

Government response to the Third Annual report of the Government-Industry Forum on Non-Food Uses of Crops

The Government welcomes the final annual report of the Government-Industry Forum on Non-Food Uses of Crops, which marks the culmination of the Forum's work over its three and half year term.

As well as making a number of specific recommendations, which are addressed below, the report provides a valuable account of the state of the non-food crops industry at the end of the Forum's term, and considers a number of generic issues which are currently receiving a high profile within Government. We are currently conducting a review of Waste Strategy and the Renewables Obligation, have launched the next round of the Framework for Sustainable Development on the Government Estate, which includes information on crop-derived materials in its procurement section, and the Environment Agency is conducting ongoing life cycle assessment of various applications of bioplastics.

The Forum's third report has been developed concurrently with the Government's *Strategy for Non-Food Crops and Uses*, which the Forum has itself assisted, and the Forum's report will inform the Government's implementation of the *Strategy*. The *Strategy* contains a number of initiatives on issues such as communicating the benefits and uses of crop-derived materials, contributing to sustainability in the construction industry and securing biodiversity in the development of non-food crops. These initiatives will provide an excellent springboard for implementing some of the Forum's recommendations, alongside the ongoing operations of the National Non-Food Crops Centre (NNFCC).

Recommendations

Sustainable Construction

Forum recommendation no. 31

Building on the CIRIA¹ project there should be a concerted effort to provide information on the natural materials available and their performance to builders and architects and other participants throughout the industry. This initiative should be led by a body fully embedded in the industry and in liaison with the NNFCC. Particular effort should be made to raise awareness amongst planners and local authorities, which might be achieved by incorporation of the information on crop-derived products into best practice guidelines to accompany PPS (1)², in concert with the measures suggested above.

¹ The Construction Industry Research and Information Association produced a handbook in November 2004 giving details of crop-derived construction materials available in the UK, their technical specification and environmental advantages.

² The Office of the Deputy Prime Minister recently consulted on Planning Policy Statement 1, which sets out the Government's vision for planning and the key policies and principles which should underpin the planning system.

The Government believes that the CIRIA report, which received funding from DTI and Defra, comprises a valuable guide to available construction materials from agricultural products, and is keen to see this information disseminated. The Government agrees that bodies with a close connection to the industry are well placed to perform this task. CIRIA have already held dissemination events to publicise the information collected in the report, with involvement from industry and the NNFCC.

The Government made a commitment in the *Strategy for Non-Food Crops and Uses* to form a Communications Strategy for non-food crops, to which the NNFCC is invited to contribute. It also agreed that the NNFCC should work with Regional Development Agencies, Government Offices, local authorities, regional assemblies and advisory bodies to develop programmes for advice and development of information on crop-derived materials. We wish opportunities for disseminating information on crop-derived construction materials to have a high priority as these developments progress. The Government also suggests that sustainable construction would be a suitable subject for the case studies the NNFCC will prepare for its website as a further part of the publicity initiatives discussed in the *Strategy*.

PPS1 was published in final form on 1 February 2005. The Government is currently reviewing whether any good practice guidance in support of the policies in PPS1 is needed.

Forum recommendation no. 32

The NNFCC should be invited to commission work from the construction industry to review existing knowledge from research programmes in other countries, to augment the information collated under the CIRIA report. This task should include work to identify and adapt for UK consumption knowledge that is applicable to UK conditions and practice, and to identify those gaps where new research is needed. The NNFCC should then be asked to commission further work to fill gaps in both performance specification and life cycle assessment for key products.

The Government will actively seek to procure such a study, to extend the work of the CIRIA report into technical and international research which lay beyond the scope of the original project. The Government will take this forward, perhaps on a partnership basis with industry bodies, and in close consultation with the NNFCC. Such work should also incorporate findings of the work on environmental profiling commissioned through the Building Research Establishment by Defra, available on the NNFCC web site.

Forum recommendation no. 33

The Government should put in place a requirement to reduce the life-cycle energy requirements of construction, using the Building Regulations as and where appropriate but using wider measures if required.

The Government agrees that Building Regulations have a role to play in setting 'minimum' standards for buildings in order to provide environmental benefits. Any changes to the regulations would build on work already undertaken to increase minimum environmental standards in a number of areas, including energy efficiency, water consumption, sound insulation, and storage for recycling. Good progress is also being made on a major review of Part L of the Building Regulations and we are aiming to lay a comprehensive amendment during 2005 that will raise energy efficiency standards for new buildings by around 25%.

In addition the Government is taking other measures to raise the standard of buildings above those stipulated by regulation. The Government has accepted the recommendation of the Sustainable Buildings Task Group to establish a Code for Sustainable Buildings which we believe will be a significant step towards improving the environmental performance of buildings. This will be a voluntary Code for which we will provide demonstrations across the Thames Gateway and within a Housing Market Renewal (HMR) Pathfinder area. The Government has undertaken to ensure that the Code considers the environmental impact of materials across their entire life cycle. It is envisaged that the Code for Sustainable Buildings would provide an indication of the possible future direction of Building Regulations.

Forum recommendation no. 34

Consideration should be given to alternative processing methods to enable current UK timber to be more widely used. The Forestry Commission should consider whether more appropriate species compatible with UK climate would better meet the needs of the construction market.

The Government agrees with the Forum's approach in this recommendation, and suggests that the Forestry Commission investigate methods to improve product capability and the total value of wood-based products that can be implemented at the time of felling, milling and engineering.

In its reassessment of suitable species and provenances in the light of climate change and the wider introduction of low impact silvicultural systems, the Forestry Commission will give a high priority to the production of construction grade timber as appropriate.

Forum recommendation no. 35

The development of procurement strategy across the Government estate must consider the environmental impact of materials on a whole-life basis, and should outline the contribution which crop-derived materials can make.

Departments should set systems in place to implement Government-wide initiatives on procurement, including crop-derived raw materials, by 1st December 2005.

The Government has included information regarding crop-derived materials in the procurement section of the Framework for Sustainable Development on the Government Estate. It will be for each department in developing its own procurement strategies to consider the environmental impact of materials on a whole-life basis, including the contribution crop-derived materials can make.

The Framework is the Government's main vehicle for improving the management of its land and buildings. Published alongside the Framework is practical guidance for procurement professionals within Government. Defra has also liaised with the Office of Government Commerce to emphasise the importance of assessing construction materials across their whole life-cycle ahead of the publication of *Achieving Excellence in Construction Guide 11: Sustainability*.

The Government has also undertaken to ensure that the forthcoming Code for Sustainable Building considers materials across their entire life-cycle, and will, as far as possible, seek to ensure that the Code and the Office of Government Commerce common minimum standards are aligned.

Forestry

Forum recommendation no. 36

The Forestry Commission should consider how best to take forward a study of extractive volumes and groupings in forestry materials and their susceptibility to handling and storage.

The Forestry Commission is currently taking this work forward and will disseminate the results. It is hoped that the results will continue the forward momentum generated at the Forestry Commission/Forestry Industry Cluster seminar.

Forum recommendation no. 37

Demonstration activity on supercritical extraction should be eligible for demonstration scheme calls, and interest should be solicited from the forestry and extractives industries.

Whilst Defra calls are not specific to one technology, good projects on the role of processing technologies in developing higher value products from agricultural and forestry materials can be accommodated within Defra's research programme. Some funding has already been awarded in this area: the joint Defra/BBSRC Link programme Competitive Industrial Materials from Crops funded the Seedex project which focused on aspects of supercritical fluid extraction of oils from novel seed crops.

The November 2004 call under the DTI's Technology Programme included technology validation for economic exploitation of non food crops and could include supercritical extraction

Forum recommendation no. 38

A second seminar on extractives from forestry products should be convened to take forward the issues raised in the June seminar, and to

capitalise on the co-operation and interest which it generated. The seminar should consider the output from recommendation no. 36 above if available.

The Government agrees that another conference would be useful to build on the progress already made. The Forestry Commission is investigating the possibility of a further seminar to coincide with the results from the study on the extractive quantities from Sitka spruce referred to in response to recommendation 36 above.

Biopolymers & other uses of Starch

Forum recommendation no. 39

The NNFCC should be asked to collate and publicise available information of demonstration work on mechanical separation of crop-derived packaging done to date, supplementing this with a UK demonstration project if necessary.

Defra and the NNFCC share a keen interest in the end of life disposal options for biopolymers and other crop-derived materials. Accurate separation, either at kerb-side or later in the waste stream, is a key part of ensuring that biodegradable materials are properly disposed of and do not routinely end in landfill. The Government agrees with the recommendation that mechanical separation, as one possible method of separation, is investigated. The NNFCC plans to liaise with stakeholders in waste processing and waste policy to address the waste issues raised by novel materials derived from renewable resources.

Forum recommendation no. 40

The Forum recommends that the NNFCC consider the wide variety of products highlighted in the BioComposites Centre study *Industrial Markets for Starch*, with a view to prioritising them according to the value of the potential markets, and exploring the measures needed to encourage their further development.

The Starch report commissioned by the NNFCC from the Biocomposites Centre at the University of Wales, Bangor, outlines an exciting range of potential uses of starch from UK-grown crops. As recommended the NNFCC will take forward the strategic appraisal of the possibilities raised in the report, with a view to highlighting those with the clearest practical potential to add value and make a positive impact to sustainable development.

Biosolvents

Forum recommendation no. 41

The NNFCC should be invited to consider the development and use of biosolvents in the printing industry in Germany, to ensure that lessons are learned from experience there and to avoid unnecessary duplication.

The Government agrees that much can be learned by sharing information with European partners. We have been encouraged by the relations already established, such as those between the NNFCC and FNR in Germany, which

has been a positive learning experience for both parties. The Government undertakes to consider developments in Germany in biosolvents as recommended, and to disseminate the information through the NNFCC.

Forum recommendation no. 42

A further, larger demonstration project on the use of biosolvents in printing should be commissioned under the guidance of the NNFCC, and based upon the interests and commitment of the printing industry and machine manufacturers represented through the PIAC³ committee.

Forum recommendation no. 43

An appraisal of the opportunities for biosolvents across the printing industry, as suggested in recommendation no. 10 in the Forum's first annual report, should be integrated into the ongoing demonstration work in this area.

The Government is awaiting feedback from the PIAC committee of the HSE in order to gauge the level of commitment and interest in a further project. Any further project would require the commitment and involvement of the industry, including manufacturers, and could be procured either directly or through a successful bid to the Defra Supply Chain Assessment and Development scheme.

The Government agrees that it would be preferable to include the appraisal of opportunities with such demonstration work, but will commission work separately if necessary.

New uses of wool

Forum recommendation no. 44

The Forum strongly recommends that the effect of implementing a revised exemption process for wool producers, and its success in attracting and encouraging entrepreneurial activity, is specifically addressed in the next scheduled review of the British Wool Marketing Board, by an independent, international agency with no links to the BWMB.

The Government agrees that the Board's role in promoting entrepreneurial activity should be included in the next review of the Board, and will incorporate this issue in the next review.

Anti-microbials

Forum recommendation no. 45

The Forum remains supportive of a seminar, now rescheduled for January 2005, to consider the barriers to anti-microbials and to identify actions to overcome them.

The seminar was held at St John's College, York, on the 27th and 28th January, and was sponsored by Defra and hosted by the NNFCC. The event

³ Printing Industry Advisory Committee of the Health and Safety Executive.

was well attended and considered very successful. It addressed issues including regulation, intellectual property, and the role of crop-derived products in countering antibiotic resistance.

The key themes which emerged from the discussion included the need for investment in research to discover new anti-microbials against a background of relatively low returns, and the need for regulatory regimes to accommodate crop-derived anti-microbials, which do not fit easily into existing frameworks.

The NNFCC has a key role in developing the findings of the seminar into firm proposals for industry and government, including European institutions.