Estate, Glasshouse & Field Research Unit

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The Estate, Glasshouse and Field Research Unit fulfils the fundamental and crucial rôles of producing and maintaining plant material for the Institute's scientific research programmes and contractual undertakings. A wide variety and large number of plants are made available throughout the year for work both in contained/controlled environments and in a broad range of field trials.

The Unit provides a fully equipped and professionally expert service to fulfil the requirements of its clients with regard to the preparation of land, growing medium, sowing, drilling, planting, propagation, plant maintenance, environment control, harvest and clearance of residues for the Institute's field and glasshouse research objectives. It may have responsibility for an entire package from start to finish, or can provide prepared land and/or controlled environment régimes for inputs to be undertaken in varying degrees by scientific clients.

Staff development, recruitment and retention continue to be vital aspects of support and service provision, especially in these specialist areas of glasshouse plant production and field trialling operations. Quality, to a high standard within a framework that allows this to be achievable consistently, is of paramount importance. The service/support provision, and the necessary resources to achieve it, must keep pace with or pre-empt the demands of dynamically developing research programmes.

A structured training and development programme is well supported by the Institute's Training Committee, and staff in the EGFR Unit undertake essential skill/competency training and certification to nationally recognised standards. Several members of staff are now progressing to vocational and further academic studies that serve to equip them with a wider range of expertise and a greater level of underpinning knowledge relevant to improving the service and support they provide. The staff in the Unit are organised operationally in small sub-teams but not on an inflexible or restricted basis so that the service provision is effective and efficient.

During the year, stringent control measures were implemented throughout the entire glasshouse and controlled environment facilities due to an outbreak of a particular insect pest. This involved the glasshouse staff in a lot of extra work and restrictions on access, but with the co-operation of clients the projects were not significantly disrupted and the whole exercise was very effective. Hygiene levels as a whole have benefited tremendously throughout the facilities, and general standards have risen accordingly.

The new research glasshouse complex came through its first full season of use: there were some teething problems but these were addressed and the facility was well used with many essential research projects being undertaken that could not previously have been catered for without such well controlled, containment glasshouses.

Controlled environment facilities were subject to ongoing review by the Institute's Glasshouse and Growth Cabinet Organisation Committee. As well as seeking to improve the maintenance of existing structures, a rolling facility replacement programme has been drafted which allows a co-ordinated approach to be taken to the replacement of old or outmoded facilities in line with developments in the research and other programmes.

A new site was found, adjacent to the Institute, which allows us to produce seed potatoes of common origin for breeding and other research projects. The previous location for this was south-west of Edinburgh but it was not cost-effective to continue at that site and all operations at the new site were taken on board by the current field trials team. A new cold store for holding the seed potatoes following harvest was built within one of the existing crop-handling buildings and even though planting was delayed (due to foot and mouth restrictions) in this first season at the new site, there has been an immediate gain in operational efficiency.

The Institute was selected as one of several sites throughout the UK for a biomass/biofuel perennial grass trial. The field trial started in May 2001 and will continue through four seasons, during which time the suitability of American-switch, reed canary, and elephant grasses will be assessed for genotype x environment interactions and yield.

In the late spring of 2002, a similar trial was commenced but with American and UK cultivars of

oilseed rape and mustard. These will be assessed for not only biofuel (oil) production but also for whole-crop exploitation and, potentially, extraction of other important chemical components.

Just as with other resources and facilities, field trialling and land use have to match the needs of the new research themes and programmes and be capable of coping with the additional needs of contractual undertakings, as well as other enterprise initiatives. Local Council and Regional development plans may affect the Institute's land resource and these very important issues are being considered by the new internal Farm Strategy Group, whose remit is to be pro-active (rather that reactive) in assessing needs and various options. Again, this is a mechanism to improve the quality of resource utilisation, facility provision, strategic planning, and decision-making in an integrated and co-ordinated manner.

David Pugh retired on 30 August 2001 after almost 26 years service to the Institute. He joined SHRI (as it was then) from a farming background and progressed to become a senior field trials officer within this Unit, liaising directly with numerous clients and always attentive to the quality aspect of fulfilling their needs. His contribution has had a highly significant impact on the success of field trialling at SCRI and we wish him well for the future.