

Converting harvest waste streams into nutritional supplements for animals



Crop

Brussels Sprouts

Brassica

oleracea convar. oleracea var. gemmifera

Pear

Pyrus communis L.

Onion

Allium cepa L.

Croppart

Bulb

Leaf

Fruit

Stem

Application area

Food & feed

Status

Research stage

Relevant plant compounds

proteins

carbohydrates

organic acids

Description

VITO and 8 Flemish entrepreneurs established a co-creation programme. In one project they looked into the conversion of harvest waste into animal feeds. A second project dealt with the local mobilisation of residual streams in a short value chain. In both projects the use of VITO's expertise and infrastructure was combined with the knowhow of the participating SME's.

The participating entrepreneurs wanted to look into the possibilities of microbial fermentation. The challenge was to find out how the fermentation process would alter the composition, and if this would enhance the nutritional qualities. The coordinator of the project, Linsey Garcia-Gonzalez, a researcher for VITO, studied the changes of 3 fermented waste streams, namely from red onions, pears and sprouts. This research showed only a limited microbial conversion after fermentation. However, specific bioactive compounds which have known nutritious effects were formed. A possible next step can be to focus on the compositional change of complex fermented harvest waste streams and the optimization of the fermentation process itself.

Pros and cons

 Upgrading of residual flows

 New product on a very competing market

Used conversion methods

Biochemical processes

Aerobic/ Anaerobic fermentation

Resources

<https://vito.be/en/news/different-angle-organic-residual-streams> Initiative website