BioBoost
Accelerating biobased horticulture

Galantamine from the Narcissus bulbs slows Alzheimer's symptoms

Crop	Narcissus *Narcissus*
Croppart	Bulb
Application area	Pharma
Status	Start-up stage
Public availability	Public
Relevant plant compounds	Alkaloïden

Description

More than 230,000 people currently suffer from dementia in the Netherlands. Due to the expected aging of the population and the increasing life expectancy, this number will only increase. Dementia is an incurable and progressive disease. That is why Alzheimer Nederland initiates and finances more and better scientific research. Because only a lot of extensive research can lead to better treatment, prevention, and hopefully someday cure. Hundreds of narcissus bulbs are now being grown for drug production

In the flower bulbs of the Narcis is a high content of the substance Galantamine. The Universities of Leiden and Delft, Holland Biodiversity, AnaTeam, FeyeCon, Ludwig & Co., Leenen Innovation, Fa. Veul and Tiofarma worked together in a consortium. Thanks in part to a subsidy from the province of South Holland, they can work on a project to develop a new medicine. A new drug with the active substance Galantamine from the Narcis flower bulb that delays the symptoms of Alzheimer's disease.

Not all Narcissus varieties contain the active ingredient Galantamine in the bulb. But there are enough species for which this is the case. The drug with the active substance Galantamine is produced with synthetic raw materials from fossil origin. Such a production method has an adverse effect on our environment. The aforementioned project therefore has the objective of replacing this synthetic production with the sustainably produced Galantamine from the flower bulbs of the Narcis. Moreover, the fact that a new product can be produced from the waste stream of flower bulb growers in the bulb region has a favorable effect on employment there. The process surrounding the production and extraction of the active substance is still in full swing and development. The consortium is very satisfied with the results achieved so far. Moreover, it seems that several substances can be extracted from the bulbs.

A new discovery means that flower bulb waste gets a completely different boost. Now that it is known that many species of Narcissus bulbs contain the active substance Galantamine, this former waste product can be treated in a sustainable and efficient way. Profit for the environment! In addition, the current synthetic production of the drug may eventually cease to exist. That is also beneficial for the environment. At the moment there are already several Dutch and English farmers who grow the Narcissus exclusively for the purpose of extracting the Galantamine from the flower bulbs. In terms of yield, this yields just as much as traditional flower bulb cultivation for flower production. By making it financially more attractive, more bulb growers would switch to this special crop. You could think of increasing the Galantamine content in a flower bulb. Breeders are already working on this

Used conversion methods

Mechanical-Physical processes

Pressing

Extraction

Resources

Use of galantamine to treat vascular dementia - The Lancet Article