Press release

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How to reduce plastic in chocolate boxes

DBU supports project for the production of thermal films

Rüthen/County of Soest. Plastic avoidance remains an essential component of environmental protection. However, there are still some key issues to be resolved: After all, yogurt pots, fruit bowls or the perfectly fitting interior of a box of chocolates are rarely produced without any plastic. One reason: The films used for foodstuffs have to meet high requirements. Nevertheless, this does not mean to discard environmental protection. The German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt, DBU) with its head office in Osnabrück has therefore provided professional and financial funding for a project on the production of so-called thermal films.

EU Commission goal: All plastic packaging recyclable by 2030

The DBU has provided approximately 303,000 euros fostering a process developed by the North Rhine-Westphalian company Constab Polyolefin Additives in Rüthen (North Rhine-Westphalia) together with the Institute for Plastics Technology at Stuttgart university. The aim: to produce such films in a more sustainable way. Therefore, the two partners have developed a production process that uses specific plastic resins to save energy and material. This will be one of the future challenges, as million tons of plastic waste heavily endangers the environment and eco systems, above all rivers and oceans. At the same time, however, due to their texture all sorts of plastics are among the most versatile materials and meet high requirements, especially in the food sector. They are hygienic, stable, lightweight and durable, and reduce the amount of oxygen and water vapor to keep sensitive goods fresh and thus prevent food waste. The European Commission's goal for all plastic packaging is to be reusable by the year 2030. “When dealing with plastic in the future the question to be answered is, how to use less of this material”, says DBU Secretary General Alexander Bonde. The Constab project in cooperation with Stuttgart university aims exactly to reach this goal, he said.

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Film: Better, denser, stronger and yet thinner

Indeed, the innovative aspect in the course of the project is to use special texture resins as environmentally friendly additives. Due to this method Constab and Stuttgart university succeeded in reducing a specific process temperature by 20 degrees Celsius, thus saving energy. In addition, the processing of the films is much easier due to the effect of the additive: they are denser and stronger, but at the same time also thinner. "The film thickness can be reduced by about 25 percent, and the heating power by 20 percent", according to project manager Dr. Andreas Strunk-Westermann." Such material and energy savings would enable a new kind of processing, saving year by year almost 200 tons of carbon dioxide – alone as regards the customers who purchase plastic granules from us for the production of thermal films." And: The optical characteristics could be improved, whereas the mechanical qualities could be kept.

Recycling of the products causes no problems, as the new material can also be used in mono-layer films. Unlike composite materials, such as milk containers, which makes recycling a difficult task, in this case there is only one single kind of material. According to Mr. Strunk-Westermann a broad use for the new thermal films is a perspective in the future time: "Single layer films will be much more demanded in the future time instead of composite materials", he says. "Our new material could replace composite films." The new environmentally friendly additives are for sale.

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Whenever the generic masculine is used, this is merely for better readability. However, all genders can be meant.

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