Kern Tec - Upcycling of Raw Materials

Name of the Organisations Involved

- Kern Tec, Austria

Challenges Identified

Upcycling agricultural by-products poses several challenges that span environmental, technological, and economic dimensions. One primary obstacle is the heterogeneity of these by-products, which can include crop residues, organic waste, and processing leftovers. The diversity in composition and quality makes it challenging to develop standardized upcycling processes. On the technology side, other challenges arise from the need for advanced and specialized machinery to efficiently convert agricultural by-products into valuable products. Processing methods must be tailored to the specific characteristics of each by-product, requiring continuous innovation and adaptation. Additionally, some by-products may contain contaminants or impurities, demanding sophisticated purification techniques.

Upcycling agricultural by-products is a multifaceted challenge requiring interdisciplinary collaboration and innovative solutions. Overcoming these obstacles is crucial for realizing the environmental and economic benefits associated with transforming agricultural residues into valuable resources.

Goals and Solution

Kern Tec aims to develop and implement technologies that address the challenges associated with upcycling agricultural by-products, focusing on innovative and sustainable solutions that can transform diverse agricultural residues into valuable products.

Through interdisciplinary collaboration and adherence to regulatory standards, Kern Tec strives to lead the way in creating a more efficient and environmentally conscious approach to agricultural by-product utilization.

Short description of the technology and the beneficiaries

Kern Tec is an Austria based upcycling and food tech company. With tech- and supply chain innovation Kern Tec is able to turn industrial by-products into high value ingredients for the food & beverage industry but also for cosmetic and industrial applications. Kern Tec is committed to bring unique plant based ingredients and products to the global food market created from pits from apricots, cherries and plums. These raw materials were previously seen as a side product in the global production, but with Kern Tec's technologies they can be processed into tasty, sustainable, nutritious and safe products like food & cosmetic oils, protein powders, "nut" spreads and even dairy alternatives. The seeds can be called as the most sustainable nuts that ever existed with plenty of applications and opportunities to come. SO far, Kern Tec has been able to successfully upcycle over 1.000.000 kg of fruit pits and is heavily investing in scaling the processes and bringing the technologies to whole Europe and beyond.

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Source: www.kern-tec.com

Actions Taken

Kern Tec's upcycling technology generates significant value by transforming industrial by-products, such as fruit pits from apricots, cherries, and plums, into high-value ingredients. The technology creates unique, sustainable, and nutritious offerings for the food & beverage, cosmetic, and industrial sectors. By turning overlooked byproducts into products like oils, protein powders, "nut" spreads, and dairy alternatives, Kern Tec contributes to a more circular economy, reducing waste and offering environmentally friendly alternatives. The technology not only benefits manufacturers and consumers by providing innovative, healthy choices but also contributes to job creation and economic growth. As Kern Tec expands its reach globally, the value extends to diverse industries and consumers seeking sustainable and diverse product options.

Benefits and Impact

- The agricultural sector benefits indirectly, as Kern Tec's technology valorizes previously considered by-products (fruit pits). This incentivizes sustainable agricultural practices and potentially increases the overall efficiency and value of fruit cultivation.
- Manufacturers in the food and beverage industry benefit from Kern Tec's innovative upcycling technology, as it provides high-value ingredients derived from industrial byproducts. This contributes to the creation of unique, sustainable, and nutritious products, including oils, protein powders, "nut" spreads, and dairy alternatives.
- Kern Tec's upcycling technology contributes to environmental conservation by reducing waste and promoting the sustainable use of resources. By transforming fruit pits into valuable ingredients, the company aligns with principles of circular economy and waste reduction.

Contact Information

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Application Area ☒ Plant
Digital Technology in the Value Chain ☒ Agromonic Services ☒ Agricultural Commodity Trading
Digital Technologies ☒ Others

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