Estate, Glasshouse & Field Research Department

G. Wood

A new SCRI committee – the Genetically Modified Crop Field Release Committee – has been established to oversee all GM crop field releases at this Institute. The committee will ensure compliance with the requisite rules and regulations and that the associated new operational practices are in line with the SCRI standards. It extends the control over GM research exercised by the Institute's Genetic Manipulation Safety Committee. The committee ratified a straightforward procedure that must be adhered to when SCRI is involved in any work which includes the deliberate release of a genetically modified crop. This procedure is over and above the statutory rules, regulations and procedures governing the deliberate release of GMOs, laid down by the Department of the Environment Transport & the Regions and the Advisory Committee on Releases to the Environment. The new committee met four times in 1998, to consider matters which included the monitoring of previous release sites and a new application (98/R23/5) for consent to release GM potatoes.

During 1998, there were also several meetings involving representatives of the local Community Council, Perth and Kinross Council, and SCRI. The successful outcome from this constructive co-operation was the recognition of official rights of way and additional permissive routes for pedestrians through the Mylnefield site. It is hoped that the routes will be 'named' following a competition sponsored by the Community Council and open to children attending Invergowrie Primary School.

Under the supervision of David Petrie, members of staff in the Field Research Unit, in conjunction with L Dixon Associates, undertook the installation of a major irrigation/fertigation system in nearly 4 ha of newly planted raspberry trials. Underground feeder and lateral pipes were connected to the existing underground ring-main fed with water from the bore hole. Pressure reduction and dilution feeder (with bypass) components were incorporated. Drip-lines were attached to the bottom wire of each row of raspberries. The system will be used to aid the quick establishment of the plant material during that critical phase immediately post-planting and during the subsequent cropping and selection seasons.

Further investigations were undertaken by Peter Gill and Barry Robertson in the Glasshouse Unit concerning the auto-control of the environment and the usage of space within glasshouses. With a physically limited facility such as glasshouses, facing steadily increasing pressures from various research programmes to cope with more and more plant material, it is vital that the efficient utilisation of such a resource is maximised. The data collected over a full season showed that there were some areas of the glasshouse facility where the effective usage of space might be improved and inputs reduced. A TOMTECH HC160 auto-environment control computer, linked to external (meteorological station) and internal sensors, delivered a highly integrated control of lighting, heating, venting, and internal thermal/shade screens in a wing of Cambridge glasshouses. This system also delivered overall reductions in energy usage and hence savings in running costs in the order of 30% (confirming previous data; Ann. Rep. 1996/97, 203.). These take no account of the additional savings in man-hours compared with manually operated, non-inte-

grated systems. As important, was the fact that the environment for the plants was more stable, and hence the quality and uniformity of the material were improved. The TOMTECH system, which is less complex than some other systems, proved entirely capable, reliable, very straightforward to operate, and delivered the degree of environment control required. We have a great deal of catching up to do since we need such a system installing in several other areas of our existing glasshouse facility. The initial one-off capital outlay is more than balanced by the immediate and continuing savings in running costs, the better quality plants and hence the better quality science!

This Department's commitment to staff development and training (Ann. Rep. 1995) continued through 1998. One of the practical benefits gained from the implementation of a staff training and development programme, in line with the Investors in People initiative, was that colleagues who had already undergone the appropriate multi-skilling training were able to cover some of the additional duties and areas of work in the immediate short-term following staff changes. In the spring of 1998 three new appointees were inducted into and immediately included in the ongoing training and development programme. The service/support rôle of this Department is crucial to the success of the Institute's science programmes, and it is vital that we attempt to maintain and provide for a continuity of skill level and experience. With financial support from Scottish Enterprise Tayside, together with inputs from Agenda Training Ltd and the Carse of Gowrie Training Group, we took on a young Skillseeker under trainee status for a Scottish Vocational Qualification in Extensive (field) Crop Production. Mark Orchiston progressed well and after 10 months he transferred to a Modern Apprenticeship (SCRI's first) under employed status. SVQs assess the skills and knowledge gained through work and training. A full SVQ can take between 9 months and 3 years to complete and each covers a complete work rôle. It is made up of a number of units, some mandatory and some optional. The majority of the training and assessment is delivered in the workplace. The system means the awards closely reflect the individual's work and the level of competency required to do it. The level of competency is measured against nationally recognised, quality assured standards. Again with financial assistance from SET, four senior members of the Department's staff successfully undertook and were awarded the D32 Assessor qualification (a Training and Development Lead Body award). This equips them to undertake competency and skills assessment within the SVQ system. This will be put to direct use in the next phase of our training and development programme with some members of the existing staff already undertaking SVQs.