

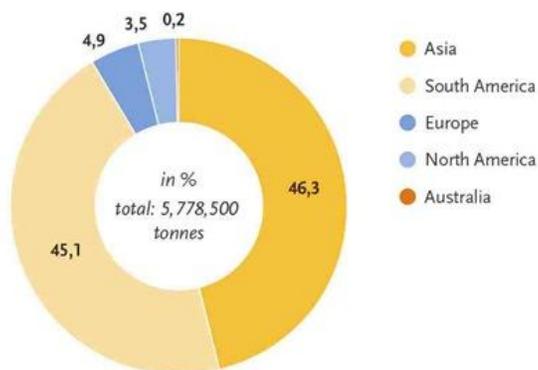
## Fivefold Growth of the Bioplastics Market by 2016

Source: European Plastics

Posted: Oct 11, 2012

An above-average positive development in bioplastics production capacity has made past projections obsolete. The market of around 1.2 million tonnes in 2011 will see a fivefold increase in production volumes by 2016 – to an anticipated almost 6 million tonnes. This is the result of the current market forecast, which the industry association European Bioplastics publishes annually in cooperation with the Institute for Bioplastics and Biocomposites from the University of Hannover.

Global production capacity of bioplastics in 2016 (by region)



The worldwide production capacity for bioplastics will increase from around 1.2 million tonnes in 2011 to approximately 5.8 million tonnes by 2016. By far the strongest growth will be in the biobased, non-biodegradable bioplastics group. Especially the so-called 'drop-in' solutions, i.e. biobased versions of bulk plastics like PE and PET that merely differ from their conventional counterparts in terms of their renewable raw material base, are building up large capacities. Leading the field is partially biobased PET, which is already accounting for approximately 40 percent of the global bioplastics production capacity. Partially biobased PET will continue to extend this lead to more than 4.6 million tonnes by 2016. That would correspond to 80 per- cent of the total bioplastics production capacity. Following PET is biobased PE with 250,000 tonnes, constituting more than 4 percent of the total production capacity.

"But also biodegradable plastics are demonstrating impressive growth rates. Their production capacity will increase by two-thirds by 2016," states Hasso von Pogrell, Managing Director of European Bioplastics. Leading contributors to this growth will be PLA and PHA, each of them accounting for 298,000

tonnes (+60 percent) and 142,000 tonnes (+700 percent) respectively. "The enormous growth makes allowance for the constantly increasing demand for sustainable solutions in the plastics market. Eventually, bioplastics have achieved an established position in numerous application areas, from the packaging market to the electronics sector and the automotive industry", says von Pogrell.

A disturbing trend to be observed is the geographic distribution of production capacities. Europe and North America remain interesting as locations for research and development and also important as sales markets. However, establishment of new production capacities is favoured in South America and Asia. "European Bioplastics invites European policy makers to convert their declared interest into concrete measures. "We are seeing many general sup- portive statements at EU level and in the Member States", says Andy Sweetman, Chairman of European Bioplastics. "There is, however, a lack of concrete measures. If Europe wants to profit from growth at all levels of the value chain in our industry, it is high time the correspon- ding decisions are made."

## Vegware Launches Market's Only Compostable Wine Glass

Source: Packaging Europe

Posted: Oct 10, 2012

1st  
eco  
wine  
glass



Vegware, the UK's first and only completely compostable food packaging firm, has launched the market's only compostable wine glass. Made of cornstarch, the eco wine glass offers a low-carbon alternative to oil-based plastic disposables, as it has a carbon footprint 77% lower than oil-based PET plastic. Like all of Vegware's certified compostable disposables, these 185ml wine glasses can be recycled together with food waste.

Vegware's Sales Director, Dominic Marjoram, said: "Making a compostable wine glass takes more creativity than simply making an ordinary wine glass out of bioplastic. A classic wine glass stem is thick, and that thickness of bioplastic would not break down quickly enough to be compostable. All Vegware is compostable, able to break down in under 12 weeks in food waste recycling conditions, so it had to be a different yet functional design." Vegware's wine glass comes as a separate top and a base, sold together. The two parts snap together creating a compostable and stylish option for sustainable events. To my knowledge, the only PLA wine glass on the market. Manufactured in conjunction with Biopak in Australia, the clever 2-piece design gives a wine glass shape whilst avoiding a thick stem that would be non-compostable, minimising material, and making it suitable for production by thermoforming to keep cost down.

Vegware invests in R&D, regularly bringing unique innovations to market. So far in 2012, the award-winning manufacturer has launched the first clear domed lid for frozen yoghurt, and the first compostable glassine window bag for hot cabinets. Vegware has recently been honoured with its own Motion in the Scottish Parliament congratulating the fast-growing Edinburgh SME on its achievements. Vegware has already won three awards so far in 2012: a BCE Award for Environmental Leadership, a Foodservice Footprint Award and Green Company of the Year 2012.

## DaniMer Scientific's 12991 Film Resins Earns Vinçotte's OK Biodegradable Compost Home Label

Source: Bioplastics Innovation

Posted: Sep 27, 2012

DaniMer Scientific's 12991 film resins have been officially certified as compostable at home by Vinçotte International, a renowned inspection facility headquartered in Vilvoorde, Belgium. The OK biodegradable home compost label guarantees that the product will completely decay even in the cooler temperatures of a garden compost heap.

"Receiving the Vinçotte OK Compost Home Certification for our 12991 film resins provides a tremendous opportunity for DaniMer to raise awareness of the availability of certain film products used daily in the home," says Scott Tuten, Senior Vice President of DaniMer Scientific. "There are many benefits of home composting including saving money and lessening the burden on landfills. DaniMer is fortunate to have developed a product that offers multiple ends of life options. The 12991 film can be composted in home compost systems providing environmentally safe materials that can be deposited back into the earth."



DaniMer's film resins are specifically designed for the efficient conversion and production of: disposable shopping bags, compostable bags, odor barrier packaging products and agricultural mulch film, among others.

## Coca Cola: New Partnership with JBF Industries Ltd. to Deliver World's Largest Plant-based material Facility

Source: Natural Plastics

Posted: Oct 1, 2012

The Coca-Cola Company today announced a partnership with JBF Industries Ltd. to further expand production of the plant-based material used in the Company's PlantBottle™ packaging. The supply partnership will help Coca-Cola continue its leadership in bringing renewable, lower-carbon plastics to the marketplace and move the Company closer to its target of using PlantBottle™ packaging technology in all of its plastic bottles by 2020.



Ronald J. Lewis, Vice President, Procurement & Chief Procurement Officer at The Coca-Cola Company said, "The benefits of sustainable innovation are only fully realized when commercialized and put in the hands of consumers. In 2009, we introduced the world to our PlantBottle™ package -- the first recyclable PET plastic bottle made partially from plants. Today, Coca-Cola has sold more than 10 billion PlantBottle™ packages around the world that are less dependent on petroleum and have a lower carbon impact. We are pleased that our partnership with JBF Industries Ltd. will help us further expand global production."

To support this partnership, JBF Industries Ltd. will build the world's largest facility to produce bio-glycol -- the key ingredient used to make PlantBottle™ packaging. The facility, which will be located in Araraquara, Sao Paulo, Brazil, will produce the ingredient using locally sourced sugarcane and sugarcane processing waste. Both materials meet The Coca-Cola Company's established sustainability criteria used to identify plant-based ingredients for PlantBottle™ packaging. These guiding principles include demonstrating improved environmental and social performance as well as avoiding negative impacts on food security.

Construction on the new facility is expected to begin at the end of this year and last for 24 months. At full capacity, it is estimated the facility will produce 500,000 metric tons of material per year. By using plant-based materials instead of non-renewable materials, the facility will remove the equivalent of 690,000 metric tons of carbon dioxide or the equivalent of consuming more than 1.5 million barrels of oil each year.

Today, Lewis joined Geraldo Alckmin the Governor of Sao Paulo, Brazil; Marcelo Barbieri, Araraquara Mayor; Cheerag Arya, Chief Executive Officer of JBF Industries Ltd. and Xiemar Zarazúa, President of The Coca-Cola Company's Brazil Business Unit, at Bandeirantes Palace in Sao Paulo to announce the partnership. PlantBottle™ packaging is available in more than 24 countries worldwide and across a wide variety of Coca-Cola products. Since the package launched in 2009, its use has eliminated the equivalent of almost 100,000 metric tons of carbon dioxide emissions -- the equivalent of 200,000 barrels of oil from The Coca-Cola Company's PET plastic packaging.



## BASF & CSM form joint venture

Source: Packaging Europe

Posted: Oct 8, 2012

BASF and Purac, a subsidiary of CSM, are establishing a joint venture for the production and sale of biobased succinic acid. The company will be called Succinity GmbH and will be operational in 2013. The establishment of Succinity GmbH is subject to filing with the relevant competition authorities. The company headquarters will be in Düsseldorf, Germany.

BASF and CSM have been conducting research under a joint development agreement on succinic acid since 2009. The complementary strengths in fermentation and downstream processing led to the development of a sustainable and highly efficient manufacturing process based on a proprietary microorganism. The bacterium used is *Basfia succiniciproducens* which produces succinic acid through natural processes and is capable of metabolizing a variety of renewable feedstocks into succinic acid. The new process combines high efficiency with the use of renewable raw materials and the fixation of the greenhouse gas carbon dioxide (CO<sub>2</sub>) in the production of succinic acid. This makes biobased succinic acid an economically and ecologically attractive alternative to petrochemical raw materials.

The demand for succinic acid is anticipated to grow strongly in the years ahead, driven mainly by bioplastics, chemical intermediates, solvents, polyurethanes and plasticizers. The two companies are currently modifying an existing fermentation facility, at Purac's Montmelo site near Barcelona, Spain, for the production of succinic acid. This plant, which will commence operations in late 2013 with an annual capacity of 10,000 metric tons of succinic acid, will put the new joint venture company in a leading position in the global marketplace. This is complemented by plans for a second large-scale facility with a capacity of 50,000 tons of succinic acid to enable the company to respond to the expected increase in demand. The final investment decision for this facility will be made following a successful market introduction.

*"Our strategy clearly focuses on innovations for a sustainable future. Chemistry driven innovations get their clues from megatrends, such as the shift to renewable raw materials. The development of a succinic acid production process based on fermentation in cooperation with Purac is a good example of this strategy being put into practice"* said Dr. Andreas Kreimeyer, Member of the Board of Executive Directors and Research Executive Director of BASF.

*"CSM is developing into a leading provider of biobased ingredients and solutions. Our joint venture with BASF for the production and sale of succinic acid is a milestone in this journey. The succinic acid project is fully in line with our strategy to develop commercially attractive biobased alternatives using renewable and sustainable resources"* explained Gerard Hoetmer, Chief Executive Officer of CSM.

*"Our cooperation with Purac to produce biobased succinic acid is a perfect example of how we enable our customers in many industries to develop sustainable solutions"* said Sanjeev Gandhi, President, BASF Intermediates division. *"We know from many discussions with customers and samples we sent them that the demand for biobased succinic acid for a.o. biodegradable plastics is set to grow faster and more strongly than expected earlier"* said Fabrizio Rampinelli, President of Purac, and added: *"We look forward to providing a high-quality product globally to customers in this industry at our usual high service levels."*

