

## ALEXANDER WITT: "USING PACKAGING DELIBERATELY PROTECTS VALUABLE RESOURCES AND CAN HELP TO REDUCE HUNGER IN THE WORLD"



„The only way to find an optimal packaging solution is to focus squarely on the food product“, says pacproject packaging engineer Alexander Witt.

### INTERVIEW WITH ALEXANDER WITT

Food packaging engineer Alexander Witt recently finished his master's thesis in dairy and packaging management at the University of Applied Sciences in Hannover. Using a cereal bar as an example, his paper explores the impact of packaging on foods in the SAVE FOOD Initiative. In October 2015 he joined the international company pacproject GmbH as a packaging engineering consultant.

In the first part of the interview, *interpack Magazine* speaks with Alexander Witt, packaging engineer at pacproject, about his research on how packaging impacts foods and the qualities that make packaging optimal.

You chose a Corny cereal bar for your





*The first Corny muesli bars came packaged in a triple composite consisting of paper, aluminium and PE. © SCHWARTAUER WERKE GmbH & Co. KGaA*

#### analysis of the impact of packaging on food. Why?

The Corny cereal bar has been sold in the European market for over 30 years. When it was first launched, it was packaged in a triple composite consisting of paper, aluminium and PE. The aluminium layer was reduced in subsequent years. In the 90s, a switch was made to a BOPP/aluminium/protective coating composite. The bar was packaged in this film structure for about 20 years, until a new barrier composite was introduced last year.

During the last 30 years, manufacturers SCHWARTAUER WERKE GmbH & Co. KGaA have always developed packaging in close cooperation with packaging suppliers. The latest film properties and barrier requirements for the packaging of their bars have always been based on empirical data attained from suppliers as well as on the results of film property tests taking into account shelf life.

History shows that aluminium foil has been increasingly substituted as a barrier. Even without full barrier protection, the quality of the Corny bar was still within a good range, even once the best-by date had been reached. This raised the question of whether current films don't also offer more protection and barriers than the bar actually needs.

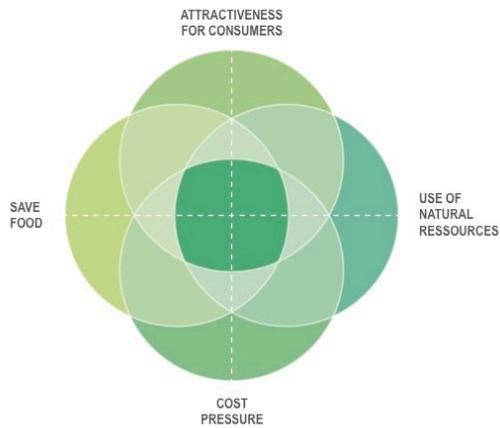
pacproject has been involved as a member in the SAVE FOOD Initiative for some time now. We're convinced that packaging can be deployed to reduce food losses and food waste along with their negative consequences for people and the environment. If we want packaging to be used consciously, we need to study the product in-depth and align the development of the packaging with the requirements of the product. Together with HERO Group we found the perfect product to illustrate and explain this approach – the Corny bar from SCHWARTAUER WERKE GmbH & Co. KGaA.



*The Corny chocolate bar combines large production quantities with product ingredients like peanuts, oats and chocolate – an ideal combination for an analysis of packaging properties. © SCHWARTAUER WERKE GmbH & Co. KGaA*

#### You selected Corny Schoko, the chocolate bar, from the assortment of Corny bars. How did you arrive at this decision?

With about 30 different products in the regular assortment, the Corny product range is highly diversified. All varieties differ in their ingredients and composition. A wide selection of nuts, cereals, dried fruits and add-ons are used. Mirroring the different formulations, each variety has its own specific packaging and product protection requirements. That fact made it necessary initially to focus on a single variety. The chocolate bar poses a challenge for the packaging due to critical product ingredients such as peanuts, oats and chocolate. This, in combination with large production quantities, made it the ideal candidate for our endeavour.



Deciding on the packaging for a product demands a case-by-case evaluation of the requirements in order ultimately to find the largest-possible intersection. @pacproject

#### What actually characterises the perfect packaging?

It's impossible to answer this question in a general way. There are some basic functions packaging has to fulfil, like product protection, communication and convenience. These and other tasks are determined by the requirements of the product, placement at the POS, costs and necessary processing properties.

A production manager, for example, may care most about the package moving seamlessly through all production lines. But if you're a buyer, price will play the far greater role. The logistics department may view stable stacking as important, while marketing prioritises a premium appearance. Consumers, in turn, really like to see natural materials being used.

A packaging solution can be developed to fulfil any of these desires, but every solution necessarily neglects the preferences of at least one other group. Some requirements even compete with each other. For example, packaging featuring high-quality finishes definitely won't be inexpensive to purchase, but consumers will love it. Similarly, natural kraft paper won't come with the barrier properties demanded by the production manager.

To me, an optimal solution represents the best compromise uniting all these aspects. The goal is to maximise the size of the intersection between all requirements. This compromise will differ from product to product and has to be reevaluated on a case-by-case basis. This task is one of the services in pacproject's portfolio.

#### What food properties is the packaging supposed to protect?

As mentioned earlier, each food demands different things of the packaging and indeed the entire value chain. This is closely linked to their specific properties, which are unique for each food item. A package should meet all these requirements while protecting the product against hygienic deficiencies, quality changes and mechanical impact. In order to achieve this outcome, it's important to know which factors could compromise the quality of the food and the degree to which the product must be protected against these forces. Sensory product changes are a clear sign of quality deficiencies. They're often caused by moisture or desiccation, oxygen, or the effect of light. These three factors are among those playing a key role in microbiological decay and/or enzymatic reactions – and thus hygienic deficiencies. A product should also be protected mechanically and physically in order to maintain its shape, consistency, colour and appearance such that it continues to entice the consumer to enjoy it as usual rather than letting it go bad.

To Part 2



#### INTERPACK NEWSLETTER

Non-Food - packaging related topics from subject areas such as pharmaceuticals, cosmetics, non-food and industrial goods.

Food - packaging related topics from subject areas such as food industry, beverages, bakery and confectionary.

**Subscribe now!**