

Editorial

The European Commission has launched an initiative to build a European lead market for new technologies, products and services that will create employment and growth in the EU and contributes to some of the most important challenges (e.g. health, energy, sustainable products).

The working definition for lead markets consists of markets:

- for research and innovation intensive goods, services or technological solutions;
- with a high growth potential in Europe and globally;
- where the EU industry can develop competitive advantages in global markets;
- where action by the public sector (as regulator, customer of facilitator; public private partnerships) can have a significant impact on their development.

This lead market initiative formed the main point on the agenda of the European Technology Platform (ETP) seminar on the 6th December 2006 with the participation of the President of the European Commission, Mr. Barroso, Commissioner Potocnik, EIB President Maystadt, high level industry representatives and Commission services.

This seminar demonstrated a strong interest of industry in lead market initiative.

The European Commission President Barroso reconfirmed the commitment of the Commission to its innovation policy and to move forward with the lead market approach. Five Commission Interservice Task Forces for pilot lead market areas were set up for a "proof of concept". These are the following:

- Health
- Construction
- Textiles
- Bio-based products
- Recycling

The Commission Interservice Task Force on lead markets for bio-based products consists of representatives from the General Directorates on Enterprise and Industry, Environment, Agriculture, Transport and

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Definition

Energy, Research and Development and Competition. This Interservice Task Force was set up in March 2007 and produced a first outline of policy recommendations for a European lead market on bio-based products.

The EU-RRM-Group, coordinated by ERRMA prepared a document for the next ETP meeting on 22 May 2007 in Brussels entitled: "Lead Market discussion – contribution by the EU working group "Renewable Raw Materials" coordinated by the European Renewable Resources and Materials Association and edited by Dr. Achim Boenke, DG Enterprise and Industry, Unit G2-Chemicals on 14 May 2007."

This contribution is summarized in the article next to this editorial.

Dr. Dietrich Wittmeyer
Secretary ERRMA

The EU-RRM-Group met on 18 April 2007 with representatives of DG Enterprise and Industry, Research and Environment to discuss the elements for an industry contribution to a lead market for bio-based products.

The EU-RRM-Group finalised this contribution on 14 May 2007.

The reasons to select bio-based products for lead markets were that they:

- are based on renewable raw materials;
- can save limited fossil resources and reduce greenhouse gas emissions;
- can usually be recovered and recycled;
- offer high biodegradability/compostability/lower toxicity;
- can be produced with a lower resource use (water, energy);
- offer new opportunities for rural development;
- can make a substantial contribution to sustainable and competitive industries;
- combine interest of agriculture, forestry and industry;
- offer a new industrial structure;
- contribute to security of resources (EU forest & agriculture land).

Lead markets are not about protectionism, picking winners or creating national champions. Their purpose is to enable future technology to emerge and come to market. In order to ensure their success, an integrated effort is needed across all services, policy areas, between public authorities and industry.

The Criteria List for Lead Markets

1. Specification of the emerging market and the extent of customer needs, both private and public, that would be satisfied and how this could lead to the development of new products and services with a global perspective.
2. The potential of technologies under development and of new combinations of existing technologies for the creation of world-class markets.
3. The basis for the EU to capitalise on investments in such technologies, including their applications to develop world-class markets, notably in terms of existing or nascent industrial strengths in Europe that could develop the new markets.
4. Evidence of the commitment of industrial and service sectors to contribute to the success of the initiative in the proposed domain, following stakeholders' consultations.
5. Existence or lack of regulation of markets of products and services, which currently impedes or in the foreseeable future will impede the development and market take-up in Europe of new products and services in the considered markets.
6. With regard to standardisation of products and services, standardisation issues that would need to be addressed in a timely way to foster the development and market take-up in Europe of new products and services.
7. With respect to intellectual property protection, the presence of IPR issues specific to the area, which presently,

* "Bio" refers to "Renewable biological resources" and not "biotechnology". While advances in life sciences and biotechnology are a major driver for optimising biomass production and for bio-product innovations, there are other technology drivers (chemistry, nanotechnologies, etc).

of Lead Markets

or in the future will affect the faster development of the emerging market.

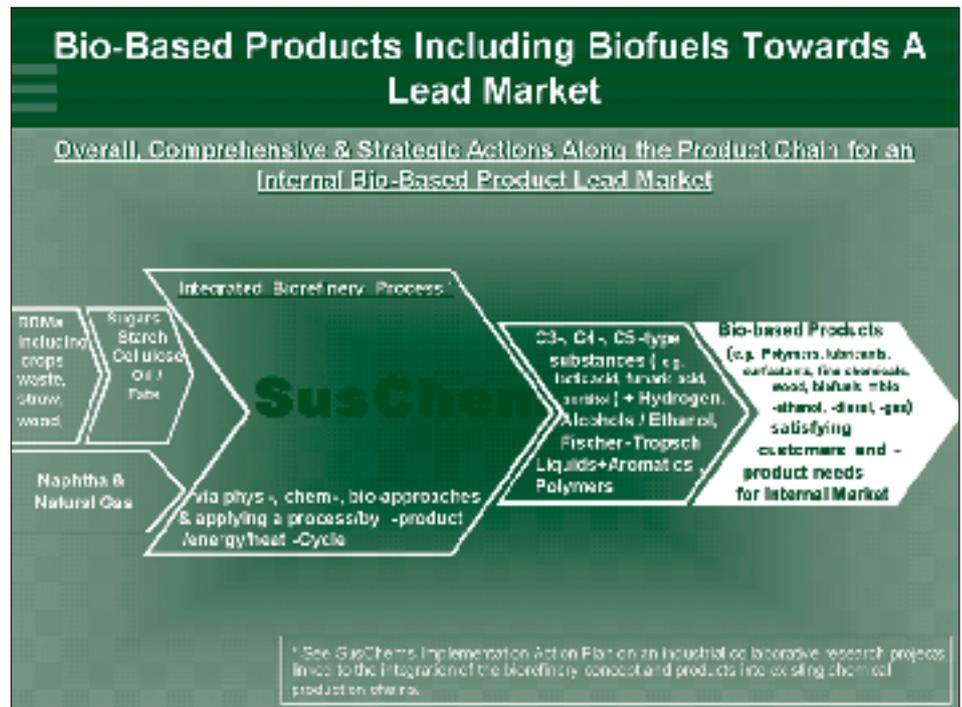
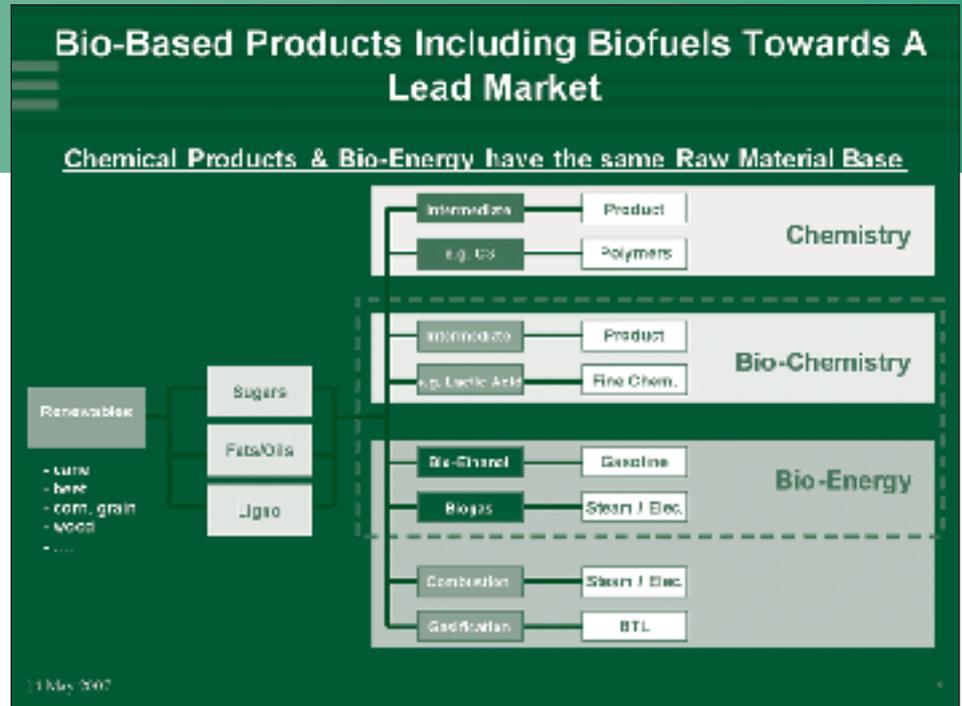
- With respect to public procurement, the extent of opportunities for the public sector, acting as a launching customer, to foster the development and market take-up of new products and services through a more proactive and innovation-oriented approach to public procurement.
- The presence of obstacles to financing (banks, EIB Group, VC) that are specific to support the development of the new market which public measures can contribute to alleviate.

Definition of Scope of bio-based Products:

Bio-based products* refer to non-food products (energy or industrial raw materials) derived from biomass (plants, crops, trees and biological waste from households, food, feed & animal production, etc.). Bio-based products may range from high-value added (usually low volume) fine chemicals such as pharmaceuticals, cosmetics, food & feed additives, etc., to usually high volume materials such as biopolymers, biofuels, etc. It may include existing bio-based products, such as paper and pulp, detergents, lubricants, construction materials, starch, sugar, or new ones, such as vaccines made from plants or second generation biofuels.

Conclusion

Consequently, an overall, coherent and comprehensive action is needed consisting of a strategic approach towards an internal lead market for bio-based products integrating all existing activities that start from the renewable/regrowable raw materials (RRMs) and biofuels up to the final bio-based end-product by satisfying the required product capabilities for customers. The strong interdependence between energy legislations and prices for RRM must be recognised. This overall and comprehensive action needs



to be characterised by an intelligent and targeted mix of market forces and political frameworks building upon industry's own voluntary schemes, international standards, labelling including certification. This needs to be accompanied by coherent regulations (see examples on the following pages). Thus

motivating industry and reducing innovation barriers, amongst others, an increase of RRM prices, reduced availability and use of non-sustainable environmental activities in other countries. Only, this will create sustainable growth and jobs.

► Definition of Lead Markets

Update from the

Example 1: The biopolymer case:

The production and use of biodegradable and compostable polymer products based on RRM can contribute to save fossil resources and reduce greenhouse gas emissions. This product group is an innovative area for agriculture and industry and in the same time a concrete example of economic & environmental positive impact for soil and water. The condition for bringing biodegradable and compostable polymer products into the EU- market is a clear understanding of biodegradability and compostability for the consumer. In order to give clear commitment of industry to follow EU- standards and neutral certification scheme, ERRMA had published an Industry Voluntary Agreement in form of self commitment which was officially recognized by DG Enterprise & Industry. To be successful a coherent accompanying adaptation by the existing EU-packaging Directive is urgently necessary. Hence, ERRMA therefore requests that biodegradability & compostability is to be proved mandatory by EN 13432 and based on the existing certification scheme. Otherwise a dilution of these qualifying characteristics will occur. ERRMA requests that the commitment for the certification scheme according EN 13432 has to be the unique qualifying criterion for the access of biodegradable and compostable polymer products as it is in force in some EU-Member States.

Example 2: The biolubricant case:

The production & use of bio-lubricants (based on $\geq 50\%$ RRM) can contribute to save fossil resources & reduce Green House Gas emissions, both in production & applications. This product group will form an innovative area for agriculture & industry and at the same time forms a concrete example for a positive economic & environmental impact in the areas soil & water because of their biodegradability. From a technical point of view modern bio-lubricants can reach the high performance levels needed in ambitious applications.

One condition for bringing more biodegradable lubricants into the EU-market is a clear understanding of the environmental benefits to the consumer. In order to show the clear commitment of industry the ERRMA working group is preparing a Voluntary Industrial Agreement in form of a self commitment. This includes a definition for a common understanding when using the term "Bio-Hydraulic Fluid". This product group has the biggest market share in comparison to other bio-lubricants. Bio-Hydraulic Fluids are compatible with the criteria from the European Eco-Label for Lubricants (EEL, 2005/360/ EC). Nevertheless, these criteria need to be focussed to basic & consumer acknowledged criteria aiming at a sufficient & increasing market share within the European Union. The self-commitment should be considered as a start in the right direction to further boost the EEL. These efforts need urgently to be accompanied by a coherent market introduction/demonstration programme that is currently operating in a successful manner in one Member State. In Germany good experience with such an approach can be reported.

The self-commitment & the market introduction/demonstration programme must be accompanied by coherent legislation; e.g. public procurement, mandatory use of bio-lubricants in sensitive areas, etc..

Dr. Achim Boenke, DG Enterprise and Industry, Unit G2-Chemicals

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concrete example of economic & environmental positive impact for soil and water

compostable polymer products as it is in force in some EU-Member States

UK's National Non-Food Crops Centre (NNFCC) June 2007



www.errma.com

Announcing the launch of new NNFCC studies

During the past year NNFCC recruited a Communications Team to produce a new range of newsletters and publications related to non-food crops and technologies, available at <http://www.nnfcc.co.uk/nnfcclibrary/publications/index.cfm>

New NNFCC Position Papers

Position Papers form our overview of current topics in renewable materials;

- 'Biorefineries: Definitions, examples of current activities and suggestions for UK development' (January 2007)
- 'The Potential for Renewable Aviation Fuels' (February 2007)

Plant-derived Pharmaceuticals

A report funded by UK Government has just been published by Professor Michael Fowler and Dr Ian Law, 'Plant-based Pharmaceuticals: A Strategic Study Relating to UK Activity and Interests' alongside a related Newsletter. UK SME activity in the sector is healthy, with several pioneering UK companies in the new botanical medicines region. The report identifies a need for partnerships between SMEs and large pharmaceutical companies in this process. For further information contact Dr Adrian Higson on a.higson@nnfcc.co.uk

Non-food crop area statistics

We have updated the 2006 UK non-food crop statistics section of our website at <http://www.nnfcc.co.uk/statistics/uk.cfm>. A further increase has been noted in the area of oilseed rape grown in the UK for non-food and energy uses. Figures from the RPA and Defra show an increase from about 160,000 ha in 2005 to over 250,000 ha in 2006. Wheat is featuring in statistics under the Energy Aid Payment Scheme with about 4,000 ha being reported as grown for non-food uses.

Green Supply Chain 2007, our annual conference

We are pleased to announce that our next annual conference The Green Supply Chain '07 will be held in York on 1st-2nd November 2007.

About the National Non-Food Crops Centre

Building sustainable supply chains

- NNFCC, the UK's single independent authority on renewable materials and technology
- Helping get products to market by building and strengthening supply chains
- Supporting decision makers with comprehensive information resources from all sectors

The National Non-Food Crops Centre Biocentre, York Science Park, Innovation Way, Heslington York YO10 5DG, UK

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Promotion of natural insulating material is continued

Symposium

German federal government keeps on supporting builders with a subsidy for natural fibre-products

Retroactively to the first of January 2007 the German ministry of agriculture resumes its market introduction programme "insulation materials from renewable resources". Applications for promotion can be submitted as hitherto to the Fachagentur Nachhaltige Rohstoffe (FNR).



The promotion firstly leaked to the end of 2006. Now, thanks to a positive decision of the European Union, it will be continued until the end of this year. This is a well and longed for message for all environmentally aware and health-conscious builders and architects.

Today, for all applicants there are 20 eligible natural insulating products from flax, hemp and other renewable resources available, produced by 13 manufacturers. These products are financially supported by the FNR. The today's publication of the directive is the starting shot for the continuation of the support-programme. From now on new applications can be submitted to the FNR. The FNR is as an project executing organisation of the ministry for agriculture responsible for the programme.

Subsidised is - as so far - the buying of thermal and acoustic insulating materials from renewable resources, which are part of the list with eligible products. The amount of the subsidy depends on the category, in which the product is listed: Category I contains all insulating materials, which are certified according the standards of natureplus®. They are supported with 35 Euro per cubic metre. In category II the promotion amounts to 25 Euro per cubic metre. Quantities under five cubic metres are not considered for promotion.

Private persons as well as companies can submit applications; the building, in which the insulating materials are used, has to be located in Germany. Manufacturer and marketeers of insulating materials and public authorities are excluded from the programme.

For the filing of application the completely filled out application form, the original bill and a quittence or bank statement have to be deposited to the FNR. This has to be done at latest three months after paying the bill of the insulating materials.

The underlying directive, the application form and the list of promoted products as well as further information can be found in the internet: www.naturdaemmstoffe.info. Telephone advice is available under +49 (0)3843 – 69 30 180.

Nuse Lack

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Nr. 519 from 21st of march 2007



Bioplastics shows increasing market opportunities

More than 100 delegates from primarily SME's attended the symposium "Bioplastics: growing opportunities for your company" on June 5th in Ede, Netherlands. This symposium was organised by the Platform Bio-based Business in collaboration with the Dutch branche organisation for compostable plastics (BCPN) and Wageningen UR. At the symposium it was concluded that bioplastics are now experiencing a definite market breakthrough, and, in the Netherlands, are now widely used in such consumer applications as fresh food packaging, waste and carrier bags and disposable cups.



Under chairmanship of Platform BBB's board member Dr. Barbara de Klerk the state of the art of bioplastics was presented. Karin Molenveld of Wageningen UR gave an overview of commercially available bioplastics, their material and processing characteristics as well as typical uses. She also presented ongoing developments to broaden the range of possible applications. Current regulations and pitfalls around compostability and biodegradability was clarified by Remy Jongboom (BCPN) and Bruno de Wilde (OWS, Belgium). Several

companies presented their market successes such as products based on starches (Novamont) and PLA (polylactic acid; Nature Works). Their products range from biodegradable packaging materials, laminated cups to moulded products such as agricultural products and sun glasses. Joost Carlier of Loc7000 highlighted his experiences with the introduction of PLA drinking cups at the recent "Lowlands festival" (a three-day 85000 visitor open air music event in The Netherlands). On the



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introduction of compostable labels was reported by Arjan Klapwijk of Biolabels, while Arno Koot of the Greenery (the largest Dutch agroproducts cooperative) presented their experience with using bioplastics in the packaging of fresh agricultural products. Arno mentioned that the Greenery's driving force for using bioplastics was not so much the biodegradability issue, but primarily the fact that bioplastics are made from renewable feed stocks. Finally, Bert Tournois of TDI addressed financing issues in bioproduct business development.

All in all it was clear from the presentations and from the many business contacts that were made on this day that bioplastics, particularly for SME's, offer great opportunities for new products and new markets.

For presentation handouts and photo impressions of this symposium, please visit our website at www.biobasedbusiness.com.

Prof.dr. Hans Derksen
President Platform Biobased Business

Calendar of events

'Renewable Raw Materials for Industry: Contribution to Sustainable Chemistry. Two day symposium. 17-18 October 2007, Brussels .

www.greentech.eu e-mail: mvanboven@europoint.eu

2nd Dutch Symposium Platform Bio-based Business in The Netherlands. Date (in October or November 2007) and place will be announced shortly.

www.biobasedbusiness.nl, e-mail: mvanboven@biobasedbusiness.nl. Tel. 00 31 30 69 33 489

The 2nd Annual Pacific Rim Summit on Industrial Biotechnology and Bioenergy will return to Honolulu, Hawaii.

14-16 November 2007 at the Hilton Hawaiian Village.

The Call for Posters will close on August 31, 2007. email us at pacrim@bio.org or call 00 1 202.962.6630

Second European Bioplastics Conference. 21-22 November 2007, Disney's Newport Bay Club Convention Centre, Paris.

Organiser: European Bioplastics, Website: www.conference.european-bioplastics.org

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