bioplastics MAGAZINE.COM

And the winner is ...

For the 9th time now, the international trade publication bioplastics MAGAZINE is honoured to present the "Bioplastics Oskar".

The winners are !

Again (after 2012) five judges from the academic world, the press and industry associations from America, Europe and Asia have chosen the two winners in a head-to-head race. Both proposals had the same number of points. For the judges it was significant that both packaging related developments represent a kind of holistic approaches that not only look at the single packaging item itself.

The prize was be awarded to the two winners on December 2nd, 2014 during the 9.European Bioplastics Conference in Brussels/Belgium.

(from left: Nick Schaude - Swiss Coffee Company,
Werner Oelschlager - Zandonella, Michael Thielen - bioplastics MAGAZINE)
(Photo Courtesy B. Zabel, European Bioplastics)

Zandonella was awarded for the development of Sandro's Bio Box, a 500 ml box made of BioFoam® for gourmet ice-cream. As the first ice cream company to do so,

Zandonella GmbH from Landau, Germany introduced the box made of expanded PLA particle foam from Synbra. In addition, all other packaging components are made of renewable raw materials, and all are appropriate for industrial composting. Further parts of the packaging concept are: paper wrap, shrink film (also for tamper evidence) made of PLA, label made of cellulose or PLA, PLA inlay, as well as coating film made of PLA.

The Swiss Coffee Company from Widnau, Switzerland, was selected for the award for the development of their Beanarella: compostable coffee capsules. In cooperation with BASF the Swiss introduced a system that consists of a coffee capsule made from ecovio® IS1335 and an aroma tight outer packaging which is predominantly based on renewable resources. Other than the existing coffee-capsule producers the Swiss Coffee Company pursued a holistic approach paying attention on the whole life-cycle of the product. This includes the capsule, the high barrier film, the filter medium and the coffee machine as well as composting and anaerobic digestion scenarios for the end of life.

For the first time the trophy of the Bioplastics Award itself exhibits a bioplastics aspect too. The plaques given to the winners feature a new Bioplastics Award logo that was 3D printed using a filament based on a PLA/PHA blend. bioplastics MAGAZINE is grateful to FKuR and Helian Polymers for their support.

The 9th Bioplastics Award recognises innovation, success and achievements by manufacturers, processors, brand owners, or users of bioplastic materials. To be eligible for consideration in the awards scheme the proposed company, product, or service must have been developed or have been on the market during 2013 or 2014.

Zandonella (Germany)

Sandro's Bio Box is a 500 ml box made of BioFoam®, which contains the finest gourmet ice-cream.

As the first ice cream company, Zandonella GmbH, in spring 2014, launched its new trade mark Sandro's Bio, in a box made of BioFoam®, the expanded fine particle PLA foam from Synbra. It looks similar in structure and has more or less the same properties as EPS. Even in a hot car this box keeps the ice cream frozen and well tempered for over an hour.

In addition, all other packaging components are made of renewable raw materials, AND all are appropriate for industrial composting. Further parts of the packaging concept are: paper wrap, shrink film (also for tamper evidence) made of PLA, label made of cellulose or PLA, PLA inlay, as well as coating film made of PLA.
The packaging system bears the following certifications and/or labels: BioFoam® is the first biological foam packaging in the world to be Cradle to CradleCM certified, certified compostable (EN 13432), and has the German "Ohne Gentechnik" seal, confirming that the material of the Bio-Box has not been genetically modified and is renewable.
The idea is really new and sustainable! Usually consumers are in a hurry and have to hurry to bring their ice creams to the freezer at home after their grocery shopping as soon as possible, before it melts. Not so with Sandro's Bio Box. Thanks to the insulating effect, you can keep the ice cream frozen without cooling for over 1 hour. Additionally the product opens up new possibilities to the places where one can enjoy ice-cream. Why not take a box on the next picnic?

www.sandros-bio.de

Swiss Coffee Company (Switzerland)

Beanarella: compostable coffee capsules

Working together with BASF the Swiss Coffee Company has succeeded in introducing a system that consists of a coffee capsule and an aroma-tight outer packaging. It fulfils the demanding requirements for protecting the product and brewing coffee in high-pressure coffee machines, yet may still be composted. The system solution is predominantly based on renewable resources.
Other than all existing conventional coffee-capsule producers the Swiss Coffee Company pursued a holistic approach, i.e. the company is paying attention from the first production step through to the end-of-life of the product. This included extensive developments (capsule, high barrier film, non-woven filter medium, coffee machine etc.), certification (EN 13432, ASTM D6400 etc.) and practical tests in composting and AD (anaerobic digestion) plants.
The coffee capsules themselves are made from ecovio IS1335 and are certified compostable (EN 13432). Also the barrier packaging (three functional layers) consists of biodegradable components. The outer paper-based carrier layer is followed by a thin barrier film as a middle layer and an inner sealing layer based on ecovio. All three single layers are certified according to EN 13432. The layers are bonded together by means of the compostable laminating adhesive Epotal®Eco from BASF. The packaging is designed to satisfy the demanding barrier requirements for coffee packaging with regard to moisture, oxygen and aroma.

www.beanarella.ch

The other finalists were:

Supla (SuQian) New Materials Co. (China)

Durable bioplastics embrace personal mobile devices with advanced functions

Following the second prize at the 8th Bioplastics Award in 2013, Supla continued the development into a new grade of modified PLA, that not only fits the requirements of durability, ease of manufacture and assembly, plus shock resistance, but also has anti-bacterial properties.
With the lactide from Corbion, Supla polymerized PLLA and PDLA on a Sulzer PLA Unit. Based on these materials of high visual purity, Supla developed SUPLA™ 158 in 2014, answering a new market in the near future for mobile consumer electronics. Kuender, who is expert in injection moulding for electronics housings, has applied SUPLA™ 158 to kid's cell phones for Dikon Information Technology (Shanghai) Co, Ltd., as well as a number of other innovative products. Because hand-held devices have become the focus in the 3C market, Supla launched SUPLA™158 which meets all of the physical properties required for such applications. In addition, to answer the special need of this market, the material also has an anti-bacterial effect with the anti-bacterial ratio of coli and aureus respectively of 99.2% and 99.6%.
Supla (SuQian) New Materials Co. Ltd. will have a production capacity of 10,000 tonnes/annum of PLA polymerization and additional compounding lines by the end of 2014 at Suqian, China. Supla's eco-friendly high performance plastics can be processed on existing manufacturing machines without big changes.

www.supla-bioplastics.cn

Rodenburg (The Netherlands)

Biodegradable structure for habitat improvement

During the past year, Bureau Waardenburg together with Rodenburg Biopolymers and GEA 2H Water Technologies have developed a starch-based three dimensional biodegradable structure specifically for use in the improvement of dwellings. The potential uses for this starch-based three dimensional structure are almost endless. The companies are just starting to uncover the possibilities of the diverse range of applications.
In a quest for artificial structures for use in the recovery of mussel beds, they have developed a biodegradable structure that can be used in restoration and improvements of their habitats. In contrast to many other bio-plastics, it undergoes complete breakdown without the need for composting agents.
Already there appears to be a wide range of potential applications for this product. Its original application was as a structure for the recovery of mussel beds and oyster beds. In addition, several other applications in the area of water purification, sewerage treatment, aquaculture, soil aeration, reclamation and the protection of coasts and sandbanks have become apparent.
One application example is a method to improve water quality using zebra mussels as a biological filter. This method is being tested in the south of the Netherlands on behalf of Waterschap Brabantse Delta.
Zebra mussels (Dreissena spp.) filter water in order to feed. They remove algae and small particles, which are deposited in excretion. In sufficient numbers they can prevent algal blooms and reduce turbidity. This improves the growing conditions for aquatic plants and the ecological water quality.

www.biopolymers.nl

UHU (Germany)

The first glue-stick with a plant-based container.

With the UHU stic ReNATURE, paper gluing is becoming sustainable. The popular glue stick offers consumers a new and more environmentally friendly alternative to existing products – in an attractive design. The new UHU stic ReNATURE overcomes all challenges in the gluing of paper, carton, cardboard and styrofoam in the accustomed quality, showing that even a small product can make a substantial contribution to environmental protection and the saving of fossil resources.
58% of the UHU stic ReNATURE's container consists of renewable raw materials, namely sugar cane based bio-PE. Some other parts of the container still have to be made from conventional plastics, such as, for example, the practical screw cap, to ensure a tight seal. The cap prevents the glue from drying out and makes it last longer.
As well as being fully recyclable, the new UHU stic ReNATURE is solvent-free and 70% of the glue formula is natural-based. Another ecological as well as economic advantage is that the UHU stic ReNATURE is far more efficient in its application and more economical than comparable products. With the medium-sized UHU stic ReNATURE, users can glue approximately 200 sheets of A4 paper more than would be possible with its main competitor.
UHU stic ReNATURE is the result of several years of intensive development and testing to achieve an innovative, sustainable, safe and high quality product. UHU stic ReNATURE – the UHU initiative for a more sustainable world – is available in the shops as 21g and 8.2g variants since January 2014 and a new size (40g) will be launched from December 2014.

www.uhu.de