

Position of European Bioplastics

INDUSTRIAL USE OF AGRICULTURAL FEEDSTOCK

The transition from a fossil based to a biobased economy is absolutely essential if the EU wants to be perceived as a global leader in climate protection and greenhouse gas emissions reduction targets. The material sector and within this the plastic market can make a major contribution to this transition through bioplastics.

Bioplastics encompasses a family of materials which differ from conventional plastics insofar as that they are bio-based, biodegradable, or both. Biobased means that the material or product is fully or partly derived from biomass. Biodegradable refers to a chemical process during which micro-organisms available in the environment convert materials into natural substances such as water, carbon dioxide and biomass (artificial additives are not needed).

Using biomass for industrial purposes such as the production of bioplastics has major benefits. For example, it reduces the dependency on limited fossil resources mainly imported from beyond Europe and reduces greenhouse gas emissions. Through the implementation of use cascades, bioplastics can also make an important contribution to resource efficiency.

Named an important pillar of the European bioeconomy by the European Commission, the bioplastics industry has developed dynamically in recent years and has a significant growth potential. Global production capacities are predicted to grow from 1.4 million tonnes in 2012 to more than 6 million tonnes in 2017. Maintained access to sustainably grown biomass is critical to guarantee this growth.

Our position is that the choice of a biomass type for industrial use should only depend on the sustainability and efficiency of the feedstock.

Today, bioplastics are mostly made of carbon hydrate rich plants, such as corn or sugar cane, so called food crops or 1st generation feedstock. Currently, 1st generation feedstock is the most efficient feedstock for the production of bioplastic as it requires the least amount of land to grow and produces the highest yields¹. In order to fulfill its growth potential, it is important that the bioplastics industry is ensured access to first generation biomass now and in the future. The bioplastics industry is of course also researching the use of non-food crops (2nd and 3rd generation feedstock), such as cellulose, with a view to its further use.

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The discussion about the use of biomass for industrial purposes is often linked to the question: Is the conversion of potential food and feed to materials ethically justifiable? This emotional debate is barren of supporting facts. Enough food to feed the world is produced, and unfortunately, wasted each year. Growing food, feed and using pastures account for about 97 percent of the global agricultural area – whereas biomass grown for material use only counts for approximately 2 percent, within this bioplastics account for less than 0.01 percent.^{2,3}

¹ See publications of nova-institute (2013): „Food or non-food: Which agricultural feedstocks are best for industrial uses?“; See also calculations of Institute for Bioplastics and Biocomposites (IfBB, 2013): <http://ifbb.wp.hs-hannover.de/downloads/index.php?site=Statistics&nav=1-0-0-0-0>.

² Market data by European Bioplastics / Institute for Bioplastics and Biocomposites (University of Applied Science, Hannover, Germany) 2012.

³ For more information on food security see the Economist Intelligence Unit's assessment tool: <http://foodsecurityindex.eiu.com/>.

No competition between biomass use for food, feed, and for material use. Less than 0.01 percent of the global agricultural area used to grow feedstock for bioplastics.

The sheer difference in volume shows that there is no competition between biomass use for food and feed, and for material use. In addition, first generation feedstock bioplastics are an enabling technology that will facilitate the transition to later generations of feedstock. Consequently, the use of first generation feedstock for industrial applications should not be discriminated against.⁴

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A level playing field for the use of biomass in materials, compared to the use of biomass for energy, needs to be

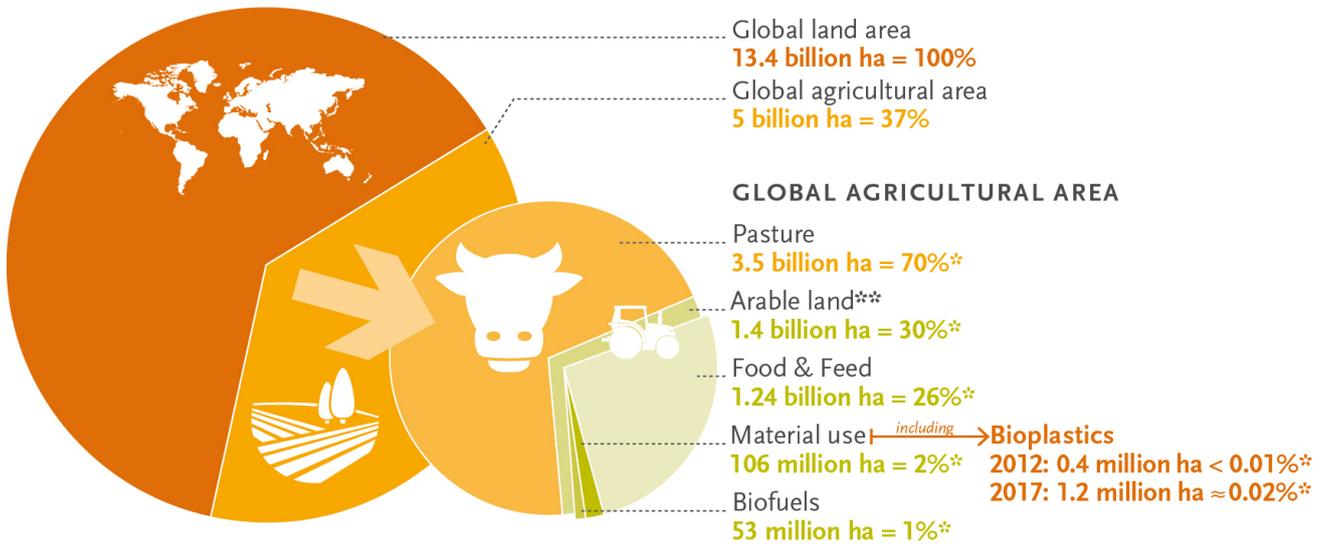
established. At European level diverse supporting instruments exist, such as subsidies, quotas, taxes, etc. All of which should either be bestowed equally to different industries using biomass, or none. Currently, the energy sector receives immense subsidies, and the bioplastics industry in comparison receives none - a condition distorting the effectiveness of biobased market segments.

European Bioplastics supports the equal treatment of all pillars of the bioeconomy and is strictly against political discrimination or preference for specific biobased industries.

About European Bioplastics

European Bioplastics represents the interests of around 70 member companies throughout the European Union. With members from the whole value chain, European Bioplastics serves as both a contact platform and catalyst for advancing the objectives of the growing bioplastics industry. For further information, please visit <http://en.european-bioplastics.org>

Land use for bioplastics 2012 and 2017



Source: European Bioplastics | Institute for Bioplastics and Biocomposites (December 2013) / FAO 2011



* In relation to global agricultural area
** Also includes approx. 1% fallow land

⁴ This position is further backed up by a study published by the World Bank in 2013, according to which an increase in food prices is largely influenced by the oil price. Biofuels and, by extension, bioplastics play a negligible factor here.