Baxter Professor of Biology in the University of Dundee and former member of the SCRI Governing Body, was appointed Secretary of the AFRC on 1 January 1988. For many years he was involved in the AFRS, not only as a member of our Governing Body but as a holder of substantial AFRC competitive research awards, Royal Society Assessor to the AFRC Council and past member of the AFRC Plants and Soils Research Grant Board. He soon established new direction for the AFRC in its links with universities, other research councils, DAFS, MAFF and DES. New areas of science were opened up with particular emphasis on forging internationally recognised centres of excellence.

The Institute depends upon the help and cooperation of others, either individuals or organisations, without whose assistance the work would be greatly handicapped. The assistance takes the form of 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 these collaborators and very appreciative of the help that they give.

Major External Sources of Income

Horticultural Development Council	£33,700
Overseas Development Administration	£64,407
Home Grown Cereals Authority	£50,607
Beechams Foods Ltd	£14,541
Agricultural Genetics Co	£17,110
International Potato Center	£11,417
Potato Marketing Board	£31,806
United Biscuits	£29,127
EEC	£27,080
British Technology Group	£2,814
Royal Botanic Gardens, Kew	£8,311
SASS Consultancies and miscellaneous income	£106,000

Permanent Appointments and Internal Transfers

G. Bengough	HSO	Physiology and Crop Production Department
I. Bradbury	SSO	SASS, Ayr
S. T. Buckland	UG7	SASS, Aberdeen
M. Catley	HSO	Zoology Department
M. C. Coleman	HSO	Potato Genetics Department
G. Cowan	ASO	Virology Department
J. W. Crawford	SSO	Physiology and Crop Production Department
D. Davidson	EWII	Tissue Culture Department