

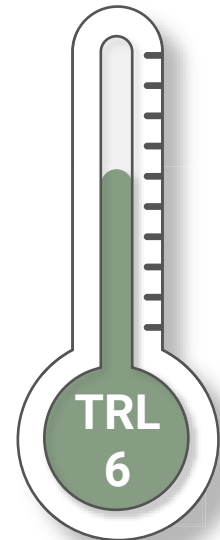
GO-GRASS

n3
PRACTICE
ABSTRACT

Roadside grass cleaning technology



Technology
readiness level:



Target group

Owners of roadside grass, National- regional governmental organisations like Rijkswaterstaat and municipalities. Other key stakeholders are contractors who do the actual harvesting of the roadside grass and process it, organisations that will produce the grass cellulose based on roadside grass.

Benefits and impact

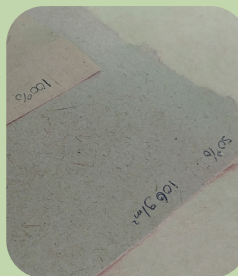
The technology is cleaning the roadside grass in such a way that it can be used to produce grass paper. There was no technology that can realise this good enough until now. It makes high value application of roadside grass possible.

Description

Step 1: Preventing collecting roadside pollution during harvesting. An external company developed a machine with a mowing head for clean harvesting. The mowing head deposits the grass into a bin and from there it is sucked into a loading trolley. In this way sand and lower pollution is not harvested.

Step 2: The harvested grass is spread on a conveyor band. A vision camera is used and an algorithm that is trained, from a large database with pictures of pollution, to recognise the pollution and giving a signal to the mechanical removal device to separate it from the grass that enters the digester.

The cleaning technology is extensively tested by ACRRES. The resulting grass will be used in the production technology. The produced cellulose fibres will be tested in grass paper production.



Watch the
[demosite video](#)



Challenges

The main problem is the waste status of roadside grass in the Netherlands. It is important to make a waste product fit as raw material to produce grass cellulose fibres to substitute wood cellulose in paper production. Current solutions are to pick manually the pollution from the grass at a conveyor band.

Solution

The cleaning of roadside grass entails 2 steps: Step 1 is done during the harvesting. The road-side grass is mowed and directly separated from the soil. A suction wagon collects the road-side grass without collecting sand and deep laying pollution. Step 2 is implemented just before the digestion. Pollution is recognised by vision cameras and removed mechanically from the grass. The waste status of roadside grass will be lifted to the status 'Extended use'.

Team and contact

ACRRES and Hiemstra Bruin BV

Gosse Hiemstra
gosse@hiemstrabruin.nl

Rommie van der Weide
rommie.vanderweide@wur.nl



www.go-grass.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°862674



GO-GRASS