BioBoost
Accelerating biobased horticulture

Jack Bean ingredient for mobile hemodialysis

Crop	Jack Bean *Canavalia ensiformis*
Croppart	Seed
Application area	Pharma
Status	Development stage
Public availability	Semi-public
Relevant plant compounds	Urease Beans

Description

Jack Bean Growers Consortium: innovative cultivation for future-proof healthcare

The Jack Bean Growers Consortium is a collaboration of progressive Dutch growers who, together with partners from healthcare, science and technology, are working on a groundbreaking goal: the cultivation of the tropical Jack Bean (*Canavalia ensiformis*) in the Netherlands. Not for food production, but for extracting a unique ingredient that is used in the **Neokidney** – a revolutionary mobile dialysis device developed by *Nextkidney*, an initiative of the Dutch Kidney Foundation and several major health insurers, patient associations and medical professionals.

A promising crop for healthcare and horticulture
The Jack Bean contains a specific plant-based ingredient that is crucial for the functioning of an innovative filter in the Neokidney. This portable artificial kidney makes it possible for kidney patients to dialyze at home or on the go, which drastically improves their quality of life. Thanks to a series of successful trial crops in 2024 – carried out by six growers spread across the Netherlands – it is now clear that the Jack Bean also offers opportunities in our climate.

The potential is enormous: it is estimated that to meet the needs of European kidney patients who want to use the Neokidney, several hundred hectares of Jack Beans would be needed. This not only offers a sustainable revenue model for the Dutch horticultural sector, but also an important social contribution to healthcare.

Collaboration and scaling up
The consortium works closely with Valorisatielab VARTA, Greenport West-Holland, various research institutions and Nextkidney to further improve the cultivation and then scale it up. A new cultivation round has started in 2025, with the ambition to optimise the production of the specific ingredient in terms of yield, workability and processability of the bean.

Do you, as a grower, also want to contribute to the healthcare sector with this innovative crop in the future? Contact Greenport West-Holland or via the LinkedIn page of the Jack Bean Kwekers Consortium.

Together we grow a healthier future!

Pros and cons

- vision of better quality of life and longer lifespan of kidney patients
- perspective for horticultural sector through new crop for a new purpose

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Used conversion methods

Mechanical-Physical processes

Milling

Extraction

Resources

https://www.linkedin.com/company/jack-bean-kwekers-consortium Initiative website

Project publication in KASmagazine (Dutch) Publication