



Interreg

2 Seas Mers Zeeën

Horti-BlueC



European Regional Development Fund

ECN TNO

TNO stands for the Netherlands Organisation for Applied Scientific Research. TNO connects people and knowledge to create innovations that boost the competitive strength of industry and the wellbeing of society in a sustainable way.

ECN>TNO is the energy research part of TNO and one of the roadmaps in energy research is: Toward CO₂-neutral fuels and feedstocks. The goal is to enable a smooth, safe and efficient transition from traditional energy sources towards renewable CO₂ neutral energy carriers.

ECN > TNO has extensive experience in biomass conversion for energy and products. One of the developed processes is the co-production of bioenergy and biochar from biomass. A wide range of agro-residues is used: wood, straw and grass from municipal park maintenance, agroresidues and spent peat or coir-based greenhouse substrates. These residues are heated in the ECN>TNO test facilities towards a combustible gas used for energy generation, and a porous, (tar-free) carbon product: biochar, which can be used as peat replacement in substrates.

The Biochar produced at ECN>TNO is first analysed on important agronomical parameters. From this we will learn which production conditions can be associated with various quality characteristics. In the pilot installation we can make larger quantities that are delivered to partners for the pot trials. The results in trials with plants will give ECN>TNO the ultimate feedback on how to optimize the in-house biochar production process and steer the parameters towards functional biochars.

