

BBSRC Horticulture Collaborative Research Proposal

REPORT OF INDUSTRY WORKSHOP

MEETING DATE: 20 October 2011

Background

The BBSRC is the largest funder of food-related research in the UK and food security is a central strategic priority for the organisation. As part of its portfolio of activities aimed at delivering research to support food security, BBSRC has been exploring the opportunities for funding a collaborative research initiative that will address key industry research challenges of importance to the horticulture sector. The science funded will be both excellent quality and industrially relevant.

BBSRC has consulted with a number of companies and organisations in the horticulture sector to explore some of the common research challenges facing the industry. The workshop invited further discussion and input on this subject. BBSRC also outlined a new collaborative funding model that could be used to support research in the area, further details are given below.

The output of the workshop discussion will also feed directly into the wider discussion on the needs of the industry for research skills and facilities that the National Horticulture Forum is exploring as part of a report to the Government Office for Science's Horticulture Roundtable, which is chaired by the Chief Scientific Advisor, Professor Sir John Beddington.

Proposal

BBSRC currently funds a number of Research and Technology Clubs to support industrially relevant research in key strategic areas. Such a Club was considered for the horticulture industry but was not felt to be appropriate to the needs and structure of this sector. Therefore a different mechanism is proposed here, but one that would aim to deliver many of the same benefits to industry and the research community.

At the workshop industry buy-in was sought for an alternative mechanism to support collaborative research between industry and academia which addresses pre-competitive industrially-relevant challenges. Projects would need to have a minimum of 10% industry contribution with a minimum of 5% cash. Applications would be encouraged that are broad in scope and that are relevant to either a number of different horticulture crops or a number of elements in the food supply chain. It is expected that there will be two calls for proposals as part of this initiative.

Part of BBSRC's objective for this activity would be to strengthen the links between industry and the relevant components of the academic research base by fostering a lasting network. One of the ways that this might be achieved is through Dissemination Events where all of the

partners involved in the initiative come together to share their results and updates on progress.

Presentations

Professor Paul Hadley gave an opening presentation that introduced some of the main challenges to the horticulture industry and set them in the context of the wider food security issue.

Presentations were also given by four representatives from the horticulture sector who spoke about their experience of the challenges facing the industry

Copies of these presentations can be found online at: www.bbsrc.ac.uk/horticulture

Discussion Outcomes

Some of the key themes to emerge from the discussion at the workshop are listed below.

- Adapting to climate change
 - What new crops might be important to the UK horticulture industry in light of climate change?
 - Research is needed to help adapt to increased variability in climate and weather and to changes in seasonality.
 - Climate change will give rise to different pest and pathogen pressures.
- Resource use efficiency
 - Water use efficiency is a critical issue.
 - Phosphorus will become increasingly scarce and the efficient use of this nutrient by plants is important.
 - The micro-nutrient requirements of plants have an important impact on crop yield and quality.
- Biological approaches to crop protection
 - Systems approaches are particularly vital for sustainable crop protection.
- End use quality
 - Understanding the biological processes associated with maturity and post harvest quality is an important area for reducing waste and improving quality.
 - Crop breeding can help to deliver better end user quality in terms of taste, safety and nutritional value.
- Seed quality and vigour
- Plant-soil interactions and soil health

Cross-cutting Themes

- Systems approaches are needed to tackle many of the challenges outlined above.

- Opportunities for knowledge exchange between ornamental-based horticulture and food-based horticulture should be exploited.
- The increased sustainability of crop production systems must be a key underlying research theme.

Way forward

Based on the outputs of the workshop and our previous discussions with industry, BBSRC will now work to refine the comments received into a number of research challenges that could form the basis of the first call for this initiative.

The challenges together with the proposed models will then be discussed by the relevant Strategy Advisory Panels within BBSRC before final activities are agreed.

Final plans will be announced early in 2012.

Contact Details

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**RESEARCH NEEDS OF THE HORTICULTURE AND
POTATO SECTORS**



20 October 2011

76 Portland Place, London, W1B 1NT www.76portlandplace.com/

AIMS:

- To discuss plans for a new collaborative research initiative supported by BBSRC which will address challenges to food security related to horticultural and potato crops.
- To identify the key research challenges that an initiative in this area would focus on.
- To explore the wider research needs of the sector for the next 10-20 years.

AGENDA:

- 09:30 **Registration** - Tea and coffee will be available
- 10:00 **Chair's Welcome** – Prof Peter Gregory, East Malling Research
- 10:10 **Introduction from BBSRC** – Dr Andy Cureton, BBSRC
- 10:20 **Food Security in Horticulture and Potato Production:**
Prof Paul Hadley, University of Reading
- 10:50 **Research Challenges** – Industry perspectives
- Resource use efficiency – Mike Storey, The Potato Council
 Adapting to climate change – Sue Kennedy, Elsoms Seeds
 Crop Protection - Emma Garrod, Produce World
 Post-harvest quality of fresh produce, Theresa Huxley, Sainsbury's
- 11:40 **Breakout session** with three themed discussions
- 12:40 **Lunch**
- 13:30 **Plenary discussion and prioritisation of research challenges**
- 14:30 **Outline of proposed funding mechanism by BBSRC**
- 15:00 **Final comments and decision on way forward**
- 15:15 **Close** – Tea and coffee will be available.

FORMAT OF BREAKOUT SESSION:

This breakout session will aim to identify a comprehensive list of research challenges that the horticulture and potato growing industries are facing.

Groups will respond to three questions as outlined below. A rapporteur will lead the discussion and be responsible for reporting back to the Chair during the plenary discussion.

Questions to be discussed by breakout groups:

- What are the key challenges associated with **high productivity** of horticulture crops and potatoes?
- What are the key challenges associated with producing **high quality** horticulture and potato crops?
- What do you expect to be the most significant challenges for research facing this industry over the **next 20 years**?