

PA #21 BioRural success stories: Bioplastics by NaturePlast

NaturePlast, headquartered in Normandy, has been a key player in bioplastics since 2007. Specialized in guiding industrial players in developing products from bioplastic materials, NaturePlast offers comprehensive project support, from design to industrial implementation. With the largest portfolio of bioplastic materials in Europe, NaturePlast focuses on four areas of expertise: supply of bioplastic raw materials, recovery of by-products, R&D of bioplastic compounds, and training and studies.

The innovative solution includes selling bioplastic pellets, modifying polymers for industrial use, and participating in biomass recovery. NaturePlast's product development is rooted in addressing alternatives to petroleum-based materials and non-biodegradable materials. The company tries to address both the origin and end-of-life aspects of plastics. Facing challenges such as market unfamiliarity and sourcing materials from abroad, NaturePlast strategically planned its implementation with the creation of a subsidiary, Biopolynov R&D centre, in 2010, marking a shift toward in-house research and tailor-made materials. The recognition of NaturePlast's skills was achieved by adding functionality to the existing solution, namely by developing a range of polymers with improved thermal resistance.

The business model and its circularity evolved with the cooperation of technical centres to strengthen R&D capabilities and overcome market reluctance towards biobased solutions. The diffusion and credibility of the solution increased within the involvement in collaborative research projects, and the participation in major trade fairs.

The successful integration of biobased solutions into the market and its replicability relies on aligning with industry trends, regulatory changes, technical facilities, and societal aspirations. Although bioplastics still represent a niche market, constituting 1-1.5% of the world's polymer plastic production capacity, projections indicate a potential increase of production capacity in the coming years. Sectors like luxury goods and cosmetics, capable of absorbing extra costs, are showing particular interest.



Figure 1: Bioplastic products of NaturePlast.

Source: NaturePlast portfolio (<https://natureplast.eu/wp-content/uploads/2021/10/210709-Material-Portfolio-ENG.pdf>)



NaturePlast's journey began with the first willingness of society and politics to reduce waste and to increase materials efficiency. It began with a pioneered bioplastics distribution, evolving into a training hub offering diverse services. Creating an R&D entity, participating in European projects, and embracing local circularity improved their development gradually. Adapting to plastic legislation changes and aligning with industry trends, NaturePlast anticipates substantial growth in the expanding bioplastics landscape.

Entering the biomaterials market, from initiating commercial activities to securing regional support, required developing technical-commercial proposals, conducting in-house R&D, and making decisive equipment investments. Actively sharing experiences, it aimed to shift mindsets, boost material sales, and address regulatory shifts, highlighting the significance of adding functionality to materials.



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