

Objectives

TECHNOLOGICAL OBJECTIVES

- To develop effective, non-destructive sampling apparatus in order to assure adequately representative measurement aiming at 90% correlation with the bulk samples.
- To assess detection limit of 50 ppb, efficacy, specificity and sensitivity of the sensor
- To develop a data evaluation algorithms and to set up correlation databases
- To develop the 'plug & play' disposable cartridge to house the antibody-binding assay

SCIENTIFIC OBJECTIVES

- The understanding and determination of parameters (temperature, pressure, vacuum, etc) affecting the sampling precision avoiding the damaging of grain.
- To develop immobilizing methods for sensitive antibodies, and assess different approaches to enhance sensitivity, reproducibility, life-time, detection range, detection limit, and/or other specifications.
- The investigation of the cross-reactivity of other trichothecenes such as 3-acetyl-DON, 15-acetyl-DON, nivalenol, etc.

ECONOMIC OBJECTIVE

- To realize a commercial price for the sensor while keeping the price of the whole apparatus with the sampling unit excluding installation cost.

TRAINING, DISSEMINATION AND EXPLOITATION OBJECTIVES

- The development of training activities addressed to the SME members of the SME-AGs, first in pre-validation stage in order to ensure the understanding of the technology operation before the partners initiate the validation tasks.
- Technology transfer will be carried out to present the project results.
- To develop a sound dissemination plan to deliver at least 4 workshops, presenting the results of the project in European conferences and specialized magazines