

Making innovations sustainable

Responsible behavior is essential to a company's culture

Sustainable business practices and acting socially responsible are central elements of the corporate culture of the Kalle Group from Wiesbaden. This is why the manufacturer of industrially produced casings and sponge cloths is working on an integrated environmental, recycling and disposal concept for its production process.

By Birgit Menne

The Kalle Group focuses on ecological and economic sustainability in manufacturing its products. For instance, only renewable, biodegradable raw materials are used in their fibrous casings and sponge cloths. Various sustainable forms of recycling are currently being defined and tested for production waste to ensure that the materials used can be fully recycled

in the future. Initial pilot tests are very promising.

Circular economy for climate protection

When developing new products, the focus is on using sustainable raw materials and their recyclability. This goal can only be achieved through a holistic development process. Specifically, this means that Kalle designs and develops products with a view to their suitability for recycling ("design for circularity") from the beginning.

Reducing the amount of plastic waste produced worldwide is one of the major challenges facing our society. The Kalle Group is therefore focusing on a circular plastics economy, particularly in the area of polymer casings. As a first step, this means substituting petroleum-based polymers with recycled raw

materials – a challenging task given the complex and highly technical products. The first new developments have already passed comprehensive internal quality and application tests and are now being tested at customers.

The second step is to work closely with innovative industrial partners to enable multiple uses of the raw materials used in casings. Initial feasibility tests regarding the recovery of raw materials from polymer waste show that it is possible to recycle products and materials.

Particularly in light of the resource shortage and the environmental problems caused by fossil raw materials, those responsible at Kalle focus on sustainable, biodegradable polymers when selecting raw materials for new, future-oriented products. It is important that the cultivation of the raw materials used are not in

competition with food and animal feed. First customer tests with a food casing made entirely from biodegradable materials are planned.

Value-added casings stand for additional benefits that go far beyond the classic casing functions. They replace entire production steps in sausage production by transferring smoke, color and spices from the casing directly to the surface of the sausages. By using natural ingredients, the company is contributing further to sustainability in this sausage casing segment. Instead of colorants and flavorings, for example, coloring foods are used as part of the transfer recipe ("clean label products").

Demand is increasing for organic and bamboo casings

Conventional cotton is already a natural material, but the sustainabil-



By transferring aroma and flavor components, the casing becomes an integral part of the final product. Photo: Kalle



A wide range of industrially produced sausage casings is the company's core business. Photo: Kalle



Cellulose fiber casings with defined meat adhesion and good smoke permeability are made from renewable raw materials. Photo: Kalle



Value-added casings transfer smoke, color, and spices from the casing directly to the surface of the sausages.

Photo: Kalle

ity factor can be increased even further when organically farmed. This is because the agricultural aspect complements the entire organic process and therefore the final product, which significantly increases its marketability. The unprinted products from the textile sector are consequently experiencing a steady increase in demand. For example, the textile sausage casing NaloTX Green is based on organically grown cotton.

NaloTX Bamboo is made from rayon fabric, which initially comes from bamboo fibers. Fast-growing bamboo supports the entire ecosystem, as it is grown in a small area without pesticides and absorbs a lot of carbon dioxide in the process. The ecological aspect is playing an increasingly important role for many consumers. Strong environmental awareness, particularly concerning packaging, is therefore of great and vital importance for the retail sector.

New approaches for the food of tomorrow

Another much-discussed topic is the significantly increasing demand for food due to the steady rise in the world's population. Due to the adverse ecological and social effects associated with the production of

animal-based foods, the Kalle Group sees it as an important task to develop edible food casings from plant-based alternatives. As part of this project, Kalle is involved as a cooperation partner in the "New-FoodSystems" innovation area.

The idea behind the innovation area, which is funded by the German Federal Ministry of Education and Research (BMBF), is to bring together players from food and nutrition research and the food industry to jointly initiate innovations and utilize research results more extensively than before. The first result of this cooperation was the development of recipes that are suitable as a basis for producing plant-based food casings. A major challenge here is the comparability with conventional casings, particularly in terms of taste and "bite". The market segment of vegetarian and vegan sausage and meat alternatives is particularly suitable for this type of casing.

Last but not least, the sourcing of raw materials with lower CO₂ emissions is also important. In this regard, the Kalle Group is working on the qualification of raw materials originating from Europe. Developing sustainable products and processes is not always an easy task.

Legal regulations must be complied with, production processes adapted, and customer requirements fulfilled. The employees of the Kalle Group take up these challenges with a wealth of ideas, expertise, and commitment.



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