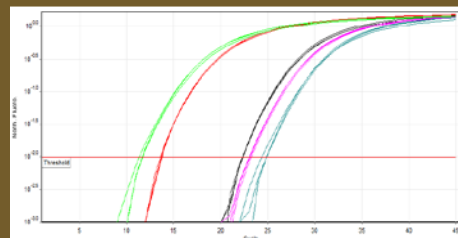


Diagnostics and risk management for plant health threats in wood chips and bark for bio-energy imported from other continents (Q-WOODCHIP)



Funding

Virtual Common Pot. Each funder only pays for the participation of their own national researchers. Total funding € 430 000

Research consortium

DASTI-DK, DEFRA-UK

Contact information

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Objectives

- Prioritize pests and pathogens according to relevance of detection
 - Produce recommendations on relevant pre-treatment methods for reduction of pests and pathogens in woodchips/bark
 - Establish collection of specimens and DNA based on prioritized list of pests and pathogens
 - Design and optimize methods for effective sampling in large wood chip/bark commodities.
 - Select and optimize methods for efficient extraction of pests and pathogens DNA from woodchip and bark
 - Design quantitative PCR (qPCR) assays for 10-12 of most relevant pests and pathogens and validate 5-6 of these assays
 - Explore next generation sequencing (NGS) methods for generic detection of pests and pathogens
 - Explore NGS for tree species determination
 - Use information on tree species/microbe composition to infer geographical origin
- Investigate stable isotope probing to infer geographical origin of commodities

Goals

The aims of this study is to provide stakeholders with: (a) information about how pests and pathogens are likely to be distributed in wood chips; (b) validated analytical methods for detecting the presence of pests and pathogens in wood chips; and (c) guidance on how to design sampling and analysis

Key outputs and results

The expected results for this project are:

- Confirmed priority list of pests and pathogens
- Recommendation of pre-export treatments
- Completed optimal sampling plan design
- Completed measurement uncertainty tool
- DNA extraction protocol
- Report on detection performance of NGS and protocol
- A set of validated protocols for Real-time PCR of selected pests and pathogens
- Report of review of wood chip species composition
- Geographic wood chip sample reference collection completed
- Report on NGS species composition study
- Report on SSR and SI analysis (M22)