

Press Release

2nd European Bioplastics Conference established as the place to be of bioplastics industry

All-time record of 315 delegates and 45 speakers – Latest innovations of 26 exhibitors – Broad scope of material, market and political issues – Bright future of bioplastics

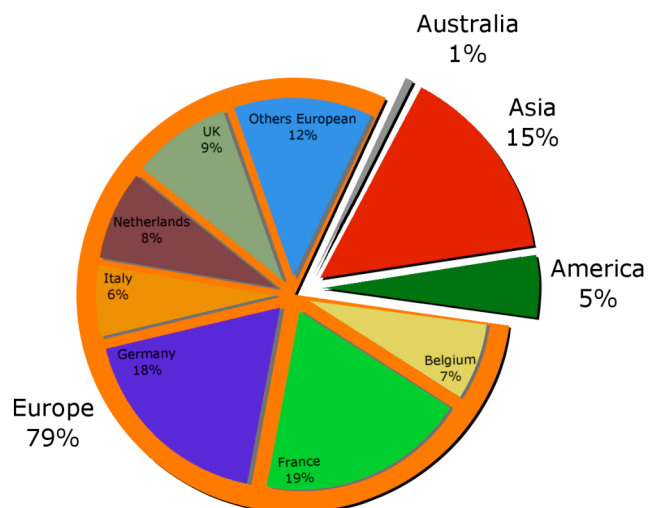
Berlin/Paris, 23 November 2007 – The 2nd European Bioplastics Conference has proved to be the place to be in bioplastics industry. 360 bioplastics professionals met in Paris at the yearly conference that is organised for the second time by the industry association European Bioplastics. The number of 315 delegates as well as the comprehensive bioplastics exhibition of 26 companies showed the relevance of the promising industry. 45 speakers touched all bioplastics issues running from material novelties to biopackaging innovations to consumer insights to political frameworks to end of life options. The conference was opened by Dr. Harald Käß, Chairman of European Bioplastics, addressing the parameters of bioplastics future development such as material supply, material properties, waste management, and consumer behaviour.

Record attendance of delegates, speakers and exhibitors

360 delegates and speakers from 29 countries registered and made the conference the largest bioplastics event ever in Europe. The European countries were represented most with almost 80 percent of participants while Asia accounted for 15 percent. France and Germany were the European countries with the largest percentages of 19 resp. 18 percent of all delegates, followed by Benelux with 15 percent of all delegates.

The delegates followed the presentations of 45 speakers. Alternating plenary and parallel sessions gave the most comprehensive overview

on bioplastics. The participants networked during the breaks that had been included in the conference schedule deliberately to a large extent in order to create a valuable business platform.



Participants of 2nd European Bioplastics Conference 2007

The exhibition room, where 26 exhibiting companies showcased their latest products and developments, provided a unique surrounding for that networking. The exhibitors represented the broad range of bioplastics including resin suppliers, plastic converters, plastic products distributors, auxiliaries producers, machinery and engineering companies as well as compostability certification bodies.

Key notes on bioplastics

The first plenary session was opened by a welcome address of Dr. Harald Käß, Chairman of European Bioplastics and Christophe Doukhi-de Boissoudy, Chairman of the French Club-bioplastiques. Käß introduced the challenges for the future bioplastics development: „Sufficient material supply will be a very basic parameter for the future of bioplastics. This can be achieved threefold: utilising existing production capacities to the full, building up new production sites by known and yet unknown market players and broadening the scope of materials and material properties.“ Also waste management will play a crucial role as well as material developments. „The bioplastics industry is at cutting edge. Fortunately, politics become more and more aware of the potential of reducing dependency on crude oil not only for fuels but also in material use of renewable resources.“

The representative of the French Ministry of Agriculture, Julien Turienne, took up the thread and explained the French policies for bio-based products, which are motivated by their advantages, i.e. the substitution of fossil or non renewable, the improvement of innovation and competitiveness and the preservation and creation of jobs in agriculture and agro-industry. Amongst the French actions are the proposal to prefer bioplastic bags regulated by law (which was rejected by the European Commission due to the free trade and packaging directive; France now works on transforming these measures in incentive measures, e.g. ecotax). Other actions include a study on labels that can be used for the promotion of bio-based products and an initiative to enhance an European framework to develop bio-based products with several member states by a memorandum. It says that biofuels and bioenergy are already covered by an legislative framework and an equivalent for material use is needed.

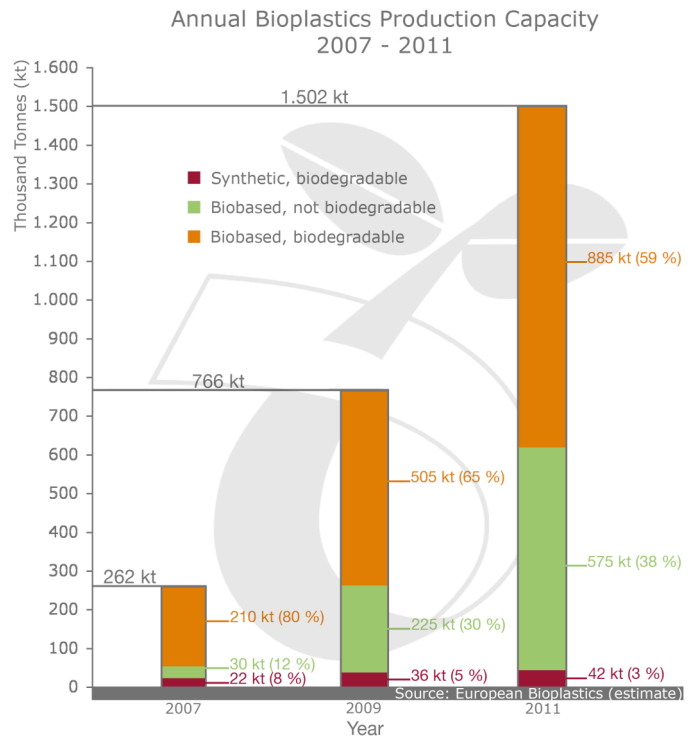
Support also came from the plastic converters, represented at the conference by the association European Plastic Converters (EuPC). EuPC sees bioplastics on a par with conventional plastics. The opening session was topped off by two presentations that can be seen as two ends of the broad bioplastics range: One of the bioplastics pioneers with a proven track record in compostable plastics, Italian Novamont, explained their approach of building up a sustainable bioplastics business, while Brazil Braskem presented their plans to build up production capacities of 200,000 tonnes/y (2009) for polyethylene from sugar cane, so-called „green PE“.

Parameters of bioplastics' development

Production capacities

European Bioplastics estimates the global production capacities of bioplastics to sextuple until 2011. The shares of the three material classes synthetic/biodegradable, biobased/bio-degradable and biobased/non-biodegradable are expected to change significantly towards biobased/non-biodegradable bioplastics. While their share is about 12 percent in 2007 (of a total production capacity of 262.000 tonnes/year), in 2011 the share of biobased/non-biodegradable bioplastics will be almost 40 percent of total

capacity. The overall capacity will increase to 766.000 tonnes/year in 2009 to about 1.500.000 tonnes/year in 2011. European Bioplastics bases its estimations on publicly available announcements that have been published in the last months as well as on information gathered amongst members of European Bioplastics. Provided a positive access to capital markets and thus investments production capacities can grow even faster.



Material properties and material types

To capture an even broader application range than today some bioplastics need to improve their material properties. Basically, this applies for barrier properties and heat resistance. Usual PLA softens at a temperature of about 60°C and is not deployable for several applications. According to a manufacturer, PLA produced from *D*- or *L*-lactic acid shall be heat resistant up to 175°C. Thus, PLA will become applicable for e.g. micro-wave suitable products.

In the competitive and technical demanding packaging market efficiency in processing and barrier properties are key success factors. According to several studies PLA bottles have a large growth potential. To capture more applications the barrier properties need improvement. Due to a low CO₂-barrier carbonated beverages lose their sparkling character very soon at the moment. Furthermore, the high permeability of steam reduces the shelf-life. However, it is expected that new PLA types and barrier layers will widen the scope of applications very soon. It is likely that new bioplastic materials and an increasing availability of bioplastics will accelerate product innovations.

Waste management and bioplastics treatment

Waste management will be a key success factor of bioplastics in two different ways.

On the one hand, for compostable plastic products it is crucial to have composting infrastructures in place. That's the reason why European Bioplastics advocates for a separate collection of organic and residual waste and for installing composting sites across Europe. The association welcomes all political initiatives that support this goal as the latest announcement of German Environmental Ministry did. The ministry intends to draw up a national organic waste recycling strategy. This includes the question of whether organic waste should be dried, burnt, fermented or composted or whether it should be processed to create biofuels. The Federal Government has also started to introduce its organic waste strategy at the European level. In the EU, organic waste accounts for around 38 per cent of municipal waste. This amounts to around 120 million tonnes of organic waste per year, with the potential to obtain over 50 million tonnes of compost annually (in EU 25). One problem, however, is the European Landfill Directive. Though the directive includes several requirements to reduce the organic component of waste, it permits explicitly the burning, the treatment in a mechanical biological facility and the mixed composting of organic waste components, with the result that the waste can no longer be used for soil improvement. Like the EU parliament and the "biowaste coalition" (Austria, Belgium, Cyprus, Czech Republic, Estonia, Hungary, Italy, Portugal, Slovakia, Spain, Rumania and Germany) European Bioplastics supports the idea of a dedicated Organic Waste Directive that is unfortunately not yet on the agenda of the EU Commission.

On the other hand European Bioplastics is strongly supporting an adequate treatment of bioplastics given the quantities of the material. Organizing the most optimized waste management system is dependent on local infrastructures for collection and recycling, local and regional regulations, the total volume on the market available and the composition of waste streams. This is also a primary reason why conventional packaging is not always treated in the same way across the EU. Most countries have set up systems to recover and recycle post consumer plastic bottles. For most other packaging, the results are more fragmented and not always very well developed. In many cases, mixed fractions are being incinerated and by doing so, (fossil) energy is being recovered. Biopackaging that would end up in the mixed waste fraction for incineration with energy recovery will generate renewable energy instead.

With both bioplastics and biopackaging in their infancy, the development of the market should not be delayed even though the most optimal recovery systems have often not been recog-

nized by local authorities. The risks associated with existing recovery schemes should be monitored. These will be limited at this time given the relatively small volumes that currently enter the market. Once volumes reach a critical mass, waste management systems which make most sense from an environmental and economic point of view can be set up. Over time, recycling may be the best option for certain bioplastics, especially if a homogenous stream can be organized such as in place for plastic bottles. German government acknowledged this considerations in the amendment process of the Packaging Ordinance by releasing bioplastic bottles from deposit obligation. The ordinance states that bottles with more than 75 percent RRM content will not be charged with a deposit fee. The privilege postpones the obligation of installing recovery systems to a point of time after market introduction.

About European Bioplastics

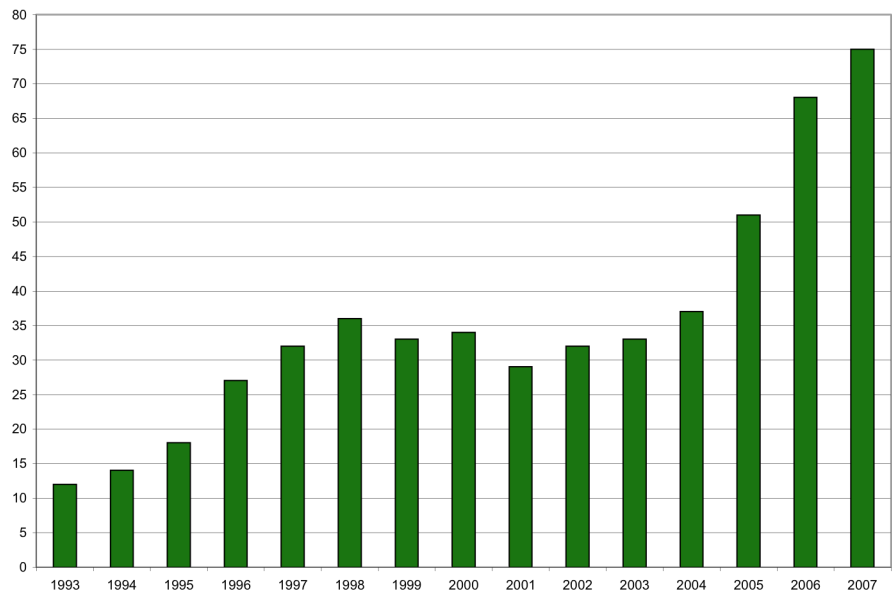
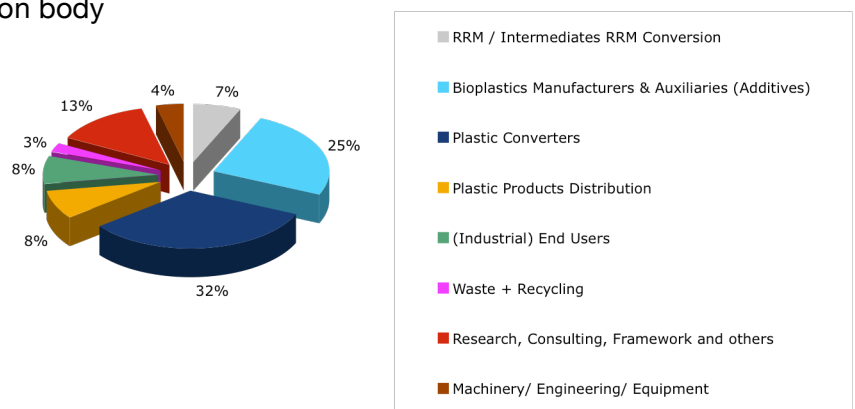
European Bioplastics is the representation body of the European bioplastics industry.

The association comprises companies alongside the whole value chain of bioplastics: from the agricultural feedstock, chemical and plastics industry, as well as industrial users and recycling companies.

Founded in 1993 as IBAW (interest group biodegradable plastic materials) the association represents the interests of 75 member companies in 2007. Between 2004 and 2007 the number of members more than doubled.

The association targets to shape the political, business and public landscape for the bioplastics industry.

Membership Structure by Sectors 2007



Supporters of 2nd European Bioplastics Conference

The conference has been supported by Gold-Sponsor Biostarch (Singapore), Silver-Sponsor Biotec (Germany) and Bronze-Sponsors Purac (Netherlands), Novamont (Italy), Innovia Films (UK), Limagrain (France), Faerch Plast (Denmark), coopbox Europe (Italy), NatureWorks (USA), Invest in Germany (Germany).

The exhibition was composed of the companies: BASF (Germany), Biostarch (Singapore), Biotec, (Germany), Clarifoil (UK), coopbox Europe (Italy), DinCertco (Germany), DuPont (Switzerland), Færch Plast (Denmark), FKUR (Germany), Forapack (Italy), Innovia Films (UK), International Process Plants (USA), Interpack (Germany), Invest in Germany (Germany), Limagrain (France), maag (Germany), NatureWorks (USA), Novamont (Italy), Plantic Technologies (Australia), PolyOne (Belgium), Purac biochem (Netherlands), Sirane Ltd (UK), Sidaplast (Belgium), Tianan Biologic Material Company (China), Unitika (Japan), Vinçotte (Belgium)

Note to the editor: In order to get printable diagrammes please send your request to press@european-bioplastics.org.

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