

Students from 72 countries train in Plant Genetic Resources

This October saw the twentieth intake to the School of Biological Sciences of postgraduate students attending the MSc course in "Conservation and Utilization of Plant Genetic Resources". While this course is not the longest established in the University (a distinction which probably goes to the MSc in Immunology), it can claim to have trained students from the four corners of the world. In fact, with the current intake, almost 300 students from 72 countries have been trained.

The term "plant genetic resources" refers to the primitive forms of crop plants typical of traditional agricultural systems throughout the world, which are being replaced by modern varieties. These primitive forms have little to commend them in modern agriculture. However, they are an invaluable and irreplaceable source of genetic characteristics, such as disease resistance, which plant breeders can use to improve modern varieties for feeding a growing world population. They are an important non-renewable natural resource, and once lost to agriculture, thousands of years of man-directed evolution are wiped out.

The concern over the loss of genetic diversity, or genetic erosion as it is sometimes called, began to grow in the 1960s, and the University of Birmingham has been at the forefront of the efforts to conserve plant genetic resources ever since. This has been achieved through the training of scientists, primarily from developing countries, in the theory and practice of genetic conservation.

The MSc course started in October 1969 in the Department of Botany as it was then, under the guidance of Professor Jack Hawkes who was Mason Professor of Botany at that time. Professor Hawkes was well connected with international efforts in genetic conservation, principally through his research on potatoes and his membership of the first expert committee set up by FAO. It was logical therefore to involve the University through the establishment of a training programme, which would meet the growing demand for qualified personnel who could collect, conserve, evaluate and utilize plant genetic resources.

Times have changed, as well as staff and departmental titles, but the course has continued to flourish. Professor



Students attending the MSc course in 'Conservation and Utilisation of Plant Genetic Resources' visit the Vegetable Genebank at the Institute of Horticultural Research, Wellesbourne near Stratford-upon-Avon. Dr David Astley, the Officer-in-Charge of the Genebank, himself a graduate of the MSc course, is shown here explaining regeneration procedures for onions.

Hawkes retired in 1982, but his successor, Professor Jim Callow took up the mantle of Course Director. The viability of the course was strengthened in the mid 1970s by the receipt of a special grant from the International Board for Plant Genetic Resources (IBPGR), one of a network of international agricultural research centres. The IBPGR support has also provided fellowships for students from developing countries.

The first group of five students came from Australia, Brazil, Italy and the UK, and they were based in the department on the main campus, as were subsequent classes until 1976. By then the course numbers had grown considerably, and alternative accommodation was found for the course at the department's Winterbourne research gardens after a laboratory building had been vacated by the British Antarctic Survey

Botanical Section following its move to Cambridge. Eleven years on, the laboratory (commonly known as GRACE - Genetic Resources and Crop Evolution) is still occupied, and there is a dedicated lecture theatre as well as glasshouse facilities donated by the IBPGR.

The Birmingham alumni are now comprised of at least one Minister of Agriculture in the Middle East and many more senior civil servants in

Africa, Sri Lanka, India and the Far East. Several are strategically placed as Genebank Managers in different parts of the world including the UK. But most importantly, many are putting into practice their valuable expertise at grass roots level throughout the world.

When the course was initiated, it was thought that all training needs in plant genetic resources would be fulfilled within about ten years. Here we are, in our twentieth year, and still there is a definite demand for training at Birmingham. In fact, this MSc course is still the only one of its kind in the world. Of course there have been many changes to the syllabus over the years, as well as changes of emphasis which have reflected new scientific developments. Modules from the MSc course have been offered for some years now as Post-Experience Courses.

Through the MSc and short courses, the name of the University of Birmingham has become well known throughout the world. We cannot predict what the long-term future holds, although IBPGR support has been promised until 1992. But then, who would have predicted in 1969 that the course would still be attracting students twenty years later?

Dr. Mike Jackson & Dr. Brian Ford-Lloyd
School of Biological Sciences

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