Potential for rapid on-site testing at border inspection posts

Area of research interest: Capabilities
Project code: FS204010/FS246004
Conducted by: Fera

Background

The requirement for the monitoring and screening of chemical residues or contaminants in food imported into the EU is the subject of much EU legislation. It covers pesticides, veterinary drug residues and contaminants such as mycotoxins, metals, nitrates and others.

Furthermore, over the past 10 years or so, there has been a series of specific measures to control imported foods for a number of chemicals such as nitrofurans, chloramphenicol and melamine. The presence of elevated concentrations of these chemicals and contaminants in imported food may mean that these products are not safe to eat.

The traditional approach to monitor chemical contaminants in imported foods is for staff at BIPs to take a sample which is then dispatched to an external and accredited laboratory for assessment. This process can mean that the time for the reporting of the analysis is typically between seven and 28 days.

This approach has several disadvantages that could be overcome if a more rapid method was available for use at BIPs.

Research Approach

A small-scale study was conducted to review the current system(s) of residue and contaminant control of imported food, with a particular focus on the use of rapid diagnostics.

The project had three phases:

Phase 1: A desk-study to review rapid diagnostics methods – in relation to the testing requirements stipulated in EU legislation

Phase 2: Interviews with BIP staff to identify the issues and practicalities associated with carrying out rapid tests at a port

Phase 3: A mini-demonstration phase where a currently available rapid diagnostic method was installed at a BIP. This rapid screening method was operated at the BIP for a short period with assistance from staff at the Food and Environment Research Agency (Fera) The feedback obtained was used to assess whether the routine and continued use of rapid screening tests at BIPs was a viable option.

Results

The key findings were:

- that rapid screening at BIPs is a feasible option for routine surveillance purposes, although certain factors need to be addressed prior to implementation.
- the rapid screening tests used need to be fit for purpose, i.e. provide detection limits at the required levels, and be simple to use

The questionnaire and mini-demonstration exercise completed in this project drew attention to the issues that need to be addressed. The report includes recommendations for further work to highlight the necessary steps to implement this type of screening on a range of food and feed commodities and products of animal origin.

Research report

England, Northern Ireland and Wales

PDF
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