



Agriculture & Horticulture
DEVELOPMENT BOARD



New Project

CP 90

Succession planning to sustain the UK's expertise in field and laboratory plant pathology research and development

EMT/HDC/HTA Fellowship

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| Project Number: | CP 90 |
| Title: | Succession planning to sustain the UK's expertise in field and laboratory plant pathology research and development |
| Start and end dates: | 1 st October 2011 to 30 th September 2016 |
| Fellow: | Dr Angela M Berrie |
| Industry Representative: | Horticultural Fellowship Governance Committee |
| HDC Lead: | Andrew Tinsley |
| Location: | East Malling Research |
| HDC Cost: | £149,313 (total cost £248,855) |

Fellowship Background:

The fellowships are funded by the East Malling Trust (EMT), the Horticultural Development Company (HDC), and the Horticultural Trades Association (HTA). The funds provide essential underpinning funding to UK-based applied horticultural researchers working in fields of study crucial to the future efficiency and competitiveness of horticultural crops grown in Britain. Each fellowship focuses on training the next generation of applied researcher whilst delivering outputs to industry through a flexible programme of work. The work is flexible so that it can respond to the skills of the individuals undergoing training and the needs of the industry. Each fellowship is managed by a Steering Group, on behalf of the Horticultural Fellowship Governance Committee.

Project Summary:

Fungi are among the most important organisms on earth. As yeasts they are vital to bread-making, brewing and wine-making and with bacteria play a vital role in waste disposal – without them the world would soon be swamped with rubbish. We are probably most aware of fungi as causing diseases of crop plants. In this respect, in the past, plant disease epidemics have had the ability to change history by wiping out crops and causing famine. Good examples include the potato blight epidemic in Ireland, which lasted for six years from 1845 and caused the deaths of over one million people and resulted in migration of a further one million. Food shortages resulting from diseased crops are also thought to be one of the causes of the French Revolution. This illustrates the importance of plant pathology – the study of plant diseases – to crop production.

In all horticultural sectors, crop protection is the top industry priority requiring research and development. Development of sustainable disease management strategies for existing and newly-emerging diseases is critically important in sustaining economic competitiveness in the production of high quality food and ornamentals. The need for economic and effective sustainable disease management will continue to provide challenges as our needs to

produce more horticultural outputs, more efficiently whilst sustaining its quality and reducing its wastage against ever-increasing global population and the potential impacts of climate change.

Angela Berrie is an applied plant pathologist specialising in diseases of fruit crops and other perennial crops. Angela's main role is in applied research, developing practical integrated methods of disease control for growers to produce high yields of first quality produce with minimal use of pesticides. Translating the results of research into practical solutions for growers is an important part of applied research.

For effective applied research and technology transfer, in addition to knowledge of plant pathology and research methods, a good understanding of practical horticulture and the growth and development of the individual crops is required. Much of this can only be gained by working with the crops (on the job training). In the past there were many people experienced in horticulture and applied plant pathology available to train new entrants. Unfortunately now such opportunities are very limited. East Malling Research (EMR) undertakes a wide range of activities from commercial horticulture to strategic research and therefore is well suited to developing the skills needed for applied plant pathology. So at EMR this Fellowship will be used to recruit a person who will be trained in all aspects of pathology relating to perennial crops, especially fruit, to ensure continuation of applied plant pathology in these valuable crops in the future.

Aims & Objectives:

Aim:

To partially fund a new position at EMR and to enable Dr Berrie to closely supervise the training of the post-holder, along with other senior EMR science staff.

Objectives:

1. Identify and recruit a successor with the most appropriate background to act initially as understudy to Dr Berrie.
2. Develop and deliver a training programme to provide the post-holder with skills and experience in the identification of field and laboratory pathology and an ability to conduct and advise on commercial disease management strategies.
3. Facilitate the development of a successor to Dr Berrie through a programme of collaboration (with other technical experts outside EMR), education, demonstration and shadowing, and industry communication to provide the successor with the skills to deliver practical disease management R&D in fruit and other perennial crops.
4. Enable the post-holder to instigate their own sources of income and the delivery of strategic and applied R&D to act as the means to sustain future innovation within commercial horticulture.

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