

Quality and Assurance

Understanding the range and complexity of the issues

The survey team understands the need to have the most flexible approach to the collection of product usage and application rates due to the many ways in which farmers record this data. Interviewer experience and training is absolutely key to avoid issues, for example with foliar feeds versus pesticide products which are often recorded in the same format but obviously have very different modes of action.

Limitations of the approach and methodology

Our experience has shown that the proposed face to face interview and 'main contact plus reserves approach' delivers the highest quality data and minimises non response bias; no other approach is likely to yield fit for purpose data to meet the quality requirements of the UK Statistics Authority (UKSA) Code of Practice for Official Statistics. Drawing a fresh stratified random sample each year is an appropriate survey methodology. The population of horticultural growers sampled for the PUS is much smaller than the number of arable holdings in England, so that, especially in the strata of larger enterprises, the same growers come around fairly often so this sample is already closer to a panel than a sample from a larger population might be.

Robust and practical measures

Fera gained Certification by Lloyds Register Quality Assurance (LRQA) in June 2006 for compliance to ISO 9001: 2000. The scope of activities covered by the Certification includes the provision of scientific services in the areas of agriculture, food and the environment to government and non-government customers worldwide. Research carried out by Fera is implemented to meet the requirements of the Defra/FSA Joint Code of Practice for Research.

- **Pre fieldwork:** All Fera's established surveyors are fully trained. Any new surveyors recruited to Fera are given farm visit training by accompanying a senior member of staff until the trainee surveyor and the senior surveyor are confident that the trainee is able to conduct visits alone. Training for all project staff will include Data Protection and Confidentiality in accordance with Cabinet Office requirements and the UKSA Code of Practice. As part of continuous improvement, interviewer instruction materials are reviewed every year to take account of arising fieldwork issues, new questions and requirements.
- **During fieldwork:** New interviewers are accompanied to their first interviews by an experienced colleague and the survey manager checks questionnaires for completeness. Interview length and response rates are monitored throughout the fieldwork period for all surveys.
- **At data entry:** Fera is responsible for data entry of all PUS data; the data entry screens developed by Fera have a series of checks in place to validate the data and there is a subsequent suite of error checking routines undertaken to identify any errors and anomalies. The first point of checking is conducted by experienced data entry staff (one has over 10 years experience), this is followed by computer sub-routines checking consistencies within the form, product rate comparisons and product approval cross referencing Fera's unique pesticide database. Where anomalies do occur, the information will be checked with the farmer by phone or email to check the accuracy of the data.
- **Pre first draft release:** The project manager will review key quality criteria, for example but not restricted to, weighted crop area comparisons, field sown areas by individual crops, treated areas by individual crops, application rates and comparison of tables to the last 2 years of surveys. All tables are subject to independent review commissioned by Defra, which may then lead to further specific checks.

Post publication: Fera will respond within the deadlines for additional data requests as laid out in the memorandum of understanding (usually 10 working days, but same day to 3 working days for urgent requests). The Health and Safety's Chemicals Regulation Directorate (CRD) will be notified immediately if a deadline cannot be met.

Description of management information provided and KPIs

- Fera provide CRD with fieldwork updates for survey progress every four weeks to include current visit status, data entry rates and any fieldwork issues as reported by surveyors.
- Fera provide CRD with progress reports for the survey programme at 10%, 50% and 100% fieldwork completion for samples collected against targets. These provide an additional check on any fieldwork issues, for example any reallocation of interviews that are required.
- First draft UK PUS report and discussion of results in agreement with CRD.
- Second draft UK PUS report and discussion of results in agreement with CRD.
- Final UK PUS report in agreement with CRD.
- First draft UK return for scrutiny by CRD 4 weeks in advance of submission date to the European Commission.

Approach to addressing performance failures

The likelihood of performance failures is low based on; Fera's experience of more than 25 years managing large-scale detailed farm surveys, including the PUS; and in the light of the quality assurance standards that the organisation has in place. However, Fera's experience brings additional measures that would assist in the event of performance failures through additional capabilities and cover, in particular for interviewing, data entry, data checking, data processing, professional statistics advice, knowledge of UKSA Codes of Practice for Official Statistics, management and reporting.

Knowledge of key relevant principles of Code of Practice for Official Statistics

Fera has read, understood and has implemented the UKSA Code of Practice for Official Statistics, published in 2009. Whilst all 8 principles apply, we acknowledge in particular, the following:

- Integrity – in particular that, statistical reports must be issued separately from other statements or comments about the figures, that the public interest prevails.
- Confidentiality – the identity of individuals or their information is not revealed, information is kept secure and respondents are informed how their confidentiality will be protected.
- Proportionate burden - seeking participation through informed consent.
- Accessibility – to all users, providing information on the quality and reliability of the statistics, adopting formats that enhance clarity and consistency, disseminate in formats that encourage analysis and re-use.

User Engagement

In accordance with the UKSA Code of Practice for Official Statistics, Fera will work with government statisticians and CRD to build on our existing extensive and effective relationships with users of the surveys to further enhance user engagement. Fera has long enjoyed strong relationships with a broad spectrum of users and stakeholders across policy, research, agricultural supply industry (including consultancies), farming and horticultural businesses, NGOs and members of the public. Over the years we have an excellent record of listening to our users and incorporating their feedback into the way we collect and report our statistics. We will work in partnership with CRD to strengthen this engagement in line with recommendations from UKSA. Together we will identify the key users of pesticide survey information, and then consider the most appropriate modes of engagement (e.g. user group, Internet dissemination, and newsletter) and plan their implementation into the future. This will ensure user engagement follows a more structured approach to facilitate review by UKSA as required by the National Statistics assessment process.

Following the UKSA review published in July 2012 all recommendations from the report have been implemented. These include a new mailing list for the distribution of reports, changes to the website to enable more accessible data downloads and a further restructuring of the website to enable users to navigate more easily.