



Cost Action UV4growth

Stakeholder meeting

Lancaster, UK, 29-30th April 2012

**Improving protected crop production
by exploiting plant responses to solar
ultraviolet light: a meeting to connect
research and end-users.**

Programme



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***Welcome to the UV4growth stakeholder meeting:
Improving protected crop production by exploiting plant
responses to solar ultraviolet light***

Dear colleagues,

Welcome to Lancaster, to the Lancaster Environment Centre and especially to this UV4growth stakeholders meeting.

UV4growth COST action is an EU-funded programme bringing together Europe's leading researchers investigating the effects of ultraviolet light on plants (<http://www.ucc.ie/en/uv4growth/>). Our increasing understanding of how plants respond to UV make it increasingly clear that there is substantial scope for exploiting those responses in crop production, especially in protected crops. Effective exploitation of UV responses can improve crop morphology, regulate growth, improve taste, colour and phytonutrient contents, and also contribute to pest and disease control. It is already possible to manipulate crop exposure to UV by the use of cladding materials (plastic films, mesh or glass) that have been designed with specific UV transmission properties. We are beginning to see lamps used to deliver UV treatments to crops, in the field as well as under protection. In the future, LEDs may offer a new route to deliver a wider range of targeted UV treatments. Despite the potential of UV as a new tool in crop production, uptake by growers remains relatively limited. This UV4growth meeting is specifically intended to address this limited uptake by bringing together researchers and end-users, whether they are growers or those involved cladding or lighting technologies. The meeting is not designed as an academic conference but a forum to facilitate dialogue and discussion, of UV reseach.

I hope that this meeting will be both enjoyable and useful for all attending, but also that it is not an end in itself, but a step in a continuing process to consider how researchers and end-users can work together to take forward the commercial exploitation of UV responses.

Very best wishes

Nigel Paul

Conference Programme UV4growth stakeholders meeting April 2012

Programme

08.45	Nigel Paul	Welcome
08.55	Marcel Jansen	Introduction to UV4growth
09.10	Andy McLeod	UV radiation: definitions and measurement
09.35	Marcel Jansen	UV as a tool to modify the phytochemical profile of crop
10.00	Eva Rosenquist	Manipulating UV to improve quality in horticultural crops plants
10.25	Eslam el Fadly	Manipulating UV as a tool for to improve transplant quality
10.50	Coffee	
11.10	Fernando Lidon	UV as a tool to manipulate plant antioxidant systems
11.35	Nigel Paul	UV manipulations as tools in pest and disease management
12.00	Michael Gaffney	Technology transfer in UV research: an Irish perspective
12.20	Wagdi Sobeih	Technology transfer in UV research: a perspective from the Eastern Mediterranean.
12.40	Titta Kotilainen	Current progress with LEDs
12.50	Lunch	
13.30	Group discussions / workshop	
15.00	Tea/refreshment	
15.20	Synthesis of discussions, and “road-map” for future UV4growth stakeholder interactions	
16.30	Close	

FOCUS POINTS FOR DISCUSSION

This UV4growth meeting is intended to stimulate discussion between a mix of people who cover the spectrum that spans "UV science", "UV technologies" and "Grower needs". The discussion is the most important part of the meeting. As you know, I have outlined some initial ideas for broad topics that will help focus the discussion session in the afternoon, as follows. I hope these are a useful starting point, but they are certainly not intended to be restrictive: the key areas of discussion may only become fully clear during the course of the meeting.

1) Of the broad areas of UV research introduced in the morning's talks, which are likely to be most important/useful in commercial use? Are some of more general interest across crop sectors than others? Are there major commercial issues for producers that might be addressed using UV, but which UV researchers are "missing" in their current research?

2) What would it need to implement UV manipulations commercially? What limits in current technologies might prevent growers from making use of commercially useful UV responses (whether UV-A, UV-B or UV-C)? What is needed from the research community?

3) Is there value in this type of dialogue between researchers, those working with UV technologies and those who might exploit UV responses? How should we sustain it beyond this meeting? Should we plan a further meeting? How might we begin to approach "knowledge transfer" to a wider stakeholder audience?

Participants

Name	Organisation	
Ake Strid	Örebro University	Sweden
Alan Davis	Horticultural Development Company	UK
Andy McLeod	Edinburgh University	UK
Claire Donkin	Lincolnshire Herbs	UK
Crispin Halsall	Lancaster University	UK
Debbie Wilson	Horticultural Development Company	UK
Eslam Elfadly	University of Alexandria	Egypt
Eva Rosenqvist	University of Copenhagen	Denmark
Fernando Lidon	Universidade Nova de Lisboa	Portugal
Gert Jensen	Rosa Danica	Denmark
James Bean	Crystal Heart Salad Company	UK
Jason Moore	Bpi-Visqueen	UK
Juan Valverde	Teagasc	Eire
Liz Hill	Lancaster University	UK
Marcel Jansen	University of Cork	Eire
Michael Gaffney	Teagasc	Eire
Nigel Paul	Lancaster University	UK
Oscar Stapel	STEPP Bretagne	France
Titta Kotilainen	Valoya	Finland
Wagdy Sobeih	Arid Agritech	Egypt

About COST

COST- the acronym for European Cooperation in Science and Technology- is the oldest and widest European intergovernmental network for cooperation in research. Established by the Ministerial Conference in November 1971, COST is presently used by the scientific communities of 35 European countries to cooperate in common research projects supported by national funds.

The funds provided by COST - less than 1% of the total value of the projects – support the COST cooperation networks (COST Actions) through which, with EUR 30 million per year, more than 30 000 European scientists are involved in research having a total value which exceeds EUR 2 billion per year. This is the financial worth of the European added value which COST achieves.

A "bottom up approach" (the initiative of launching a COST Action comes from the European scientists themselves), "à la carte participation" (only countries interested in the Action participate), "equality of access" (participation is open also to the scientific communities of countries not belonging to the European Union) and "flexible structure" (easy implementation and light management of the research initiatives) are the main characteristics of COST.

As precursor of advanced multidisciplinary research COST has a very important role for the realisation of the European Research Area (ERA) anticipating and complementing the activities of the Framework Programmes, constituting a "bridge" towards the scientific communities of emerging countries, increasing the mobility of researchers across Europe and fostering the establishment of "Networks of Excellence" in many key scientific domains such as: Biomedicine and Molecular Biosciences; Food and Agriculture; Forests, their Products and Services; Materials, Physical and Nanosciences; Chemistry and Molecular Sciences and Technologies; Earth System Science and Environmental Management; Information and Communication Technologies; Transport and Urban Development; Individuals, Societies, Cultures and Health. It covers basic and more applied research and also addresses issues of pre-normative nature or of societal importance.



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About the Lancaster Environment Centre (LEC)

The Lancaster Environment Centre (LEC) is one of Lancaster University's largest department, alongside the Lancaster University Management School, InfoLab21, Lancaster Institute for the Contemporary Arts and our new multi-disciplinary Quantum Technology Centre.

LEC brings together academic researchers from the University of Lancaster alongside the Natural Environment Research Council's (NERC) Centre for Ecology & Hydrology (CEH) and a growing number of co-located businesses. With over 450 scientists and £35 million of capital investment, LEC forms one of the largest centres of its kind in Europe. Our research and teaching covers the "A to Z" of environmental topics from to anthropology/biochemistry to volcanology/water management/zoology.

At the heart of LEC is a fundamental commitment ensuring that our research and teaching is driven to deliver academic excellence and real world impact to our user communities. LEC has established clear strategic areas of research to address some of the most pressing issues of the 21st century. Our cross-disciplinary research areas focus on biodiversity and global change, atmospheric science, water management, environmental geosciences, sustainable agriculture, management of chemicals in the environment and the relationships between the environment and our wider society. Together with colleagues across the wider university LEC is also playing a leading role in the development of Energy Lancaster, a new cross-disciplinary research centre at Lancaster that aims to address current and emerging challenges in the generation and supply of energy and sustainable transport systems.

Enterprise & Business Partnerships (EBP) within LEC is a dedicated knowledge exchange and commercialisation team which leads significant collaborative programmes with the commercial sector, regionally, nationally and internationally. Whether via physical co-location of businesses within LEC or as part of a range of other partnership programmes, we aim to work with our business partners to deliver clear commercial value via the full and effective exploitation of our knowledge, understanding and innovations.

For more information, please see our website <http://www.lec.lancs.ac.uk/> or contact:-

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