

## Conversion of surplus cucumbers into valuable products



Crop	Cucumber <i>Cucumis sativus L.</i>
Croppart	Leaf Stem Fruit
Application area	<div style="background-color: #6a3d9a; color: white; padding: 5px; text-align: center;">Fine chemicals</div> <div style="background-color: #92d050; color: white; padding: 5px; text-align: center;">Food &amp; feed</div>
Status	Development stage
Public availability	Non-public
Relevant plant compounds	<div style="background-color: #e0e0e0; border-radius: 10px; padding: 5px; text-align: center; margin-bottom: 5px;">carbohydrates</div> <div style="background-color: #e0e0e0; border-radius: 10px; padding: 5px; text-align: center; margin-bottom: 5px;">fibres</div> <div style="background-color: #e0e0e0; border-radius: 10px; padding: 5px; text-align: center;">Vitamins and minerals</div>

## Description

### Valorisation of residual streams

On certain moments in the year the cucumber yield exceeds market demand. Cucumber growers have been investigating possibilities to convert their produce into other valuable products and thus finding new markets for their residual stream.

### The Challenge

Which valuable components can be found in a cucumber – and how to optimize the value of these components? Bodec accepted this challenge, found the best extraction technology and investigated market potential for these specific components.


### The approach


Bodec has extensive inside knowledge of the food (ingredient) industry and is the expert in the field of valorisation of fruit and vegetables. To select the optimal extraction technology for this specific product, Bodec's chemists and food technologists evaluated a broad spectrum of available methods on lab scale. Although the primary goal of the project was the extraction of a specific component, the Bodec specialists also investigated the possibilities for valorisation of secondary residual streams like waste water and vegetable fibres from pulp and leaves. Finally Bodec approached potential customers to discuss the possibilities.

### The result

Bodec developed a successful lab-scale extraction proces for several valuable components which became a proof of concept for the valorisation of surplus cucumber streams. After the final go from growers and customers, this process will be further devoped to pilot plant level in Bodec's own pilot production facilities.

### Pros and cons

 Residuals utilised to make a new product

 Challenges in upscaling the product

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### Used conversion methods

#### Mechanical-Physical processes

Extraction

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## Resources

<https://www.bodec.eu/case/valorisation-of-residual-streams/> Initiative website