

Press release

nova-Institut GmbH (www.nova-institute.eu)
Hürth, 7 January 2019



In-depth psychological market research finds surprising insights into consumers' mindset towards bio-based products

In recent years, numerous B2C online surveys and focus group analyses have been conducted to understand what consumers think of bio-based products. It is well known, however, that other methods such as in-depth psychological interviews are better suited to explore deep-seated opinions, prejudices and contexts. In the European project BIOFOREVER, this methodology has now been applied for the first time to questions with relevance to the bio-based economy – with partly astonishing results.

Which materials and products do consumers expect in their daily lives in the future? For which applications will they prefer bio-based products and when will consumers rather make use of things from recycled materials? What do consumers think about the biological degradation of plastics or the use of CO₂ for fuels and mattresses? Do consumers make a difference between first and second-generation biomass feedstock for bio-based products? These are some of the questions that are of interest to politics and industry. Many stakeholders would like to know what consumers really think and how they act when shopping.

The European research project BIOFOREVER¹ deals mainly with technological issues concerning the questions how so-called second-generation biomass, i.e. mainly wood and lignocellulosic by-products, can be utilised in an ecologically and economically sound fashion. However, the project also includes questions of social acceptance with regard to the use of biomass for consumer products. These questions were investigated in cooperation between “september Strategie & Forschung” (Cologne) and nova-Institute (Hürth). September is one of Germany's market leaders in deep psychological market research while nova-Institute is well known for its B2B market research in the bio-based economy. In summer 2018, 60 in-depth interviews of 90 minutes each were conducted and evaluated in Poland, Germany and Italy. Some of the results are surprising and supplement and deepen the insights won by online questionnaires and focus groups conducted up until now.

¹ BIOFOREVER has received funding from the Bio-Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No. 720710. Project duration is from September 2016-August 2019. More information at www.bioforever.org.

What are plastics made of? Consumers generally have no idea about mineral oil being the feedstock. It is a widespread perception that plastics are “bad” and kill animals in the sea.

When it comes to plastics, the interviewees mainly thought of negative aspects, but almost no one was aware that they are made from crude oil: “Something chemical, industrial, artificial ingredient, when it comes to ingredients I don't really know”. The main problem perceived was that plastics do not biodegrade: “The problem with plastic is the recycling as it is not biodegradable.” “plastic is the reason why many animals are dying in the ocean”. The respondents were very surprised to learn that plastics actually can be made of plants – only the Italians were relatively aware of that fact. The market presence of bio-based and biodegradable shopping bags in Italy plays a decisive role for awareness raising here.

Easy thinking: plant features are projected onto the product – chemistry is “toxic magic”

Another interesting result is that with consumers, the knowledge of chemistry is very low and the transformation from liquid mineral oil to solid plastic works like a miracle. Chemistry is “toxic magic”. In this way, the properties of the raw materials are transferred directly to the end products in consumers’ minds. Wood is hard, resistant and durable; analogously it should only be used to make hard, resistant and long-living products. Wood is perceived as an exquisite feedstock, so using it for packaging or single-use products is considered a waste and killing the forest for those seems to be even worse than using mineral oil. Deforestation is seen as a big problem of our times that should be prevented. The forest is a place of longing for many people. Especially the city people associate the forest with a feeling of time-out, coming to rest, etc. “The forest is the lung of the earth and a habitat for animals and must be protected”. There was also the concern to lose the (beloved) forest as a destination for excursions and a place to relax and reflect. “When I look at all these products, that they should be made of wood instead of plastic, then we would really need a lot of wood. I think it is important to protect the forest. I would be afraid that in the end we will not have enough wood.”

First generation feedstock for single-use applications

For soft and single-use applications, interviewees prefer first generation feedstocks: “Food crops are a high-quality feedstock, but they are perceived less valuable than virgin lignocellulosics since food crops grow faster.” Only very few respondents were aware of the discussions on food or non-food crops for industry, which seems to be mainly a discussion in the political area.

And there were other reasons for preferring food plants, one being the understandable transfer of raw material properties to the product: “This plastic product could be made of corn, because corn feels like plastic” – *so it's only logical you can make plastic out of it*. Quickly growing “vegetables are rather soft, flexible and not resistant, short-living” – *perfect for single-use products*. The analogous thinking present in assessing wood shows here, too. Another aspect is health: “Normal plastic is not good for the body! Bottles made out of corn could influence the water in a healthy way.”

In principle, the test persons welcomed the use of biogenic waste, but there were concerns about: “unhygienic, bad smells, potential pollution”. For example, no products should be made from biogenic waste that come into contact with food or the body.

Nobody understands “bio-based” and all plant-derived products will be biodegradable

Products made from plants are biodegradable to consumers. Meaning: It will biodegrade if one throws it in the compost or in the forest. Thus: “Everything made out of plants is environment friendly”. The term “bio” is linked to “organic”, in contrast to “bio-based”, which was not understood or misunderstood. Consumers understand “plant-based”.

Consumer want to be educated by the politics

Consumers feel overwhelmed, not competent and not responsible for the decision which materials are good or bad. Respondents wanted a simple, official and trustworthy label to help them identify the good materials. This result calls into question the numerous consumer awareness projects currently underway. Perhaps the development of a labelling system would be more helpful.

These are just a few of the results. A complete presentation of the methodology and detailed results will be presented at the 12th International Conference on Bio-based Materials, 15 - 16 May 2019, Maternushaus, Cologne, Germany.

„Here at nova-Institute, we are convinced that by enriching our comprehensive market knowledge with in-depth psychological market research methods, we and the bio-based economy can gain completely new insights.” Michael Carus, Managing Director, nova-Institute.

Background information

Would you also like to understand consumers and their real motives and decision-making processes? The september & nova team offer you the chance to get closer to the answers than with traditional, structured interviews. Try it! We will be happy to get in touch. Just contact nova’s Managing Director Michael Carus at Michael.carus@nova-institut.de

Cooperation between market researchers “september” and “nova-Institute” approved in November 2018 to get a better understanding of the consumer mindset with regard to Bio-, CO₂-based and Circular Economy.

“september Strategie & Forschung”, Cologne, is one of Germany’s market leaders in deep psychological market research. Thanks to extensive in-depth interviews with consumers, it is possible to look behind the scenes of buying behaviour and find connections that remain hidden in online surveys.

september works along three guiding principles which are “professional naivety”, “open interviewing” and a “customer-centric approach”. The motto: “Insight into the Matryoshka: How in-depth market research helps you make the right decisions.”

“september” works for market leaders in the categories of food, fashion, retail, telecommunication and media (www.september-online.de).

“nova-Institute for Innovation and Ecology”, Hürth near Cologne, is one of the market leaders in the field of market and trend reports in the Bio-, CO₂- and Circular Economy,

especially in B2B issues. Above all, the market analyses on biopolymers, building blocks and CO₂ use as well as GreenPremium prices are known worldwide (www.bio-based.eu).

“nova-Institute” has already worked for companies such as: BASF, BMW, Covestro, DuPont, Evonik, Ford, Honeywell, IKEA, Lego, Mercedes, Mondi, NESTE, Porsche, REWE, Teijin, Total, Velux, Volkswagen, WWF.

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nova-Institute is a private and independent research institute, founded in 1994; nova offers research and consultancy with a focus on bio-based and CO₂-based economy in the fields of food and feedstock, techno-economic evaluation, markets, sustainability, dissemination, B2B communication and policy. Every year, nova organises several large conferences on these topics; nova-Institute has 30 employees and an annual turnover of more than 2.5 million €.

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