

Defra - strategy for non-food crops and uses action plan - summary of actions

Promoting non-food crops uses of crops through the provision of information and knowledge

November 2006

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 1. Develop communications strategy for non-food crops to provide information to the consumer to influence behaviour and support environmentally beneficial choices and to industry on new commercial opportunities 	<p>A long term communications strategy was formulated in summer 2006 and this targets all players in the renewable materials supply chain from farmers and growers, to regulators, policy makers, innovators, industrialists and consumers. The strategy has been developed alongside, and links into, publicity work related to wider policies on climate change and sustainable consumption and production,</p> <p>NNFCC have a permanent Communications and Information Manager and a dedicated communications team is in place for 2006/07. Together with Defra, DTI and the regional organisation, NNFCC have been using existing communications channels, including websites, contact with media, attendance at industry seminars and various educational events, to promote and raise awareness of renewable materials.</p> <p>NNFCC have an established web presence and 2005 saw around 1.5 million hits from over 100 countries. Targeted news and information is sent to contacts (including a subscriber base of 220 companies and individuals) and NNFCC</p>	<p>Defra's communication efforts will focus on industry and on other parts of the public sector.</p> <p>Defra has published an information leaflet to help those working in other parts of central government and the public sector to understand the potential benefits of renewable materials and how they can impact on, and be affected by a range of cross cutting policies. This is being supported by a series of Defra sponsored 'meet the non food crops team' seminars at various locations across government.</p> <p>We will be looking to appoint celebrity consumer champions for the key renewables sectors.</p> <p>Communications is an ongoing task and the communication strategy and will be evaluated and refined in light of any future policy</p>

	<p>have assisted other web sources including the BBC.</p> <p>NNFCC have published a range of generalist publications and specialist reports including supply chain newsletters, crop fact sheets and annual reports.</p> <p>NNFCC have developed a media presence, particularly in the specialist and farming press and in radio interviews.</p> <p>Events hosted by NNFCC include the annual 'Green Supply Chain' conference. NNFCC are also regular presenters and exhibitors at industry conferences and educational events.</p>	<p>developments and feedback from stakeholders.</p> <p>NNFCC will continue to develop its communications work with industry sectors, and increasingly, with educational and lay audiences.</p>
<ul style="list-style-type: none"> 2. Develop education materials on the potential of non-food crops to substitute for fossil materials 	<p>NNFCC have supported a number of educational events to communicate and evaluate mechanisms for engaging teachers and students. These include science fairs and teachers' workshops focusing on sustainability.</p> <p>NNFCC have published a series of posters under the banner 'Did You Know?' aimed at informing school children at Key Stage 2 (ages 7-11) about the different uses of non – food crops and renewable materials. Teacher packs on the history and uses of hemp as an oil and fibre crop have been prepared and trialled.</p> <p>NNFCC have developed links to key organisations including the National Science Learning Centre, FACE and the Association for Science Education.</p>	<p>The communication strategy includes a further programme of work on the development of educational materials. This includes liaising with FACE and the Department for Education and Skills to look at the scope for including renewable materials in the national curriculum.</p>
<ul style="list-style-type: none"> 3. NNFCC to work with Regional Development Agencies, Government Offices, local authorities, regional assemblies and advisory bodies to develop programmes for advice and 	<p>Meetings have been held to allow all Regional Development Agencies and Government Offices to share best practice and disseminate</p>	<p>This work will continue. In particular NNFCC will be building on and extending the strong</p>

<p>dissemination of information</p>	<p>developments in non food crop technology. Following on from this, NNFCC has formed alliances with a range of organisations through regional network.</p> <p>For 2006/07, NNFCC has appointed a regional coordinator to help the regions to deliver the non food crops strategy according to their own strengths.</p>	<p>alliances it has formed with organisations throughout the regions.</p> <p>Because of the different structures, priorities and working practices of each regional body , it is necessary to tailor specific approaches. NNFCC is examining with DTI the possibility of inputting into existing DTI/RDA networks of relevance to the renewable materials agenda.</p>
<ul style="list-style-type: none"> 4. Establish programme of business support and training for farmers to help co-operative working and new business development 	<p>Rather than create a new programme of business support and training for farmers, efforts have focused on using existing vehicles such as Lantra, Business Links to signpost and disseminate information on existing schemes. Under the new Rural Development Programme, RDAs have resources to address any specific skills shortages and business needs within their regions. Renewable energy and renewable materials are included in these arrangements.</p>	<p>These arrangements will be monitored and kept under review.</p>
<ul style="list-style-type: none"> 5. Prepare and host a range of case studies on the NNFCC website to publicise non-food crop uses 	<p>There are a variety of reports on NNFCC website covering use of key product groups. A list of about 30 case studies has been compiled which indicates progress to date with emergent market successes involving renewable materials.</p> <p>These case studies are being written up by NNFCC for use in publications and on the web. They are organised by product group and region.</p>	<p>Work will continue to develop case studies in supply chains (including phytopharmaceuticals, biolubricants, biorefineries, biofuels and construction materials. Fact sheets and web content are also being drawn up to publicise the results of projects. Initial summary sheets for 7 of the projects were published at the NNFCC conference in November 2006.</p>

<ul style="list-style-type: none"> 6. Consider a programme of industrial secondments to the NNFCC 	<p>The Project Board and NNFCC Board has considered that this is not a priority for action at this stage, given the level of existing industrial experience within NNFCC and the strong networks it has developed with industry players.</p>	<p>Will be kept under review for future if a particular secondment is identified that would strengthen the Centre or its links with industry.</p>
<ul style="list-style-type: none"> 7. Develop close co-operation between seed producers, farmers and industrial users by the development of NNFCC instigated networks. 	<p>NNFCC has established 3 Thematic Working Groups to network all elements of the supply chains for biolubricants, renewable polymers and plant derived pharmaceuticals.</p>	<p>This is an ongoing action. Following the success of the thematic working groups NNFCC will establish effective networking arrangements for all parties involved in the development of biorefineries and for the supply chain for renewable materials in construction.</p>

ANALYSING STRATEGIC ISSUES AND IDENTIFYING BARRIERS TO DEVELOPMENT OF NON-FOOD CROPS

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 8. Develop new programme of work and workstreams to take forward recommendations of the Government Industry Forum on the Non-Food Uses of Crops 	<p>It has not been necessary to develop a new work programme as implementation of the few outstanding recommendations from GIFNFC is being taken forward through the existing non-food crops Strategy work streams.</p>	<p>Ongoing, but most outstanding actions arising from GIFNFC recommendations due to be completed by 2009.</p>
<ul style="list-style-type: none"> 9. Commission sectoral analyses assessing economic and environmental impacts with the aim of defining 3-5 key sectors or products with the potential for early development 	<p>NNFCC has identified key sectors as biopolymers, plant-derived pharmaceuticals, biosolvents, biofuels/biorefineries and renewable construction materials. Sectoral analyses have been taken forward in particular for the biopolymers and phytopharmaceutical sectors and are underway for the remaining key sectors.</p>	<p>NNFCC will continue to develop and refine its understanding of the key sectors to establish and develop the potential for realising economic and environmental benefits.</p>
<ul style="list-style-type: none"> 10. Align sectoral analyses with Regional Economic Strategies to differentiate competitive advantages of geographic regions 	<p>The NNFCC regional coordinator has been liaising with GOs and RDAs to communicate the outputs of the completed sectoral analyses at a local level and, together with Defra, is working to ensure that any specific regional business opportunities are incorporated into RES and other regional planning documents.</p>	<p>This work is ongoing.</p>
<ul style="list-style-type: none"> 11. Following the AEBC study, Defra and DTI to define a strategy for the development of high value-added products including pharmaceuticals from crops. 	<p>As a first step in devising a Strategy for high value added products, a joint DTI/Defra funded study on analysing strategic issues and identifying barriers for plant derived pharmaceutical sector was taken forward under NNFCC management. Conclusions have been finalised and the written report is due to be completed by the end of November 2006.</p>	<p>The results of the pharmaceutical study have been presented to Defra, DTI and the NNFCC pharmaceuticals working group. They will inform the development of the approach taken by Government and industry to this sector over the coming years.</p>

FUNDING SCIENTIFIC RESEARCH

ACTION	PROGRESS TO DATE	NEXT STEPS
12. Defra non – food crops research programme doubled to £2m per annum	Complete in 2004/2005, 2005/2006 financial years	Awaiting decision on future funding.
<ul style="list-style-type: none"> 13. Development of new LINK-style non-food crops programme 	A new Renewable Materials LINK programme involving Defra and the Biotechnology and Biological Sciences Research Council (BBSRC) was launched in November 2005. It aims to provide funding for high quality, innovative, pre-competitive research that enhances the non-food uses of renewable materials for sustainable development, and which can be readily exploited by the private sector.	By autumn 2006, 3 projects had been approved for LINK funding . These will be taken forward over the next 5 years. Various innovative projects are in the pipeline.
<ul style="list-style-type: none"> 14. New programme on supply chain development and assessment worth £1.3 m per annum being rolled out 	A new 2 year competitive R&D funding programme on supply chain development and assessment programme was launched in April 2004. This has incorporated 13 projects. Most were completed by summer 2006 and outputs are currently being assessed.	The outputs from the projects will be disseminated, in most cases by early 2007.
<ul style="list-style-type: none"> 15. BBSRC to develop a strategy for research on non-food uses of crops 	BBSRC focused initially on energy and a Bioenergy review was issued in March 2006.	
<ul style="list-style-type: none"> 16. Output from supply chain programme to include publicity fact sheets available on the NNFC website 	NNFCC have established the format and dissemination arrangements for fact sheets. The fact sheets for the individual projects are now in preparation.	Consultants have been appointed to write the fact sheets as soon as the outputs from supply chain projects are available. Most projects finished in summer 2006 and all fact sheets should be published by early 2007.

<ul style="list-style-type: none"> 17. Develop, at the European level if possible, a central life cycle inventory database to support the sustainable development of the sector. 	<p>This is a longer term action which needs to be taken forward in tandem with work being carried out by the EU Commission to develop lifecycle inventory data bases for materials on a European scale. There is scope for the UK to play a lead role in the development of LCA information for renewable materials and an expert in this field from Imperial College is helping the NNFCC to develop LCA's in this area.</p> <p>Following on from this NNFCC are developing lifecycle inventory and assessment information for several materials and /or products of most relevance to UK. These include packaging and construction materials and will take into account latest EU standards on methodologies etc.</p> <p>A number of projects relating to the use of biomass for energy and fuel have also been completed and work to align this with European standards is being taken forward as part of the Government's response to the Biomass Task Force report.</p>	<p>Work on developing the European level LCA data base is expected to continue up to 2009.</p>
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CONTRIBUTING TO THE LOW CARBON ECONOMY WITH RENEWABLE FUELS AND ENERGY

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> • 18. Energy Act 2004 provides a framework that would enable the introduction of a Renewable Transport Fuels Obligation (See also action 24) 	<p>The Government announced in November 2005 that a Renewable Transport Fuel Obligation (RTFO) will be introduced to require 5% of transport fuel to come from renewable resources by 2010. The Budget report in March 2006 announced that the level of the obligation for the interim years will be 2.5% in 2008 and 3.75% in 2009.</p>	<p>As part of the Obligation, an assurance scheme will be developed. This will require companies to report on the level of carbon savings achieved and on the sustainability of their supplies. A methodology and tool for calculating the carbon intensity of biofuels is being developed, together with a draft environmental standard for biofuels. The Government will be developing a Biofuels Sustainability Unit to take forward this work.</p> <p>Subject to State aid approval, the Government will introduce an Enhanced Capital Allowance scheme in 2007 for biofuel processing plants which make a good carbon balance inherent in their design. It will add value to the RTFO by giving an additional incentive to encourage the development of the "cleanest" (most carbon beneficial) biofuels production processes.</p>
<ul style="list-style-type: none"> • 19. External year-long study commissioned to analyse issues relating to biomass development 	<p>The Biomass Task Force, led by Sir Ben Gill, issued its report on 25 October 2005. The Government published its response to the report</p>	<p>A joint Defra/DTI team is working across Government to implement the agreed actions. Most of these</p>

	on 27 April 2006. This response accepts that energy from crops, trees and waste can make a strong contribution to reducing greenhouse gas emissions and sets out 12 key initiatives and 65 associated actions to make this happen.	should be implemented by April 2007. A number of actions will, by necessity, continue beyond that date, such as the 5 year capital grant scheme for biomass boilers and CHP systems.
<ul style="list-style-type: none"> 20. Publication of new planning guidance (PPS 22) to facilitate renewable energy projects 	PPS 22 was issued in August 2004	Department for Communities and Local Government (DCLG) are reviewing the extent to which the provisions of PPS 22 are being implemented by local authorities.
<ul style="list-style-type: none"> 21. Review of the Climate Change Programme which will take full account of the potential contribution of biomass fuel and energy 	The Climate Change Programme Review was published on 28 March 2006. This takes into account the potential contributions of biomass fuel, energy and renewable materials.	
<ul style="list-style-type: none"> 22. DTI review of the Renewables Obligation in 2005/06 which will consider whether the effectiveness of the Obligation can be improved with regard to achieving renewables targets including waste management options other than conventional "mass burn" incineration technology 	Legislation to amend the Renewables Obligation (RO) was adopted on 1 April 2006. Under the revised arrangements, eligibility rules for energy from mixed wastes have been relaxed. Previously, the definition of biomass required 98% of the energy content to be derived from plant or animal matter (including agricultural, forestry or wood wastes or residues and sewage). The purity limit has now been reduced to 90%. This allows waste wood and some other contaminated biomass to be used.	<p>The Energy Review, published in July 2006, proposed strengthening the RO in two ways. Firstly, the level of the RO should be increased to ensure it always stays above the level of the renewables actually installed, up to a 20% obligation. Secondly, DTI should consult on adapting the RO to provide more support to emerging technologies.</p> <p>DTI issued a consultation on 9 October. As well as the above points this also included a proposed interim change to the co-firing rules under the RO. This will examine in particular the figure for the cap on the amount</p>

		of an individual supplier's obligation that may be met from co-firing. This changed from 25% to 10% on 1 April 2006.
<ul style="list-style-type: none"> 23. In the review of the Rural Development Regulation and planning for the second England Rural Development Programme the Government will consider what measures are needed to support effectively the establishment and delivery of energy crops as part of a supply chain for biomass heat and power. (Roll out of regulation will also impact on actions 3&10) 	<p>The Government has agreed in principle to support energy crops under the new Rural Development Programme which will run from 2007 to 2013. The nature of the support is expected to be broadly similar to that provided under the current programme, and we are assessing current costs of establishing energy crops. The European Commission has now finalised the implementing regulation for the Rural Development Regulation, which will allow for the cultivation of miscanthus and other perennial crops for energy. It is hoped to put forward the new Rural Development Programme to the Commission later this year for their approval.</p>	
<ul style="list-style-type: none"> 24. Government will confirm the 2005 target for the introduction of alternative transport fuels by the end of this year. Government will consider a longer term target and policy measures in the light of the recent consultation (See also action 18) 	<p>In December 2004, the UK set a target of 0.3% use of biofuels by 2005. As explained in action 18 above, the targets for 2008-2010 have now been announced.</p>	
<ul style="list-style-type: none"> 25. Further measures are under consideration to develop the biomass heat market in the light of the RCEP report. 	<p>Following publication of the RCEP report in September 2004, Defra and DTI commissioned a report from Future Energy Solutions (FES) from AEA Technology to look more carefully at the renewable heat and CHP heat market and likely carbon savings. The report was published in September 2005 and was considered in the light of the recommendation from the Biomass Task Force that the Government should <u>not</u> pursue a renewable heat obligation.</p>	<p>The Government has given a commitment to carry out a comprehensive analysis of potential support mechanisms for renewable heat, including assessment of a renewable heat obligation, by April 2007. This analysis will provide the information needed to assess whether a workable long-term</p>

	Government concluded that further analysis was needed.	mechanism exists or could be constructed.
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CONTRIBUTING TO IMPROVEMENTS IN WASTE DISPOSAL AND TACKLING POLLUTION AND HEALTH RISKS

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 26. Develop logo to facilitate identification of biodegradable packaging 	<p>The Din Certco label for biodegradable packaging material has been established and is managed in UK by the Composting Association.</p>	
<ul style="list-style-type: none"> 27. Carry out demonstration work on biolubricants and biosolvents to show benefits 	<p>NNFCC was granted State Aid approval in July 2005 to carry out demonstration activities.</p>	<p>Arrangements for demonstration projects for biosolvents will be considered in light of further information gleaned from NNFCC studies on barriers to uptake in UK, including fact finding missions. The development of NNFCC work programmes for fuels and biorefineries will also inform this work.</p>
<ul style="list-style-type: none"> 28. Support the development of an eco-label for biolubricants, to be in place by end 2004 	<p>The UK version of the eco label for biolubricants was launched in August 2005 and publicised as part of Defra's Environment Direct Service and Shoppers Guide to Green labels.</p>	<p>To encourage UK industry to apply for the eco label for biolubricants (and other products), the UK will be seeking some simplification of the Eco label system which is currently being reviewed.</p>
<ul style="list-style-type: none"> 29. In order to support uptake, prepare publicity material to show that biolubricants and biosolvents are technically robust, deliver environmental gains and are affordable. 	<p>NNFCC is developing a range of materials promoting the benefits of biolubricants. These will include examples of best practise identified through industry networks and Thematic Working Group activity and will also take into account outputs from relevant Defra funded supply chain projects, due to report by end</p>	<p>NNFCC is undertaking a project to assess barriers to the uptake of biosolvents in the printing industry and possible solutions. A visit has been arranged to Germany to investigate best practice. The results of both exercises will</p>

	2006.	inform the development of the biosolvent sector and preparation of any relevant publicity materials.
<ul style="list-style-type: none"> 30. NNFCC to liaise closely with the Waste and Resources Action Programme and the Waste Implementation Programme to ensure synergies are exploited and consistent messages disseminated. 	<p>NNFCC have been working through WRAP and WIP to ensure that any changes in the types or amount of biodegradable renewable materials arising in the UK are taken into account in wider WRAP and WIP publicity and initiatives relating to waste recovery and /or sustainable disposal.</p> <p>NNFCC & Defra are also feeding into a number of wider policy reviews and initiatives relating to waste disposal to ensure that where possible these take into account the need to develop sustainable disposal methods for biodegradable products and minimise any unnecessary regulatory burdens which could restrict development of the renewables sector, in particular the development of biomass energy and renewable polymers.</p>	This is an ongoing action.
<ul style="list-style-type: none"> 31. Assess and demonstrate the potential for mechanical separation systems, such as those using near infra red technology, for biodegradable waste 	<p>NNFCC, in liaison with WIP and Defra Waste policy officers, have been assessing various options for the mechanical separation of biodegradable waste (including the use of infra red technology). Fact finding missions to Germany have provided some initial technical information on systems and this is being assessed.</p>	<p>Decisions on whether to proceed with demonstration projects for specific mechanical separation systems will need to be informed by findings of the review of the UK's waste strategy which is due to be published by the end of 2006. This will also take into account the work of the UK Compostable Packaging Group which is now part of the NNFCC's renewable polymers thematic working group.</p>

CONTRIBUTING TO SUSTAINABILITY IN THE BUILDING AND CONSTRUCTION INDUSTRIES

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 32. Publicise and disseminate BRE/CIRIA report on sustainable building materials 	<p>Completed. NNFCC have attended 6 events to raise profile of report and crop-derived construction materials since Jan 2004. NNFCC produced in June 2004 a construction sector newsletter which focused on the CIRIA report and the potential for crop derived building materials</p>	<p>Work on publicising and if possible demonstrating information on renewable building materials will continue to be given high priority.</p>
<ul style="list-style-type: none"> 33. Ensure that the new single National Code for Sustainable Building, recommended in the Sustainable Building Task Group report, takes account of the potential of crop-derived building materials 	<p>'The Code is based on a system of 6 performance levels ranging from basic entry level 1 to an aspirational high of 6. It sets standards for energy, water, materials use, and waste minimisation. The use of renewable energy, including biomass, will be required to achieve carbon neutral status of the higher Code levels. The Code was built on the basis of the Bream Eco Homes System developed by the Building Research Establishment (BRE) and points can be gained by using for example sustainable materials included in BRE Green Guide. At present it is envisaged that The Code for Sustainable Homes will be announced by the end of December 2006 and will 'go live' in April 07.'</p> <p>NNFCC are managing a BRE project on environmental profiling of renewable materials as part of efforts to increase the number and range of renewable products covered in the BRE Green Guide. The project is due to be completed shortly.</p>	<p>The Code for Sustainable Homes is the first part of the wider Code for Sustainable Buildings which will be drawn up and consulted on in the future. Defra and NNFCC will play a continuing role in this work.</p>

<ul style="list-style-type: none"> 34. Commission work to define priority options for the use of crop-derived building materials, establish technical detail and demonstrate methods of use. 	<p>NNFCC is taking forward a number of construction related projects in 2006/7 including: drawing up a technical manual for hemp lime construction; a gap analysis of key environmental & performance data for non-food crop materials; and life cycle assessments for insulation materials.</p>	<p>This work will continue over the next 2 - 3 years. The London 2012 Olympics should provide opportunities to promote and demonstrate crop-based materials.</p>
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INCREASING USE OF SUSTAINABLE PRODUCTS THROUGH GOVERNMENT PROCUREMENT POLICIES

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 35. Potential for crop-derived materials highlighted in the Framework for Sustainable Development on the Government Estate 	<p>Complete. The Framework for Sustainable Development on the Government Estate and associated on line guidance was revised in 2005 and includes details of how to obtain crop derived products and materials.</p>	<p>The Sustainable Procurement Task Force which reported in May 2006 has highlighted the need to strengthen the sustainable procurement guidance issued to government procurers. The Government will be issuing its response to the Task Force by the end of 2006 and in light of this, Defra will seek further opportunities to integrate renewable energy and materials into practical procurement policy</p>
<ul style="list-style-type: none"> 36. Defra considering opportunities for the use of biomass heating in offices. 	<p>A biomass boiler was installed in the Defra Worcester office in summer 2005 and has worked well, providing heating and hot water for the canteen.</p>	<p>As announced in the Government response to the Biomass Task Force report, Defra will map the suitability of its estate for conversion to biomass heating. This exercise will provide a model for other government departments to use in respect of their offices.</p>
<ul style="list-style-type: none"> 37. Defra will consult on the potential to add non-food crops derived materials to the Market Transformation Programme/Quick Wins list which sets out current and future minimum standards for government buyers. 	<p>Biolubricants and plant based hydraulic oils were added to 'Quick Wins' list in December 2005.</p>	<p>Defra, advised by NNFC, will continue to look for opportunities to add renewable products to the Quick Wins list, taking into account any relevant developments arising from the Government's response to the Sustainable Procurement Task</p>

		Force report.
<ul style="list-style-type: none"> 38. Prepare product datasheets which will enable public procurement nationally and regionally to give a lead on the use of crop-derived products. 	<p>It was decided to defer production of the individual product data sheets until after the Government had responded to the Sustainable Procurement Task Force's recommendation for a central data base on sustainable products. In the meantime NNFCC continues to provide information on products upon request.</p>	<p>NNFCC will prepare product data sheets once it has a clearer idea of the format required in light of the Government response to the Sustainable Procurement Task Force.</p>

BIODIVERSITY

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> 39. Commission study on other non-food crops (ie non energy crops) to identify significant impacts of crops and their management systems on biodiversity including an assessment of the effect of increasing diversity of crop production. 	<p>The Centre for Ecology and Hydrology (CEH) have completed a first stage study on the environmental impacts of crambe, borage, hemp and miscanthus. This was based on desk studies and flagged the possible benefits to wildlife from these relatively low input crops. To confirm these findings large scale field trials would be required. This would be a long term, high cost project and given the relatively small areas of land currently used for non energy non food crop production, Defra has decided that a separate field study should not be commissioned at this stage. Instead, Defra will seek to include non food crop trials in wider biodiversity research projects under the Environment and Landscape section of its R&D programme.</p> <p>Work on assessing the impacts of miscanthus and other energy and fuel crops such as short rotation coppice will continue to be given a high profile given the larger areas of land which will be potentially used to grow these crops.</p>	
<ul style="list-style-type: none"> 40. Prepare best practice guidance to help farmers maximise profits from non-food crops whilst delivering biodiversity benefits 	<p>NNFCC and CSL have produced four fact sheets covering borage, hemp, crambe and miscanthus. These are intended to be practical information sheets for farmers and cover basic market information, agronomy (sowing, harvest, inputs, storage, yields, etc), environmental impact, financial support available, eligible land,</p>	<p>NNFCC will build on the portfolio of fact sheets by adding market information sheets and FAQ sheets. These will be disseminated widely at events and developed with additional information as required.</p>

	<p>potential for adding value and useful contacts.</p> <p>Other sheets will be prepared when there is significant interest in the specific crop. Fuel crops (wheat / osr) plus echium, camelina, HEAR and calendula may be covered.</p> <p>General guidance on good biodiversity practice for crops, whether grown for food or non food purposes is also available in various Defra literature on the Single Payment Scheme and Environmental Stewardship.</p>	<p>The results of a study of on-farm processing (funded by Defra and run by NNFCC) will provide more detailed information on maximizing profits from individual crops and processes. Dissemination sheets will be produced once the study is complete - to include economics of various scales of processing, guidance and recommendations.</p>
<ul style="list-style-type: none"> 41. Develop a case study on maximising crop yields (and profits) while minimising impacts by using low input systems and managing field margins and other non-productive areas sensitively to protect and enhance biodiversity. 	<p>To be completed</p> <p>A field trial of the suitability of switchgrass, and reed canary grass as biofuel crops under UK conditions finished last year, led by Rothamsted Research and funded by Defra and Dti. The trials were at ten sites in the UK with collaboration with ADAS Consulting, Dutchy College and SCRI. In general the yield of reed canary grass was greater than switchgrass, which in turn was greater than miscanthus.</p> <p>A research project for developing SRC poplar led by Southampton University was completed last year. The project has identified the most heritable traits related to SRC yield in poplar and using this information, has developed an ideotype for high yield. The objective was to provide the underpinning science for future developments in molecular breeding and improvement.</p>	

<ul style="list-style-type: none">• 42. Assess the potential to develop an accreditation scheme for non-food uses of crops to certify sustainability.	<p>The NNFCC Board considered this issue and agreed that there was no scope at this stage to pursue the idea of a single accreditation scheme for the wide variety of non-food crop products at or near market. Some existing schemes are relevant to the sector (the eco label for biolubricants, Din Certco label for compostable biodegradable packaging) and a sustainability accreditation scheme is being developed for biofuels.</p>	<p>The question of accreditation schemes for non food crop products groups will be kept under review particularly in the light of developments at an EU level where work on sustainable consumption and production is looking more generally at accreditation.</p>
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USING CAP MEASURES TO PROMOTE NON-FOOD CROPS

ACTION	PROGRESS TO DATE	NEXT STEPS
43. Publicise how CAP reform can stimulate diversity in production.	Complete	
44. Discussions of successor programme to ERDP to take account of potential of non food crops. (See also action 23)		
45. Initiate collaborative working with other Member States to develop non-food crops policies and support through, for example, research and development at the European level.	<p>The DTI is involved in three initiatives with EU colleagues:</p> <p>(1) The UK (through DTI) has signed up to the Organisation for Economic Co-operation and Development (OECD) Task Force on Biotechnology for Sustainable Industrial Development. The current focus of its work is the effectiveness of measures being taken to assist a positive transition to a bio-based economy between now and 2030.</p> <hr/> <p>(2) 'EC document' Industrial or white biotechnology; A driver of sustainable growth in Europe - published June 2005. Contributing to the development of a sustainable bio-based economy.</p> <hr/> <p>(3) The UK has signed up to the new, EU approved, ERA-Net in Industrial Biotechnology (a network of funding agencies in 16 countries and a sub-group of the Sustainable Chemistry</p>	The UK will continue to feed into the various collaborative EU groups.

	<p>Technology Platform), which was formed in December 2005. The UK is tasked with gathering data from Member States on their ability to provide and use bio products, began in June 2006. This will be followed with gathering data from non-European countries, with an emphasis on Japan, China and USA.</p>	
<p>46. Consult industry on future of flax and hemp processing aid within the context of CAP reform.</p>	<p>The planned 2005/06 reform of the hemp and flax sector has been postponed until 2008. This decision follows an EU Commission report on the future of fibre processing aid which recommended a two year roll over of the existing regime. The two year roll over was recommended in order to get a better picture of how the sector is operating under current CAP arrangements. The commission report also recommended a few technical adjustments which make hemp and flax cultivated for industrial uses other than fibre eligible for the single payment scheme, as well as hemp for fibre. These adjustments were accepted by the Council and came into force in July 2006.</p>	<p>Defra will continue to monitor the sector and represent UK interests at natural fibres committee discussions in Brussels. The industry will be fully consulted on all CAP reform proposals when the regime is reformed in 2008.</p>

USING ENVIRONMENTAL REGULATION TO ACHIEVE ENVIRONMENTAL OUTCOMES WITH BENEFITS FOR NON-FOOD CROPS

ACTION	PROGRESS TO DATE	NEXT STEPS
<ul style="list-style-type: none"> • 47. A joint Defra-DTI high level conference will be held using these pilot projects as a basis for discussions between business and government on how to make environmental regulation more innovation and competitiveness-friendly. 	<p>A High level DTI/DEFRA conference was held on 6 April 2005 to look generically at how to make environmental legislation more innovation and competitiveness friendly.</p> <p>Following on from this, a Joint Defra/DTI workshop was held in October 2005 to identify opportunities to integrate key elements of work on environment and innovation across both departments. The following policy initiatives were identified as particularly relevant to developments in the renewables sectors:</p> <ul style="list-style-type: none"> ○ Sustainable Consumption and Production (SCP) agenda including development of a UK Products Strategy ○ Proposal for a joint Defra/DTI SCP Innovation platform under the DTI Technology programme to bring together Government and its agencies, research establishments and regional organisations to develop innovative sustainable products and services. 	<p>We will continue to work with those taking forward SCP initiatives to ensure that potential opportunities for renewable materials are maximised.</p> <p>If agreed, the SCP innovation platform could provide a chance to collaborate on large scale demonstration activities for renewable materials and products.</p>

IINSTIGATE BLUE SKY THINKING TO UNDERPIN LONG-TERM DEVELOPMENT OF THE SECTOR

ACTION	PROGRESS TO DATE	NEXT STEP
<ul style="list-style-type: none"> 48. The NNFCC will identify emerging opportunities and markets and support technology development from other countries. 	<p>Over the past 2 years NNFCC have developed working relationships with countries from all over the world including USA and Canada. The Bioscience for Business Knowledge Transfer Network carried out missions to China and Japan in 2006 and UK Trade and Investment carried out a visit to Canada to visit companies involved in renewable materials in July 2006. NNFCC has been using DTI's Global Watch service to monitor international developments in the non food crops sector and lead a recent Global Watch mission to Germany, Finland and the Netherlands on second generation biofuels.</p>	<p>NNFCC will continue to monitor, disseminate and where relevant learn from international developments in the renewable materials and bio energy sectors.</p>
<ul style="list-style-type: none"> 49. Develop key strategic partnerships at a European level to help the EU to compete in a global non-food crops products market. 	<p>Over the past 2 years NNFCC have played an active part in the European Renewable Raw Materials Association (ERRMA) which represents the national activities of member states in industrial crops. They have also engaged with the Renewable Raw Materials Working Group of the EU Commission's DG Enterprise. They have also been involved in work to connect the relevant programmes of Commission services responsible for enterprise, environment and research.</p> <p>Defra and other Government Department have been engaged in the development of the EU's Biomass and Biofuels strategies.</p>	<p>NNFCC will continue to build its links to EU institutions and develop partnerships at an EU level. It will actively consider participation in relevant projects involving bids for EU research funds.</p>

<ul style="list-style-type: none">• 50. Explore and evaluate the longer-term potential of non-food crops as a source of raw material in a more modern and technologically advancing society.	<p>A successful DTI /Defra Futures workshop was held on 8 June 2005. Representatives from the NNFCC Strategy Group, staff, government, industry and academia used horizon scanning techniques to look at long term scenarios and drivers for the sector up to 2050. The outputs of the workshop are informing policy thinking on the next steps for the renewables sector.</p> <p>NNFCC projects on fuels and biorefineries are also examining how developing technologies and business models may provide opportunities to develop renewables markets over the medium to long - term.</p>	<p>This is an ongoing process for government, NNFCC and industry.</p>
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